CS 2550ci

# SERVICE MANUAL 

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Rev. 4

## CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

It may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for proper disposal.

## ATTENTION

IL Y A UN RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACEE PAR UN MODELE DE TYPE INCORRECT. METTRE AU REBUT LES BATTERIES UTILISEES SELON LES INSTRUCTIONS DONNEES.

Il peut être illégal de jeter les batteries dans des eaux d'égout municipales. Vérifiez avec les fonctionnaires municipaux de votre région pour les détails concernant des déchets solides et une mise au rebut appropriée.

Revision history

| Revision | Date | Replaced pages | Remarks |
| :---: | :---: | :---: | :---: |
| 1 | 3 April 2012 | Cover, 1-2-2, 1-2-3, 1-2-6, 1-2-12 to 1-2-15, 1-2-17, 1-3-2 to 1-3-4, 1-3-6, 1-3-7, 1-3-28, 1-3-29, <br> 1-3-35, 1-3-38, 1-3-39, 1-3-53, 1-3-57 to 1-3-64, <br> 1-3-70, 1-3-76, 1-3-77, 1-3-98, 1-3-124, 1-3-125, <br> 1-3-130, 1-3-134, 1-3-135, 1-3-178, 1-4-12 to 1-4-15, <br> $1-4-23$ to 1-4-25, 1-4-30, 1-5-6, 1-5-9, 1-5-11, <br> 1-5-15 to 1-5-18, 1-5-47, 2-2-7, 2-2-8, 2-3-18, <br> 2-4-12, address | - |
| 2 | 9 May 2012 | 1-2-14, 1-2-15, 2-4-1 | - |
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| 4 | 18 June 2012 | Contents, 1-3-16, 1-3-55, 1-3-136, 1-3-137, <br> $1-3-171,1-4-41,1-4-42,1-5-5,1-6-1,2-4-10$ to 19 | - |

## Safety precautions

This booklet provides safety warnings and precautions for our service personnel to ensure the safety of their customers, their machines as well as themselves during maintenance activities. Service personnel are advised to read this booklet carefully to familiarize themselves with the warnings and precautions described here before engaging in maintenance activities.

## Safety warnings and precautions

Various symbols are used to protect our service personnel and customers from physical danger and to prevent damage to their property. These symbols are described below:

A DANGER: High risk of serious bodily injury or death may result from insufficient attention to or incorrect compliance with warning messages using this symbol.

WARNING: Serious bodily injury or death may result from insufficient attention to or incorrect compliance with warning messages using this symbol.

A CAUTION: Bodily injury or damage to property may result from insufficient attention to or incorrect compliance with warning messages using this symbol.

## Symbols

The triangle ( $\triangle$ ) symbol indicates a warning including danger and caution. The specific point of attention is shown inside the symbol.


General warning.
 Warning of risk of electric shock.


Warning of high temperature.

Q indicates a prohibited action. The specific prohibition is shown inside the symbol.


Disassembly prohibited.
indicates that action is required. The specific action required is shown inside the symbol.


General action required.


Remove the power plug from the wall outlet.

Always ground the copier.

## 1. Installation Precautions

## A WARNING

- Do not use a power supply with a voltage other than that specified. Avoid multiple connections to one outlet: they may cause fire or electric shock. When using an extension cable, always check that it is adequate for the rated current.

- Connect the ground wire to a suitable grounding point. Not grounding the copier may cause fire or electric shock. Connecting the earth wire to an object not approved for the purpose may cause explosion or electric shock. Never connect the ground cable to any of the following: gas pipes, lightning rods, ground cables for telephone lines and water pipes or faucets not approved by the proper authorities. $\qquad$



## ACAUTION:

- Do not place the copier on an infirm or angled surface: the copier may tip over, causing injury. $\qquad$

- Do not install the copier in a humid or dusty place. This may cause fire or electric shock. $\qquad$

- Do not install the copier near a radiator, heater, other heat source or near flammable material. This may cause fire. $\qquad$

- Allow sufficient space around the copier to allow the ventilation grills to keep the machine as cool as possible. Insufficient ventilation may cause heat buildup and poor copying performance.

- Always handle the machine by the correct locations when moving it.

- Always use anti-toppling and locking devices on copiers so equipped. Failure to do this may cause the copier to move unexpectedly or topple, leading to injury.

- Avoid inhaling toner or developer excessively. Protect the eyes. If toner or developer is accidentally ingested, drink a lot of water to dilute it in the stomach and obtain medical attention immediately. If it gets into the eyes, rinse immediately with copious amounts of water and obtain medical attention.

- Advice customers that they must always follow the safety warnings and precautions in the copier's instruction handbook.



## 2. Precautions for Maintenance

## A warning

- Always remove the power plug from the wall outlet before starting machine disassembly $\qquad$
- Always follow the procedures for maintenance described in the service manual and other related brochures. $\qquad$
- Under no circumstances attempt to bypass or disable safety features including safety mechanisms and protective circuits.

- Always use parts having the correct specifications. $\qquad$

- Always use the thermostat or thermal fuse specified in the service manual or other related brochure when replacing them. Using a piece of wire, for example, could lead to fire or other serious accident.

- When the service manual or other serious brochure specifies a distance or gap for installation of a part, always use the correct scale and measure carefully.

- Always check that the copier is correctly connected to an outlet with a ground connection. $\qquad$

- Check that the power cable covering is free of damage. Check that the power plug is dust-free. If it is dirty, clean it to remove the risk of fire or electric shock.

- Never attempt to disassemble the optical unit in machines using lasers. Leaking laser light may damage eyesight.

- Handle the charger sections with care. They are charged to high potentials and may cause electric shock if handled improperly.



## $\triangle$ CAUTION

- Wear safe clothing. If wearing loose clothing or accessories such as ties, make sure they are safely
secured so they will not be caught in rotating sections. ...........................................................................
- Use utmost caution when working on a powered machine. Keep away from chains and belts.

- Handle the fixing section with care to avoid burns as it can be extremely hot. $\qquad$
- Check that the fixing unit thermistor, heat and press rollers are clean. Dirt on them can cause abnormally high temperatures

- Do not remove the ozone filter, if any, from the copier except for routine replacement. $\qquad$
- Do not pull on the AC power cord or connector wires on high-voltage components when removing them; always hold the plug itself.

- Do not route the power cable where it may be stood on or trapped. If necessary, protect it with a cable cover or other appropriate item.

- Treat the ends of the wire carefully when installing a new charger wire to avoid electric leaks. $\qquad$
- Remove toner completely from electronic components.

- Run wire harnesses carefully so that wires will not be trapped or damaged. $\qquad$
- After maintenance, always check that all the parts, screws, connectors and wires that were removed, have been refitted correctly. Special attention should be paid to any forgotten connector, trapped wire and missing screws.

- Check that all the caution labels that should be present on the machine according to the instruction handbook are clean and not peeling. Replace with new ones if necessary.

- Handle greases and solvents with care by following the instructions below: $\qquad$

- Use only a small amount of solvent at a time, being careful not to spill. Wipe spills off completely. - Ventilate the room well while using grease or solvents.
- Allow applied solvents to evaporate completely before refitting the covers or turning the power switch on.
Always wash hands afterwards.
- Never dispose of toner or toner bottles in fire. Toner may cause sparks when exposed directly to fire in a furnace, etc.

- Should smoke be seen coming from the copier, remove the power plug from the wall outlet immediately.



## 3. Miscellaneous


#### Abstract

A WARNING - Never attempt to heat the drum or expose it to any organic solvents such as alcohol, other than the specified refiner; it may generate toxic gas.




- Keep the machine away from flammable liquids, gases, and aerosols. A fire or an electric shock might occur.



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Installation Guide
PF-790 (Paper feeder)DF-470 (Document finisher)
DT-730 (Document tray)
FAX System(W)

## 1-1-1 Specifications

## Machine

| Item |  | Specifications |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Type |  | Desktop |  |  |  |
| Printing method |  | Electrophotography by semiconductor laser, tandem (4) drum system |  |  |  |
| Originals |  | Sheet, Book, 3-dimensional objects (maximum original size: A3/Ledger) |  |  |  |
| Original feed system |  | Fixed |  |  |  |
| Paper weight | Cassette | 60 to $256 \mathrm{~g} / \mathrm{m}^{2}$ (Duplex: 60 to $220 \mathrm{~g} / \mathrm{m}^{2}$ ) |  |  |  |
|  | MP tray | 60 to $256 \mathrm{~g} / \mathrm{m}^{2}, 230 \mu \mathrm{~m}$ (Cardstock) |  |  |  |
| Paper type | Cassette | Plain, Recycled, Preprinted, Bond, Color (Colour), Letterhead, Thick, High quality, Custom 1 to 8 |  |  |  |
|  | MP tray | Plain, Vellum, Recycled, Preprinted, Bond, Cardstock, Color (Colour), Letterhead, Thick, Envelope, Coated, High quality, Rough, Transparency (OHP film), Labels, Prepunched ,Custom 1 to 8 |  |  |  |
| Paper size | Cassette | A3, A4, A5, B4, B5, Ledger, Letter, Legal, Statement, Oficio II, Folio, 8K, 16K |  |  |  |
|  | MP tray | A3, A4, A5, A6, B4, B5, ISO B5, B6, Ledger, Letter, Legal, Statement, Executive, Oficio II, Folio, 8K, 16K, Envelope \#10, Envelope \#9, Envelope \#6, Envelope Monarch, Envelope DL, Envelope C4, Envelope C5, Postcards, Return postcard, Youkei 2, Youkei 4, Custom |  |  |  |
| Zoom level |  | Manual mode : 25 to $400 \%$, 1\% increments <br> Auto mode : $400 \%, 200 \%, 141 \%, 122 \%, 115 \%, 86 \%, 81 \%, 70 \%, 50 \%, 25 \%$ |  |  |  |
| Copying <br> speed <br> (Simplex) |  | Color |  | B/W |  |
|  |  | Cassette | MP tray | Cassette | MP tray |
|  | A4/Letter | 25 sheets/min | 17 sheets/min | 25 sheets/min | 17 sheets/min |
|  | A4R/LetterR | 17 sheets/min | 14 sheets/min | 17 sheets/min | 14 sheets/min |
|  | A3/Ledger | 13 sheets/min | 10 sheets/min | 13 sheets/min | 10 sheets/min |
|  | B4/Legal | 13 sheets/min | 10 sheets/min | 13 sheets/min | 10 sheets/min |
|  | B5 | 25 sheets/min | 17 sheets/min | 25 sheets/min | 17 sheets/min |
|  | B5R | 17 sheets/min | 14 sheets/min | 17 sheets/min | 14 sheets/min |
|  | A5R | 13 sheets/min | 10 sheets/min | 13 sheets/min | 10 sheets/min |
|  | A6R | - | 10 sheets/min | - | 10 sheets/min |
| First copy time (A4, feed from cassette) |  | When the DP is not used: 9.9 s or less (Color) $/ 7.9 \mathrm{~s}$ or less (B/W) When using the DP : 11.9 s or less (Color)/ 9.9 s or less (B/W) |  |  |  |
| Warm-up time ( $22{ }^{\circ} \mathrm{C} / 71.6^{\circ} \mathrm{F}, 60 \% \mathrm{RH}$ ) |  | Power on : 45 s or less |  |  |  |
| Paper capacity | Cassette | 1000 sheets ( $80 \mathrm{~g} / \mathrm{m}^{2}, 500$ sheets $\times 2$ ) |  |  |  |
|  | MP tray | 100 sheets ( $80 \mathrm{~g} / \mathrm{m}^{2}$, plain paper, A4/Letter or less) 25 sheets ( $80 \mathrm{~g} / \mathrm{m}^{2}$, plain paper, A4/Letter or more) |  |  |  |
| Output tray capacity |  | Inner tray $: 250$ sheets $\left(80 \mathrm{~g} / \mathrm{m}^{2}\right)$Job separator : $\quad 30$ sheets $\left(80 \mathrm{~g} / \mathrm{m}^{2}\right)$ |  |  |  |


| Item |  | Specifications |
| :---: | :---: | :---: |
| Continuous copying |  | 1 to 999 sheets |
| Light source |  | White LED |
| Scanning system |  | Flat bed scanning by CCD image sensor |
| Photoconductor |  | OPC drum (diameter 30 mm ) |
| Image write system |  | Semiconductor laser: |
| Charging system |  | Contact charger roller method |
| Developer system |  | Touch down developing system <br> Developer: 2-component <br> Toner replenishing: Automatic from the toner container |
| Transfer system |  | Primary: Transfer belt Secondary: Transfer roller |
| Separation system |  | Small diameter separation, separation electrode |
| Cleaning system |  | Counter blade cleaning |
| Charge erasing system |  | Exposure by cleaning lamp (LED) |
| Fusing system |  | One axis IH established method Heat source: IH inverter heating Abnormally high temperature protection devices: thermostat |
| CPU |  | PowerPC750CL (600MHz) |
| Main memory | Standard | 2048MB |
|  | Maximum | 2048 MB |
| Interface | Standard | USB interface connector: 1 (USB Hi-speed) <br> USB host: 2 (USB Hi-speed) <br> Network interface: 1 (10BASE-T/100BASE-TX/1000BASE-T) |
|  | Option | eKUIO slot: 2 |
| Resolution |  | $600 \times 600 \mathrm{dpi}$ |
| Operating environment | Temperature | 10 to $32.5{ }^{\circ} \mathrm{C} / 50$ to $90.5{ }^{\circ} \mathrm{F}$ |
|  | Humidity | 15 to 80\% RH |
|  | Altitude | 2,500 m/8,202 ft or less |
|  | Brightness | 1,500 lux or less |
| Dimensions ( $\mathbf{W} \times \mathrm{D} \times \mathrm{H}$ ) |  | $594 \times 699 \times 862 \mathrm{~mm} / 233 / 8$ " $\times 271 / 2$ " $3315 / 16$ " |
| Weight |  | $95.5 \mathrm{~kg} / 210.5 \mathrm{lb}$ (with toner containers) |
| Space required ( $\mathbf{~ \times ~ D ~}$ ) |  | $874 \times 699 \mathrm{~mm} / 347 / 16^{\prime \prime} \times 271 / 2^{\prime \prime}$ (using MP tray) |
| Power source |  | $120 \mathrm{~V} \mathrm{AC}, 60 \mathrm{~Hz}$, more than 12A 220-240 V AC, 50 Hz , more than 7.2 A |
| Options |  | Paper feeder (double cassette), Document finisher, Fax kit, Expanded memory, Gigabit ethernet board, Thin print kit, Data security kit, Internet FAX kit, Card Authentication kit, IC card reader holder, Document tray, Key counter, USB key board |

Document processor

| Item | Specifications |
| :---: | :--- |
| Original feed method | Automatic feed |
| Supported original types | Sheet originals |
| Original sizes | Maximum: A3/Ledger <br> Minimum : A5/Statement |
| Original weights | Simplex: 45 to $160 \mathrm{~g} / \mathrm{m}^{2}$ <br> Duplex : 50 to $120 \mathrm{~g} / \mathrm{m}^{2}$ |
| Loading capacity | 50 sheets $\left(50\right.$ to $\left.80 \mathrm{~g} / \mathrm{m}^{2}\right)$ or less <br> 30 sheets $\left(50\right.$ to $\left.80 \mathrm{~g} / \mathrm{m}^{2}\right)$ or less :Mixed original sizes |

Printer

| Item |  | Specifications |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Printing } \\ & \text { speed } \\ & \text { (Simplex) } \end{aligned}$ |  | Color |  | B/W |  |
|  |  | Cassette | MP tray | Cassette | MP tray |
|  | A4/Letter | 25 sheets/min | 17 sheets/min | 25 sheets/min | 17 sheets/min |
|  | A4R/LetterR | 17 sheets/min | 14 sheets/min | 17 sheets/min | 14 sheets/min |
|  | A3/Ledger | 13 sheets/min | 10 sheets/min | 13 sheets/min | 10 sheets/min |
|  | B4/Legal | 13 sheets/min | 10 sheets/min | 13 sheets/min | 10 sheets/min |
|  | B5 | 25 sheets/min | 17 sheets/min | 25 sheets/min | 17 sheets/min |
|  | B5R | 17 sheets/min | 14 sheets/min | 17 sheets/min | 14 sheets/min |
|  | A5R | 13 sheets/min | 10 sheets/min | 13 sheets/min | 10 sheets/min |
|  | A6R | - | 10 sheets/min |  | 10 sheets/min |
| Printing speed (Duplex) | A4/Letter | 23 sheets/min | 16 sheets/min | 23 sheets/min | 16 sheets/min |
|  | A4R/LetterR | 9 sheets/min | 8 sheets/min | 9 sheets/min | 8 sheets/min |
|  | A3/Ledger | 7 sheets/min | 6 sheets/min | 7 sheets/min | 6 sheets/min |
|  | B4/Legal | 7 sheets/min | 6 sheets/min | 7 sheets/min | 6 sheets/min |
|  | B5 | 23 sheets/min | 16 sheets/min | 23 sheets/min | 16 sheets/min |
|  | B5R | 9 sheets/min | 8 sheets/min | 9 sheets/min | 8 sheets/min |
|  | A5R | 13 sheets/min | 9 sheets/min | 13 sheets/min | 9 sheets/min |
| First print time (A4, feed from cassette) |  | B/W : 9.4 sColor: 10.9 s |  |  |  |
| Resolution |  | $600 \times 600 \mathrm{dpi}$ |  |  |  |
| Operat | system | Windows 2000, Windows XP, Windows XP Professional, Windows Server 2003, Windows Server 2003, x64 Edition, Windows Vista x86 Edition, Windows Vista x64 Edition, Windows $7 \times 86$ Edition, Windows $7 \times 64$ Edition, Windows Server 2008, Windows Server $2008 \times 64$ Edition, Apple Macintosh OS 9.x, OS X |  |  |  |
| Interface |  | USB interface connector: 1 (USB Hi-speed) Network interface: 1 (10BASE-T/100BASE-TX/1000BASE-T) |  |  |  |
| Page description language |  | PRESCRIBE |  |  |  |
| Emulation |  | PCL-6(PCL5c/PCL-XL), KPDL3, XPS |  |  |  |

Scanner

| Item |  | Specifications |
| :---: | :---: | :---: |
| Operating system |  | Windows XP, Windows Server 2003, Windows Vista, Windows Server 2008, Windows 7 |
| System requirements |  | IBM PC/AT compatible <br> CPU: Celeron 600 MHz or higher <br> RAM: 128 MB or more <br> HDD free space: 20 MB or more Interface: Ethernet |
| Resolution |  | $600 \mathrm{dpi}, 400 \mathrm{dpi}, 300 \mathrm{dpi}, 200 \mathrm{dpi}, 200 \times 100 \mathrm{dpi}, 200 \times 400 \mathrm{dpi}$ |
| File format |  | TIFF, JPEG, XPS, PDF (MMR/JPEG compression), PDF (high compression) |
| Scanning speed | Simplex | B/W : 48 images/min <br> Color: 48 images/min <br> (A4 landscape,300 dpi, Image quality: Text/Photo original) |
|  | Duplex | B/W : 15 images/min <br> Color: 15 images/min <br> (A4 landscape, 300 dpi , Image quality: Text/Photo original) |
| Interface |  | Ethernet (10 BASE-T/100 BASE-TX/1000BASE-T) |
| Network protocol |  | TCP/IP |
| Transmission system |  | PC transmission <br> SMB: Scan to PC <br> FTP: Scan to FTP, FTP over SSL <br> E-mail transmission <br> SMTP: Scan to E-mail <br> TWAIN scan <br> KM-WSDL, WIA Driver <br> WIA scan <br> WSD-Scan |

NOTE: These specifications are subject to change without notice.

## 1-1-2 Parts names

## (1) Machine (front side)



Figure 1-1-1

1. Cassette
2. Paper width guides
3. Paper length guide
4. MP (multi purpose) tray
5. MP tray extension
6. MP Paper width guides
7. Inner tray
8. Operation panel
9. DP top cover
10. DP paper feed roller
11. DP forwarding roller
12. DP separation pully
13. DP original width guides
14. Original table
15. USB memory slot


Figure 1-1-2
16. Front cover
17. Duct cover
18. Waste toner box
19. Right cover 1
20. MP paper feed roller
21. Right registration roller
22. Secondary transfer roller
23. Feed shift guide
24. Fuser unit
25. Toner container / $Y$
26. Toner container /C
27. Toner container /M
28. Toner container /K
29. Drum unit /Y
30. Drum unit $/ \mathrm{C}$
31. Drum unit / $M$
32. Drum unit/K
33. Developer unit $/ Y$
34. Developer unit /C
35. Developer unit /M
36. Developer unit /K
37. Duct holder
38. Right cover 2

## (2) Machine (rear side)



Figure 1-1-3
39. Main power switch
40. Scanner lock lever
41. DP interface connector
42. DF interface connector
43. Cassette heater switch (cover)
44. Outlet connector
45. Inlet connector
46. Network interface connector
47. USB port
48. USB interface connector
49. Option interface slot 2
50. Option interface slot 1
51. FAX memory cover


Figure 1-1-4

1. Program key
2. Status/Job cancel key
3. Copy key
4. Accessibility display key
5. Help key
6. Auto color key
7. Quick no. search key
8. Clear key
9. Reset key
10. System menu key
11. Power key
12. Counter key
13. Main power indicator
14. Application key
15. Document box key
16. Send key
17. FAX key
18. Full color key
19. Processing indicator
20. Black and White key
21. Memory indicator
22. Numeric keys
23. Enter key
24. Attention indicator
25. Start key
26. Stop key
27. Interrupt key
28. Authentication/Logout key
29. Energy saver key

## 1-1-3 Machine cross section



Figure 1-1-5

1. Cassette
2. Cassette paper feed section
3. MP tray paper feed section
4. Conveying section
5. Primary transfer section
6. Secondary transfer section / Separation sections
7. Fuser unit
8. Eject section
9. Duplex/conveyning section
10. Image scanner unit (ISU)
11. Charger roller unit
12. Toner container /YCMK
13. Developer unit $/ Y$
14. Developer unit /C
15. Developer unit /M
16. Developer unit /K
17. Drum unit $/ Y$
18. Drum unit /C
19. Drum unit /M
20. Drum unit /K
21. Laser scanner unit (LSU) /YCMK
22. Document processor (DP)

## 1-2-1 Installation environment

1. Temperature: 10 to $32.5^{\circ} \mathrm{C} / 50$ to $90.5^{\circ} \mathrm{F}$
2. Humidity: 15 to $80 \%$ RH
3. Power supply: $120 \mathrm{~V} \mathrm{AC}, 12.0 \mathrm{~A}$
220-240 V AC, 6.5 A
4. Power supply frequency: $50 \mathrm{~Hz} \pm 2 \% / 60 \mathrm{~Hz} \pm 2 \%$
5. Installation location

Avoid direct sunlight or bright lighting. Ensure that the photoconductor will not be exposed to direct sunlight or other strong light when removing paper jams.
Avoid locations subject to high temperature and high humidity or low temperature and low humidity; an abrupt change in the environmental temperature; and cool or hot, direct air.
Avoid places subject to dust and vibrations.
Choose a surface capable of supporting the weight of the machine.
Place the machine on a level surface.
The degree of level: 5 mm or less of front and rear, right and left
Twist: 3 mm or less
Avoid air-borne substances that may adversely affect the machine or degrade the photoconductor, such as mercury, acidic of alkaline vapors, inorganic gasses, NOx, SOx gases and chlorine-based organic solvents.
Select a well-ventilated location.
6. Allow sufficient access for proper operation and maintenance of the machine.


Figure 1-2-1

## 1-2-2 Unpacking and installation

(1) Installation procedure


## (2) Pre cautions for unpacking

Please remove a tape as follows at the time of unpacking, and pull out a handle.


Figure 1-2-2


Figure 1-2-3

1. Skid
2. Hinge joints
3. Bottom pad RF
4. Bottom pad R-Rear
5. Bottom pad LF
6. Bottom pad L-Rear
7. Bottom pad Center
8. Plastic bag $(600 \times 700)$
9. Pad R
10. Accessories box
11. Pad L
12. Pad Front
13. Pad Rear
14. Inner case
15. Outer case
16. Top pad R
17. Top pad $L$
18. Machine
19. Machine cover
20. Plastic bag (Vacuum bag)
21. Toner container box
22. Plastic bag (540 $\times 950$ )
23. Job separator tray
24. Plastic bag $(400 \times 600)$
25. Installation guide, etc.
26. Plastic bag
27. Power cord
28. CD-ROM *1
*1:Excluding 230V AC model

Cautions: Place the machine on a level surface.

## Remove the tapes and spacer

1. Remove seven tapes.


Figure 1-2-4
2. Open the DP top cover.
3. Slide two DP original width guides and then remove the pad.
4. Close the DP top cover.


Figure 1-2-5
5. Open the DP.
6. Remove the protective sheet.


Figure 1-2-6


Figure 1-2-7
9. Peel off two tapes and then remove the protective sheet 2.
10. Remove the protective sheet 1.
11. Remove the spacer.


Figure 1-2-8

## Install the job separator tray

1. Gently push the job separator tray into the machine along the guides.

ATTENTION: When installing the Job separator tray, are cautious of the position of a paper guide.



Figure 1-2-9

## Release the scanner lock lever

1. Pull the scanner lock lever in the direction of the arrow. This will unlock the scanner mechanism.
Note: When turning on power if the lock lever is not released, the error message is displayed.


Figure 1-2-10

## Install the optional paper feeder

1. Install the optional paper feeder as required.
Note: Refer to the installation manual of a paper feeder (PF-790) for details.


Figure 1-2-11

## Load paper

1. Take out the paper preservation bag.
2. Pressing the paper width adjusting tab as shown, move the paper width guides to fit the paper size.
3. Adjust the paper length guide to fit the paper size.


Figure 1-2-12


Figure 1-2-13
4. Align the paper so that it is abut with the right end of the cassette.
5. Insert the cassette size plate.
6. Gently push the cassette back in.


Figure 1-2-14

## Install the toner container

1. Open the front cover.
2. Hold the toner container vertically and tap the upper part five times or more. Turn the toner container upside down and tap the upper part five times or more.


Figure 1-2-15
3. Shake the toner container up and down five times or more.
Turn the toner container upside down and shake it five times or more.


Figure 1-2-16
4. Shake the toner container approximately five or six times in the horizontal direction to stir toner.


Figure 1-2-17
5. Gently push the toner container into the machine.
Note: Push the container all the way into the machine until it locks in place.


Figure 1-2-18

## Attaching the language label (Excluding 240V AC model)

1. Insert a flat-head screwdriver and slide the operation panel covers $A$ and $B$ to remove them.


Figure 1-2-19
2. Remove the clear panel.


Figure 1-2-20
3. Remove the operation panel sheet.
4. Replace the operation panel sheet of the corresponding language.
5. Refit the clear panel.
6. Refit the operation panel covers A and B.


Figure 1-2-21

## Switch the cassette heater switch

1. Release the hook and then remove the switch cover.
2. Turn the cassette heater switch on.

Note: When the cassette heater is used, it turns it on.
3. Refit the switch cover.


Figure 1-2-22

## Install the other optional devices

1. Install the optional devices (Document finisher, Fax kit, etc.) as required.

## Connect the power cord

1. Connect the power cord to the connector on the machine.
2. Insert the power plug into the wall outlet.

## Installing toner

1. Turn the main power switch on.

The machine automatically starts to feed toner in the developer unit.
Note: When the main power switch is turned on for the first time, it takes about one minute until entering the state that can be copied.
2. The drive chain is disengaged when toner installation is completed.

Adjusting the image

1. Performing calibration (See the operation guide for details, or use maintenance mode U464 [Setting the ID correction operation - performing calibration] to conduct this adjustment.) Press the System menu key.
Press [Adjustment/Maintenance] and then [Next] of [Calibration].
Press [Execute] to perform Color calibration. When completed, press [OK].
2. Performing color registration (See the operation guide for details, or use maintenance mode U469 [Adjusting the color registration] to conduct this adjustment.)
Press [Adjustment/Maintenance] and then [Next] of [Color Registration].
Perform adjustments automatically or manually.

## Auto correction

Press [Next] in [Auto]. Press [Start]. A chart is printed.
Set the output chart for adjustment as the original.
Press [Start] to perform Color registration. When completed, press [OK].
Manual correction
Press [Next] in [Manual]. Press [Print] of [Chart]. A chart is printed.
Find the location on each chart where 2 lines most closely match.
Press [Next] of [Registration] and [Change].
Enter the registration values for each chart.
Press [Start] to perform Color registration. When completed, press [OK].
3. U410 Adjusting the halftone automatically (see page 1-3-109)

Load the cassette with multiple sheets of A4 or Letter paper.
Enter the maintenance mode by entering 10871087 using the numeric keys.
Enter 410 using the numeric keys and press the start key.
Press [Normal Mode] and then press the start key. A test patterns 1, 2 and 3 are outputted.
Place the output test pattern 1 as the original.
Place approximately 20 sheets of white paper on the test pattern 1 and set them.
Press the start key. Adjustment is made.
Place the output test pattern 2 as the original.
Place approximately 20 sheets of white paper on the test pattern 2 and set them.
Press the start key. Adjustment is made.
Place the output test pattern 3 as the original.
Place approximately 20 sheets of white paper on the test pattern 2 and set them.
Press the start key. Adjustment is made.
[Finish] is displayed in [Phase] when normally completed.
Press the stop key twice to exit.
4. Make test copies.

If image quality is unsatisfactory after test copying, execute calibration, then retry U410-Adjusting the halftone automatically.

Output an own-status report (maintenance item U000)

1. Enter the maintenance mode by entering 10871087 using the numeric keys.
2. Enter 000 using the numeric keys and press the start key.
3. Select Maintenance and press the start key to output a list of the current settings of the maintenance items.
4. Press the stop key to exit.

Clearing the counter (maintenance item U927)

1. Enter 927 using the numeric keys and press the start key.
2. Select [Excute].
3. Press the start key. The counter is cleared.
4. Press the stop key to exit.

Setrting the delivery date (maintenance item U278)

1. Enter 278 using the numeric keys and press the start key.
2. Select [Today].
3. Press the start key. The delivery date is set.
4. Press the stop key to exit.

Exit maintenance mode

1. Enter "001" using the numeric keys and press the start key.

Print out a user setting list

1. Select [Report Print] to print a user setting list.

Make test copies

1. Place an original and make test copies.

Installation is completed.

## (3) Setting initial copy modes

Factory settings are as follows:

| Maintenance <br> item No. | Contents | Factory setting |
| :---: | :--- | :---: |
| U250 | Checking/clearing the maintenance cycle | - |
| U251 | Checking/clearing the maintenance counter | - |
| U252 | Setting the destination | - |
| U253 | Switching between double and single counts | Double count <br> (A3/Ledger) |
| U260 | Selecting the timing for copy counting | Eject |
| U276 | Setting the copy count mode | Mode0 |
| U284 | Setting 2 color copy mode | Off |
| U285 | Setting service status page | On |
| U325 | Setting the paper interval | Off/1 |
| U326 | Setting the black line cleaning indication | On/8 |
| U332 |  | 1.0 |
|  | Setting the size conversion factor | 0 |
|  |  | 1.0 |
| U340 | Setting the applied mode | $190 / 1$ |
|  |  | $10 /-$ |
| U341 | Specific paper feed location setting for printing function | Off/Off/Off/Off |
| U343 | Switching between duplex/simplex copy mode | Off |
| U345 | Setting the value for maintenance due indication | 0 |

## 1-2-1 Option composition



IB-50 (Gigabit ethernet board)


Data security kit (E)


Internet FAX Kit (A)


FAX System (W)


MM-16-128 (FAX Option Memory)


Card Authentication KIT (B)


IC card reader


Card reader holder (B)

USB key board
UG-33 (ThinPrint Kit) *2
DT-730 (Original table)
Key counter
*2: 230V AC model only

## 1-2-3 Installing the key counter (option)

## (1) Installing directly on the device



Key counter installation requires the following parts:

| Parts | Quantity | Part.No. |
| :--- | :---: | :---: |
| Key counter | 1 | 3025418011 |
| Key counter set | 1 | $302 A 369709$ |
| Key counter wire | 1 | 302 MV 46090 |
| Wire saddle A | 1 | 7YZM610010++H01 |
| Wire saddle B | 1 | 7YZM610008++H01 |
| Wire saddle C |  |  |

Supplied parts of key counter set (302A369709):

| Parts | Quantity | Part.No. |
| :---: | :---: | :---: |
| Key counter socket assembly | 1 | 3029236241 |
| Key counter cover retainer | 1 | 302GR03010 |
| Key counter retainer | 1 | 302GR03020 |
| Key counter cover | 1 | 3066060011 |
| Key counter mount | 1 | 3066060041 |
| Edging | 2 - | 7YZM210006++H01 |
| Band | 1* | M21AH010 |
| M3 x 8 tap-tight P screw | $1 *$ | $\begin{gathered} \text { 5MBTPB3008PW++ } \\ \mathrm{R} \end{gathered}$ |
| M4 x 10 tap-tight P screw | 2* | 5MBTPB4010PW++ R |
| M4 x 10 tap-tight S screw | 2 | 5MBTPB4010TW++ R |
| M3 x 6 bronze flat-head screw | 2 | 7BB003306H |
| M4 x 20 tap-tight S screw | 2* | 7BB100420H |


| Parts | Quantity | Part.No. |
| :--- | :---: | :---: |
| M3 nut | 1 | 7BC1003055++H01 |
| M3 x 8 bronze binding screw | $1^{*}$ | B1B03080 |
| M4 x 30 tap-tight S screw | $1^{*}$ | B1B54300 |
| M4 x 6 chrome TP screw | 5 | B4A04060 |
| M4 $\times 10$ chrome TP screw | 2 | B4A04100 |

* : Not used in this model.
$\mathbf{\Delta}$ : One piece is used in this model.


## Procedure

1. Press the power key on the operation panel to off. Make sure that the power indicator and the memory indicator are off before turning off the main power switch. And then unplug the power cable from the wall outlet.
2. Fit the key counter socket assembly to the key counter retainer using two screws and nut.
Note: Take out the wire from the central portion of the key counter retainer, as shown in a figure.
3. Fit the key counter mount to the key counter cover using two screws.
4. Fit the key counter retainer to the key counter mount using two screws.


Figure 1-2-23

1. Remove two screws of the DP interface connector and then remove the DP interface connector.
2. Remove the DP.
3. Remove seven screws.
4. Pull the rear cover upwards and then release three hooks.
5. Remove the rear cover.


Figure 1-2-24
6. Remove two screws and then remove the ISU right cover.
7. Remove the right upper cover.


Figure 1-2-25
8. Cut out the aperture plate (right side) on the right upper cover using nippers.


Figure 1-2-26
9. Remove fifteen screws and then remove the controller box cover.


Figure 1-2-27
10. Remove four wire holders.
11. Remove two connector (YC1 and YC27) from the main PWB.
12. Remove two screws and then remove the hard disk.

* : Be careful not to give excessive vibration and shock to a hard disk for breakage prevention.


Figure 1-2-28
13. Attaches four wire saddle to the controller box and four wire saddle to the IH box cover. Then release the hook of all wire saddles.
14. Release the hook of wire saddle $A$ (standard).


Figure 1-2-29
15. Remove two screws and then remove the ISU rear cover.


Figure 1-2-30
16. Attaches the wire saddle $B$ and the wire saddle $C$ to right upper section of the machine and then release two hooks of the thir.
17. Attach the edging to the aperture part.


Figure 1-2-31
18. Pass the key counter wire through the wire saddle $B$ and the wire saddle $C$ and then pull out from the aperture part.
19. Pass the key counter wire through the edging.
Note: Put a binding band on the front side of the wire saddle $C$.


Figure 1-2-32
20. Pass the connector of the key counter wire from Below through the aperture in the controller box and then connect to the connector (YC24) of the video PWB.
21. Fix the key counter wire using nine wire saddle $A$.
Note: When a key counter electric wire slackens, bundle and fix to $X$ position.


Figure 1-2-33
22. Refit the hard disk using two screws.
23. Connect two connectors to the connector (YC1 and YC27) of main PWB.
24. Put the wire in the wire guide and then fix it using four wire holders.
25. Fit the controller box cover using fifteen screws.
26. Fit the ISU rear cover using two screws.
27. Fit the right upper cover.

Note: Pass the connector of the key counter wire through the aperture (right side) in the right upper cover.
Note: Be careful not to put a key counter electric wire with the upper right cover.
28. Fit the ISU right cover using two screws.
29. Insert the projection of the key counter cover retainer in the aperture of the right upper cover.
30. Fit the key counter cover retainer using the two M4 x 10 screws.

Figure 1-2-34


Figure 1-2-35
31. Connect the key counter signal cable to the key counter wire.
32. Fit the key counter cover to the machine using the $\mathrm{M} 4 \times 6$ screw.
33. Fit the rear cover using seven screws.?
34. Put DP on the machine. connect the DP interface connector and then fit using two screws.
35. Insert the key counter into the key counter socket assembly.
36. Turn the main power switch on and enter the maintenance mode.
37. Run maintenance item U204 and select [Key-Counter] (see page P.1-3-83).
38. Exit the maintenance mode.
39. Check that the message requesting the key counter to be inserted is displayed on the touch panel when the key counter is pulled out.
40. Check that the counter counts up as copies are made.


Figure 1-2-36

## (2) Mounting on the document table



Key counter installation requires the following parts

| Parts | Quantity | Part.No. |
| :--- | :---: | :---: |
| Key counter | 1 | 3025418011 |
| Key counter set | 1 | 302A369709 |
| Key counter wire | 1 | 302MV46090 |
| Document table | 1 | 1902LC0UN1(option) |
| Wire saddle A | 1 | 7YZM610010++H01 |
| Wire saddle B | 1 | 7YZM610008++H01 |
| Wire saddle C |  | 7YZM610009++H01 |

Supplied parts of key counter set (302A369709):

| Parts | Quantity | Part.No. |
| :---: | :---: | :---: |
| Key counter socket assembly | 1 | 3029236241 |
| Key counter cover retainer | 1 | 302GR03010 |
| Key counter retainer | 1 | 302GR03020 |
| Key counter cover | 1 | 3066060011 |
| Key counter mount | 1 | 3066060041 |
| Edging | 2 - | 7YZM210006++H01 |
| Band | 1* | M21AH010 |
| M3 x 8 tap-tight P screw | 1* | 5MBTPB3008PW++R |
| M4 x 10 tap-tight P screw | 2* | 5MBTPB4010PW++R |
| M4 x 10 tap-tight S screw | 2* | 5MBTPB4010TW++R |
| M3 $\times 6$ bronze flat-head screw | 2 | 7BB003306H |
| M4 x 20 tap-tight S screw | 2 | 7BB100420H |
| M3 nut | 1 | 7BC1003055++H01 |
| M3 $\times 8$ bronze binding screw | 1* | B1B03080 |
| M $4 \times 30$ tap-tight S screw | 1* | B1B54300 |
| M4 x 6 chrome TP screw | 5 | B4A04060 |


| Parts | Quantity | Part.No. |
| :---: | :---: | :---: |
| M4 $\times 10$ chrome TP screw | $2^{*}$ | B4A04100 |

Supplied parts of document table (1902LCOUN1)

| Parts | Quantity | Part.No. |
| :---: | :---: | :---: |
| Tray stay | 1 | - |
| Tray mount | 1 | - |
| Tray cover | 1 | 302LC04600 |
| Tray lower cover | 1 | 302LC04710 |
| Tray retainer | 1* | - |
| Sheet | 2 - | 302LC04660 |
| Pin | 2 | 303NS24410 |
| M4 nut | 2* | 3CY06030 |
| M4 x 8 screw | 7 V | 7BB180408H |
| M4 x 10 screw | 2 | 7BB607410H |
| M4 x 14 screw | 2* | 7BB607414H |

* : Not used in this model.

A: One piece is used in this model.
$\boldsymbol{\nabla}$ : Six pieces are used in this model.

## Procedure

1. Press the power key on the operation panel to off. Make sure that the power indicator and the memory indicator are off before turning off the main power switch. And then unplug the power cable from the wall outlet.
2. Fit the key counter socket assembly to the key counter retainer using two screws and nut.
Note: Take out the wire from the central portion of the key counter retainer, as shown in a figure.
3. Fit the key counter mount to the key counter cover using two screws.
4. Fit the key counter retainer to the key counter mount using two screws.
5. Remove two screws of the DP interface connector and then remove the DP interface connector.
6. Remove the DP.
7. Remove seven screws.
8. Pull the rear cover upwards and then release three hooks.
9. Remove the rear cover.


Figure 1-2-37
6. Remove two screws and then remove the ISU right cover
7. Remove the right upper cover.


Figure 1-2-39
8. Cut out four ribs of the aperture plate (left side) on the right upper cover using nippers.
Note: Cut off the rib (lower part) certainly so that a projection does not remain.


Figure 1-2-40
9. Remove fifteen screws and then remove the controller box cover.

Figure 1-2-41
10. Remove four wire holders.
11. Remove two connector (YC1 and YC27) from the main PWB.
12. Remove two screws and then remove the hard disk.
Caution: Be careful not to give excessive vibration and shock to a hard disk for breakage prevention.


Figure 1-2-42
13. Attaches four wire saddle to the controller box and four wire saddle to the IH box cover.
Then release the hook of all wire saddles.
14. Release the hook of wire saddle $A$ (standard).


Figure 1-2-43
15. Remove two screws and then remove the ISU rear cover.


Figure 1-2-44
16. Attaches the wire saddle $B$ and the wire saddle $C$ to right upper section of the machine and then release two hooks of the thir.
17. Attach the edging to the aperture part.


Figure 1-2-45
18. Pass the key counter wire through the wire saddle $B$ and the wire saddle $C$ and then pull out from the aperture part. Note: Put a binding band on the out side of the wire saddle $B$.
19. Pass the key counter wire through the edging.


Figure 1-2-46
20. Pass the connector of the key counter wire from Below through the aperture in the controller box and then connect to the connector (YC24) of the video PWB.
21. Fix the key counter wire by using nine wire saddle A.
Note: When a key counter electric wire slackens, bundle and fix to X position.
22. Refit the hard disk using two screws.
23. Connect two connectors to the connector (YC1 and YC27) of main PWB.
24. Put the wire in the wire guide and then
fix it using four wire holders.
25. Fit the controller box cover using fifteen screws.
26. Fit the ISU rear cover using two screws.
27. Fit the right upper cover.

Note: Pass the connector of the key counter wire through the aperture (right side) in the right upper cover.
Note: Be careful not to put a key counter electric wire with the upper right cover.
28. Fit the ISU right cover using two screws.


Figure 1-2-47
. cove.


Figure 1-2-48
29. Fit the tray stay to the ISU right cover using two screws.


Figure 1-2-49
30. Snap in the tray mount to the tray stay and fix using two screws.


Figure 1-2-50
31. Cut out the aperture plate on the tray cover using nippers.
32. Fit the tray cover to the tray stay using four screws.
33. Fit the key counter cover retainer using two screws.

Figure 1-2-51



Figure 1-2-52
34. Pass the key counter signal cable through the aperture in the document table.
35. Fit the key counter cover to the document table using the screw.
36. Connect the key counter signal cable to the key counter wire.


Figure 1-2-53

## 37. Fit the tray lower cover.

Note: Install the key counter signal cable and key counter wire so that they are held behind the tray lower cover.


Figure 1-2-54
38. Secure the tray lower cover with two pins.


Figure 1-2-55
39. Adhere the sheet onto right side of the document table.
40. Fit the rear cover using seven screws.?
41. Put DP on the machine. connect the DP interface connector and then fit using two screws.
42. Insert the key counter into the key counter socket assembly.
43. Turn the main power switch on and enter the maintenance mode.
44. Run maintenance item U204 and select [Key-Counter] (see page P.1-3-83).
45. Exit the maintenance mode.
46. Check that the message requesting the key counter to be inserted is displayed on the touch panel when the key counter is pulled out.
47. Check that the counter counts up as copies are made.


Figure 1-2-56

## 1-2-4 Installing the gigabit ethernet board (option)

Gigabit ethernet board installation requires the following parts:

| Parts | Quantity | Part.No. |
| :---: | :---: | :---: |
| Gigabit ethernet board | 1 | 1505JV0UN0 (option) |

## Procedure

1. Press the power key on the operation panel to off. Make sure that the power indicator and the memory indicator are off before turning off the main power switch. And then unplug the power cable from the wall outlet.
2. Remove two pins and then remove the slot cover of the OPT2.


Figure 1-2-57
3. Insert the gigabit ethernet board along the groove in OPT2 and secure the board with two pins that have been removed in step 2.
Caution: Do not directly touch the gigabit ethernet board terminal.
Hold the top and bottom of the gigabit ethernet board, or the projection of the board to insert the gigabit ethernet board.


Figure 1-2-58
4. Plug the modular connector cable into the line terminal,


Figure 1-2-59

## 1-2-5 Installing the IC card reader holder (option)

IC card reader holder installation requires the following parts:

| Parts | Quantity | Part.No. |
| :--- | :---: | :---: |
| IC card reader holder | 1 | 1709ADOUNO (option) |

Supplied parts of IC card reader holder (1709ADOUN0):

| Parts | Quantity | Part.No. |
| :--- | :---: | :---: |
| Card reader case | 1 | - |
| Card reader base | 1 | - |
| Card reader mount | 1 | - |
| Card reader tray | 1 | - |
| USB Wire (For extension) | 1 | - |
| Pin | 3 | 303NS24410 |
| Clamp | 6 | 7YZM690002++H01 |

The card reader base, card reader mount, and the pin are packaged as an assembled kit.

## Procedure

1. Press the power key on the operation panel to off. Make sure that the power indicator and the memory indicator are off before turning off the main power switch. And then unplug the power cable from the wall outlet.
2. Remove the pin of the card reader base and then remove the card reader mount.


Figure 1-2-60
3. Fit the card reader mount to left upper section of the machine using two pins.


Figure 1-2-61
4. Refit the card reader base to card reader mount using the pin removed in step 2.


Figure 1-2-62
5. Fit the card reader tray to the card reader base.
Choose the direction of mounting the IC card reader according to the depth of the reader.
10 mm to 22 mm : Face the mark A upwards.
Less than 10 mm : Face the mark $B$ upwards.


Figure 1-2-63
6. Route the USB wire of the IC card reader through the aperture of the card reader base and mount the IC card reader on the card reader base.
7. Hook the two hooks of the card reader case to fit the card reader case to the card reader base.
Press its top until it clicks in.


Figure 1-2-64


Figure 1-2-65
8. Fit six clamps.


Figure 1-2-66
9. Pass the USB wire of the IC card reader through six clamps and then fasten the wire.
10. Connect the USB wire to the machine.


Figure 1-2-67

## Enabling IC Card Authentication

## Precautions

To install the optional function, you need the License Key. Please access the designated website of your dealer or service representative, and register "Machine No." indicated on your machine and "Product ID" indicated on the License Certificate supplied with the product to issue the License Key.

1. Turn the main power switch on.
2. Press the System Menu key and then press [System].

If user login administration is disabled, the user authentication screen appears.
Enter your login user name and password and then press [Login]. For this, you need to log in with administrator privileges.
3. Press [Next] of Optional Function.
4. Select CARD AUTHENTICATION KIT(B) and press [Activate].
5. The License Key entry screen is displayed.

Enter the License Key using the numeric keys and press [Official].
6. Confirm the product name CARD AUTHENTICATION KIT(B) and press [Yes].
7. To use a SSFC card, run maintenance mode U222 and set SSFC.

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## 1-3-1 Maintenance mode

The machine is equipped with a maintenance function which can be used to maintain and service the machine.

## (1) Executing a maintenance item



## (2) Maintenance modes item list

| Section | Item No. | Content of maintenance item | Initial setting |
| :---: | :---: | :---: | :---: |
| General | U000 | Outputting an own-status report | - |
|  | U001 | Exiting the maintenance mode | - |
|  | U002 | Setting the factory default data | - |
|  | U003 | Setting the service telephone number |  |
|  | U004 | Setting the machine number | - |
|  | U010 | Setting the maintenance mode ID | - |
|  | U019 | Displaying the firrmware version | - |
| Initialization | U021 | Memory initializing | - |
|  | U024 | HDD formatting | - |
| Drive, paper feed and paper conveying system | U030 | Checking the operation of the motors | - |
|  | U031 | Checking switches and sensors for paper conveying | - |
|  | U032 | Checking the operation of the clutches | - |
|  | U033 | Checking the operation of the solenoids | - |
|  | U034 | Adjusting the print start timing LSU Out Top <br> LSU Out Left | $\begin{gathered} \text { 41/41/41 } \\ 0 / 0 / 0 / 0 / 0 / 0 \end{gathered}$ |
|  | U035 | Setting the printing area for folio paper | 330/210 |
|  | U037 | Checking the operation of the fan motors | - |
|  | U051 | Adjusting the deflection in the paper | 0/0/0/0 |
|  | U053 | Setting the adjustment of the motor speed <br> Full <br> Half <br> 3/4 | $-1 /-3 /-5 /-5 /-3 /-3 / 13 / 0 / 0 / 0$ <br> $-3 /-2 /-3 /-3 /-1 /-1 / 3 / 0 / 0 / 0$ <br> -1/-3/-4/-4/-2/-2/10/0/0/0 |
| Optical | U061 | Checking the operation of the exposure lamp | - |
|  | U063 | Adjusting the shading position | 0 |
|  | U065 | Adjusting the scanner magnification | 0/0 |
|  | U066 | Adjusting the scanner leading edge registration | 0/0 |
|  | U067 | Adjusting the scanner center line | 0/0 |
|  | U068 | Adjusting the scanning position for originals from the DP | 0/0 |
|  | U070 | Adjusting the DP magnification | 0/0 |
|  | U071 | Adjusting the DP scanning timing | 0/0/0/0 |
|  | U072 | Adjusting the DP center line | 0/0 |
|  | U073 | Checking the scanner operation | 100/10200/1 |
|  | U074 | Adjusting the DP input light luminosity | 1 |


| Section | Item No. | Content of maintenance item | Initial setting |
| :---: | :---: | :---: | :---: |
| Optical | U087 | Setting DP reading position modification operation | 145/145/145 |
|  | U089 | Outputting a MIP-PG pattern | - |
|  | U099 | Adjusting original size detection | 0/0/0/0/0 50/50/50/50/50/50/50/50/50 0/0/0/0/0 |
| High voltage | U100 | Setting the main high voltage | Auto $0 / 0 / 0 / 0$ $-/-/--$ $145 / 145 / 145 / 145$ Mode0 3 Mode0 Off |
|  | U101 | Setting the voltage for the primary transfer <br> Base <br> 1st side <br> 2nd side <br> B/W | $\begin{gathered} 45 / 36 / 25 \\ 5 / 5 / 0 / 5 \\ 2 / 2 /-3 / 2 \\ 30 \end{gathered}$ |
|  | U106 | Setting the voltage for the secondary transfer Color-Light/Normal1-1st Side <br> Color-Light/Normal1-2nd Side <br> Color-Normal2/3-1st Side <br> Color-Normal2/3-2nd Side <br> Color-Heavy1-1st Side <br> Color-Heavy1-2nd Side <br> Color-Heavy2/3-1st Side <br> Color-Heavy2/3-2nd Side <br> Color-OHP <br> Color-Coated <br> B/W-Light/Normal3-1st Side <br> B/W-Light/Normal3-2nd Side <br> B/W-Heavy1-1st Side <br> B/W-Heavy1-2nd Side <br> B/W-Heavy2/3-1st Side <br> B/W-Heavy2/3-2nd Side | $83 / 58 / 42$ $88 / 60 / 40$ $85 / 60 / 44$ $90 / 62 / 42$ $64 / 45 / 33$ $68 / 47 / 32$ $54 / 37 / 25$ $57 / 37 / 25$ $40 / 33 / 25$ $59 / 42 / 31$ $78 / 53 / 40$ $83 / 55 / 38$ $60 / 41 / 31$ $64 / 43 / 30$ $51 / 35 / 25$ $54 / 34 / 25$ |
|  | U107 | Setting the voltage for the intermediate transfer cleaning <br> Belt(A) <br> Belt(B) <br> Belt(C) | 13/9/10/13/10/9 90/45/68/75/35/53 90/45/68/75/35/53 |


| Section | Item No. | Content of maintenance item | Initial setting |
| :---: | :---: | :---: | :---: |
| High voltage | U108 | Setting separation shift bias Ligjt/Normal1 <br> Normal2/3 <br> Heavy1 <br> Coated <br> Timing | $\begin{gathered} 20 / 20 \\ 10 / 12 \\ 10 / 10 \\ 10 / 10 \\ 3 / 0 / 0 / 100 \end{gathered}$ |
|  | U110 | Checking the drum count | 0/0/0/0 |
|  | U111 | Checking the drum drive time | 0/0/0/0 |
|  | U117 | Checking the drum number | - |
|  | U118 | Displaying the drum history | - |
|  | U122 | Checking the transfer belt unit number | - |
|  | U123 | Displaying the transfer belt unit history | - |
|  | U127 | Checking/clearing the transfer count | 0/0/0/0 |
| Developer | U135 | Checking toner motor operation | - |
|  | U136 | Setting toner near end detection | 3/3 |
|  | U139 | Displaying the temperature and humidity outside the machine | - |
|  | U140 | Setting developer bias <br> Mag DC <br> Sleeve DC <br> Clock Freq <br> Clock Duty <br> AC Ctrl <br> On Timing <br> Off Timing | $480 / 480 / 450 / 450 / 50 / 50 / 50 / 50 / 380 /$ $380 / 350 / 350$ $180 / 180 / 150 / 150 / 150 / 150 / 150 / 150 /$ $180 / 180 / 150 / 150$ $36 / 36 / 36 / 36 / 36 / 36 / 36 / 36 / 36 / 36 / 36 /$ 36 $37 / 37 / 37 / 37 / 33 / 33 / 33 / 33 / 33 / 33 / 33 /$ 33 $1500 / 1500 / 1500 / 1500 / 1150 / 1150 /$ $1150 / 1150 / 1150 / 1150 / 1150 / 1150$ $0 / 0 / 0 / 0$ $0 / 0 / 0 / 0$ |
|  | U147 | Setting for toner applying operation | 0/60 |
|  | U150 | Checking sensors for toner | - |
|  | U157 | Checking the developer drive time | 0/0/0/0 |
|  | U158 | Checking the developer count | 0/0/0/0 |
| Fuser | U161 | Setting the fuser control temperature | 210/240/190/110/100/125/150/155/ 155/130/150/240/90/50/200/95 |
|  | U163 | Resetting the fuser problem data | - |
|  | U167 | Checking/setting the fuser count | 0/0/0 |
|  | U169 | Checking/setting the fuser power source | - |
|  | U199 | Displaying fuser heater temperature | - |


| Section | Item No. | Content of maintenance item | Initial setting |
| :---: | :---: | :---: | :---: |
| Operation panel and support equipment | U200 | Turning all LEDs on | - |
|  | U201 | Initializing the touch panel | - |
|  | U202 | Setting the KMAS host monitoring system | - |
|  | U203 | Checking DP operation | - |
|  | U204 | Setting the presence or absence of a key card or key counter | Off/Coin Vender |
|  | U206 | Setting the presence or absence of a coin vender <br> Normal <br> B/W <br> CMY <br> RGB <br> Full Color | $\begin{gathered} 10 / 10 / 10 / 10 \\ 100 / 50 / 30 / 50 \\ 100 / 50 / 30 / 50 \\ 100 / 50 / 30 / 50 \end{gathered}$ |
|  |  | AD <br> B/W <br> CMY <br> RGB <br> Full Color | $\begin{gathered} 10 / 10 / 10 / 10 \\ 100 / 50 / 30 / 50 \\ 100 / 50 / 30 / 50 \\ 100 / 50 / 30 / 50 \end{gathered}$ |
|  |  | Print <br> B/W <br> Full Color | $\begin{gathered} \text { 10/10/10/10 } \\ 100 / 50 / 30 / 50 \end{gathered}$ |
|  |  | Boot Mode | Normal |
|  | U207 | Checking the operation panel keys | - |
|  | U221 | Setting the USB host lock function | Off |
|  | U222 | Setting the IC card type | Other |
|  | U223 | Operation panel lock | Unlock |
|  | U224 | Install original panel display | - |
|  | U243 | Checking the operation of the DP motors | - |
|  | U244 | Checking the DP switches | - |
|  | U245 | Checking messages | - |


| Section | Item No. | Content of maintenance item | Initial setting |
| :---: | :---: | :---: | :---: |
| Mode setting | U250 | Checking/clearing the maintenance cycle | - |
|  | U251 | Checking/clearing the maintenance counter | - |
|  | U252 | Setting the destination | - |
|  | U253 | Switching between double and single counts | Double count (A3/Ledger) |
|  | U260 | Selecting the timing for copy counting | Eject |
|  | U265 | Setting OEM purchaser code | - |
|  | U276 | Setting the copy count mode | Mode0 |
|  | U278 | Setting the delivery date | - |
|  | U284 | Setting 2 color copy mode | Off |
|  | U285 | Setting service status page | ON |
|  | U325 | Setting the paper interval | 1 |
|  | U326 | Setting the black line cleaning indication | ON/8 |
|  | U332 | Setting the size conversion factor <br> Rate <br> Mode <br> Level 1 <br> Level 2 | 1.0 |
|  | U340 | Setting the applied mode Adj Memory <br> Adj Max Job |  |
|  | U341 | Specific paper feed location setting for printing function | Off/Off/Off |
|  | U343 | Switching between duplex/simplex copy mode | Off |
|  | U345 | Setting the value for maintenance due indication | 0 |
| Image processing | U402 | Adjusting margins of image printing | 4.0/3.0/3.0/3.9 |
|  | U403 | Adjusting margins for scanning an original on the contact glass | 2.0/2.0/2.0/2.0 |
|  | U404 | Adjusting margins for scanning an original from the DP | 3.0/2.5/3.0/4.0 |
|  | U407 | Adjusting the leading edge registration for memory image printing | 0 |
|  | U410 | Adjusting the halftone automatically | Table1 |
|  | U411 | Adjusting the scanner automatically | - |
|  | U415 | Adjusting the print position automatically | - |


| Section | Item No. | Content of maintenance item | Initial setting |
| :---: | :---: | :---: | :---: |
| Image processing | U425 | Setting the target <br> Chart1 <br> White <br> Black <br> Grav1 <br> Grav2 <br> Grav3 <br> C <br> M <br> Y <br> R <br> G <br> B <br> Adjust Original | $\begin{gathered} 93.6 / 0.9 /-0.4 \\ 10.6 /-0.2 /-0.7 \\ 76.2 /-0.2 / 1.2 \\ 25.2 /-0.2 /-0.2 \\ 51.3 /-0.3 / 0.3 \\ 72.6 /-32.8 /-11.5 \\ 48.1 / 69.9 /-6.1 \\ 86.2 /-18.6 / 81.7 \\ 46.7 / 54.2 / 38.6 \\ 67.8 /-51.3 / 48.9 \\ 38.8 / 25.3 /-22.8 \\ 5.0 / 10.0 / 190.0 \end{gathered}$ |
|  |  | Chart2/CCD <br> N875 <br> N475 <br> N125 <br> C <br> M <br> Y <br> R <br> G <br> B <br> Adjust Original Chart2/DP | $\begin{gathered} 85.4 / 0.0 / 1.1 \\ 52.0 /-1.3 / 2.4 \\ 21.0 /-0.5 / 2.5 \\ 55.2 /-29.7 /-45.0 \\ 45.9 / 71.2 /-2.1 \\ 86.3 /-9.8 / 89.1 \\ 45.5 / 63.2 / 43.3 \\ 48.4 /-70.6 / 25.9 \\ 23.6 / 21.3 /-42.9 \\ 15.0 / 10.0 / 190.0 \\ 15.0 / 15.0 / 390.0 \end{gathered}$ |
|  | U429 | Setting the offset for the color balance <br> Text+Photo <br> Photo <br> Photo/Printout <br> Text <br> Graphics/Map <br> Copy/Printout | 0/0/0/0 <br> 0/0/0/0 <br> 0/0/0/0 <br> 0/0/0/0 <br> 0/0/0/0 <br> 5/5/5/5 |
|  | U464 | Setting the ID correction operation <br> Permission <br> Time interval <br> Bias target <br> Gamma target | On/On 20/18/11 $760 / 760 / 750 / 820$ $300 / 300 / 300 / 400$ |
|  | U467 | Setting the color registration adjustment | On/4 |


| Section | Item No. | Content of maintenance item | Initial setting |
| :---: | :---: | :---: | :---: |
| Image processing | U468 | Checking the color registration data <br> Auto(C) <br> Auto(M) <br> Auto(Y) <br> Manual(C) <br> Manual(M) <br> Manual(Y) | - |
|  | U469 | Adjusting the color registration Regist | - |
|  | U470 | Setting the JPEG compression ratio Copy <br> Photo <br> Text <br> Send <br> Photo <br> Text <br> HC-PDF(BG) <br> HC-PDF(Char) <br> System | $90 / 90$ $90 / 90$ $70 / 90 / 30 / 40 / 51 / 70 / 90 / 30 / 40 / 51$ $70 / 90 / 30 / 40 / 51 / 70 / 90 / 30 / 40 / 51$ $15 / 25 / 90 / 15 / 25 / 90$ $15 / 25 / 90 / 15 / 25 / 90 /$ $90 / 90$ |
|  | U473 | Adjusting laser power output | - |
|  | U485 | Setting the image processing mode | 1/0 |
|  | U486 | Setting color/black and white operation mode | Mode2 |


| Section | Item <br> No. | Content of maintenance item | Initial setting |
| :---: | :---: | :---: | :---: |
| Fax | U600 | Initializing all data | - |
|  | U601 | Initializing permanent data | - |
|  | U603 | Setting user data 1 | - |
|  | U604 | Setting user data 2 | - |
|  | U605 | Clearing data | - |
|  | U610 | Setting system 1 <br> Setting:[Cut Line(100\%)] <br> Setting:[Cut Line(Auto)] <br> Setting:[Cut Line(100\%)] | $\begin{aligned} & 3 \\ & 0 \\ & 0 \end{aligned}$ |
|  | U611 | Setting system 2 <br> Setting:[Adj Lines] <br> Setting:[Adj Lines(A4)] <br> Setting:[Adj Lines(LT)] | 7 $22$ $26$ |
|  | U612 | Setting system 3 Setting:[Auto Reduct] Setting:[Protocol List] | On <br> Off |
|  | U615 | Setting system 6 | Ledger |
|  | U620 | Setting the remote switching mode | One |
|  | U625 | Setting the transmission system 1 Setting:[Interval] <br> Setting:[Times] | $\begin{aligned} & 2 \\ & 3 \end{aligned}$ |
|  | U630 | Setting communication control 1 <br> Setting:[TX Speed] <br> Setting:[RX Speed] <br> Setting:[TX Echo] <br> Setting:[RX Echo] | $\begin{gathered} \text { 14400bps/V17 } \\ \text { 14400bps } \\ 300 \\ 75 \end{gathered}$ |
|  | U631 | Setting communication control 2 <br> Setting:[ECM TX] <br> Setting:[ECM RX] <br> Setting:[CED Freq] | $\begin{gathered} \text { On } \\ \text { On } \\ 2100 \\ \hline \end{gathered}$ |
|  | U632 | Setting communication control 3 <br> Setting:[DIS 4Byte] <br> Setting:[Num OF CNG(F/T)] | Off 2Time |


| Section | Item No. | Content of maintenance item | Initial setting |
| :---: | :---: | :---: | :---: |
| Fax | U633 | Setting communication control 4 <br> Setting:[V.34] <br> Setting:[DIS 2Res] <br> Setting:[DIS 2Res] <br> Setting:[RTN Check] | On <br> On <br> Once $15 \%$ |
|  | U634 | Setting communication control 5 | 0 |
|  | U640 | Setting communication time 1 <br> Setting:[Time (One)] <br> Setting:[Time (Cont)] | $\begin{gathered} 7 \\ 80 \end{gathered}$ |
|  | U641 | Setting communication time 2 Setting:[T0 Time Out] Setting:[T1 Time Out] Setting:[T2 Time Out] Setting:[Ta Time Out] Setting:[Tb1 Time Out] Setting:[Tb2 Time Out] Setting:[Tc Time Out] Setting:[Td Time Out] | $\begin{gathered} 56 \\ 36 \\ 69 \\ 30 \\ 20 \\ 80 \\ 60 \\ 6 \end{gathered}$ |
|  | U650 | Setting modem 1 <br> Setting:[Reg G3 TX Eqr] <br> Setting:[Reg G3 RX Eqr] <br> Setting:[RX Mdm Level] | $\begin{gathered} 0 \mathrm{~dB} \\ 0 \mathrm{~dB} \\ -43 \mathrm{dBm} \end{gathered}$ |
|  | U651 | Setting modem 2 <br> Modem output level <br> DTMF output level (main value) <br> DTMF output level (level difference) | $\begin{gathered} -11 \\ -8 \\ 2 \end{gathered}$ |
|  | U660 | Setting the NCU <br> Setting:[Exchange] <br> Setting:[Dial Tone] <br> Setting:[Busy Tone] <br> Setting:[PBX Setting] <br> Setting:[DC Loop] | PSTN <br> On <br> On <br> Loop <br> On |
|  | U670 | Outputting lists | - |
|  | U671 | Clear FAX back up data |  |
|  | U695 | FAX function customize | On/Off |
|  | U698 | Setting the port addressed in maintenance mode |  |
|  | U699 | Setting the software switches | - |



## (3) Contents of the maintenance mode items

| Item No. |  | Description |
| :---: | :---: | :---: |
| U000 | Outputting an own-status report <br> Description <br> Outputs lists of the current settings of the maintenance items and paper jam and service call occurrences. Outputs the event log. Also sends output data to the USB memory. <br> Purpose <br> To check the current setting of the maintenance items, or paper jam or service call occurrences. Before initializing or replacing the backup RAM, output a list of the current settings of the maintenance items to reenter the settings after initialization or replacement. <br> Method:Outputs the report <br> 1. Press the start key. <br> 2. Select the item to be output. |  |
|  | Display | Output list |
|  | Maintenance User Status Service Status Event Network Status All | List of the current settings of the maintenance modes <br> Outputs the user status page <br> Outputs the service status page <br> Outputs the event log <br> Outputs the network status page <br> Outputs the all reports |
|  | 3. Select [Print]. <br> 4. Press the start key When A4/Letter p location. <br> The output status | is output. available, a report of this size is output. If not, specify the paper feed ayed. |
|  | Display | Description |
|  | --- <br> Active <br> OK | During output standby <br> During output process <br> Output process completion |


| Item No. | Description |
| :---: | :--- | :--- |
| U000 | Method: Send to the USB memory <br> 1. Press the power key on the operation panel, and after verifying the main power indicator has <br> gone off, switch off the main power switch. <br> 2. Insert USB memory in USB memory slot. <br> 3. Turn the main power switch on. <br> 4. Enter the maintenance item. <br> 5. Press the start key. <br> 6. Select the item to be send. <br> Display <br> USB (Text) <br> USB (HTML) <br> 7. Press the start key. <br> Output will be sent to the USB memory. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. <br> Sends output data to the USB memory (HTML type) |



Figure 1-3-1

| Item No. | Description |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| U000 | Detail of event log |  |  |  |  |
|  | No. | Items | Description |  |  |
|  | (1) | System version |  |  |  |
|  | (2) | System date |  |  |  |
|  | (3) | Engine soft version |  |  |  |
|  | (4) | Engine boot version |  |  |  |
|  | (5) | Controller BROM version |  |  |  |
|  | (6) | Operation panel mask version |  |  |  |
|  | (7) | Machine serial number |  |  |  |
|  | (8) | Paper Jam Log | \# | Count. | Event |
|  |  |  | Remembers 1 to 16 of occurrence. If the occurrence of the previous paper jam is less than 16 , all of the paper jams are logged. When the occurrence excesseds 16 , the oldest occurrence is removed. | The total page count at the time of the paper jam. | Log code (hexadecimal, 5 categories) <br> (a) Cause of a paper jam <br> (b) Paper source <br> (c) Paper size <br> (d) Paper type <br> (e) Paper eject |
|  |  |  | (a) Cause of paper jam (Hexadecimal) |  |  |
|  |  |  | For details on the case of paper jam, refer to Paper Misfeed Detection. (P.1-4-2) |  |  |
|  |  |  | (b) Detail of paper source (Hexadecimal) |  |  |
|  |  |  | 00: MP tray <br> 01: Cassette 1 <br> 02: Cassette 2 <br> 03: Cassette 3 (paper feeder) <br> 04: Cassette 4 (paper feeder) <br> 05 to 09: Reserved |  |  |
|  |  |  | (c) Detail of paper size (Hexadecimal) |  |  |
|  |  |  | 00: (Not specified) 01: Monarch 02: Business 03: International DL 04: International C5 05: Executive 06: Letter-R 86: Letter-E 07: Legal 08: A4R 88: A4E 09: B5R 89: B5E 0A: A3 | OB: B4 <br> OC: Ledger <br> OD: A5R <br> OE: A6 <br> OF: B6 <br> 10: Commercial \#9 <br> 11: Commercial \#6 <br> 12: ISO B5 <br> 13: Custom size <br> 1E: C4 <br> 1F: Postcard <br> 20: Reply-paid postcard <br> 21: Oficio II | 22: Special 1 <br> 23: Special 2 <br> 24: A3 wide <br> 25: Ledger wide <br> 26: Full bleed paper <br> ( $12 \times 8$ ) <br> 27: 8 K <br> 28: 16K-R <br> A8: 16K-E <br> 32: Statement-R <br> B2: Statement-E <br> 33: Folio <br> 34: Western type 2 <br> 35: Western type 4 |





Figure 1-3-2

## Engine Information

(38) NVRAM Version
(39) Scanner Version
(40) FAX Slot1

FAX BOOT Version
FAX APL Version FAX IPL Version
(41) MAC Address

| Item No. |  |
| :---: | :--- |
| U000 | Service status page (2) |
|  | Service Status Page <br>  |

Firmware version 2MV_2000.000.000 2011.08.02

## Description

Service status page (2)
Service Status Page
MFP
$[X X X X X X X X][X X X X X X X X][X X X X X X X X]$

## Send Information

(42) Date and Time 11/08/02 15:15
(43) Address
$1 / 2$ (44) (45)
(46) 100/100
(47) 0/0/0/0/0/0/0/0
(48) 0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/

0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/ FOO/U00/0/0/0/0/30/30/70/70/abcde/1/0/1/ (49)(50)(51)(52)(53)(54)(55)(56)(57)(58)(59)(60)(61)(62)
(63) 0000/0000/0000/0000/0000/0000/0000/0000/0000/0000/0000/0000/0000/0000/0000/ 0000/0000/0000/0000/0000/0000/0000/0000/0000/0000/
(64) 0000/0100/0500/1000/0000/0100/0500/1000/0000/0100/0500/1000/0000/0100/0500/1000/ 0000/0100/0500/1000/0000/0100/0500/1000/0000/0100/0500/1000/0000/0100/0500/1000/
(65) 0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/000000000000000 (50000000000/ 0000000000000000/00000000/
(66) 0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
(67) 0000000000000000/0000000000000000/0000000000000000/
(68) 0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/000000000000000 ( $7000000000 /$
(69) $0000000000000000 / 0000000000000000 / 0000000000000000 / 0000000000000000 / 0000000000000000 / 00000000000000001$ )
(70) 0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/000000000000000 , 0000000000/
(71) 0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/000000000000000 10000000000/
(72) 0000000000000000/0000000000000000/0000000000000000/
(73) 0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000
(74) $0000000000000000 / 0000000000000000 / 0000000000000000 / 0000000000000000 / 0000000000000000 / 000000000000000$ ( $30000000000 /$
(75) 0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000, 1000000000/
(76) 0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/ 000000000/
(77) 12345678/11223344/00001234abcd567800001234abcd5678/01234567890123456789012345678901/0008/00/07

12345678/11223344/00001234abcd567800001234abcd5678/01234567890123456789012345678901/0008/00/07 12345678/11223344/00001234abcd567800001234abcd5678/01234567890123456789012345678901/0008/00/07
12345678/11223344/00001234abcd567800001234abcd5678/01234567890123456789012345678901/0008/00/07
(78) XXXXXXXX
[ABCDEFGHIJ] [ABCDEFGHIJ] (79) (80)
[ABCDEFGHIJ] [ABCDEFGHIJ] (81) (82)
(83) 00070107FE/0700FEOOFE/00FE000100/0000000000/0000000000/0000000000/00000A010A/OA0A0A3200/0000000000/0000000000/ 0008000000/080000001D/0096009B00/9B009BFFFB/0082000000/000000001F/0000002C00/0000000000/0000000000/0000000000/ 0000000000/0000000000/0000000000
0/3/ (84) (85)
0/12.3/56.7/ (86) (87) (88)
1/1/1/0/1/0 2010/12/15 12:34:56 (89)
1/5/ (90)(91)
ABCDEFGHIJKL/ABCDEFGHIJKL/ABCDEFGHIJKL/ABCDEFGHIJKL/ (92)

Figure 1-3-3

| Item No. |  |  | Description |
| :---: | :---: | :---: | :---: |
| U000 | Detail of service status page |  |  |
|  | No. | Description | Supplement |
|  | (1) | Firmware version | - |
|  | (2) | System date | - |
|  | (3) | Engine soft version | - |
|  | (4) | Engine boot version | - |
|  | (5) | Operation panel mask version | - |
|  | (6) | Machine serial number | - |
|  | (7) | Total memory size | - |
|  | (8) | Local time zone | - |
|  | (9) | Report output date | Day/Month/Year hour:minute |
|  | (10) | NTP server name | - |
|  | (11) | Presence or absence of the document processor | Installed/Not installed |
|  | (12) | Presence or absence of the paper feeder | Installed/Not installed |
|  | (13) | Presence or absence of the side feeder | Installed/Not installed |
|  | (14) | Presence or absence of the finisher | 500-sheet finisher/Not Installed |
|  | (15) | Presence or absence of the IC card authentication kit | Installed/Not Installed/Trial |
|  | (16) | Presence or absence of the internet fax kit | Installed/Not Installed |
|  | (17) | Presence or absence of the data security kit | Installed/Not Installed |
|  | (18) | Presence or absence of the UG-33 | Installed/Not Installed |
|  | (19) | Presence or absence of the USB keyboard | Connected/Not connected |
|  | (20) | USB keyboard setting display | US-English/US-English with Euro/German/French |
|  | (21) | Page of relation to the A4/Letter | - |
|  | (22) | Average coverage for total | Black/Cyan/Magenta/Yellow |
|  | (23) | Average coverage for copy | Black/Cyan/Magenta/Yellow |
|  | (24) | Average coverage for printer | Black/Cyan/Magenta/Yellow |
|  | (25) | Average coverage for fax | Black/Cyan/Magenta/Yellow |


| Item No. | Description |  |  |
| :---: | :---: | :---: | :---: |
| U000 |  |  |  |
|  | No. | Description | Supplement |
|  | (26) | Cleared date and output date | - |
|  | (27) | Coverage on the final output page | - |
|  | (28) | Fax kit information | This item is printed only when the fax kit is installed. |
|  | (29) | Number of rings | 0 to 15 |
|  | (30) | Number of rings before automatic switching | 0 to 15 |
|  | (31) | Number of rings before connecting to answering machine | 0 to 15 |
|  | (32) | Optional DIMM size | - |
|  | (33) | FRPO setting | - |
|  | (34) | RP code | Code the engine software version and the date of update. |
|  | (35) | RP code | Code the main software version and the date of update. |
|  | (36) | RP code | Code the engine software version and the date of the previous update. |
|  | (37) | RP code | Code the main software version and the date of the previous update. |
|  | (38) | NV RAM version | _ 1F3 1225 _ 1F3 1225 <br> (a) (b) (c) (d) (e) (f) <br> (a) Consistency of the present software version and the database <br> _ (underscore): OK <br> * (Asterisk): NG <br> (b) Database version <br> (c) The oldest time stamp of database version <br> (d) Consistency of the present software version and the ME firmware version <br> _ (underscore): OK <br> * (Asterisk): NG <br> (e) ME firmware version <br> (f) The oldest time stamp of the ME database version <br> Normal if (a) and (d) are underscored, and (b) and (e) are identical with (c) and (f). |
|  | (39) | Scanner firmware version | - |
|  | (40) | Fax firmware version | This item is printed only when the fax kit is installed. |
|  | (41) | Mac address | - |


| Item No. | Description |  |  |
| :---: | :---: | :---: | :---: |
| U000 |  |  |  |
|  | No. | Description | Supplement |
|  | (42) | The last sent date and time | - |
|  | (43) | Transmission address | - |
|  | (44) | Destination information | - |
|  | (45) | Area information | - |
|  | (46) | Margin settings | Top margin/Left margin |
|  | (47) | Margin/Page length/Page width settings | Top margin integer part/Top margin decimal part/ Left margin integer part/Left margin decimal part/ Page length integer part/Page length decimal part/ Page width integer part/Page width decimal part |
|  | (48) | Life counter (The first line) | Machine life/MP tray/Cassette 1/Cassette 2 / Cassette 3/Cassette 4/Cassette 5/Cassette 6/ Cassette 7/Duplex |
|  |  | Life counter (The second line) | Drum unit K/Drum unit C/Drum unit M/Drum unit $\mathrm{Y} /$ Transfer belt unit/Developer unit K/ Developer unit C/Developer unit M/ Developer unit Y/Maintenance kit A/ Maintenance kit $B /$ Maintenance kit $C$ |
|  | (49) | Panel lock information | 0: Off/1: Partial lock/2: Full lock |
|  | (50) | USB information | U00: Not installed/U01: Full speed/U02: Hi speed |
|  | (51 | Paper handling information | 0: Paper source unit select/1: Paper source unit |
|  | (52) | Color printing double count mode | 0 : All single counts <br> 1: A3, Single count, Less than 420 mm (length) <br> 2: Legal, Single count, 356 mm or less (length) <br> 3: Folio, Single count, Less than 330 mm (length) |
|  | (53) | Black and white printing double count mode | 0 : All single counts <br> 1: A3, Single count, Less than 420 mm (length) <br> 2: Legal, Single count, 356 mm or less (length) <br> 3: Folio, Single count, Less than 330 mm (length) |
|  | (54) | Billing counting timing | - |
|  | (55) | Temperature (machine inside) | - |
|  | (56) | Temperature (machine outside) | - |
|  | (57) | Relative humidity (machine outside) | - |
|  | (58) | Humidity (machine inside) | - |
|  | (59) | Fixed assets number | - |
|  | (60) | Job end judgment time-out time | - |
|  | (61) | Job end detection mode | - |
|  | (62 | Prescribe environment reset | $\begin{aligned} & \text { 0: Off } \\ & \text { 1: On } \end{aligned}$ |


| Item No. | Description |  |  |
| :---: | :---: | :---: | :---: |
| U000 |  |  |  |
|  | No. | Description | Supplement |
|  | (63) | Media type attributes 1 to 28 (Not used: 18, 19, 20) | Weight settings Fuser settings <br> 0: Light 0: High <br> 1: Normal 1 1: Middle <br> 2: Normal 2 2: Low <br> 3: Normal 3 3: Vellum <br> 4: Heavy 1 Duplex settings <br> 5: Heavy 2 0: Disable <br> 6: Heavy 3 1: Enable <br> 7: Extra Heavy  |
|  | (64) | Calibration information | Black/Cyan/Magenta/Yellow |
|  | (65) | Calibration information | - |
|  | (66) |  |  |
|  | (67) | Calibration information | - |
|  | (68) | Calibration information | - |
|  | (69) | Calibration information | - |
|  | (70) | Calibration information | - |
|  | (71) | Calibration information | - |
|  | (72) |  |  |
|  | (73) |  | - |
|  | (74) |  | - |
|  | (75) | Calibration information | - |
|  | (76) | Calibration information | - |
|  | (77) | RFID information | - |
|  | (78) | RFID reader/writer version information | - |
|  | (79) | Color table version for printer | - |
|  | (80) | Color table 2 version for printer | - |
|  | (81) | Color table version for copy | - |
|  | (82) | Color table 2 version for copy | - |
|  | (83) | Maintenance information | - |
|  | (84) | Altitude | 0: Standard <br> 1: High altitude 1 <br> 2: High altitude 2 |
|  | (85) | Charger roller correction | 1 to 5 |
|  | (86) | Configuring toner coverage counters | 0: Full-color count display <br> 1: Color coverage count display |



| Item No. | Description |
| :---: | :---: |
| U001 | Exiting the maintenance mode <br> Description <br> Exits the maintenance mode and returns to the normal copy mode. <br> Purpose <br> To exit the maintenance mode. <br> Method <br> Press the start key. The normal copy mode is entered. |
| U002 | Setting the factory default data <br> Description <br> Restores the machine conditions to the factory default settings. <br> Purpose <br> To move the mirror frame of the scanner to the position for transport <br> Method <br> 1. Press the start key. <br> 2. Select [Mode1(AII)]. <br> 3. Press the start key. <br> The mirror frame of the scanner returns to the position for transport. <br> 4. Turn the main power switch off and on. <br> * : An error code is displayed in case of an initialization error. When errors occurred, turn main power switch off then on, and execute initialization using maintenance item U002. <br> Error codes |
|  | Codes  Description <br> 0001 Entity error  <br> 0002 Controller error  <br> 0003 OS errer  <br> 0020 Engine error  <br> 0040 Scanner error  |


| Item No. | Description |
| :---: | :---: |
| U003 | Setting the service telephone number <br> Description <br> Sets the telephone number to be displayed when a service call code is detected. <br> Purpose <br> To set the telephone number to call service when installing the machine. <br> Setting <br> 1. Press the start key. <br> The keys to enter the number are displayed on the touch panel. <br> 2. Enter a telephone number (up to 15 digits). <br> 3. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U004 | Setting the machine number <br> Description <br> Sets or displays the machine number. <br> Purpose <br> To check or set the machine number. <br> Method <br> 1. Press the start key. <br> If the machine serial number of engine PWB matches with that of main PWB <br> If the machine serial number of engine PWB does not match with that of main PWB <br> Setting <br> Carry out if the machine serial number does not match. <br> 1. Select [Execute]. <br> 2. Press the start key. Writing of serial No. starts. <br> 3. Turn the main power switch off and on. Allow more than 5 seconds between Off and On. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :---: |
| U010 | Setting the maintenance mode ID <br> Description <br> Sets the maintenance mode ID. <br> Purpose <br> Modify maintenance mode ID for more security. <br> Method <br> 1. Press the start key. <br> Setting <br> 1. Select [New ID]. <br> 2. Enter a new 8 -digit ID on ten keys ( $0-9,{ }^{*}$, \#). * and \# are mandatory to contain. <br> 3. Select [New ID(Reconfirm)]. <br> 4. Enter a new 8 -digit ID on ten keys ( $0-9,{ }^{*}$, \#). <br> 5. Press the start key. The setting is set. <br> Method: [Initialize] <br> 1. Select [Initialize]. <br> 2. Press the start key. ID is initialized. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :---: |
| U019 | Displaying the firrmware version <br> Description <br> Displays the part number of the ROM fitted to each PWB. <br> Purpose <br> To check the part number or to decide, if the newest version of ROM is installed. <br> Method <br> 1. Press the start key. The ROM version are displayed. <br> 2. Change the screen using the cursor up/down keys. |



| Item No. | Description |
| :---: | :---: |
| U021 | Memory initializing <br> Description <br> Initializes all settings, except those pertinent to the type of machine, namely each counter, service call history and mode setting. Also initializes backup RAM according to region specification selected in maintenance item U252 Setting the destination. <br> Purpose <br> To return the machine settings to their factory default. <br> Method <br> 1. Press the start key. <br> 2. Select [Execute]. <br> 3. Press the start key. All data other than that for adjustments due to variations between machines is initialized based on the destination setting. <br> 4. Turn the main power switch off and on. Allow more than 5 seconds between Off and On. <br> * : An error code is displayed in case of an initialization error. <br> When errors occurred, turn main power switch off then on, and execute initialization using maintenance item U021. <br> Error codes |
|  | Codes  Description <br> 0001 Entity error  <br> 0002 Controller error  <br> 0020 Engine error  <br> 0040 Scanner error  |


| Item No. | Description |
| :---: | :---: |
| U024 | HDD formatting <br> Description <br> Initializes the hard disk. <br> Purpose <br> To initialize the hard disk when replacing the hard disk after shipping. <br> Caution <br> In addition, the following settings are also initialized by initializing the hard disk. <br> System menu (user login administration, job accounting, address book, one-touch keys and doc- <br> ument box etc.), shortcuts and panel programs <br> When fully formatted, the following pre-installed software are removed. <br> Option language, PDF1.7 resource, FMU, weekly timer, color table <br> Method <br> 1. Press the start key. <br> 2. Select the item. |
|  | Display ${ }^{\text {a }}$ Description |
|  | Full Full format <br> Data Data format (the application software are retained) |
|  | 3. Press [Execute]. <br> 4. Press the start key to initialize the hard disk. <br> 5. Turn the main power switch off and on. Allow more than 5 seconds between Off and On. |


| Item No. | Description |
| :---: | :---: |
| U030 | Checking the operation of the motors <br> Description <br> Drives each motor. <br> Purpose <br> To check the operation of each motor. <br> Method <br> 1. Press the start key. <br> 2. Select the motor to be operated. <br> 3. Press the start key. The operation starts. |
|  | Display Description |
|  | Feed Conveying motor (CM) is turned on <br> Exit(CW) Eject motor (EM) is turned on clockwise <br> Exit(CCW) Eject motor (EM) is turned on counterclockwise <br> Drum K Drum motor K (DRM-K) is turned on <br> Drum COL Drum motor YCM (DRM-YCM) is turned on <br> DLP K(CW) DLP motor K (DEVM-K) is turned on clockwise <br> DLP K(CCW) DLP motor K (DEVM-K) is turned on counterclockwise <br> DLP COL(CW) DLP motor YCM (DEVM-YCM) is turned on clockwise <br> DLP COL(CCW) DLP motor YCM (DEVM-YCM) is turned on counterclockwise |
|  | 4. To stop operation, press the stop key. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |



| Item No. | Description |
| :---: | :---: |
| U032 | Checking the operation of the clutches <br> Description <br> Turns each clutch on. <br> Purpose <br> To check the operation of each clutch. <br> Method <br> 1. Press the start key. <br> 2. Select the clutch to be operated. <br> 3. Press the start key. The operation starts. <br> 4. Press the stop key. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U033 | Checking the operation of the solenoids <br> Description <br> Turns each solenoid on. <br> Purpose <br> To check the operation of each solenoid. <br> Method <br> 1. Press the start key. <br> 2. Select the solenoid to be operated. <br> 3. Press the start key. The operation starts. <br> 4. To stop operation, press the stop key. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. |  | Description |
| :---: | :---: | :---: |
| U034 | Adjusting the print <br> Description <br> Adjusts the leading ed <br> Purpose <br> Make the adjustment original. <br> Make the adjustment original. <br> Method <br> 1. Press the start key <br> 2. Select the item to | ing <br> stration or center line. <br> is a regular error between the leading e <br> is a regular error between the center lin <br> sted. The screen for executing each ite |
|  | Display | Description |
|  | LSU Out Top <br> LSU Out Left | Leading edge registration adjustment Center line adjustment |

Adjustment: LSU Out Top

1. Press the system menu key.
2. Press the start key to output a test pattern.
3. Press the system menu key.
4. Select the item to be adjusted.

| Display | Description | Setting <br> range | Initial <br> setting | Change in <br> value per step |
| :--- | :--- | :--- | :--- | :--- |
| MPT | Paper feed from MP tray <br> (when large size paper is used) | -128 to 127 | 41 | 0.1 mm |
| Cassette | Paper feed from cassette <br> (when large size paper is used) | -128 to 127 | 41 | 0.1 mm |
|  | Duplex mode (second) <br> (when large size paper is used) | -128 to 127 | 41 | 0.1 mm |

Large size: 218 mm or more in width of paper.
Item No.

## Description

U034
5. Change the setting value using the $+/$ - keys or numeric keys.

For output example 1, increase the value. For output example 2, decrease the value.


Correct image


Output
example 1


Output example 2

Figure 1-3-4

## 6. Press the start key. The value is set.

## Remark

Changing the larger sizes settings affects those for the smaller sizes.

## Caution

Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.


Adjustment: LSU Out Left

1. Press the system menu key.
2. Press the start key to output a test pattern.
3. Press the system menu key.
4. Select the item to be adjusted.

| Display | Description | Setting <br> range | Initial <br> setting | Change in <br> value per step |
| :--- | :--- | :--- | :--- | :--- |
| MPT | Paper feed from MP tray | -128 to 127 | 0 | 0.1 mm |
| Cassette1 | Paper feed from cassette 1 | -128 to 127 | 0 | 0.1 mm |
| Cassette2 | Paper feed from cassette 2 | -128 to 127 | 0 | 0.1 mm |
| Cassette3 | Paper feed from optional <br> cassette 3 | -128 to 127 | 0 | 0.1 mm |
| Cassette4 | Paper feed from optional <br> cassette 4 <br> Duplex mode (second) | -128 to 127 | 0 | 0.1 mm |
| Duplex | -128 to 127 | 0 | 0.1 mm |  |


| Item No. |
| :---: |
| U034 |

## Description

U034
5. Change the setting value using the +/- keys or numeric keys.

For output example 1, increase the value. For output example 2, decrease the value.
Center line of printing
(within $\pm 0.5 \mathrm{~mm}$ )


Correct image


Output example 2

Figure 1-3-5
6. Press the start key. The value is set.

## Caution

Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.


## Completion

Press the stop key. The screen for selecting a maintenance item No. is displayed.

| Item No. | Description |
| :---: | :---: |
| U035 | Setting the printing area for folio paper <br> Description <br> Changes the printing area for copying on folio paper. <br> Purpose <br> To prevent cropped images on the trailing edge or left/right side of copy paper by setting the actual printing area for folio paper. <br> Setting <br> 1. Press the start key. <br> 2. Select the item to be set. <br> 3. Change the setting value using the $+/$ - keys or numeric keys. <br> 4. Press the start key. The value is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U037 | Checking the operation of the fan motors <br> Description <br> Drives each fan motor. <br> Purpose <br> To check the operation of each fan motor. <br> Method <br> 1. Press the start key. <br> 2. Select the fan motor to be operated. <br> 3. Press the start key. The operation starts. <br> To stop operation, press the stop key. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |



Figure 1-3-6
7. Press the start key. The value is set.

## Completion

Press the stop key. The indication for selecting a maintenance item No. appears.

| Item No. | Description |  |
| :---: | :---: | :---: |
| U053 | Setting the adjustment of the motor speed <br> Description <br> Performs fine adjustment of the speeds of the motors. <br> Purpose <br> Basically, the setting need not be changed. Modify settings by interlock setting only if faulty images occur. <br> Method <br> 1. Press the start key. <br> 2. Select the item. The screen for executing each item is displayed. |  |
|  | Display | Description |
|  | Full Half $3 / 4$ | Speed correction value setting at full velocity Speed correction value setting at half velocity Speed correction value setting at $3 / 4$ velocity |

## Setting

1. Select the item to be adjusted.

| Display | $\quad$ Description | Setting <br> range |
| :--- | :--- | :--- |
| Feed | Conveying motor 1 (CM1) speed adjustment | -50 to 50 |
| Exit | Eject motor (EM) speed adjustment | -40 to 40 |
| Drum(CMY) | Drum motor (DRM-YCM) speed adjustment | -50 to 50 |
| Drum(K) | Drum motor (DRM-K) speed adjustment | -50 to 50 |
| DLP(CMY) | DLP motor (DEVM-YCM) speed adjustment | -50 to 50 |
| DLP(K) | DLP motor (DEVM-K) speed adjustment | -50 to 50 |
| Fixing | Fixing motor(FUM) speed adjustment | -50 to 50 |
| Porygon(CMY) | Porygon motor(PM-YCM) speed adjustment | -20 to 20 |
| Porygon(K) | Porygon motor (PM-K) speed adjustment | -20 to 20 |
| Feed2 | Conveying motor 2 (CM2) speed adjustment | -50 to 50 |

2. Change the setting value using the $+/-$ keys or numeric keys.
3. Press the start key. The value is set.

## Completion

Press the stop key. The indication for selecting a maintenance item No. appears.

| Item No. | Description |
| :---: | :---: |
| U061 | Checking the operation of the exposure lamp <br> Description <br> Lights the exposure lamp. <br> Purpose <br> To check whether the exposure lamp are turned on. <br> Method <br> 1. Press the start key. <br> 2. Select the item. <br> 3. Press the start key. The lamp lights. <br> 4. To turn the lamp off, press the stop key. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U063 | Adjusting the shading position <br> Description <br> Changes the shading position of the scanner. <br> Purpose <br> Used when the white line continue to appear longitudinally on the image after the shading plate is cleaned. <br> This is due to flaws or stains inside the shading plate. To prevent this problem, the shading position should be changed so that shading is possible without being affected by the flaws or stains. <br> Setting <br> 1. Press the start key. <br> 2. Select [Position]. <br> 3. Change the setting value using the $+/$ - keys or numeric keys. <br> Increasing the value moves the shading position toward the machine left, and decreasing it moves the position toward the machine right. <br> 4. Press the start key. The value is set. <br> Supplement <br> While this maintenance item is being executed, copying from an original is available in interrupt copying mode (which is activated by pressing the system menu key). <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| U065 | Adjusting the scan <br> Description <br> Adjusts the magnific <br> Purpose <br> Make the adjustmen <br> Make the adjustmen <br> Caution <br> Adjust the magnifica <br> Method <br> 1. Press the start k <br> 2. Press the system <br> 3. Place an original <br> 4. Press the system <br> 5. Select the item to | ner magnification <br> ation of the original scanning. <br> t if the magnification in the ma t if the magnification in the aux <br> ation of the scanner in the follo <br> U065 auxiliary scan- ning direction <br> ey. <br> $m$ menu key. <br> and press the start key to ma menu key. <br> to be adjusted. | scanning dire ary scanning g order. <br> a test copy. | ction is in direction | correct. incorrect. |
|  | Display | Description | Setting range | Initial setting | Change in value per step |
|  | Y Scan Zoom <br> X Scan Zoom | Scanner magnification in the main scanning direction Scanner magnification in the auxiliary scanning direction | $\begin{aligned} & -75 \text { to } 75 \\ & -125 \text { to } 125 \end{aligned}$ | 0 | $\begin{aligned} & 0.02 \% \\ & 0.02 \% \end{aligned}$ |

## Adjustment: [Y Scan Zoom]

1. Change the setting value using the $+/$ - keys or numeric keys.

For copy example 1, increase the value. For copy example 2, decrease the value.


Figure 1-3-7
2. Press the start key. The value is set.

Item No.

## Description

U066
Adjusting the scanner leading edge registration

## Description

Adjusts the scanner leading edge registration of the original scanning.

## Purpose

Make the adjustment if there is a regular error between the leading edges of the copy image and original.

## Adjustment

1. Press the start key.
2. Press the system menu key.
3. Place an original and press the start key to make a test copy.
4. Press the system menu key.
5. Select the item to be adjusted.

| Display | Description | Setting range | Initial setting | Change in value per step |
| :---: | :---: | :---: | :---: | :---: |
| Front | Scanner leading edge registration | -51 to 51 | 0 | 0.091 mm |
| Rotate | Scanner leading edge registration (rotate copying) | -51 to 51 | 0 | 0.100 mm |

6. Change the setting value using the +/- keys or numeric keys.
For copy example 1, increase the value. For copy example 2, decrease the value.


Figure 1-3-9
7. Press the start key. The value is set.

## Caution

Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.


## Completion

Press the stop key. The screen for selecting a maintenance item No. is displayed.
Item No.

## Description

U067
Adjusting the scanner center line

## Description

Adjusts the scanner center line of the original scanning.

## Purpose

Perform this adjustment if there is a unmatching error between the center lines of the copy image and original.

## Adjustment

1. Press the start key.
2. Press the system menu key.
3. Place an original and press the start key to make a test copy.
4. Press the system menu key.
5. Select the item to be adjusted.I

| Display | Description | Setting <br> range | Initial <br> setting | Change in <br> value per step |
| :--- | :--- | :--- | :--- | :--- |
| Front | Scanner center line <br> RotateScanner center line (rotate <br> copying) | -60 to 60 | 0 | 0.085 mm |

6. Change the setting value using the +/- keys or numeric keys.
For copy example 1, increase the value. For copy example 2, decrease the value.


Figure 1-3-10
7. Press the start key. The value is set.

## Caution

Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.


## Completion

Press the stop key. The screen for selecting a maintenance item No. is displayed.

| Item No. | Description |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| U068 | Adjusting the scanning position for originals from the DP <br> Description <br> Adjusts the position for scanning originals from the DP. Performs the test copy at the four scanning positions after adjusting. <br> Purpose <br> Used when the image fogging occurs because the scanning position is not proper when the DP is used. Run U071 to adjust the timing of DP leading edge when the scanning position is changed. <br> Setting <br> 1. Press the start key.l |  |  |  |  |
|  | Display | Description | Setting range | Initial setting | Change in value per step |
|  | DP Read <br> Black Line | Starting position adjustment for scanning originals <br> Scanning position for the test copy originals | -66 to 66 <br> 0 to 3 |  | $0.091 \mathrm{~mm}$ |
|  | 2. Select [DP Read]. <br> 3. Change the setting using the $+/$ - keys or numeric keys. When the setting value is increased, the scanning position moves to the right and it moves to the left when the setting value is decreased. <br> 4. Press the start key. The value is set. <br> 5. Select [Black Line]. <br> 6. Change the setting using the cursor $+/-$ keys or numeric keys. <br> 7. Press the start key. The value is set. <br> 8. Set the original (the one which density is known) in the DP and press the system menu key. <br> 9. Press the start key. Test copy is executed. <br> 10. Perform the test copy at each scanning position with the setting value from 0 to 3 and check that no black line appears and the image is normally scanned. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |  |  |



Figure 1-3-11
2. Press the start key. The value is set.

## Completion

Press the stop key. The screen for selecting a maintenance item No. is displayed.

| Item No. | Description |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| U071 | Adjusting the DP <br> Description <br> Adjusts the DP or <br> Purpose <br> Make the adjustm nal and the copy <br> Method <br> 1. Press the star <br> 2. Press the sys <br> 3. Place an origi <br> 4. Press the sys <br> 5. Select the item | canning timing <br> nal scanning timing. <br> t if there is a regular error age when the DP is used. <br> ky. <br> $m$ menu key. <br> on the DP and press the star <br> menu key. <br> o be adjusted.I | n the leadi <br> $y$ to make | or trailing <br> est copy. | edges of the origi- |
|  | Display | Description | Setting range | Initial setting | Change in value per step |
|  | Front Head | Leading edge registration (first side) | -80 to 80 | 0 | 0.119 mm |
|  | Front Tail | Trailing edge registration (first side) | $-80 \text { to } 80$ | 0 | 0.119 mm |
|  | Back Head | Leading edge registration (second side) | $-80 \text { to } 80$ | 0 | 0.119 mm |
|  | Back Tail | Trailing edge registration (second side) | -80 to 80 | 0 | 0.119 mm |

## Adjustment: Front Head

1. Change the setting value using the $+/-$ keys or numeric keys.

For copy example 1, increase the value. For copy example 2, decrease the value.


Figure 1-3-12
2. Press the start key. The value is set.

## Caution

If the first side is adjusted, check the second side and if adjustment is required, carry out the adjustment.
Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.



Figure 1-3-13
2. Press the start key. The value is set.

## Caution

If the first side is adjusted, check the second side and if adjustment is required, carry out the adjustment.
Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.


## Completion

Press the stop key. The screen for selecting a maintenance item No. is displayed.
Item No.

## Description

U072
Adjusting the DP center line

## Description

Adjusts the scanning start position for the DP original.

## Purpose

Perform the adjustment if there is a regular error between the centers of the original and the copy image when the DP is used.

## Adjustment

1. Press the start key.
2. Press the system menu key.
3. Place an original on the DP and press the start key to make a test copy.
4. Press the system menu key.
5. Select the item to be adjusted.I

| Display | Description | Setting <br> range | Initial <br> setting | Change in <br> value per step |
| :--- | :--- | :--- | :--- | :--- |
| Front | DP center line (first side) | -60 to 60 | 0 | 0.085 mm |
| Back | DP center line (second side) | -60 to 60 | 0 | 0.085 mm |

6. Change the setting value using the +/- keys or numeric keys.
For copy example 1, increase the value. For copy example 2, decrease the value.


Original


Figure 1-3-14
7. Press the start key. The value is set.

## Caution

If the first side is adjusted, check the second side and if adjustment is required, carry out the adjustment.
Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.


## Completion

Press the stop key. The screen for selecting a maintenance item No. is displayed.

| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U073 | Description <br> Simulates the scanner operation under the arbitrary conditions. <br> Purpose <br> To check the scanner operation. This is also done to check the accumulation of dust on the slit glass. |  |  |  |
|  | Display <br> Scanner Motor <br> Home Position <br> Dust Check <br> DP Reading | Scanner oper Home position Dust adhesion DP scanning | Descript <br> ration <br> ck operation wit ion operation | amp on |
|  | Setting: [Scanner Motor] <br> 1. Select [Scanner Motor]. <br> 2. Select the item. <br> 3. Change the setting using the $+/-$ keys or numeric keys. |  |  |  |
|  | Display | Operating conditions |  | Setting range |
|  | Zoom <br> Size <br> Lamp | Magnification Original size On and off of the exp | re lamp | 25 to 400 \% See below. 0 (off) or 1 (on) |
|  | Original sizes for each setting in SIZE |  |  |  |
|  | Setting | Paper size | Setting | Paper size |
|  | 5000 | A4 | 5000 | A5R |
|  | 4300 | B5 | 7800 | Folio |
|  | 5100 | 11 " x 8 1/2" | 10200 | 11" x 17" |
|  | 10000 | A3 | 9000 | $11^{\prime \prime} \times 15{ }^{\prime \prime}$ |
|  | 8600 | B4 | 8400 | $81 / 2^{\prime \prime} \times 14^{\prime \prime}$ |
|  | 7100 | A4R | 6600 | $81 / 2^{\prime \prime} \times 11^{\prime \prime}$ |
|  | 6100 | B5R | 5100 | $51 / 2^{\prime \prime} \times 8$ 1/2" |
|  | 4. Press the start key. The setting is set. <br> 5. Select [Execute]. <br> 6. Press the start key. Scanning starts under the selected conditions. <br> 7. To stop operation, press the stop key. |  |  |  |


| Item No. | Description |
| :---: | :---: |
| U073 | Method: [Home Position] <br> 1. Select [Home Position]. <br> 2. Press the start key. <br> The mirror frame of the scanner moves to the home position. <br> Method: [Dust Check] <br> 1. Select [Dust Check]. <br> 2. Press the start key. The exposure lamp lights. <br> 3. To turn the exposure lamp off, press the stop key. <br> Method: [DP Reading] <br> 1. Select [DP Reading]. <br> 2. Press the start key. <br> The mirror frame of the scanner moves to the reading position. <br> Completion <br> Press the stop key when scanning stops. The screen for selecting a maintenance item No. is displayed. |
| U074 | Adjusting the DP input light luminosity <br> Description <br> Sets the luminosity correction for scanning originals from the DP. <br> Purpose <br> Modify the setting only if a spotted background appears when a bluish original is scanned from the DP. <br> Setting <br> 1. Press the start key. <br> 2. Change the setting value using the $+/$ - keys or numeric keys. <br> Settings 0: No correction / 1: Slight correction / 2: Medium correction / 3: Strong correction <br> 3. Press the start key. The value is set. <br> Supplement <br> While this maintenance item is being executed, copying from an original is available in interrupt copying mode (which is activated by pressing the system menu key). <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |





| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U099 | Setting: [B/W Level1] <br> 1. Select an item to be set. <br> 2. Change the setting value using the $+/$ - keys or numeric keys.l |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | Original R1 | Original threshold value for color R (near side) | 0 to 255 | 50 |
|  | Original R2 | Original threshold value for color R (center) | 0 to 255 | 50 |
|  | Original R3 | Original threshold value for color R (far side) | 0 to 255 | 50 |
|  | Original G1 | Original threshold value for color G (near side) | 0 to 255 | 50 |
|  | Original G2 | Original threshold value for color G (center) | 0 to 255 | 50 |
|  | Original G3 | Original threshold value for color G (far side) | 0 to 255 | 50 |
|  | Original B1 | Original threshold value for color B (near side) | 0 to 255 | 50 |
|  | Original B2 | Original threshold value for color B (center) | 0 to 255 | 50 |
|  | Original B3 | Original threshold value for color B (far side) | 0 to 255 | 50 |

Reducing the value increases the sensitivity of the sensor allowing a document with more density to be detected, however, the document mat could be detected as an original document.
If the values vary excessively, mal-detection could occur depending on how a document is placed.


| Fig. | Original <br> $\mathrm{R} / \mathrm{G} / \mathrm{B}$ | Original width size range |  |
| :---: | :---: | :---: | :---: |
| (1) | 1 | A4R to A 3 | $8.5^{\prime \prime}$ to 11 " |
| $(2)$ | 2 | B6R to A 4 R | 5.5 " to $8.5^{\prime \prime}$ |
| $(3)$ | 3 | to B 6 R | to 5.5 " |

Figure 1-3-15
3. Press the start key. The value is set.

## Completion

Press the stop key. The screen for maintenance item No. is displayed.


| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U100 | Setting:[Bias] <br> 1. Select an item to be set. <br> 2. Change the setting value using the $+/$ - keys or numeric keys. |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | C <br> M <br> Y <br> K <br> Default(C) <br> Default(M) <br> Default(Y) <br> Default(K) | Manual adjustment value (Cyan) Manual adjustment value (Magenta) Manual adjustment value (Yellow) Manual adjustment value (Black) Manual adjustment base value (Cyan) Manual adjustment base value (Magenta) Manual adjustment base value (Yellow) Manual adjustment base value (Black) | 0 to 250 <br> 0 to 250 <br> 0 to 250 <br> 0 to 250 <br> 0 to 250 <br> 0 to 250 <br> 0 to 250 <br> 0 to 250 | $\begin{array}{\|l\|} \hline 145 \\ 145 \\ 145 \\ 145 \end{array}$ |
|  | 3. Press the start key. The value is set. <br> Setting:[Bias] <br> 1. Select an item to be set. <br> 2. Change the setting value using the $+/-$ keys or numeric keys. |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | C  <br> $M$  <br> $Y$  <br> $K$  | MC DC bias (Cyan) <br> MC DC bias (Magenta) <br> MC DC bias (Yellow) <br> MC DC bias (Black) | 0 to 250 <br> 0 to 250 <br> 0 to 250 <br> 0 to 250 | 145 145 145 145 |
|  | 3. Press the start key. The value is set. <br> Supplement <br> While this maintenance item is being executed, copying from an original is available in interrupt copying mode (which is activated by pressing the system menu key). |  |  |  |


| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U100 | Setting:[High Altitude] <br> 1. Select an item to be set. |  |  |  |
|  | Display | Description |  |  |
|  | Mode0 Mode1 Mode2 Mode3 | Standard (Factory setting) High ground 1 ( 1500 to 2500 High ground 2 ( 2500 m or m High ground 3 ( 3500 m or m |  |  |
|  | Initial setting: Mode0 <br> *: MCH compensation is set to " 3 " when it sets to the high ground 1 ,high ground 2 or the high ground 3 . <br> *: Plain weight attribute information is set to "Normal 1" when it sets to the high ground 1 ,high ground 2 or the high ground 3 . |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | Value | MCH compensation | 1 to 5 | 3 |
|  | *: A setup is possible only when set to the "standard" by high-ground setup. <br> 2. Press the start key. The value is set. |  |  |  |
|  | Display | Description |  |  |
|  | Mode0 <br> Mode1 | It changes by drum drive tim Initial fixation |  |  |
|  | Initial setting: Mode0 <br> 2. Press the start key. The value is set. <br> Setting:[Drum Aging] <br> 1. Select an item to be set. |  |  |  |
|  | Display | Description |  |  |
|  | On <br> Off | with aging (it operates by lapsed time)with not aging |  |  |
|  | Initial setting: Off <br> 2. Press the start key. The value is set. <br> Completion <br> Press the stop key when main charger output stops. The screen for selecting a maintenance item No. is displayed. |  |  |  |


| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U101 | Setting the voltage for the primary transfer <br> Description <br> Sets the control voltage for the primary transfer. <br> Purpose <br> To change the setting when any density problems, such as too dark or light, occur. <br> Method <br> 1. Press the start key. <br> 2. Select the item. The screen for executing each item is displayed. |  |  |  |
|  | Display <br> Base <br> 1st side <br> 2nd side <br> B/W | Standard value <br> Correction value of single-side printing <br> Correction value of duplex printing <br> Correction value of monochrome printing |  |  |
|  | Setting: [Base] <br> 1. Select the item to be set. <br> 2. Change the setting value using the +/- keys or numeric keys. |  |  |  |
|  | - Display | Description | Setting range | Initial setting |
|  | Full <br> Half | Full speed printing Half speed printing | 0 to 100 <br> 0 to 100 | $\begin{aligned} & 45 \\ & 25 \end{aligned}$ |
|  | 3. Press the start key. The value is set. <br> Setting: [1st side/02nd side] <br> 1. Select the item to be set. <br> 2. Change the setting value using the $+/$ - keys or numeric keys. |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | $C$ <br> $M$ <br> $Y$ <br> K | Correction value (Cyan) Correction value (Magenta) Correction value (Yellow) Correction value (Black) | $\begin{aligned} & -50 \text { to } 50 \\ & -50 \text { to } 50 \\ & -50 \text { to } 50 \\ & -50 \text { to } 50 \end{aligned}$ | $\begin{aligned} & 5 / 2 \\ & 5 / 2 \\ & 0 /-3 \\ & 5 / 2 \end{aligned}$ |
|  | 3. Press the start key. The value is set. |  |  |  |


| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U101 | Setting: [B/W] <br> 1. Change the setting value using the $+/-$ keys or numeric keys. |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | Value | Correction value | -50 to 50 | 30 |
|  | 2. Press the start <br> Supplement <br> While this mainten copying mode (wh <br> Completion <br> Press the stop key | The value is set. <br> item is being executed, is activated by pressing the <br> e screen for selecting a ma | an original nu key). <br> tem No. is | available in <br> layed. |


| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U106 | Setting the voltage for the secondary transfer <br> Description <br> Sets the control voltage for the secondary transfer. <br> Purpose <br> To change the setting when any density problems, such as too dark or light, occur. <br> Method <br> 1. Press the start key. <br> 2. Select the item. The screen for executing each item is displayed. |  |  |  |
|  | Display  <br> Color  <br> B/W  | Correction value of color printing Correction value of monochrome printing |  |  |
|  | Method:[Color] <br> 1. Select the item. The screen for executing each item is displayed. |  |  |  |
|  | Display | Description |  |  |
|  | Light/Normal1 Normal2/3 Heavy1 Heavy2/3 OHP Coated | Weight of paper (light to usual 1 )Weight of paper (usual 2 to 3 )Weight of paper (heavy 1 )Weight of paper (heavy 2 to 3 )Kind of paper (OHP)Kind of paper (Coated paper) |  |  |
|  | Method: [Light/Normal1 / Normal2/3 / Heavy1 / Heavy2/3] <br> 1. Select the item. The screen for executing each item is displayed. |  |  |  |
|  | Display | Description |  |  |
|  | 1st side <br> 2nd side | Correction value of single-side printing Correction value of duplex printing |  |  |
|  | Setting:[1st side/2nd side] <br> 1. Select the item to be set. <br> 2. Change the setting value using the +/- keys or numeric keys. |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | Width<160 | width of paper<160 | 0 to 200 | $\begin{aligned} & 83 / 85 / 64 / 54 \\ & 88 / 90 / 68 / 57 \end{aligned}$ |
|  | 160<=Width<220 | $160<=$ width of paper <220 | 0 to 200 | $\begin{aligned} & \text { 58/60/45/37 } \\ & 60 / 62 / 47 / 37 \end{aligned}$ |
|  | 220<=Width | $220<=$ width of paper | 0 to 200 | $\begin{aligned} & 42 / 44 / 33 / 25 \\ & 40 / 42 / 32 / 25 \end{aligned}$ |
|  | 3. Press the start key. The value is set. |  |  |  |



| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U107 | Setting the voltage for the intermediate transfer cleaning <br> Description <br> Sets the control voltage for the intermediate transfer cleaning. <br> Purpose <br> To change the setting when the offset by a defective cleaning of the transfer belt is generate. <br> Method <br> 1. Press the start key. <br> 2. Select the item. The screen for executing each item is displayed. |  |  |  |
|  | Display <br> $\operatorname{Belt}(A)$ <br> $\operatorname{Belt}(\mathrm{B})$ <br> $\operatorname{Belt}(\mathrm{C})$ | Correction value of belt A Correction value of belt $B$ Correction value of belt C |  |  |
|  | Setting <br> 1. Select the item to be set. <br> 2. Change the setting value using the $+/$ - keys or numeric keys. |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | Full <br> Half <br> 3/4 <br> B/W Full <br> B/W Half <br> B/W 3/4 | Full speed printing of color <br> Half speed printing of color <br> $75 \%$ of full speed printing of color <br> Full speed printing of monochrome <br> Half speed printing of monochrome <br> $75 \%$ of full speed printing of monochrome | 0 to 200 0 to 200 0 to 200 0 to 200 0 to 200 0 to 200 | $\begin{aligned} & \hline 13 / 90 / 90 \\ & 9 / 45 / 45 \\ & 10 / 68 / 68 \\ & 13 / 75 / 75 \\ & 10 / 35 / 35 \\ & 9 / 53 / 53 \end{aligned}$ |
|  | 3. Press the start key. The value is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |  |


| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U108 | Setting separation shift bias <br> Description <br> Adjusts output of separation shift bias and ON/OFF timing. <br> Purpose <br> To set when the separated malfunction of the paper occurs. <br> Method <br> 1. Press the start key. <br> 2. Select the item. The screen for executing each item is displayed. |  |  |  |
|  | Display <br> Light/Normal1 <br> Normal2/3 <br> Heavy1 <br> Coated <br> Timing | Weight of paper (light to usual 1) <br> Weight of paper (usual 2 to 3 ) <br> Weight of paper (heavy 1) <br> Kind of paper (Coated paper) <br> Setting of the separation timing |  |  |
|  | Setting:[Light/Normal1 / Normal2/3 / Heavy1 / Coated] <br> 1. Select the item to be set. <br> 2. Change the setting value using the $+/$ - keys or numeric keys. |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | 1st side <br> 2nd side | Correction value of single-side printing Correction value of duplex printing | $\begin{aligned} & 0 \text { to } 40 \\ & 0 \text { to } 40 \end{aligned}$ | $\begin{array}{l\|} \hline 20 / 10 / 10 / 10 \\ 20 / 12 / 10 / 10 \end{array}$ |
|  | Setting:[Timing] <br> 1. Select the item to be set. <br> 2. Change the setting value using the +/- keys or numeric keys. |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | Add Normal Lead On Timing 1 On Timing 2 Off Timing | for the leading edge on paper <br> Adjustment of the ON Timing 1 <br> Adjustment of the ON Timing 2 <br> Adjustment of the OFF Timing | 0 to 20 <br> -100 to 100 <br> -100 to 100 <br> -100 to 100 | $\begin{array}{\|l} 3 \\ 0 \\ 0 \\ 100 \end{array}$ |
|  | 3. Press the start key. The value is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |  |


| Item No. | Description |
| :---: | :---: |
| U110 | Checking the drum count <br> Description <br> Displays the drum counts for checking. <br> Purpose <br> To check the drum status. <br> Method <br> 1. Press the start key. The current drum counts is displayed. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U111 | Checking the drum drive time <br> Description <br> Displays the drum drive time for checking a figure, which is used as a reference when correcting the high voltage based on time. <br> Purpose <br> To check the drum status. <br> Method <br> 1. Press the start key. <br> 2. Select the item. The drum drive time is displayed. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :---: |
| U117 | Checking the drum number <br> Description <br> Displays the drum number. <br> Purpose <br> To check the drum number. <br> Method <br> 1. Press the start key. The drum number is displayed. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U118 | Displaying the drum history <br> Description <br> Displays the past record of machine number and the drum counter. <br> Purpose <br> To check the count value of machine number and the drum counter. <br> Method <br> 1. Press the start key. <br> 2. Select the color to reference. <br> * : The history of a machine number and a drum counter for each color is displayed by three cases. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :---: |
| U122 | Checking the transfer belt unit number <br> Description <br> Displays the number of the transfer belt unit for checking. <br> Purpose <br> To check the number of the transfer belt. <br> Method <br> 1. Press the start key. <br> The current number of the transfer belt is displayed. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U123 | Displaying the transfer belt unit history <br> Description <br> Displays the past record of machine number and the transfer belt unit counter. <br> Purpose <br> To check the count value of machine number and the transfer counter. <br> Method <br> 1. Press the start key. <br> The history of a machine number and a transfer belt unit counter for each color is displayed by three cases. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :---: |
| U127 | Checking/clearing the transfer count <br> Description <br> Displays and clears the counts of the transfer counter. <br> Purpose <br> To check the count after replacement of the transfer belt unit or transfer roller. Also to clear the counts after replacing transfer roller. <br> Method <br> 1. Press the start key. The current counts of the transfer counter is displayed. <br> Clearing <br> 1. Select [Clear]. <br> 2. Press the start key. The counter value is cleared. <br> Clears only the transfer roller. The transfer belt unit is not cleared. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U135 | Checking toner motor operation <br> Description <br> Drives toner motors. <br> Purpose <br> To check the operation of toner motors. <br> Remarks <br> When driving the toner motors long time or several times, developer section becomes the toner full and is locked. <br> Method <br> 1. Press the start key. <br> 2. Select [Toner]. <br> 3. Press the start key. The operation starts. <br> 4. To stop the operation, press the stop key. <br> Completion <br> Press the stop key after operation stops. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :---: |
| U136 | Setting toner near end detection <br> Description <br> Sets the level that indicates the number of sheets that can be printed from occurrence of toner near end to toner empty. <br> Purpose <br> To change the setting to advance detection of near end if the interval from toner near end to toner empty seems too short. <br> Setting <br> 1. Press the start key. <br> 2. Select the item to be set. <br> 3. Change the setting value using the $+/$ - keys or numeric keys. <br> Increasing the setting makes the interval from toner near end to toner empty longer. Decreasing the setting makes the interval from toner near end to toner empty shorter. If 0 is set, toner near end will not be detected. <br> 4. Press the start key. The value is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U139 | Displaying the temperature and humidity outside the machine <br> Description <br> Displays the detected temperature and humidity outside the machine. <br> Purpose <br> To check the temperature and humidity outside the machine. <br> Method <br> 1. Press the start key. The detected temperature are displayed. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |



| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U140 | Setting: [On Timing/On Timing] <br> 1. Select the item to be set. <br> 2. Change the setting value using the $+/-$ keys or numeric keys. |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | C <br> M <br> Y <br> K | Setting the value of cyan. Setting the value of magenta. Setting the value of yellowt. Setting the value of black. | -500 to 500 <br> -500 to 500 <br> -500 to 500 <br> -500 to 500 | $0 / 0$ $0 / 0$ $0 / 0$ $0 / 0$ |
|  | 3. Press the start key. The value is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |  |
| U147 | Setting for toner applying operation <br> Description <br> Sets the mode for removing charged toner in the developer unit (T7 control: Toner applying operation). <br> Purpose <br> Changing settings are not required. However, when the documents with lower print density (e.g. less than $2 \%$ ) should customarily printed in a great volume, mode must be changed. <br> If the charged toner stays inside the developer unit, density decreases. <br> Setting <br> 1. Press the start key <br> 2. Select the item to be set. <br> 3. Change the setting value using the $+/-$ keys or numeric keys. |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | T7 <br> Drum T7 | T7 Operational mode <br> Drum T7 operational mode | 0 to 1 <br> 0 to 255 | $\begin{array}{\|l\|} \hline 0 \\ 60 \end{array}$ |
|  | 4. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |  |



| Item No. | Description |
| :---: | :---: |
| U150 | Method: [Waste Box] <br> 1. Turn each switch or sensor on and off manually to check the status. <br> When a switch or sensor is detected to be in the ON position, the display for that switch or sensor will be "1" <br> 2. To stop motor driving, press the stop key. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U157 | Checking the developer drive time <br> Description <br> Displays the developerdrive time for checking a figure, which is used as a reference when correcting the toner control. <br> Purpose <br> To check the developer drive time after replacing the developer unit. <br> Method <br> 1. Press the start key. The developer drive time of each color is displayed. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |



| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U161 | Setting the fuser control te <br> Description <br> Changes the fuser control tem values. <br> Purpose <br> Normally no change is neces of paper, or solve a fuser pro <br> Setting <br> 1. Press the start key. <br> 2. Select the item to be set. <br> 3. Change the setting value | perature <br> erature and control temperature correc <br> ry. However, this mode can be used to m on thick paper. <br> sing the +/- keys or numeric keys. | ion value and revent curling | other set <br> or creasing |
|  | Display | Description | Setting range | Initial setting |
|  | Copy Curb(Edge) | Prevention temperature of overtemperature rise under copy | 100 to 250 | 210 |
|  | Curb(Edge) | Prevention temperature of overtemperature rise | 100 to 250 | 240 |
|  | Return(Edge) | Return temperature of overtemperature rise | 100 to 250 | 190 |
|  | Ready(Edge) | Ready display temperature | 0 to 200 | 110 |
|  | Pressure(Press) | Pressurizing beginning temperature | 0 to 200 | 100 |
|  | High speed(Center) | Full speed shift temperature | 0 to 200 | 125 |
|  | Ready(Center) | Ready display temperature | 100 to 200 | 150 |
|  | Drive(Center) | The second stability temperature | 100 to 200 | 155 |
|  | Full speed(Center) | Print control temperature | 100 to 200 | 155 |
|  | Wait(Center) | Control temperature when being standing by | 100 to 200 | 130 |
|  | WarmUp Curb(Center) | Electric power control temperature at start-up | 0 to 200 | 150 |
|  | Curb(Center) | Prevention temperature of overtemperature rise | 170 to 250 | 240 |
|  | Low power(Center) | Low electric power control temperature | 0 to 200 | 90 |
|  | Ready(Press) | Ready display temperature | 0 to 200 | 50 |
|  | Curb(Press) | Prevention temperature of overtemperature rise | 170 to 250 | 200 |
|  | Wait Offset(Press) | Correction temperature when being standing by | 0 to 200 | 95 |
|  | 4. Press the start key. The value is set. |  |  |  |
|  | Completion <br> Press the stop key. The scr | Completion |  |  |


| Item No. | Description |
| :---: | :--- |
| U163 | Resetting the fuser problem data <br> Description <br> Resets the detection of a service call code indicating a problem in the fuser section. <br> Purpose <br> To prevent accidents due to an abnormally high fuser temperature. <br> Method <br> 1. Press the start key. <br> 2. Press [Execute]. <br> 3. Press the start key. The fuser problem data is initialized. <br> 4. Turn the main power switch off and on. Allow more than 5 seconds between Off and On. |


| Item No. | Description |
| :---: | :---: |
| U167 | Checking/setting the fuser count <br> Description <br> Displays and sets the fuser count for checking. <br> Purpose <br> To check or set the fuser count after replacement of the fuser unit. <br> Method <br> 1. Press the start key. The fuser count is displayed. <br> Clearing <br> 1. Press [Clear]. <br> 2. Press the start key. The count is cleared. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U169 | Checking/setting the fuser power source <br> Description <br> Displays and settings the reference voltage of the fuser IH PWB. <br> Purpose <br> To check the reference voltage. <br> Method <br> 1. Press the start key. <br> 2. Select the mode. <br> 1: 100 V specifications 2: 200 V specifications 3: 120 V specifications <br> 4: 110 V specifications <br> 3. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :---: |
| U199 | Displaying fuser heater temperature <br> Description <br> Displays the detected fuser temperature. <br> Purpose <br> To check the fuser temperature. <br> Method <br> 1. Press the start key. The current setting is displayed. <br> Completion <br> Press the stop key. The screen for selecting a maintenance mode No. is displayed. |
| U200 | Turning all LEDs on <br> Description <br> Turns all the LEDs on the operation panel on. <br> Purpose <br> To check if all the LEDs on the operation panel light. <br> Method <br> 1. Press the start key. <br> 2. Select [Execute]. <br> 3. Press the start key.All the LEDs on the operation panel light. <br> 4. Press the stop key. The LEDs turns off. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :---: |
| U201 | Initializing the touch panel <br> Description <br> Automatically correct the positions of the X - and Y -axes of the touch panel. <br> Purpose <br> To automatically correct the display positions on the touch panel after it is replaced. <br> Method <br> 1. Press the start key. <br> 2. Select the [Initialize] or [Check]. <br> Method: [Initialize] <br> 1. Press the start key. <br> 2. Press the center of the + keys. Be sure to press three + keys displayed in order. <br> The touch panel is adjusted automatically. <br> 3. Press the indicated three + keys, and then check the display. <br> 4. Press the stop key. The screen for selecting a maintenance item No. is displayed. <br> Method: [Check] <br> 1. Press the start key. <br> 2. Press the indicated three + keys, and then check the display. <br> When adjusting the display, press [Initialize] to execute the adjustment automatically. <br> 3. Press the stop key. The screen for selecting a maintenance item No. is displayed. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |  |
| :---: | :---: | :---: |
| U202 | Setting the KMAS host monitoring system <br> Description <br> Initializes or operates the KMAS host monitoring system. <br> This is an optional device which is currently supported only by Japanese specification machines, so no setting is necessary. <br> Purpose <br> Performed at installation, periodic maintenance, and/or repair. <br> Method <br> 1. Press the start key. <br> 2. Select the item. |  |
|  | Display | Description |
|  | Init/Set TEL No. Call Service End | Initialization/Phone Nbr. se <br> Outgoing at the end of service activities |

## Method: [Init/Set TEL No.]

1. Select the item to be input.

| Display | Description |
| :--- | :--- |
| TEL No. 1 | Sales companies |
| TEL No. 2 | Call center |

2. Input the telephone number using the numeric keys.
3. Press the start key. The setting is set.
4. Select [Initialize].
5. Select [Execute].
6. Press the start key. Communication with the host initiated.
7. The result of communication will be displayed. (Refer to the result.)

## Method: [Call Service End]

1. Select [Execute].
2. Press the start key. Communication with the host initiated.
3. The result of communication will be displayed. (Refer to the result.)

## Result table

| Display | Description |
| :---: | :--- |
| OK | Communication properly terminated. |
| NG | Communication error (Nbr. of calls exceeded) |
| Communication error (Communication timeout) |  |
|  | Communication error (Communication trial timeout) |
| Communication error (Other) |  |
| KMAS unreachable |  |

## Completion

Press the stop key. The screen for selecting a maintenance item No. is displayed.



| Item No. |  | Description |
| :---: | :---: | :---: |
| U206 | Setting the presenc <br> Description <br> Sets the presence or <br> This is an optional d <br> Purpose <br> To run this maintena <br> Method <br> 1. Press the start key <br> 2. Select the item to | ence of a coin vender <br> of the optional coin vender. ch is currently supported only by Japanese specification machines. <br> if a coin vender is installed. |
|  | Display | Description |
|  | On/Off Config No Coin Action Price <br> Boot Mode | Sets the presence or absence of the coin vender <br> Behavior when change runs out during copying <br> Charge per copy by size and color <br> Setting the starting mode |
|  | Setting: [On/Off Config] <br> 1. Select On or Off. |  |
|  | Display | Description |
|  | $\begin{aligned} & \text { On } \\ & \text { Off } \end{aligned}$ | The coin vender is installed <br> The coin vender is not installed |
|  | Initial setting: Off <br> 2. Press the start key. The setting is set. <br> 3. Turn the main power switch off and on. Allow more than 5 seconds between Off and On. |  |
|  | Display | Description |
|  | All Clear <br> Auto Clear <br> Off | All clear is performed Auto clear is performed Clear is not performed |
|  | Initial setting: Of <br> 2. Press the start $k$ <br> 3. Turn the main po <br> Setting: [Price] <br> 1. Select the item to | etting is set. <br> ch off and on. Allow more than 5 seconds between Off and On. |
|  | Display | Description |
|  | Normal <br> AD <br> Print | Normal <br> Advertising copy <br> Printing division money |


2. Select the paper size to be set.
3. Change the setting value using the $+/-$ keys or numeric keys.

| Display | Description | Setting range | Initial setting |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | B/W | CMY/RGB <br> Full Color |
| A3-Ledger | A3/Ledger size | 0 to 300 | 10 | 100 |
| B4 | B4 size | 0 to 300 | 10 | 50 |
| Card | Post card | 0 to 300 | 10 | 30 |
| Other | Other | 0 to 300 | 10 | 50 |

In 10-yen increments
Value of 0 allows non-restricted copying. (At a periodic maintenance, etc.)
4. Press the start key. The value is set.
5. Turn the main power switch off and on. Allow more than 5 seconds between Off and On.

## Setting: [Print]

1. Select the item of unit price to be set.

| Display | Description |
| :--- | :--- |
| B/W | Black \& White |
| Full Color | Full color |

2. Select the paper size to be set.
3. Change the setting value using the $+/-$ keys or numeric keys.

| Display | Description | Setting <br> range | Initial <br> setting |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  | B/W | Full Color |
| A3-Ledger | A3/Ledger size | 0 to 300 | 10 | 100 |
| B4 | B4 size | 0 to 300 | 10 | 50 |
| Card | Post card | 0 to 300 | 10 | 30 |
| Other | Other | 0 to 300 | 10 | 50 |

In 10-yen increments
Value of 0 allows non-restricted copying. (At a periodic maintenance, etc.)
4. Press the start key. The value is set.
5. Turn the main power switch off and on. Allow more than 5 seconds between Off and On.

| Item No. | Description |
| :---: | :---: |
| U206 | Setting: [Boot Mode] <br> 1. Select the item. <br> Initial setting: Normal <br> 2. Press the start key. The setting is set. <br> 3. Turn the main power switch off and on. Allow more than 5 seconds between Off and On. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U207 | Checking the operation panel keys <br> Description <br> Checks operation of the operation panel keys. <br> Purpose <br> To check operation of all the keys and LEDs on the operation panel. <br> Method <br> 1. Press the start key. The screen for executing is displayed. <br> 2. [Count0] is displayed and the leftmost LED on the operation panel lights. <br> 3. As the keys lined up in the same line as the lit indicator are pressed in the order from the top to the bottom, the figure shown on the touch panel increases in increments of 1. When all the keys in that line are pressed and if there are any LEDs corresponding to the keys in the line on the immediate right, the top LED in that line will light. <br> 4. When all the keys on the operation panel have been pressed, all the LEDs light for up to 10 seconds. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :---: |
| U221 | Setting the USB host lock function <br> Description <br> Specifies ON/OFF the USB host lock function. Setting this to ON causes the machine to be unable to recognize the device connected to the USB host. <br> Purpose <br> Set according to the preference of the user. <br> Method <br> 1. Press the start key. <br> 2. Select [Host Lock]. <br> 3. Select On or Off. <br> Initial setting: Off <br> 4. Press the start key. The setting is set. <br> 5. Turn the main power switch off and on. Allow more than 5 seconds between Off and On. |
| U222 | Setting the IC card type <br> Description <br> Sets the type of IC card. <br> Purpose <br> To change the type of IC card. <br> Setting <br> 1. Press the start key. <br> 2. Select the item. <br> *: Initial setting: Other <br> 3. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |



| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U224 | Install original pan <br> Description <br> Changes the image image data and the <br> Purpose <br> Set according to the <br> Setting <br> 1. Write the image <br> 2. Insert USB mem <br> 3. Turn the main po <br> 4. Enter the maint <br> 5. Press the start k <br> 6. Select the [Insta | display <br> a and the message of the o ssage of the service call sc eference of the user. <br> ta or the message data to th in USB memory slot of the er switch on. nce item. <br> or [UnInstall]. | ening screen at the machin en to user specified data. <br> USB memory. machine. | startup and the |
|  | Display |  | Description |  |
|  | Install <br> UnInstall | Installs the image da Restores the origina | a or the message data image data or message da |  |
|  | 7. Select the item. |  |  |  |
|  | Display | Description | Display area |  |
|  | Opening Img Call Img Call Msg Top Call Msg Detail | Startup screen <br> Service call screen <br> Service call message 1 <br> Service call message 2 | Entire start display <br> Graphic display area <br> Message display area (top) <br> Message display area (de | riptive area) |
|  | 8. Press the start <br> 9. When normally <br> Supplement 1 File information | Installation or uninstallation mpleted, $[\mathrm{OK}]$ is displayed. | is started. |  |
|  | Description | File name | Image size (in pixels) | File format |
|  | Startup screen | opening_ext_image.png | Length: 480 <br> Width: 800 | PNG |
|  | Service call screen | callwin_ext_image.png | Length: 200 <br> Width : 180 | PNG |
|  | Service call message 1 | callwin_ext_mes_top.txt | - | TEXT (Unicode) |
|  | Service call message 2 | callwin_ext_mes_detail.txt | - | TEXT (Unicode) |



| Item No. | Description |
| :---: | :---: |
| U244 | Checking the DP switches <br> Description <br> Displays the status of the respective switches in the DP. <br> Purpose <br> To check if the respective switches in the DP operate correctly. <br> Method <br> 1. Press the start key. <br> 2. Turn each switch or sensor on and off manually to check the status. When a switch or sensor is detected to be in the ON position, the display for that switch or sensor will be " 1 ". <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U245 | Checking messages <br> Description <br> Displays a list of messages on the touch panel of the operation panel. <br> Purpose <br> To check the messages to be displayed. <br> Method <br> 1. Press the start key. <br> 2. Change the message using the cursor up/down keys. When a message number is entered with the numeric keys and then the start key is pressed, the message corresponding the specified number is displayed. <br> 3. Change the language using the $+/$ - keys. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |



| Item No. | Description |
| :---: | :---: |
| U251 | Checking/clearing the maintenance counter <br> Description <br> Displays and clears or changes the maintenance count and automatic grayscale adjustment count. <br> Purpose <br> To verify the maintenance counter count and automatic grayscale count. Also to clear the count during maintenance service. <br> Setting <br> 1. Press the start key. <br> 2. Select the item to be changed. <br> 3. Change the setting using the +/- keys or numeric keys. |
|  | Display Description Setting range |
|  | M.Cnt A Count value for maintenance cycle (A) 0 to 9999999 <br> M.Cnt B Count value for maintenance cycle (B) 0 to 9999999 <br> M.Cnt HT Automatic grayscale adjustment count 0 to 9999999 |
|  | 4. Press the start key. The setting value is set. <br> Clearing <br> 1. Select [Clear]. <br> 2. Press the start key. The setting value is cleared. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. |  | Description |
| :---: | :---: | :---: |
| U252 | Description <br> Switches the operations and screens of the machine according to the destination. <br> Purpose <br> To be executed after initializing the backup RAM, in order to return the setting to the value before replacement or initialization. |  |
|  | Display | Description |
|  | Inch <br> Europe Metric <br> Asia Pacific <br> Australia <br> China <br> Korea | Inch (North America) specifications <br> Metric (Europe) specifications <br> Metric (Asia Pacific) specifications <br> Australia specifications <br> China specifications <br> Korea specifications |
|  | 3. Press the start key <br> 4. Turn the main pow <br> * : An error code When errors oc maintenance it <br> Error codes | ch off and on. <br> yed in case of an initialization error. <br> turn main power switch off then on, and execute initialization using 2. |
|  | Codes | Description |
|  | 0001 <br> 0002 <br> 0003 <br> 0020 <br> 0040 | Entity error Controller error OS error Engine error Scanner error |


| Item No. | Description |
| :---: | :---: |
| U253 | Switching between double and single counts <br> Description <br> Switches the count system for the total counter and other counters for every color mode. <br> Purpose <br> Used to select, according to the preference of the user (copy service provider), if A3/Ledger paper is to be counted as one sheet (single count) or two sheets (double count). <br> Setting <br> 1. Press the start key. <br> 2. Select the item to set. |
|  | Display ${ }^{\text {a }}$ Description |
|  | Full Color Count system of full color mode <br> Mono Color* Count system of single color mode <br> B/W Count system of black/white mode |
|  | *: Displayed only if the setting of U276 (Setting the copy count mode) is Mode1. 3. Select the count system. |
|  | Display $\quad$ Description |
|  | SGL(All) Single count for all size paper <br> DBL(A3/Ledger) Double count for A3/Ledger size or larger <br> DBL(B4) Double count for B4 size or larger <br> DBL(Folio) Double count for Folio size or larger |
|  | Initial setting: DBL(A3/Ledger) <br> 4. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :---: |
| U260 | Selecting the timing for copy counting <br> Description <br> Changes the copy count timing for the total counter and other counters. <br> Purpose <br> To be set according to user request. <br> Setting <br> 1. Press the start key. <br> 2. Select the copy count timing. <br> *: Initial setting: Eject <br> 3. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U265 | Setting OEM purchaser code <br> Description <br> Sets the OEM purchaser code. <br> Purpose <br> Sets the code when replacing the main PWB and the like. <br> Setting <br> 1. Press the start key. <br> 2. Change the setting value using the numeric keys. <br> 3. Press the start key. The setting is set. <br> 4. Turn the main power switch off and on. Allow more than 5 seconds between Off and On. |


| Item No. | Description |
| :---: | :---: |
| U276 | Setting the copy count mode <br> Description <br> Sets the count mode of single color mode. <br> Purpose <br> To change the charging counter which counts up in single color printing. <br> Setting <br> 1. Press the start key. <br> 2. Select the mode. <br> Initial setting: Mode 0 <br> 3. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U278 | Setting the delivery date <br> Description <br> Enter delivery date in month, day, and year. <br> Purpose <br> To operate when installing the machine. Perform this to confirm the delivery date. <br> Method <br> 1. Press the start key. <br> 2. Select [Today]. <br> 3. Press the start key. The delivery date is set. <br> Clearing <br> 1. Select [Clear]. <br> 2. Press the start key. The delivery date is cleared. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :---: |
| U284 | Setting 2 color copy mode <br> Description <br> Sets whether to use 2 color copy mode. <br> Purpose <br> According to user request, changes the setting. <br> Setting <br> 1. Press the start key. <br> 2. Select On or Off. <br> Initial setting: Off <br> If On is selected, 2-color copy will be displayed on the color function screen. <br> 3. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U285 | Setting service status page <br> Description <br> Determines displaying the print coverage report on reporting. <br> Purpose <br> According to user request, changes the setting. <br> Setting <br> 1. Press the start key. <br> 2. Select [On] or [Off]. <br> * : Initial setting: On <br> 3. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |



| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U326 | Setting the black lin <br> Description <br> Sets whether to display <br> Purpose <br> Displays the cleaning by the rubbish on the <br> Method <br> 1. Press the start k <br> 2. Select the item to | cleaning indication <br> the cleaning guidance when detecting the <br> uidance in order to make the call for servi ontact glass when scanning from the DP. <br> et. The screen for setting each item is dis | black line. <br> with the layed. | $k$ line decrease |
|  | $\quad$ Display <br> Black Line Mode <br> Black Line Cnt |  Descrip <br>  Black line cleaning guidance ON/ <br> Setting counts of the cleaning guid | FF setting ance indicat |  |
|  | Setting: [Black Line Mode] 1. Select [On] or [Off]. |  |  |  |
|  | Display $\quad$ Description |  |  |  |
|  |  | Displays the cleaning guidance <br> Not to display the cleaning guidance |  |  |
|  | *: Initial setting: On <br> 2. Press the start key. The setting is set. <br> Setting: [Black Line Cnt] <br> 1. Select [Cnt]. <br> 2. Change the setting value using the $+/$ - keys or numeric keys. |  |  |  |
|  | - Display | Description | Setting range | Initial setting |
|  | Cnt | Setting counts of the cleaning guidance indication ( $\times 1000$ sheets) | 0 to 255 | $8$ |
|  | * : When setting is 0 , the black line cleaning indication is displayed only if the black line is detected. <br> 3. Press the start key. The value is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |  |



| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U340 | Description <br> Allocates memory to ensure that there is sufficient memory available for the printer to use as a working area. <br> Purpose <br> Modify the memory allocation if insufficient memory for transparency support or XPS direct printing occurs. |  |  |  |
|  | Display <br> Adj Memory <br> Adj Max Job | \|l|l $\begin{aligned} & \text { Setting the memory allocation } \\ & \text { Setting the maximum of multiple j }\end{aligned}$ |  |  |
|  | Setting: [Adj Memory] <br> 1. Change the setting using the +/- keys or numeric keys. |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | Image | Area temporarily used to create output image. | 0 to 400 (MB) | 190 |
|  | Image(Detail) | Area temporarily used to hold downloaded font and other data. | 0 to 400 (MB) | 1 |
|  | Set the values below in case print failure occurs with the memory shortage. <br> (recommended value) <br> Image : +190 <br> Image(Detaile) : +1 <br> 2. Press the start key. The value is set. <br> 3. Turn the main power switch off and on. Allow more than 5 seconds between Off and On. |  |  |  |
|  | Display | Description | Setting range |  |
|  | Copy <br> Printer | Maximum copy (Scan To Print) Jobs Maximum printer (Host To Print) Jobs | 10 to 50 <br> 10 to 50 |  |
|  | The maximum Printer jobs should be (maximum jobs) - (maximum copy jobs). <br> 2. Press the start key. The value is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |  |


| Item No. | Description |
| :---: | :---: |
| U341 | Specific paper feed location setting for printing function <br> Description <br> Sets a paper feed location specified for printer output. <br> Purpose <br> To use a paper feed location only for printer output. <br> A paper feed location specified for printer output cannot be used for copy output. <br> Method <br> 1. Press the start key. <br> 2. Select the paper feed location for the printer. <br> * : When an optional paper feed device is not installed, the corresponding count is not displayed. <br> 3. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U343 | Switching between duplex/simplex copy mode <br> Description <br> Switches the initial setting between duplex and simplex copy. <br> Purpose <br> To be set according to frequency of use: set to the more frequently used mode. <br> Setting <br> 1. Press the start key. <br> 2. Select [On] or [Off]. <br> * : Initial setting: Off <br> 3. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U345 | Setting the value for maintenance due indication <br> Description <br> Sets when to display a message notifying that the time for maintenance is about to be reached, by setting the number of copies that can be made before the current maintenance cycle ends. When the difference between the number of copies of the maintenance cycle and that of the maintenance count reaches the set value, the message is displayed. <br> Purpose <br> To change the time for maintenance due indication. <br> Setting <br> 1. Press the start key. <br> 2. Select [Cnt]. <br> 3. Change the setting using the $+/-$ keys or numeric keys. |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | Cnt | Time for maintenance due indication (Remaining number of copies that can be made before the current maintenance cycle ends) | 0 to 9999 | 0 |
|  | 4. Press the start key. The value is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |  |


| Item No. | Description |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| U402 | Adjusting margins of image printing <br> Description <br> Adjusts margins for image printing. <br> Purpose <br> Make the adjustment if margins are incorrect. <br> Adjustment <br> 1. Press the start key. <br> 2. Press the system menu key. <br> 3. Press the start key to output a test pattern. <br> 4. Press the system menu key. <br> 5. Select the item to be adjusted. |  |  |  |  |
|  | Display | Description | Setting range | Initial setting | Change in value per step |
|  | Lead <br> A Margin C Margin Trail | Printer leading edge margin <br> Printer left margin <br> Printer right margin <br> Printer trailing edge margin | 0 to 10.0 <br> 0 to 10.0 <br> 0 to 10.0 <br> 0 to 10.0 | $\begin{aligned} & 4.0 \\ & 3.0 \\ & 3.0 \\ & 3.9 \end{aligned}$ | 0.1 mm <br> 0.1 mm <br> 0.1 mm <br> 0.1 mm |

6. Change the setting value using the + - keys or numeric keys. Increasing the value makes the margin wider, and decreasing it makes the margin narrower.


Figure 1-3-16
7. Press the start key. The value is set.

## Caution

Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.


## Completion

Press the stop key. The screen for selecting a maintenance item No. is displayed.

| Item No. | Description |
| :---: | :---: |

U403 Adjusting margins for scanning an original on the contact glass

## Description

Adjusts margins for scanning the original on the contact glass.

## Purpose

Perform the adjustment if margins are incorrect.

## Adjustment

1. Press the start key.
2. Press the system menu key.
3. Place an original and press the start key to make a test copy.
4. Press the system menu key.
5. Select the item to be adjusted.

| Display | Description | Setting <br> range | Initial <br> setting | Change in <br> value per step |
| :--- | :--- | :--- | :--- | :--- |
| A Margin | Scanner left margin | 0 to 10.0 | 2.0 | 0.5 mm |
| B Margin | Scanner leading edge margin | 0 to 10.0 | 2.0 | 0.5 mm |
| C Margin | Scanner right margin | 0 to 10.0 | 2.0 | 0.5 mm |
| D Margin | Scanner trailing edge margin | 0 to 10.0 | 2.0 | 0.5 mm |

6. Change the setting value using the $+/$ - keys or numeric keys. Increasing the value makes the margin wider, and decreasing it makes the margin narrower.


Figure 1-3-17
7. Press the start key. The value is set.

## Caution

Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.


## Completion

Press the stop key. The indication for selecting a maintenance item No. appears.

| Item No. | Description |
| :---: | :---: |
| U404 | Adjusting margins for scanning an original from the DP |
|  | Description |
|  | Adjusts margins for scanning the original from the DP. |
|  | Purpose |
|  | Perform the adjustment if margins are incorrect. |
|  | Caution |
|  | Before making this adjustment, ensure that the following adjustments have been made in maintenance mode |



## Adjustment

1. Press the start key.
2. Press the system menu key.
3. Place an original on the DP and press the start key to make a test copy.
4. Press the system menu key.
5. Select the item to be adjusted.

| Display | Description | Setting <br> range | Initial <br> setting | Change in <br> value per step |
| :--- | :--- | :--- | :--- | :--- |
| A Margin | DP left margin | 0 to 10.0 | 3.0 | 0.5 mm |
| B Margin | DP leading edge margin | 0 to 10.0 | 2.5 | 0.5 mm |
| C Margin | DP right margin | 0 to 10.0 | 3.0 | 0.5 mm |
| D Margin | DP trailing edge margin | 0 to 10.0 | 4.0 | 0.5 mm |

6. Change the setting value using the $+/$ - keys or numeric keys.

Increasing the value makes the margin wider, and decreasing it makes the margin narrower.


Figure 1-3-18
7. Press the start key. The value is set.

## Completion

Press the stop key. The screen for selecting a maintenance item No. is displayed.
Item No.

## Description

U407 Adjusting the leading edge registration for memory image printing

## Description

Adjusts the leading edge registration during memory copying.

## Purpose

Perform the following adjustment if there is a regular error between the leading edge of the copy image on the front face and that on the reverse face during duplex switchback copying.

## Caution

Before Performing this adjustment, ensure that the following adjustments have been made in maintenance mode.


## Adjustment

1. Press the start key.
2. Press the system menu key.
3. Place an original and press the start key to make a test copy.
4. Press the system menu key.
5. Select [Adj Data].

| Display | Description | Setting <br> range | Initial <br> setting | Change in <br> value per step |
| :--- | :--- | ---: | :--- | :--- |
| Adj Data | Leading edge registration for <br> memory image printing | -47 to 47 | 0 | 0.1 dot |

6. Change the setting value using the $+/-$ keys or numeric keys.
For copy example 1, decrease the value. For copy example 2, increase the value.


Figure 1-3-19
7. Press the start key. The value is set.

## Completion

Press the stop key. The screen for selecting a maintenance item No. is displayed.


| Item No. | Description |
| :---: | :---: |
| U410 | Method: [Setting Table] <br> 1. Select the item. |
|  | Display ${ }^{\text {des }}$ Description |
|  | Table1 $\quad$ Normal color table |
|  | Table2 |
|  | Table3 |
|  | Initial setting: Table1 <br> 2. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |  |  |
| :---: | :---: | :---: | :---: |
| U411 | Adjusting the scanner automatically <br> Description <br> Uses a specified original and automatically adjusts the following items in the scanner and the DP scanning sections. <br> Purpose <br> To perform automatic adjustment of various items in the scanner and the DP scanning sections. Perform adjustments using a new test chart (chart 1) when replacing ISC PWB, LED lamp PWB, ISU, DP main PWB. <br> Method <br> 1. Press the start key. <br> 2. Select the item. |  |  |
|  | Display | Description | Original to be used for adjustment (P/N) |
|  | Table (Chart1) | Automatic adjustment in the scanner section (chart 1) | 7505000005 |
|  | DP FaceUp (Chart1) | Do not use. <br> Automatic adjustment in the DP scanning section (first side) (chart 1) | 7505000005 |
|  | Table (Chart2) | Automatic adjustment in the scanner section (chart 2) | 302FZ56990 |
|  | DP FaceUp (Chart2) | Automatic adjustment in the DP scanning section (first side) (chart 2) | 302AC68243 |
|  | Target | Set-up for obtaining the target value | - |
|  | DP Auto Adj | Automatic adjustment of automatic document processor using the chart printed from the machine |  |
|  | Method: [Table (Chart1)] <br> To manually enter the target value <br> 1. Enter the target values which are shown at the bottom of the specified original <br> (P/N: 7505000005) executing maintenance item U425. <br> 2. Set a specified original on the platen. <br> 3. Enter maintenance item U411. <br> 4. Select [Target]. <br> 5. Select [U425] and press the start key. <br> 6. Select [Table (Chart1)]. <br> 7. Select the item. |  |  |


| Item No. | Description |
| :---: | :---: |
| U411 | To automatically enter the target value <br> 1. Enter the value for [Adjust Original] using maintenance item U425. <br> 2. Set a specified original (P/N: 7505000005) on the platen. <br> 3. Enter maintenance item U411. <br> 4. Select [Target]. <br> 5. Select [Auto] and press the start key. <br> 6. Select [Table (Chart1)]. <br> 7. Select the item. |
|  | Display ${ }^{\text {a }}$ Description |
|  | All $\quad$ Executing the all scanner adjustment |
|  | LED/AGC $\quad$ Executing the adjustment for LED light quantity/AGC |
|  | White $\quad$ Executing the white reference compensation coefficient |
|  | C.A. $\quad$ Executing the adjustment for chromatic aberration filter |
|  | MTF $\quad$ Executing the adjustment for MTF filter |
|  | Gamma Executing the adjustment for input gamma |
|  | Matrix |
|  | 8. Press the start key. Auto adjustment starts. <br> * : When automatic adjustment has normally completed, [OK] is displayed. If a problem occurs during auto adjustment, error code is displayed and operation stops. Should this happen, determine the details of the problem and repeat the procedure from the beginning. <br> Method: [DP FaceUp (Chart1)] <br> To manually enter the target value <br> 1. Enter the target values which are shown at the bottom of the specified original (P/N: 7505000005) executing maintenance item U425. <br> 2. Set a specified original on the DP face up. <br> 3. Enter maintenance item U411. <br> 4. Select [Target]. <br> 5. Select [U425] and press the start key. <br> 6. Select [DP FaceUp (Chart1)]. <br> 7. Select [Input]. <br> To automatically enter the target value <br> 1. Enter the value for [Adjust Original] using maintenance item U425. <br> 2. Set a specified original (P/N: 7505000005) on the DP face up. <br> 3. Enter maintenance item U411. <br> 4. Select [Target]. <br> 5. Select [Auto] and press the start key. <br> 6. Select [DP FaceUp (Chart1)]. <br> 7. Select [Input]. |



| Item No. | Description |
| :---: | :---: |
| U411 | Method: [DP FaceUp (Chart2)] <br> 1. Measure the leading edge, main scanning, and auxiliary scanning of the specified original ( P $\mathrm{N}: 302 \mathrm{AC} 68243$ ) and enter the values by executing maintenance item U425. <br> 2. Set a specified original (P/N: 302AC68243) on the DP. <br> Cut the trailing edge of the original. <br> Figure 1-3-20 <br> 3. Enter maintenance item U411. <br> 4. Select [Target]. <br> 5. Select [U425] and press the start key. <br> 6. Select [DP FaceUp (Chart2)]. <br> 7. Select [INPUT]. |
|  | Display $\quad$ Description |
|  | Input Executing the adjustment in the DP scanning section (first <br> side) for magnification, leading edge timing and center line |
|  | 8. Press the start key. Auto adjustment starts. <br> * : When automatic adjustment has normally completed, [OK] is displayed. If a problem occurs during auto adjustment, error code is displayed and operation stops. Should this happen, determine the details of the problem and repeat the procedure from the beginning. |




| Item No. | Description |
| :---: | :---: |
| U415 | Adjusting the print position automatically <br> Description <br> Automatically adjusts timings at the print engine. <br> Adjustment for leading edge timing, center line and margin. <br> Purpose <br> Used to make respective auto adjustments for the print engine. <br> Method <br> 1. Load A3/ledger paper. <br> 2. Press the start key. <br> 3. Select [Execute]. <br> 4. Press the start key. A test pattern is outputted <br> 5. Set the output test pattern as the original. <br> 6. Press the start key. <br> Automatically performs adjustment from the top to bottom cassettes. <br> 7. When normally completed, [OK] is displayed. <br> If a problem occurs during auto adjustment, error code is displayed. <br> Error Codes |
|  | Codes $\quad$ Description |
|  | S001 Black band is not detected (main scanning direction far end) <br> S002 Black band is not detected (main scanning direction near end) <br> S003 Black band is not detected (auxiliary scanning direction leading edge) <br> S004 Black band is not detected (auxiliary scanning direction trailing edge) <br> S005 Auxiliary scanning direction skew error (1.5 mm or more) <br> S006 Main scanning direction skew error (1.5 mm or more) <br> S007 Original error (detection of reverse original paper) <br> S008 Original error (page mismatch) <br> SFFF Scanner other error <br> C101 Adjustment value error (main scanning direction magnification) <br> C102 Adjustment value error (auxiliary scanning direction magnification) <br> C103 Adjustment value error (leading edge timing) <br> C104 Adjustment value error (center line) <br> C105 Adjustment value error (B margin) <br> C106 Adjustment value error (A margin) <br> C107 Adjustment value error (C margin) <br> C108 Adjustment value error (D margin) <br> CFFF Controller other error |
|  | Completion Press the stop key. The screen for selecting a maintenance item No. is displayed. |



| Item No. | Description |
| :---: | :---: |
| U425 | Setting: [Adjust Original] <br> 1. Measure the distance from the leading edge to the top of black belt 1 of the original at $A, B$ and C . <br> Measurement procedure <br> 1) Measure the distance from the leading edge to the top of black belt 1 of the original at A ( 30 mm from the left edge), B (148.5 mm from the left edge) and C (267 mm from the left edge), respectively. <br> 2) Apply the following formula for the values obtained: ( $(A+B+C) / 3)$ <br> 2. Enter the values solved using the cursor left/right keys or numeric keys in [Dist1]. <br> 3. Press the start key. The value is set. <br> 4. Measure the distance from the left edge to the right edge black belt 2 of the original at $F$. Measurement procedure <br> 1) Measure the distance from the left edge to the right edge black belt 2 of the original at $F$ ( 15 mm from the top edge of black belt 1). <br> 5. Enter the values using the cursor left/right keys or numeric keys in [Dist2]. <br> 6. Press the start key. The value is set. <br> 7. Measure the distance from the top edge of black belt 1 to the bottom of black belt 3 of the original at D and E. <br> 1) Measure the distance from the top edge of black belt 1 to the bottom of black belt 3 of the original at $D$ ( 30 mm from the left edge) and $E$ ( 267 mm from the left edge), respectively. <br> 2) Apply the following formula for the values obtained: (D/2 $+E / 2$ ) <br> 8. Enter the measured value using the cursor left/right keys or numeric keys in [Dist3]. <br> 9. Press the start key. The value is set. <br> Figure 1-3-21 |


| Item No. |  | Descriptio |  |
| :---: | :---: | :---: | :---: |
| U425 | Method: [Chart2] <br> 1. Press the start key. <br> 2. Select the item. |  |  |
|  | Display | Description |  |
|  | CCD | Entering the target values of the chart (P/N: 302FZ56990) used for adjustment |  |
|  | DP | Entering the measurement value of the chart (P/N: 302AC68243) used for adjustment |  |
|  | Method: [CCD] <br> 1. Select the item to be set. |  |  |
|  | Display | Description |  |
|  | N875 N475 N125 C M Y R G B Adjust Original | Setting the N875 patch for the original for adjustment Setting the N475 patch for the original for adjustment Setting the N125 patch for the original for adjustment Setting the cyan patch for the original for adjustment Setting the magenta patch for the original for adjustment Setting the yellow patch for the original for adjustment Setting the red patch for the original for adjustment Setting the green patch for the original for adjustment Setting the blue patch for the original for adjustment Setting the main and auxiliary scanning directions |  |
|  | 2. Select the item to be set. |  |  |
|  | Display | Description | Setting range |
|  | $\begin{aligned} & \mathrm{L} \\ & \mathrm{a} \\ & \mathrm{~b} \end{aligned}$ | Setting the $L$ value <br> Setting the a value <br> Setting the $b$ value | $\begin{aligned} & 0.0 \text { to } 100.0 \\ & -200.0 \text { to } 200.0 \\ & -200.0 \text { to } 200.0 \end{aligned}$ |
|  | 3. Enters the value that is indicated on the back of the chart using the +/- keys or numeric keys. <br> 4. Press the start key. The value is set. |  |  |



| Item No. | Description |
| :---: | :--- | :--- | :--- |
| U425 | Setting: [DP] <br> 1. Measure the distance from the leading edge to the black belt (inside) of the original at A. <br> 2. Enter the measured value using the +/- keys or numeric keys in [Lead]. <br> 3. Measure the distance from the left edge to the black belt (inside) of the original at B. <br> 4. Enter the measured value using the +/- keys or numeric keys in [Main Scan]. <br> 5. Measure the distance from the black belt of leading edge (inside) to the black belt of trailing <br> edge (inside) of the original at C. <br> 6. Enter the measured value using the +/- keys or numeric keys in [Sub Scan]. <br> 7. Press the start key. The value is set. |
|  |  |




| Item No. |  | Description |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U464 | Setting: [Bias Target/Gamma Target] <br> 1. Select the item to be set. <br> 2. Change the setting value using the $+/$ - keys or numeric keys. |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | $\begin{aligned} & \hline \mathrm{C} \\ & \mathrm{M} \\ & \mathrm{Y} \\ & \mathrm{~K} \end{aligned}$ | Setting of target (Cyan) <br> Setting of target (Magenta) <br> Setting of target (Yellow) <br> Setting of target (Black) | 10 to 1000 <br> 10 to 1000 <br> 10 to 1000 <br> 10 to 1000 | $\begin{aligned} & \hline 760 / 300 \\ & 760 / 300 \\ & 750 / 300 \\ & 820 / 400 \end{aligned}$ |
|  | 3. Press the start key. The value is set. <br> Method: [Calib] <br> 1. Select the item to be set <br> 2. Press the start key. The operation starts. |  |  |  |
|  | Display | Description |  |  |
|  | Regist <br> Gamma <br> Paper Int <br> Color Regist | Executes the calibration to correct registration. <br> Executes the calibration to quantities of light. <br> Executes the calibration between paper. <br> Executes the calibration to color registration. |  |  |
|  | 3. To stop operation, press the stop key. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |  |


| Item No. | Description |
| :---: | :---: |
| U467 | Setting the color registration adjustment <br> Description <br> Sets the color registration adjustment. <br> Purpose <br> If color variance is uneven due to a sensor failure, etc., turn this off and temporarily make a manual adjustment. <br> Method <br> 1. Press the start key. <br> 2. Select the item to be set. <br> Setting <br> 1. Change the setting value using the $+/$ - keys or numeric keys. <br> 2. Press the start key. The value is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U468 | Checking the color registration data <br> Description <br> Displays the color registration correction data and transfer belt speed correction data. <br> Purpose <br> To check the corresponding data. <br> Method <br> 1. Press the start key. <br> 2. Select the item to be reference. The screen for the selected item is displayed. |


| Item No. | Description |
| :---: | :--- | :--- |
| U468 | Displaying: [Auto] <br> 1. Select [Auto(1st)], [Auto(2nd)] or [Auto(3rd)]. <br> The current value is displayed. |
| Display Description <br> LSU Out Top <br> LSU Out Left <br> Magnification(Whole) Image up-to-date timing <br> Image optical axis adjustment <br> Correction data of original size magnification in whole |  |

## Displaying: [Manual]

1. Select [Manua(1st)], [Manual(2nd)] or [Manual(3rd)].

The current value is displayed.

| Display | Description |
| :--- | :--- |
| LSU Out Top | Image up-to-date timing |
| LSU Out Left | Image optical axis adjustment |
| Magnification(Whole) | Correction data of original size magnification in whole |
| Magnification(Part1) | Correction data of original size magnification in a part 1 |
| Magnification(Part2) | Correction data of original size magnification in a part 2 |
| Magnification(Part3) | Correction data of original size magnification in a part 3 |
| Magnification(Part4) | Correction data of original size magnification in a part 4 |
| Magnification(Part5) | Correction data of original size magnification in a part 5 |
| Magnification(Part6) | Correction data of original size magnification in a part 6 |
| Magnification(Part7) | Correction data of original size magnification in a part 7 |

## Method: [Initialize]

1. Select [Initialize].
2. Select [Execute] and then press the start key.

* : Initialization is executed.

| Display | Description |
| :--- | :--- |
| Execute | Execution of initialization |

## Completion

Press the stop key. The screen for selecting a maintenance item No. is displayed.


Figure 1-3-24

| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U469 | Error codes |  |  |  |
|  | Codes | Description | Codes | Description |
|  | $\begin{aligned} & \hline \text { S001 } \\ & \text { S002 } \end{aligned}$ S003 | Patch not detected <br> Original deviation in the main scanning direction <br> Original deviation in the auxiliary scanning direction | $\begin{aligned} & \hline \text { S004 } \\ & \text { S005 } \\ & \text { SFFF } \\ & \text { CFFF } \end{aligned}$ | Original inclination error <br> Original type error <br> Scanner other error <br> Controller other error |
|  | Method: [Manual] <br> 1. Select [Print]. <br> 2. Press the start key. A chart for adjustment is outputted. <br> 3. Select [Regist]. <br> 4. Read figures at MH-1 to $7 / \mathrm{CH}-1$ to $7 / \mathrm{YH}-1$ to 7 and MV-3/CV-3/YV-3 of the reference chart and enter the figure marked at the scale which the $B K$ fine line is in line with the $M / C / Y$ fine lines, using the \# key or * key. |  |  |  |
|  |  |  <br> hart for adjustment | (example) <br> When a red bar exactly coincides with $B$, enter $B$ as a value. |  |

Figure 1-3-25
5. Press the start key. The value is set.
6. Press the start key after all values have been entered. Color registration correction starts.
7. Print a chart for adjustment.
8. Verify that each scale is within the range of 1 to $A$.


The scale must be corresponding within the range of " A " from " 1 ".

Figure 1-3-26
Item No. Description

| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U470 | Setting the JPEG compression ratio <br> Description <br> Sets the compression ratio for JPEG images in each image quality mode. <br> Purpose <br> To change the setting in accordance with the image that the user is copying. For example, in order to soften the coarseness of the image when making copies at over $200 \%$ magnification, change the level of compression by raising the value. Lowering the value will increase the compression and thereby lower the image quality; Raising the value will increase image quality but lower the image processing speed. <br> Method <br> 1. Press the start key. <br> 2. Select the item to be set. |  |  |  |
|  | Display <br> Copy <br> Send <br> System | Compression ratio for copying <br> Compression ratio for sending <br> Compression ratio for temporary storage in system |  |  |
|  | Setting: [Copy] <br> 1. Select the item to be set. |  |  |  |
|  | Displa | Description |  |  |
|  | Photo <br> Text | Compression ratio in the photo mode Compression ratio in the text mode |  |  |
|  | 2. Select the item to be set. <br> 3. Change the setting value using the $+/-$ keys or numeric keys. |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | Y $\mathrm{Y}^{\text {CbCr }}$ | Compression ratio of brightness Compression ratio of color differential | $\begin{aligned} & 1 \text { to } 100 \\ & 1 \text { to } 100 \end{aligned}$ | $\begin{aligned} & \hline 90 / 90 \\ & 90 / 90 \end{aligned}$ |
|  | 4. Press the start key. The value is set. |  |  |  |


| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U470 | Setting: [Send] <br> 1. Select the item to be set. |  |  |  |
|  | Display | Description |  |  |
|  | Photo <br> Text <br> HC-PDF(BG) <br> HC-PDF(Char) | Compression ratio in the photo mode <br> Compression ratio in the text mode <br> Compression ratio of high compression $\operatorname{PDF}(B G)$ <br> Compression ratio of high compression PDF(Char) |  |  |
|  | 2. Select the item to be set. <br> 3. Change the setting value using the $+/$ - keys or numeric keys. <br> [Photo] or [Text] |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | $\left\lvert\, \begin{aligned} & \text { Y1 to } \mathrm{Y} 5 \\ & \mathrm{CbCr} 1 \text { to } \mathrm{CbCr} 5\end{aligned}\right.$ | Compression ratio of brightness <br> Compression ratio of color differential | $\begin{array}{\|l\|} \hline 1 \text { to } 100 \\ 1 \text { to } 100 \end{array}$ | 70/90/30/40/51 <br> 70/90/30/40/51 |
|  | [HC-PDF] |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | Y1 to Y3  <br> CbCr 1 to CbCr 3 C | Compression ratio of brightness Compression ratio of color differential | 1 to 100 <br> 1 to 100 | $\begin{aligned} & \hline 15 / 25 / 90 \\ & 15 / 25 / 90 \end{aligned}$ |
|  | 4. Press the start key. The value is set. <br> Setting: [System] <br> 1. Select the item to be set. <br> 2. Change the setting value using the + /- keys or numeric keys. |  |  |  |
|  | - Display | Description | Setting range | Initial setting |
|  | Y <br> CbCr | Compression ratio of brightness <br> Compression ratio of color differential | $\begin{aligned} & 1 \text { to } 100 \\ & 1 \text { to } 100 \end{aligned}$ | 90 90 |
|  | 3. Press the start key. The value is set. <br> Supplement <br> While this maintenance item is being executed, copying from an original is available in interrupt copying mode (which is activated by pressing the system menu key). <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |  |



| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U485 | Setting the image proces <br> Description <br> Sets the detection level for guard function. Also, sets Purpose <br> To change the detection le tion in scanning. Also, cha <br> Method <br> 1. Press the start key. <br> 2. Select the item. | g mode <br> canning printed matter outputted wither process PDF images are rotated. <br> when the confidential document g es the process of how PDF images | the confide <br> rd is not pri re rotated. | al document <br> d well for detec- |
|  | Display <br> Mode <br> Color table | Descript <br> Setting of image-processing mode <br> Setting of a color table |  |  |
|  | Method: [Mode] 1. Select the item |  |  |  |
|  | Display | Description |  |  |
|  | Conf. Doc. Detection <br> PDF Rotation | Confidential document guard detection levelProcessing the rotation of PDF images |  |  |
|  | Setting: [Conf. Doc. Detection] <br> 1. Change the setting value using +/- keys or numeric keys. |  |  |  |
|  | Display | Description | Setting range | Initial setting |
|  | Conf. Doc. Co <br> Detection lev | Confidential document guard detection level | 1 to 5 | 1 |
|  | A smaller value raises the detection sensitivity but increases the possibility of false detection. <br> A larger value lowers the detection sensitivity but decreases the possibility of false detection. <br> 2. Press the start key. The value is set. <br> Setting: [PDF Rotation] <br> 1. Change the setting value using $+/$ - keys or numeric keys. |  |  |  |
|  | Display | Description |  |  |
|  | 0 1 2 | Assigns the image rotation with the internal parameter Assigns the image rotation with the actual image Assigns the image rotation with the internal parameter (CTM rotation) |  |  |
|  | Initial setting: 0 <br> 2. Press the start key. The value is set. |  |  |  |


| Item No. | Description |  |
| :---: | :--- | :--- |
| U485 | Method:[Color table] <br> 1. Select the item. <br> Display Color Table 1 (Prn) <br> Color Table 2 (Prn)  <br> Install  <br> Uninstall  | Printer color table (Default) <br> Printer color table (Custom) <br> Installation of a color table <br> Uninstallation of a color table |

Setting: [Color Table 1 (Prn)/Color Table 2 (Prn)]

1. Select the item to setting.

| Display | Description |
| :--- | :--- |
| TYPE_FU | Color table name |
| TYPE_KO | Color table name |
| TYPE_KY | Color table name |
| TYPE_RH | Color table name |
| TYPE_TO | Color table name |
| TYPE_CA | Color table name |

2. Press the start key. The value is set.

## Method:[Install]

1. USB containing a color table file is attached.
2. Select [Execute].
3. Press the start key. Installation of a color table is started.

## Setting: [Uninstall]

1. Select the item to setting.

| Display |  |
| :--- | :--- |
| TYPE_FU | Color table name |
| TYPE_KO | Color table name |
| TYPE_KY | Color table name |
| TYPE_RH | Color table name |
| TYPE_TO | Color table name |
| TYPE_CA | Color table name |

2. Press the start key. Uninstallation of a color table is started.

## Completion

Press the stop key. The screen for selecting a maintenance item No. is displayed.

| Item No. | Description |
| :---: | :---: |
| U486 | Setting color/black and white operation mode <br> Description <br> When color and B/W documents are mixed, sets operation mode after a color document is detected. <br> Purpose <br> To ensure productivity when copying color and B/W documents in ACS mode, select Mode3. However, selecting Mode3 will increase the maintenance count for cyan, magenta, and yellow color developer units even when there is a B/W original after a color original. <br> Setting <br> 1. Press the start key. <br> 2. Select the mode. |
|  | Display Description |
|  | Mode1 A mode suited for the user with high black-and-white usage in which the <br> occurrence of color printing during continuous printing is minimum. <br> Color / monochrome mode is switched for every original. |
|  | Mode2 A mode suited for the user with high black-and-white usage in which the <br> occurrence of color printing during continuous printing is maximum. <br> Printing in color mode resumes up to 10 pages in a row even an interrupt is <br> made to switch to black and white mode, until printing is diverted to black and <br> white mode from color mode at the 11th page (color processing is termi- <br> nated). |
|  | Mode3 A mode suited for the user with high black-and-white usage in which the <br> occurrence of color printing during continuous printing is maximum. <br> Mode suited for high color printing volume <br> Once diverted to color mode, the black and white printings are executed in <br> color processing mode. |
|  | Auto Mode that allows to select from modes 1 through 3 depending on the usage. <br> Mode is selected from three modes depending on the percentage of color <br> and black and white printings in the total number of print pages during a pre- <br> determined period. |
|  | Initial setting: Mode2 <br> 3. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |



| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U600 | Initializing all data <br> Description <br> Initializes software switches and all data in the backup data on the FAX control PWB, according to the destination and OEM. <br> Executes the check of the file system, when abnormality of the file system is detected, initializes the file system, communication past record and register setting contents. <br> Purpose <br> To initialize the FAX control PWB. <br> Method <br> 1. Press the start key. <br> 2. Select [Country Code] and enter a destination code using the numeric keys. Refer to the destination code list on following for the destination code. <br> OEM code is no operation necessary. <br> 3. Select [Execute]. <br> 4. Press the start key. Data initialization starts. To cancel data initialization, press the stop key. <br> 5. After data initialization, ROM version are displayed. <br> A ROM version displays three kinds, application, boot, and IPL. <br> Destination code list |  |  |  |
|  | Cod | Destination | Code | Destination |
|  | 000 009 038 080 084 088 097 108 126 136 137 152 156 159 169 181 242 243 | Japan <br> Australia <br> China <br> Hong Kong <br> Indonesia <br> Israel <br> Korea <br> Malaysia <br> New Zealand <br> Peru <br> Philippines <br> Middle East <br> Singapore <br> South Africa <br> Thailand <br> U.S.A. <br> South America <br> Saudi Arabia | 253 | CTR21 (European nations) <br> Italy <br> Germany <br> Spain <br> U.K. <br> Netherlands <br> Sweden <br> France <br> Austria <br> Switzerland <br> Belgium <br> Denmark <br> Finland <br> Portugal <br> Ireland <br> Norway <br> Taiwan |



| Item No. | Description |
| :---: | :---: |
| U604 | Setting user data 2 <br> Description <br> Makes user settings to enable the use of the machine as a fax. <br> Purpose <br> Use this if the user wishes to adjust the number of rings that occur before the unit switches into fax receiving mode when fax/telephone auto-select is enabled. <br> Method <br> 1. Press the start key. <br> 2. Select $[R i n g s(F / T)$ \#]. <br> 3. Change the setting using the $+/$ - keys or numeric keys. <br> * : If you set this to 0 , the unit will start fax reception without any ringing. <br> 4. Press the start key. The value is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U605 | Clearing data <br> Description <br> Initializes data related to the fax transmission such as transmission history. <br> Purpose <br> To clear the transmission history. <br> Method <br> 1. Press the start key. <br> 2. Select [CLEAR COM.REC.]. <br> 3. Press the start key. Initialization processing starts. When processing is finished, [Completed] is displayed. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |  |  |
| :---: | :---: | :---: | :---: |
| U610 | Setting system 1 <br> Description <br> Makes settings for fax reception regarding the sizes of the fax pap automatic printing of the protocol list. <br> Method <br> 1. Press the start key. <br> 2. Select the item to be set. | paper and | ved images and |
|  | Description |  |  |
|  | Cut Line(100\%) Sets the number of lines to be ig <br> $100 \%$ magnification. <br> Cut Line(Auto) Sets the number of lines to be ig <br> the auto reduction mode. <br> Cut Line(A4) <br> Sets the number of lines to be ig <br> (A4R/LetterR) in the auto reducti  | nored when <br> nored when <br> nored when on mode. | eiving a fax at eiving a fax in eiving a fax |
|  | Setting:[Cut Line(100\%)] <br> Sets the maximum number of lines to be ignored if the received data volume exceeds the recording capacity when recording the data at $100 \%$ magnification. If the number of excess lines is below the setting, those lines are ignored. If over the setting, they are recorded on the next page <br> 1. Change the setting using the $+/$ - keys or numeric keys. |  |  |
|  | Description | Setting range | Initial setting |
|  | Number of lines to be ignored when receiving at 100\% | 0 to 22 | 3 |
|  | *: Increase the setting if a blank second page is output, and decrease it if the received image does not include the entire transmitted data. <br> 2. Press the start key. The value is set. <br> Setting:[Cut Line(Auto)] <br> Sets the maximum number of lines to be ignored if the received data volume exceeds the recording capacity when the data is recorded in the auto reduction mode. If the number of excess lines is below the setting, those lines are ignored. If over the setting, the entire data on a page is further reduced so that it can be recorded on the same page. <br> 1. Change the setting using the $+/$ - keys or numeric keys. |  |  |
|  |  |  |  |
|  | Description | Setting range | Initial setting |
|  | Number of lines to be ignored when receiving in the auto reduction mode | 0 to 22 | 0 |
|  | *: Increase the setting if a page received in the reduction mode is over-reduced and too much trailing edge margin is left. Decrease it if the received image does not include all transmitted data. <br> 2. Press the start key. The value is set. |  |  |


| Item No. | Description |  |  |
| :---: | :---: | :---: | :---: |
| U610 | Setting:[Cut Line(A4)] <br> Sets the maximum number of lines to be ignored if the received data volume exceeds the recording capacity when the data is recorded in the auto reduction mode onto A4R or LetterR paper under the conditions below. <br> If the number of excess lines is below the setting, those lines are ignored. If over the setting, the entire data on a page is further reduced so that it can be recorded on the same page. <br> 1. Change the setting using the $+/-$ keys or numeric keys. <br> *: Increase the setting if a page received in the reduction mode is over-reduced and too much trailing edge margin is left. Decrease it if the received image does not include all transmitted data. <br> 2. Press the start key. The value is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |


| Item No. | Description |  |  |
| :---: | :---: | :---: | :---: |
| U611 | Setting system 2 <br> Description <br> Sets the number of adjustment lines for automatic reduction. <br> Method <br> 1. Press the start key. <br> 2. Select the item to be set. |  |  |
|  | Description |  |  |
|  | Sets the number of adjustment lines for automatic reduction. Sets the number of adjustment lines for automatic reduction when A4 paper is set. <br> Sets the number of adjustment lines for automatic reduction when letter size paper is set. |  |  |
|  | Setting:[Adj Lines] <br> Sets the number of adjustment lines for automatic reduction. <br> 1. Change the setting using the cursor left/right keys or numeric keys. |  |  |
|  | Description | Setting range | Initial setting |
|  | Number of adjustment lines for automatic reduction | 0 to 22 | 7 |
|  | 2. Press the start key. The value is set. <br> Setting:[Adj Lines(A4)] <br> Sets the number of adjustment lines for automatic reduction when A4 paper is set. <br> 1. Change the setting using the cursor left/right keys or numeric keys. |  |  |
|  | Description | Setting range | Initial setting |
|  | Number of adjustment lines for automatic reduction when A4 paper is set | 0 to 22 | 22 |
|  | 2. Press the start key. The value is set. <br> Setting:[Adj Lines(LT)] <br> Sets the number of adjustment lines for automatic reduction when letter size paper is set. <br> 1. Change the setting using the cursor left/right keys or numeric keys. |  |  |
|  | Description | Setting range | Initial setting |
|  | Number of adjustment lines for automatic reduction when letter size paper is set | 0 to 26 | 26 |
|  | 2. Press the start key. The value is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |


| Item No. | Description |
| :---: | :---: |
| U612 | Setting system 3 <br> Description <br> Makes settings for fax transmission regarding operation and automatic printing of the protocol list. <br> Method <br> 1. Press the start key. <br> 2. Select the item to be set. |
|  | Display ${ }^{\text {a }}$ Description |
|  | Auto Reduct Selects if auto reduction in the auxiliary direction is to be per- <br> formed. <br> Sets the automatic printing of the protocol list. <br> Protocol List  |
|  | Setting:[Auto Reduct] <br> Sets whether to receive a long document by automatically reducing it in the auxiliary direction or at $100 \%$ magnification. <br> 1. Select the item to be set. |
|  | Display ${ }^{\text {a }}$ Description |
|  | On Auto reduction is performed if the received document is longer <br> than the fax paper. <br> Off |
|  | * : Initial setting: On <br> 2. Press the start key. The setting is set. <br> Setting:[Protocol List] <br> Sets if the protocol list is automatically printed out. <br> 1. Select the item to be set. |
|  | Display Description |
|  | Off The protocol list is not printed out automatically. <br> Err <br> One protocol list is automatically printed out after communica-  <br> tion only if a communication error occurs.  |
|  | * : Initial setting: Off <br> 2. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :---: |
| U615 | Setting system 6 <br> Description <br> Makes settings for fax reception regarding the sizes of the fax paper and received images. <br> Purpose <br> To set the maximum recording width and processing method when 11 " width fax paper is loaded on an inch specification machine. <br> Setting <br> 1. Press the start key. <br> 2. Select [RX Width For 11"]. <br> 3. Select the item to be set. <br> * : Initial setting: Ledger <br> 4. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U620 | Setting the remote switching mode <br> Description <br> Sets the signal detection method for remote switching. Be sure to change the setting according to the type of telephone connected to the machine. <br> Setting <br> 1. Press the start key. <br> 2. Select [Remort Mode]. <br> 3. Select the mode. <br> * : Initial setting: One <br> 4. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |



| Item No. | Description |
| :---: | :---: |
| U630 | Setting communication control 1 <br> Description <br> Makes settings for fax transmission regarding the communication. <br> Method <br> 1. Press the start key. <br> 2. Select the item to be set. |
|  | Display ${ }^{\text {a }}$ Description |
|  | TX Speed Sets the communication starting speed. <br> RX Speed Sets the reception speed. <br> TX Echo Sets the waiting period to prevent echo problems at the <br> sender. <br> RX Echo Sets the waiting period to prevent echo problems at the <br> receiver. |
|  | Setting:[TX Speed] <br> Sets the initial communication speed when starting transmission. When the destination unit has V. 34 capability, V. 34 is selected for transmission, regardless of this setting. <br> 1. Select the setting. |
|  | Display $\quad$ Description |
|  | $14400 \mathrm{bps} / \mathrm{V} 17$ V.17, 14400 bps <br> $9600 \mathrm{bps} / \mathrm{V} 29$ V.17, 9600 bps <br> $4800 \mathrm{bps} / \mathrm{V} 27 \mathrm{ter}$ V.27ter, 4800 bps <br> $2400 \mathrm{bps} / \mathrm{V} 27 \mathrm{ter}$ $\mathrm{V} .27 \mathrm{ter}, 2400 \mathrm{bps}$ |
|  | * : Initial setting: 14400bps/V17 <br> 2. Press the start key. The setting is set. <br> Setting:[RX Speed] <br> Sets the reception speed that the sender is informed of using the DIS or NSF signal. When the destination unit has V .34 capability, V .34 is selected, regardless of the setting. <br> 1. Select the setting. |
|  | Display Description |
|  | 14400bps V.17, V.33, V.29, V.27ter <br> 9600bps V.29, V.27ter <br> 4800bps V.27ter <br> 2400bps V.27ter (fallback only) |
|  | *: Initial setting: 14400bps <br> 2. Press the start key. The setting is set. |


| Item No. | Description |
| :---: | :---: |
| U630 | Setting:[TX Echo] <br> Sets the period before a DCS signal is sent after a DIS signal is received. Used when problems occur due to echoes at the sender. <br> 1. Select the setting. |
|  | Display ${ }^{\text {a }}$ Description |
|  | 500 Sends a DCS 500 ms after receiving a DIS. <br> 300 Sends a DCS 300 ms after receiving a DIS. |
|  | *: Initial setting: 300 <br> 2. Press the start key. The setting is set. <br> Setting:[RX Echo] <br> Sets the period before an NSF, CSI or DIS signal is sent after a CED signal is received. Used when problems occur due to echoes at the receiver. <br> 1. Select the setting. |
|  | Display ${ }^{\text {a }}$ ( Description |
|  | 500 Sends an NSF, CSI or DIS 500 ms after receiving a CED. <br> 75 Sends an NSF, CSI or DIS 75 ms after receiving a CED. |
|  | *: Initial setting: 75 <br> 2. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :---: |
| U631 | Setting communication control 2 <br> Description <br> Makes settings regarding fax transmission. <br> Method <br> 1. Press the start key. <br> 2. Select the item to be set. |
|  | Display Description |
|  | ECM TX Sets ECM transmission. <br> ECM RX Sets ECM reception. <br> CED Freq Sets the frequency of the CED signal. |
|  | Setting:[ECM TX] <br> To be set to Off when reduction of transmission costs is of higher priority than image quality. This should not be set to Off when connecting to the IP (Internet Protocol) telephone line. <br> 1. Select the setting. |
|  | Display Description |
|  | On <br> Off |
|  | * : Initial setting: On <br> 2. Press the start key. The setting is set. <br> Setting:[ECM RX] <br> To be set to Off when reduction of transmission costs is of higher priority than image quality. This should not be set to Off when connecting to the IP (Internet Protocol) telephone line. <br> 1. Select the setting. |
|  | Display ${ }^{\text {a }}$ Description |
|  | On ECM reception is enabled. <br> Off ECM reception is disabled. |
|  | * : Initial setting: On <br> 2. Press the start key. The setting is set. <br> Setting:[CED Freq] <br> Sets the frequency of the CED signal. Used as one of the measures to improve transmission performance for international communications. <br> 1. Select the setting. |
|  | Display ${ }^{\text {a }}$ Description |
|  | 2100 2100 Hz <br> 1100 1100 Hz |
|  | *: Initial setting: 2100 <br> 2. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |




| Item No. | Description |
| :---: | :---: |
| U633 | Setting:[DIS 2Res] <br> Sets the number of times to receive the DIS signal to once or twice. Used as one of the correction measures for transmission errors and other problems. <br> 1. Select the setting. <br> *: Initial setting: Once <br> 2. Press the start key. The setting is set. <br> Setting:[RTN Check] <br> Sets the error line rate as the reference for RTN signal output. If transmission errors occur frequently due to the quality of the line, they can be reduced by lowering this setting. <br> 1. Select the setting. <br> * : Initial setting: 15\% <br> 2. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U634 | Setting communication control 5 <br> Description <br> Sets the maximum number of error bytes judged acceptable when receiving a TCF signal. Used as a measure to ease transmission conditions if transmission errors occur. <br> Setting <br> 1. Press the start key. <br> 2. Select [TCF Check]. <br> 3. Change the setting using the $+/-$ keys or numeric keys. <br> 4. Press the start key. The value is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |  |  |
| :---: | :---: | :---: | :---: |
| U640 | Description <br> Sets the detection time when one-shot detection is selected for remote switching. (This setting item will be displayed, but the setting made is ineffective.) <br> Sets the detection time when continuous detection is selected for remote switching. (This setting item will be displayed, but the setting made is ineffective.) |  |  |
|  | Display  <br> Time (One) Sets the one-shot dete <br> Time (Cont) Sets the continuous de | Sets the one-shot detection time for remote switching. <br> Sets the continuous detection time for remote switching. |  |
|  | Setting:[Time (One)] <br> 1. Change the setting using the $+/$ - keys or numeric keys. |  |  |
|  | Description | Setting range | Initial setting |
|  | One-shot detection time for remote switching | 0 to 255 | 7 |
|  | 2. Press the start key. The value is set. <br> Setting:[Time (Cont)] <br> 1. Change the setting using the $+/$ - keys or numeric keys. |  |  |
|  |  |  |  |
|  | Description | Setting range | Initial setting |
|  | Continuous detection time for remote switching | 0 to 255 | 80 |
|  | 2. Press the start key. The value is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |



| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U641 | Setting:[T2 Time Out] <br> The T2 time-out time decides the following. From CFR signal output to image data reception From image data reception to the next signal reception In ECM, from RNR signal detection to the next signal reception <br> 1. Change the setting using the $+/-$ keys or numeric keys. |  |  |  |
|  | Description | Setting range | Initial setting | Change in value per step |
|  | T2 time-out time | 1 to 255 | 69 | 100 ms |

2. Press the start key. The value is set.

## Setting:[Ta Time Out]

In the fax/telephone auto select mode, sets the time to continue ringing an operator through the connected telephone after receiving a call as a fax machine (see figure 1-3-28). A fax signal is received within the Ta set time, or the fax mode is selected automatically when the time elapses. In fax/telephone auto select mode, change the setting when fax reception is unsuccessful or a telephone fails to receive a call.

1. Change the setting using the +/- keys or numeric keys.

| Description | Setting range | Initial setting |
| :--- | :--- | :--- |
| Ta time-out time | 1 to 255 | 30 |

2. Press the start key. The value is set.


Figure 1-3-28 Ta/Tb1/Tb2 time-out time

## Setting:[Tb1 Time Out]

In the fax/telephone auto select mode, sets the time to start sending the ring back tone after receiving a call as a fax machine (see figure 1-3-28). In fax/telephone auto select mode, change the setting when fax reception is unsuccessful or a telephone fails to receive a call.

1. Change the setting using the $+/-$ keys or numeric keys.

| Description | Setting <br> range | Initial <br> setting | Change in value <br> per step |
| :--- | :--- | :--- | :--- |
| Tb1 time-out time | 1 to 255 | 20 | 100 ms |

2. Press the start key. The value is set.

| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U641 | Setting:[Tb2 Time Out] <br> In the fax/telephone auto select mode, sets the time to start ringing an operator through the connected telephone after receiving a call as a fax machine (see figure 1-3-28). In the fax/telephone auto select mode, change the setting when fax reception is unsuccessful or a telephone fails to receive a call. <br> 1. Change the setting using the $+/$ - keys or numeric keys. |  |  |  |
|  | Description | Setting range | Initial setting | Change in value per step |
|  | Tb2 time-out time | 1 to 255 | 80 | 100 ms |
|  | 2. Press the start key. The value is set. <br> Setting:[Tc Time Out] <br> In the TAD mode, set the time to check if there are any triggers for shifting to fax reception after a connected telephone receives a call. Only the telephone function is available if shifting is not made within the set Tc time. <br> In the TAD mode, change the setting when fax reception is unsuccessful or a telephone fails to receive a call. <br> 1. Change the setting using the $+/$ - keys or numeric keys. |  |  |  |
|  |  |  |  |  |
|  | Description |  | Setting range | Initial setting |
|  | Tc time-out time |  | 1 to 255 | 60 |
|  | 2. Press the start key. The value is set. |  |  |  |
|  | Setting:[Td Time Out] <br> Sets the length of the time required to determine silent status (fax), one of the triggers for Tc time check. In the TAD mode, change the setting when fax reception is unsuccessful or a telephone fails to receive a call. Be sure not to set it too short; otherwise, the mode may be shifted to fax while the unit is being used as a telephone. <br> 1. Change the setting using the $+/$ keys or numeric keys. |  |  |  |
|  | Description | Setting range |  | Initial setting |
|  | 2. Press the start key. The value is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |  |
|  |  |  |  |  |


| Item No. | Description |
| :---: | :---: |
| U650 | Setting modem 1 <br> Description <br> Sets the G3 cable equalizer. Sets the modem detection level. <br> Purpose <br> Perform the following adjustment to make the equalizer compatible with the line characteristics. To improve the transmission performance when a low quality line is used. <br> Method <br> 1. Press the start key. <br> 2. Select the item to be set. <br> Setting:[Reg G3 TX Eqr] <br> 1. Select [0dB], [4dB], [8dB] or [12dB]. <br> *: Initial setting: OdB <br> 2. Press the start key. The setting is set. <br> Setting:[Reg G3 RX Eqr] <br> 1. Select [ 0 dB$],[4 \mathrm{~dB}],[8 \mathrm{~dB}]$ or $[12 \mathrm{~dB}]$. <br> *: Initial setting: OdB <br> 2. Press the start key. The setting is set. <br> Setting:[RX Mdm Level] <br> 1. Select [-33dBm], [-38dBm], [-43dBm] or [-48dBm] using the cursor up/down keys. <br> * : Initial setting: -43dBm <br> 2. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |  |  |
| :---: | :---: | :---: | :---: |
| U651 | Setting modem 2 <br> Description <br> Sets the modem output level. <br> Sets the DTMF output level of a push-button dial telepho <br> Purpose <br> Used if problems occur when sending a signal with a pu <br> Setting <br> 1. Press the start key. <br> 2. Select the item to be set. <br> 3. Change the setting using the $+/-$ keys or numeric ke |  |  |
|  | Display | Description | Setting range |
|  | Sgl LV Modem DTMF LEV(CENT) DTMF LEV(DIFF) | Modem output level <br> DTMF output level (main value) <br> DTMF output level <br> (level difference) | -15 to 0 <br> -15 to 0 <br> 0 to 5.5 |
|  | 4. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |



| Item No. |  | Description |
| :---: | :---: | :---: |
| U660 | Setting:[Busy Tone] <br> When a fax signal is sent, sets whether the line is disconnected immediately after a busy tone is detected, or the busy tone is not detected and the line remains connected until TO time-out time. Fax transmission may fail due to incorrect busy tone detection. When set to 2 , this problem may be prevented. However, the line is not disconnected within the TO time-out time even if the destination line is busy. <br> 1. Select the setting. |  |
|  | Display | Description |
|  |  | Detects busy tone. Does not detect busy tone. |
|  | * : Initial setting: On <br> 2. Press the start key. The setting is set. <br> Setting:[PBX Setting] <br> Selects the mode to connect an outside call when connected to a PBX. According to the type of the PBX connected, select the mode to connect an outside call. <br> 1. Select the setting. |  |
|  | Display | Description |
|  | FlashLoop | Flashing mode |
|  | *: Initial setting: Loop <br> 2. Press the start key. The setting is set. <br> Setting:[DC Loop] <br> Sets if the loop current detection is performed before dialing. <br> 1. Select the setting. |  |
|  | Display | Description |
|  | On <br> Off | Performs loop current detection before dialing. <br> Does not perform loop current detection before dialing. |
|  | *: Initial setting: On <br> 2. Press the start key. The setting is set. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |



| Item No. | Description |
| :---: | :---: |
| U671 | Clear FAX back up data <br> Description <br> The communication history information of fax / Internet fax and the fax transmitting reservation information which are backed up on the FAX control circuit board are cleared. <br> Moreover, memory DIMM is initialized. <br> Purpose <br> It carries out for the prevention from an information leak of backup data. <br> Method <br> 1. Press the start key. <br> 2. Select the item. <br> 3. Press the start key. Backup data is cleared. <br> 4. When "Recovery FAX DIMM" or "FAX DIMM Clear" is selected, turn the main power switch off and on. Allow more than 5 seconds between Off and On. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |




| Item No. | Description |  |  |
| :---: | :---: | :---: | :---: |
| U699 | Setting the <br> Description <br> Sets the so <br> Purpose <br> To change Since the c changed. <br> Method <br> 1. Press th <br> 2. Press [ <br> 3. Enter th and pre <br> 4. Use nu <br> 5. Press th <br> Completio <br> Press the s <br> List of Sof <br> <Commun | ware swi <br> e switche <br> etting when unication <br> key. <br> No.]. <br> sired soft <br> e start ke <br> keys 0 to <br> art key to <br> ey. The s <br> Switche <br> n contro | tches <br> s on the FAX control PWB individually. <br> n a problem such as split output of received originals occurs. performance is largely affected, normally this setting need not be <br> ware switch number (3 digits) using the +/- keys or the numeric keys y. 7 to switch each bit between 0 and 1. set the value. <br> creen for selecting a maintenance item No. is displayed. <br> of Which the Setting Can Be Changed <br> procedure> |
|  | No. | Bit | Item |
|  | 36 | 7654 | Coding format in transmission |
|  |  | 3210 | Coding format in reception |
|  | 37 | 5 | $33600 \mathrm{bps} / \mathrm{V} 34$ |
|  |  | 4 | $31200 \mathrm{bps} / \mathrm{V} 34$ |
|  |  | 3 | 28800 bps/V34 |
|  |  | 2 | 26400 bps/V34 |
|  |  | 1 | $24000 \mathrm{bps} / \mathrm{V} 34$ |
|  |  | 0 | $21600 \mathrm{bps} / \mathrm{V} 34$ |
|  | 38 | 7 | $19200 \mathrm{bps} / \mathrm{V} 34$ |
|  |  | 6 | $16800 \mathrm{bps} / \mathrm{V} 34$ |
|  |  | 5 | $14400 \mathrm{bps} / \mathrm{V} 34$ |
|  |  | 4 | $12000 \mathrm{bps} / \mathrm{V} 34$ |
|  |  | 3 | 9600 bps/V34 |
|  |  | 2 | 7200 bps/V34 |
|  |  | 1 | 4800 bps/V34 |
|  |  | 0 | 2400 bps/V34 |
|  | 41 | 3 | FSK detection in V. 8 |
|  | 42 | 4 | 4800 bps when low-speed setting is active |
|  |  | 2 | FIF length in transmission of more than 4 times of DIS/DTC signal |


| Item No. | Description |  |  |
| :---: | :---: | :---: | :---: |
| U699 | <Communication time setting> |  |  |
|  | No. | Bit | Item |
|  | 53 | 76543210 | T3 timeout setting |
|  | 54 | 76543210 | T4 timeout setting (automatic equipment) |
|  | 55 | 76543210 | T5 timeout setting |
|  | 60 | 76543210 | Time before transmission of CNG ( 1100 Hz ) signal |
|  | 63 | 76543210 | T0 timeout setting (manual equipment) |
|  | 64 | 7 | Phase C timeout in ECM reception |
|  | 66 | 76543210 | Timeout 1 in countermeasures against echo |
|  | 68 | 76543210 | Timeout for FSK detection start in V. 8 |
|  | <Modem setting> |  |  |
|  | No. | Bit | Item |
|  | 89 | 76543 | RX gain adjust |
|  | <NCU setting> |  |  |
|  | No. | Bit | Item |
|  | 121 | 7654 | Dial tone/busy tone detection pattern |
|  | 122 | 7654 | Busy tone detection pattern |
|  |  | 1 | Busy tone detection in automatic FAX/TEL switching |
|  | 125 | 76543210 | Access code registration for connection to PSTN |
|  | 126 | 7654 | FAX/TEL automatic switching ring back tone ON/OFF cycle |
|  | <Calling time setting> |  |  |
|  | No. | Bit | Item |
|  | 133 | 76543210 | DTMF signal transmission time |
|  | 134 | 76543210 | DTMF signal pause time |
|  | 141 | 76543210 | Ringer detection cycle (minimum) |
|  | 142 | 76543210 | Ringer detection cycle (maximum) |
|  | 143 | 76543210 | Ringer ON time detection |
|  | 144 | 76543210 | Ringer OFF time detection |
|  | 145 | 76543210 | Ringer OFF non-detection time |
|  | 147 | 76543210 | Dial tone detection time (continuous tone) |
|  | 148 | 76543210 | Allowable dial tone interruption time |
|  | 149 | 76543210 | Time for transmitting selection signal after closing the DC circuit |
|  | 151 | 76543210 | Ringer frequency detection invalid time |


| Item No. | Description |
| :---: | :---: |
| U901 | Checking copy counts by paper feed locations <br> Description <br> Displays or clears copy counts by paper feed locations. <br> Purpose <br> To check the time to replace consumable parts. Also to clear the counts after replacing the consumable parts. <br> Method <br> 1. Press the start key. The counts by paper feed locations are displayed. |
|  | Display Description |
|  | MPT MP tray <br> Cassette1 Cassette 1 <br> Cassette2 Cassette 2 <br> Cassette3 Cassette 3 (optional paper feeder) <br> Cassette4 Cassette 4 (optional paper feeder) <br> Duplex Duplex unit |
|  | * : When an optional paper feed device is not installed, the corresponding count is not displayed. <br> Clearing <br> 1. Select the counts to be cleared. [Cassette3] and [Cassette4] cannot be cleared. <br> 2. Select the counts for all and press [Clear]. <br> 3. Press the start key. The counter value is cleared. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |



| Item No. | Description |
| :---: | :---: |
| U904 | Checking/clearing the call for service counts <br> Description <br> Displays or clears the service call code counts by types. <br> Purpose <br> To check the service call code status by types. <br> Also to clear the service call code counts after replacing consumable parts. <br> Method <br> 1. Press the start key. <br> 2. Select the item. <br> Method: [Cnt] <br> 1. Select [Cnt]. The count for service call detection by type is displayed. <br> Codes for which the count value is 0 are not displayed. <br> 2. Change the screen using the cursor up/down keys. <br> 3. Select the count value for service call code and press [Clear]. <br> The individual counter cannot be cleared. <br> 4. Press the start key. The counter value is cleared. <br> Method: [Total Cnt] <br> 1. Select [Total Cnt]. The total number of service call counts by type is displayed. <br> 2. Change the screen using the cursor up/down keys. <br> The total number of service call count cannot be cleared. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :---: |
| U905 | Checking counts by optional devices <br> Description <br> Displays the counts of document processor or document finisher. <br> Purpose <br> To check the use of document processor or document finisher. <br> Method <br> 1. Press the start key. <br> 2. Select the device to be checked. The count of the selected device is displayed. <br> DP <br> DF <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U906 | Resetting partial operation control <br> Description <br> Resets the service call code for partial operation control. <br> Purpose <br> To be reset after partial operation is performed due to problems in the cassettes or other sections, and the related parts are serviced. <br> Method <br> 1. Press the start key. <br> 2. Press [Execute]. <br> 3. Press the start key to reset partial operation control. <br> 4. Turn the main power switch off and on. Allow more than 5 seconds between Off and On. |


| Item No. | Checking the total counter value <br> Description <br> Displays the total counter value. <br> Purpose <br> To check the total counter value. <br> Method <br> 1. Press the start key. The total count value is displayed. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| :---: | :--- |
| Clearing the print coverage data |  |
| Description |  |
| Clears the accumulated data for the print coverage per A4 size paper and its period of time (as <br> shown on the service status report). <br> Purpose <br> To clear data as required at times such as during maintenance service. <br> Method <br> 1. Press the start key. <br> 2. Select [Execute]. <br> 3. Press the start key. The print coverage data is cleared. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |


| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U911 | Checking copy counts by paper sizes <br> Description <br> Displays the paper feed counts by paper sizes. <br> Purpose <br> To check the counts after replacing consumable parts. <br> Method <br> 1. Press the start key. The screen for the paper feed counts by paper size is displayed. |  |  |  |
|  | Display (metric) | Description | Display (inch) | Description |
|  | A3 <br> B4 <br> A4 <br> B5 <br> A5 <br> Folio | Paper feed counts for A3 <br> Paper feed counts for B4 <br> Paper feed counts for A4 <br> Paper feed counts for B5 <br> Paper feed counts for A5 <br> Paper feed counts for Folio | Ledger <br> Legal <br> Letter <br> Statement <br> ETC | Paper feed counts for Ledger <br> Paper feed counts for Legal <br> Paper feed counts for Letter <br> Paper feed counts for Statement <br> Paper feed counts for other size |
|  | Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |  |  |


| Item No. | Description |
| :---: | :---: |
| U917 | Setting backup data reading/writing <br> Description <br> Retrieves the backup data to a USB memory from the machine; or writes the data from the USB memory to the machine. <br> Purpose <br> Machine information is backed up and restored. <br> Method <br> 1. Press the power key on the operation panel, and after verifying the power indicator has gone off, switch off the main power switch. <br> 2. Insert USB memory in USB memory slot. <br> 3. Turn the main power switch on. <br> Wait for 10 seconds to allow the machine to recognize the USB memory. <br> 4. Enter the maintenance item. <br> 5. Press the start key. <br> 6. Select the item. |
|  | Display $\quad$ Description ${ }^{\text {d }}$ ( ${ }^{\text {depending data }}$ |
|  | Address Book Address book - <br> Job Account Job accounting - <br> One Touch Information on one-touch key Address book <br> User User managements Job accounting <br> Program Program information Job accountings and user manage- <br> ments <br> Shortcut Shortcut information Job accountings, user managements <br> and document box information <br> Job accountings and user manage- <br> Document Box Document box information ments <br> Fob <br> Fax Forward FAX transfer information Job accountings, user managements <br> and document box information <br> IC Card IC Card information - <br> *: Since data are dependent with each other, data other than those assigned are also retrieved or written in. <br> 7. Select [Export] or [Import] and press the start key. <br> 8. Press the start key. Starts reading or writing. <br> The progress of selected item is displayed in \%. <br> When an error occurs, the operation is canceled and an error code is displayed. <br> 9. When normally completed, [Finish] is displayed. <br> 10. Turn the main power switch off and on after completing writing when selecting [Import]. Allow more than 5 seconds between Off and On. |


| Item No. | Description |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| U917 | Error Codes |  |  |  |
|  | Codes | Description | Codes | Description |
|  | e002 | Parameter error | e31e | User managements error |
|  | e003 | File write error | e31f | User managements open error |
|  | e004 | File initialization error | e320 | User managements error |
|  | e005 | File error | e321 | User managements open error |
|  | e006 | Processing error | e322 | User managements list error |
|  | e010 | Address book clear error (contact) | e323 | User managements list error |
|  | e011 | Address book open error (contact) | e324 | Shortcut open error |
|  | e012 | Address book list error (contact) | e325 | Shortcut list error |
|  | e013 | Address book list error (contact) | e326 | Shortcut list error |
|  | e014 | Address book clear error (group) | e410 | Box file open error |
|  | e015 | Address book open error (group) | e411 | Box error in writing |
|  | e016 | Address book list error (group) | e412 | Box error in reading |
|  | e017 | Address book list error (group) | e413 | Box list error |
|  | e110 | Job accounting clear error | e414 | Box list error |
|  | e111 | Job accounting open error | e415 | Box error |
|  | e112 | Job accounting open error | e416 | Box error |
|  | e113 | Job accounting error in writing | e417 | Box open error |
|  | e114 | Job accounting list error | e418 | Box close error |
|  | e115 | Job accounting list error | e419 | Box creation error |
|  | e210 | One-touch open error | e41a | Box creation error |
|  | e211 | One-touch list error | e41b | Box deletion error |
|  | e212 | One-touch list error | e41c | Box movement error |
|  | e310 | User managements backup error | e510 | Program error in writing |
|  | e311 | User managements clear error | e511 | Program error in reading |
|  | e312 | User managements open error | e710 | Fax memory open error |
|  | e313 | User managements open error | e711 | Fax memory initialization error |
|  | e314 | User managements open error | e712 | Fax memory list error |
|  | e315 | User managements error in writing | e713 | Fax memory error |
|  | e316 | User managements list error | e714 | Fax memory error |
|  | e317 | User managements list error | e715 | Fax memory mode error |
|  | e318 | User managements list error | e716 | Fax memory error |
|  | e319 | User managements list error | e717 | Fax memory error |
|  | e31a | User managements open error | e718 | Fax memory mode error |
|  | e31b | User managements error | e910 | File reading error |
|  | e31c | User managements error | e911 | File writing error |
|  | e31d | User managements open error | e912 | Data mismatch |



| Item No. | Description |
| :---: | :---: |
| U920 | Checking the copy counts <br> Description <br> Checks the copy counts. <br> Purpose <br> To check the copy counts. <br> Method <br> 1. Press the start key. The current counts are displayed. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U927 | Clearing the all copy counts and machine life counts (one time only) <br> Description <br> Resets all of the counts back to zero. <br> Supplement <br> The total account counter and the machine life counter can be cleared only once if all count values are 1000 or less. <br> Method <br> 1. Press the start key. <br> 2. Select [Execute]. <br> 3. Press the start key. All copy counts and machine life counts are cleared. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |




| Item No. | Description |
| :---: | :---: |
| U952 | Method: [Execute(USB)] <br> 1. Press the power key on the operation panel, and after verifying the main power indicator has gone off, switch off the main power switch. <br> 2. Insert USB memory in USB memory slot. <br> 3. Turn the main power switch on. <br> 4. Enter maintenance item U952. <br> 5. Select [Execute(USB)]. <br> 6. Select the workflow. <br> 7. Press the start key. <br> Executes maintenance modes defined in a workflow in succession. <br> Method: [Entry(USB)] <br> 1. Press the power key on the operation panel, and after verifying the main power indicator has gone off, switch off the main power switch. <br> 2. Insert USB memory in USB memory slot. <br> 3. Turn the main power switch on. <br> 4. Enter maintenance item U952. <br> 5. Select [Entry(USB)]. <br> 6. Select the workflow. <br> 7. Select the work flow save area. <br> 8. Select [Execute]. <br> Exports a workflow housed in a USB flash device to the machine. <br> Example <br> Registration is feasible when a USB flash device that stores the commands and text/maintenance ID (editable) is inserted. <br> File Format: xxx.mwf <br> !R! MNFC "WFPS"; <br> 1.SET UP, 464, 469, 410, 000, 927, 278 <br> 2.WARRANTY, 089, 000 <br> 3.MK-A, 901, 127, 410, 251 <br> 4.MK-B, 410, 251 <br> 5.EH SET UP, 034 <br> WRED;EXIT; <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :---: |
| U964 | Checking of log <br> Description <br> Sends a log file saved on the HDD to a USB memory. <br> Purpose <br> To transfer a log file saved on the HDD to a USB memory as a means of investigating malfunctions. <br> Method <br> 1. Press the power key on the operation panel, and after verifying the main power indicator has gone off, switch off the main power switch. <br> 2. Insert USB memory in USB memory slot. <br> 3. Turn the main power switch on. <br> 4. Enter maintenance item U964. <br> 5. Select [Execute]. <br> 6. Press the start key. <br> Starts sending the log file saved on the HDD to the USB memory. <br> Processing is displayed for approximately 3 to 5 minutes. <br> 7. When normally completed, [Completed] is displayed. <br> 8. Turn the main power switch off and on. Allow more than 5 seconds between Off and On. If a problem occurs during auto correction, error code is displayed. <br> Supplement <br> Instructions on how to obtain a log when the operation panel has frozen <br> Simultaneously press and hold the *, 8, 6, and Clear keys for 3 to 6 seconds to start logging. <br> The memory indicator keeps lighting during a log is generated and goes off when completed. <br> Error codes |
| U969 | Checking of toner area code <br> Description <br> Displays the toner area code. <br> Purpose <br> To check the toner area code. <br> Method <br> 1. Press the start key. The toner area code is displayed. <br> Completion <br> Press the stop/clear key. The screen for selecting a maintenance item No. is displayed. |


| Item No. | Description |
| :---: | :--- |
| U977 | Data capture mode <br> Description <br> Store the print data sent to the machine into USB memory. <br> Purpose <br> In case to occur the error at printing, check the print data sent to the machine. <br> Method <br> 1. Press the power key on the operation panel, and after verifying the main power indicator has <br> gone off, switch off the main power switch. <br> 2. Insert USB memory in USB memory slot. <br> 3. Turn the main power switch on. <br> 4. Enter maintenance item U977. <br> 5. Select [Execute]. <br> 6. Press the start key. <br> 7. Send the print data to the machine. <br> Once the print data is stored into USB memory, [Finish] will be displayed. <br> Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |
| U984 | Checking the developer unit number <br> Description <br> Displays the developer unit number. <br> Purpose <br> To check the developer unit number. <br> Method <br> 1. Press the start key. The developer unit number for each color is displayed. <br> Display <br> C <br> C <br> M <br> Y <br> K |
| Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |


| Item No. |  | Description |
| :---: | :---: | :---: |
| U985 | Displaying the developer history <br> Description <br> Displays the past record of machine number and the developer counter. <br> Purpose <br> To check the count value of machine number and the developer counter. <br> Method <br> 1. Press the start key. <br> 2. Select the color to check. |  |
|  | Display | Description |
|  | $\begin{aligned} & \hline \mathrm{C} \\ & \mathrm{M} \\ & \mathrm{Y} \\ & \mathrm{~K} \end{aligned}$ | Cyan developer unit past record <br> Magenta developer unit past record <br> Yellow developer unit past record <br> Black developer unit past record |
|  | 3. The history of a machine number and a developer counter for each color is displayed by three cases. |  |
|  | Display | Description |
|  | Machine History 1-3 <br> Cnt History 1-3 | Historical records of the machine number <br> Historical records of developer counter |
|  | Completion <br> Press the stop key. The screen for selecting a maintenance item No. is displayed. |  |



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## 1-4-1 Paper misfeed detection

## (1) Paper misfeed indication

When a paper misfeed occurs, the machine immediately stops copying and displays the jam location on the operation panel.
Paper misfeed counts sorted by component can be checked by maintenance item U903.
To remove the paper jammed in the machine, open the right cover and pull the cassette out.
To remove the original jammed in DP or the document finisher, open the top cover.
Paper misfeed can be reset by opening and closing the respective covers.


Figure 1-4-1
(A) Misfeed in the MP tray
(B) Misfeed in cassette 1
(C) Misfeed in cassette 2
(D) Misfeed in cassette 3 (option)
(E) Misfeed in cassette 4 (option)
(F) Misfeed in right cover 1
(G) Misfeed in right cover 2
(H) Misfeed in right cover 3 (option)
(I) Misfeed in the bridge (option)
(J) Misfeed in the document processor
(K) Misfeed in the document finisher (option)
(L) Stapler problem (option)

## (2) Paper misfeed detection component



Figure 1-4-2

| Code | Contents | Conditions | $\begin{gathered} \text { Jam } \\ \text { location* } \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| 0000 | Initial jam | The power is turned on when a sensor in the conveying system is on. | - |
| 0100 | Secondary paper feed request time out | Secondary paper feed request given by the controller is unreachable. | F |
| 0101 | Waiting for process package to be ready | Process package won't be ready. | - |
| 0104 | Waiting for conveying package to be ready | Conveying package won't be ready. | - |
| 0106 | Paper feeding request for duplex printing time out | Paper feeding request for duplex printing given by the controller is unreachable. | F |
| 0107 | Waiting for fuser package to be ready | Fuser package won't be ready. | - |
| 0110 | Right cover 1 open | The right cover 1 is opened during printing. | - |
| 0111 | Front cover open | The front cover is opened during printing. | - |
| 0112 | Right cover 3 open | The right cover 3 is opened during printing. | - |
| 0120 | Receiving a duplex paper feeding request while paper is empty | Paper feed request was received from the duplex section despite the absence of paper in the duplex section. | F |
| 0121 | Exceeding number of duplex pages circulated | The controller issued the duplex section a request for more pages than the duplex print cycle contains. | F |
| 0210 | Right cover 2 open | The right cover 2 is opened during printing. | - |
| 0501 | No paper feed from cassette 1 | The registration sensor (RS) does not turn on during paper feed from cassette 1 . | B |
| 0502 | No paper feed from cassette 2 | Feed sensor 1 (FS1) does not turn on during paper feed from cassette 2 (Retry 1 times). | C |
| 0503 | No paper feed from cassette 3 | Feed sensor 2 (FS2) does not turn on during paper feed from cassette 3 (Retry 1 times). | D |
| 0504 | No paper feed from cassette 4 | PF feed sensor (PFFS) does not turn on during paper feed from cassette 4 (Retry 1 times). | E |
| 0508 | No paper feed from duplex section | The registration sensor (RS) does not turn on during paper feed from the duplex section. | F |
| 0509 | No paper feed from MP tray | The registration sensor (RS) does not turn on during paper feed from the MP tray. | A |
| 0511 | Multiple sheets in cassette 1 | The registration sensor (RS) does not turn off during paper feed from cassette 1. | F |
| 0512 | Multiple sheets in cassette 2 | Feed sensor 1 (FS1) does not turn off during paper feed from cassette 2. | G |
| 0513 | Multiple sheets in cassette 3 | Feed sensor 2 (FS2) does not turn off during paper feed from cassette 3. | G |

[^0]| Code | Contents | Conditions | Jam location* |
| :---: | :---: | :---: | :---: |
| 0514 | Multiple sheets in cassette 4 | PF feed sensor (PFFS) does not turn off during paper feed from cassette 4. | G |
| 0518 | Multiple sheets in duplex section | The registration sensor (RS) does not turn off during paper feed from the duplex section. | F |
| 0519 | Multiple sheets in MP tray | The registration sensor (RS) does not turn off during paper feed from theMP tray. | F |
| 1403 | Feed sensor 1 non arrival jam | Feed sensor 1 (FS1) does not turn on during paper feed from cassette 3. | G |
| 1404 |  | Feed sensor 1 (FS1) does not turn on during paper feed from cassette 4. | G |
| 1413 | Feed sensor 1 stay jam | Feed sensor 1 (FS1) does not turn off during paper feed from cassette 3. | F |
| 1414 |  | Feed sensor 1 (FS1) does not turn off during paper feed from cassette 4. | F |
| 1604 | Feed sensor 2 non arrival jam | Feed sensor 2 (FS2) does not turn on during paper feed from cassette 4. | H |
| 1614 | Feed sensor 2 stay jam | Feed sensor 2 (FS2) does not turn off during paper feed from cassette 4. | G |
| 4002 | Registration sensor non arrival jam | The registration sensor (RS) does not turn on during paper feed from cassette 2. | G |
| 4003 |  | The registration sensor (RS) does not turn on during paper feed from cassette 3. | G |
| 4004 |  | The registration sensor (RS) does not turn on during paper feed from cassette 4. | G |
| 4012 | Registration sensor stay jam | The registration sensor (RS) does not turn off during paper feed from cassette 2. | F |
| 4013 |  | The registration sensor (RS) does not turn off during paper feed from cassette 3 . | F |
| 4014 |  | The registration sensor (RS) does not turn off during paper feed from cassette 4. | F |
| 4101 | Fuser pre sensor non arrival jam | The fuser pre sensor (FUPS) does not turn on during paper feed from cassette 1. | F |
| 4102 |  | The fuser pre sensor (FUPS) does not turn on during paper feed from cassette 2. | F |
| 4103 |  | The fuser pre sensor (FUPS) does not turn on during paper feed from cassette 3. | F |
| 4104 |  | The fuser pre sensor (FUPS) does not turn on during paper feed from cassette 4. | F |
| 4108 |  | The fuser pre sensor (FUPS) does not turn on during paper feed from duplex section. | F |
| 4109 |  | The fuser pre sensor (FUPS) does not turn on during paper feed from MP tray. | F |

[^1]| Code | Contents | Conditions | $\begin{gathered} \text { Jam } \\ \text { location* } \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| 4111 | Fuser pre sensor stay jam | The fuser pre sensor (FUPS) does not turn off during paper feed from cassette 1 . | F |
| 4112 |  | The fuser pre sensor (FUPS) does not turn off during paper feed from cassette 2. | F |
| 4113 |  | The fuser pre sensor (FUPS) does not turn off during paper feed from cassette 3. | F |
| 4114 |  | The fuser pre sensor (FUPS) does not turn off during paper feed from cassette 4. | F |
| 4118 |  | The fuser pre sensor (FUPS) does not turn off during paper feed from the duplex section. | F |
| 4119 |  | The fuser pre sensor (FUPS) does not turn off during paper feed from the MP tray. | F |
| 4201 | Eject sensor non arrival jam | The eject sensor (ES) does not turn on during paper feed from cassette 1. | F |
| 4202 |  | The eject sensor (ES) does not turn on during paper feed from cassette 2. | F |
| 4203 |  | The eject sensor (ES) does not turn on during paper feed from cassette 3. | F |
| 4204 |  | The eject sensor (ES) does not turn on during paper feed from cassette 4. | F |
| 4208 |  | The eject sensor (ES) does not turn on during paper feed from duplex section. | F |
| 4209 |  | The eject sensor (ES) does not turn on during paper feed from MP tray. | F |
| 4211 | Eject sensor stay jam | The eject sensor (ES) does not turn off during paper feed from cassette 1 . | 1 |
| 4212 |  | The eject sensor (ES) does not turn off during paper feed from cassette 2. | 1 |
| 4213 |  | The eject sensor (ES) does not turn off during paper feed from cassette 3. | I |
| 4214 |  | The eject sensor (ES) does not turn off during paper feed from cassette 4. | 1 |
| 4218 |  | The eject sensor (ES) does not turn off during paper feed from the duplex section. | I |
| 4219 |  | The eject sensor (ES) does not turn off during paper feed from the MP tray. | 1 |

[^2]| Code | Contents | Conditions | $\begin{gathered} \text { Jam } \\ \text { location* } \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| 4301 | Duplex sensor non arrival jam | The duplex sensor (DUS) does not turn on during paper feed from cassette 1. | F |
| 4302 |  | The duplex sensor (DUS) does not turn on during paper feed from cassette 2. | F |
| 4303 |  | The duplex sensor (DUS) does not turn on during paper feed from cassette 3 . | F |
| 4304 |  | The duplex sensor (DUS) does not turn on during paper feed from cassette 4. | F |
| 4309 |  | The duplex sensor (DUS) does not turn on during paper feed from the MP tray. | F |
| 4311 | Duplex sensor stay jam | The duplex sensor (DUS) does not turn off during paper feed from cassette 1. | F |
| 4312 |  | The duplex sensor (DUS) does not turn off during paper feed from cassette 2. | F |
| 4313 |  | The duplex sensor (DUS) does not turn off during paper feed from cassette 3. | F |
| 4314 |  | The duplex sensor (DUS) does not turn off during paper feed from cassette 4. | F |
| 4319 |  | The duplex sensor (DUS) does not turn off during paper feed from the MP tray. | F |
| 4901 | Bridge conveying sensor 1 non arrival jam | The bridge conveying sensor 1 (BRCS1) does not turn on during paper feed from cassette 1. | 1 |
| 4902 |  | The bridge conveying sensor 1 (BRCS1) does not turn on during paper feed from cassette 2. | 1 |
| 4903 |  | The bridge conveying sensor 1 (BRCS1) does not turn on during paper feed from cassette 3. | 1 |
| 4904 |  | The bridge conveying sensor 1 (BRCS1) does not turn on during paper feed from cassette 4. | 1 |
| 4908 |  | The bridge conveying sensor 1 (BRCS1) does not turn on during paper feed from duplex section. | 1 |
| 4909 |  | The bridge conveying sensor 1 (BRCS1) does not turn on during paper feed from the MP tray. | 1 |

*: Refer to figure 1-4-1 for paper jam location (see page 1-4-1).

| Code | Contents | Conditions | Jam location* |
| :---: | :---: | :---: | :---: |
| 4911 | Bridge conveying sensor 1 stay jam | The bridge conveying sensor 1 (BRCS1) does not turn off during paper feed from cassette 1. | I |
| 4912 |  | The bridge conveying sensor 1 (BRCS1) does not turn off during paper feed from cassette 2. | I |
| 4913 |  | The bridge conveying sensor 1 (BRCS1) does not turn off during paper feed from cassette 3. | I |
| 4914 |  | The bridge conveying sensor 1 (BRCS1) does not turn off during paper feed from cassette 4. | I |
| 4918 |  | The bridge conveying sensor 1 (BRCS1) does not turn off during paper feed from duplex section. | I |
| 4919 |  | The bridge conveying sensor 1 (BRCS1) does not turn off during paper feed from the MP tray. | I |
| 5001 | Bridge conveying sensor 3 non arrival jam | The bridge conveying sensor 3 (BRCS3) does not turn on during paper feed from cassette 1. | I |
| 5002 |  | The bridge conveying sensor 3 (BRCS3) does not turn on during paper feed from cassette 2. | I |
| 5003 |  | The bridge conveying sensor 3 (BRCS3) does not turn on during paper feed from cassette 3. | I |
| 5004 |  | The bridge conveying sensor 3 (BRCS3) does not turn on during paper feed from cassette 4. | I |
| 5008 |  | The bridge conveying sensor 3 (BRCS3) does not turn on during paper feed from the duplex section. | I |
| 5009 |  | The bridge conveying sensor 3 (BRCS3) does not turn on during paper feed from theMP tray. | I |
| 5011 | Bridge conveying sensor 3 stay jam | The bridge conveying sensor 3 (BRCS3) does not turn off during paper feed from cassette 1. | I |
| 5012 |  | The bridge conveying sensor 3 (BRCS3) does not turn off during paper feed from cassette 2 . | I |
| 5013 |  | The bridge conveying sensor 3 (BRCS3) does not turn off during paper feed from cassette 3. | I |
| 5014 |  | The bridge conveying sensor 3 (BRCS3) does not turn off during paper feed from cassette 4. | I |
| 5018 |  | The bridge conveying sensor 3 (BRCS3) does not turn off during paper feed from duplex section. | I |
| 5019 |  | The bridge conveying sensor 3 (BRCS3) does not turn off during paper feed from the MP tray. | I |
| 6023 | Staple cover open | The staple cover is opened during operation. | - |
| 6043 | DF top cover open | The DF top cover is opened during operation. | - |
| 6103 | DF paper conveying sensor non arrival jam | The paper conveying sensor (PCS) does not turned on even if a specified time has elapsed after the machine eject signal was received. | K |

[^3]| Code | Contents | Conditions | Jam location* |
| :---: | :---: | :---: | :---: |
| 6113 | DF paper conveying sensor stay jam | The paper conveying sensor (PCS) does not turn off within the specified time of its turning on. | K |
| 6123 | DF paper conveying sensor remaining jam | The paper conveying sensor (PCS) does not turned on when the power is turned on or the cover is closed. | K |
| 6413 | DF eject paper sensor stay jam | The eject paper sensor (EPS) does not turn off within the specified time. | K |
| 6423 | DF eject paper sensor remaining jam | The eject paper sensor (EPS) does not turned on when the power is turned on or the cover is closed. | K |
| 6803 | Front adjustment plate operation ON error | The adjustment sensor 1 (ADS1) does turned on when the job is executed. | H |
| 6813 | Front adjustment plate operation OFF error | The adjustment sensor 1 (ADS1) does not turned off when the job is executed. | H |
| 6903 | Rear adjustment plate operation ON error | The adjustment sensor 2 (ADS2) does not turned on when the job is executed. | H |
| 6913 | Rear adjustment plate operation OFF error | The adjustment sensor 2 (ADS2) does not turned off when the job is executed. | H |
| 7013 | Staple operation error | The next staple hasn't head-poked for the next copy to bind after a predetermined interval while clinching has commenced. | H |
| 7023 | Staple initial operation error | Head-poking has not been accomplished after 10 attempts in the initialization at power up or closing the cover. | H |
| 7913 | Sequence error 1 (operation prohibited) | Operation commenced in the state the finisher is prohibited to operate. | - |
| 7923 | Sequence error 2 (initialoperation error) | A request for maintenance mode has occurred in the state the finisher is prohibited to operate or has commenced operation. | - |
| 7933 | Sequence error 3 (Error in the reception of backup data) | A backup data command has been received in the state the operation has initiated. | - |
| 7943 | Sequence error 4 (standby) | Operation has started in the state standby is prohibited. | - |
| 7953 | Sequence error 5 <br> (Error in between copies) | An illegal inter-page or inter-copy interval has occurred. | - |
| 7963 | Sequence error 6 | The finisher does not deliver the eject-complete command in 15 seconds after the bridge eject sensor is turned off. | - |
| 9000 | No paper feed from DP | DP feed sensor (DPPFS) does not turn on during original feed from DP (Retry 5 times). | J |
| 9001 | DP original conveying jam | DP timing sensor (DPTS) turns off within the specified time since the sensor turns on. | J |

[^4]

[^5]
## 1-4-2 Self-diagnostic function

## (1) Self-diagnostic function

This machine is equipped with self-diagnostic function. When a problem is detected, the machine stops printing and display an error message on the operation panel. An error message consists of a message prompting a contact with service personnel and a four-digit error code indicating the type of the error.

## (2) Self-diagnostic codes

If the part causing the problems not designated as a service part, replace the assembly comprising the part.

| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 0030 | FAX control PWB system error <br> Processing with the fax software was disabled due to a hardware problem. | Defective PWB. | Replace the fax control PWB and check for correct operation. |
| 0070 | FAX control PWB incompatible detection error In the initial communication with the FAX control PWB, the normal communication command is not transmitted. | Defective FAX software. | Install the fax software. |
|  |  | Defective PWB. | Replace the fax control PWB and check for correct operation. |
| 0100 | Backup memory device error | Defective flash memory. | Replace the main PWB and check for correct operation (see page 1-5-33). |
|  |  | Defective PWB. |  |
| 0120 | MAC address data error The data includes an invalid MAC address. | Defective flash memory. | Replace the main PWB and check for correct operation (see page 1-5-33). |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 0150 | Backup memory read/write error (engine PWB) Detecting engine PWB EEPROM communication error. | The engine PWB EEPROM was improperly installed. | Check the EEPROM is properly installed and remedy if necessary. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
|  |  | Defective EEPROM. | Contact the Service Administrative Division. |
| 0160 | Backup memory data error (engine PWB) | Defective flash memory. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
|  |  | Defective PWB. |  |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 0170 | Billing counting error A checksum error is detected in the main and engine backup memories for the billing counters. | Data in the EEPROM . | Contact the Service Administrative Division. |
|  |  | Defective PWB. | Replace the main PWB or the engine PWB and check for correct operation (see page 1-5-33, 1-5-35). |
| 0180 | Machine number mismatch Machine number of main and engine does not match. | Data in the EEPROM . | Contact the Service Administrative Division. |
| 0320 | I/O CPU communication error <br> A communication error is detected 10 times in succession. | Defective PWB. | Replace the main PWB or the engine PWB and check for correct operation. (see page 1-5-33,1-5-35) |
| 0620 | FAX image DIMM error DIMM is not installed correctly. <br> DIMM cannot be accessed. | DIMM installed incorrectly. | Check if the DIMM is inserted into the socket on the main PWB correctly. |
|  |  | Defective PWB. | Replace the main PWB and check for correct operation (see page 1-5-33). |
| 0630 | DMA error DMA transmission of image data does not complete within the specified period of time. | Poor contact in the connector terminals. | Check the connection the signal cable for CIS and the main PWB, and the continuity across the connector terminals. Repair or replace if necessary. |
|  |  | Defective PWB. | Replace the main PWB and check for correct operation (see page 1-5-33). |
| 0640 | Hard disk error The hard disk cannot be accessed. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. |
|  |  | Defective hard disk. | Run U024 (HDD formatting) without turning the power off to initialize the hard disk. Replace the hard disk drive and check for correct operation if the problem is still detected after initialization. |
|  |  | Defective PWB. | Replace the main PWB and check for correct operation (see page 1-5-33). |
| 0650 | FAX image DIMM check error Improper DIMM is installed. | DIMM installed incorrectly. | Check if the DIMM is inserted into the socket on the main PWB correctly. |
|  |  | DIMM of another machine is installed | Perform maintenance mode U671 (RECOVERY FAX DIMM). |
|  |  | Defective PWB. | Replace the main PWB and check for correct operation (see page 1-5-33). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 0800 | Image processing error The JAM100 fee counter is continuously generated. | Defective main PWB. | Replace the main PWB and check for correct operation (see page 1-5-33). |
| 0830 | FAX control PWB flash program area checksum error A checksum error occurred with the program of the FAX control PWB. | Defective FAX software. | Install the fax software. |
|  |  | Defective PWB. | Replace the FAX control PWB. |
| 0840 | Faults of RTC <br> The time is judged to go back based on the comparison of the RTC time and the current time or five years or more have passed. | The battery is disconnected from the main PWB. | Check visually and remedy if necessary |
|  |  | Defective PWB. | Replace the main PWB and check for correct operation (see page 1-5-33). |
| 0870 | FAX control PWB to main PWB high capacity data transfer error High-capacity data transfer between the FAX control PWB and the main PWB of the machine was not normally performed even if the data transfer was retried the specified times. | Improper installation FAX control PWB. | Reinstall the FAX control PWB. |
|  |  | Defective PWB. | Replace the FAX control PWB or main PWB and check for correct operation (see page 1-5-33). |
| 0920 | Fax file system error The backup data is not retained for file system abnormality of flash memory of the FAX control PWB. | Defective PWB. | Replace the FAX control PWB and check for correct operation. |
| 0980 | 24 V power down detect 24 V disconnection signal is detected for 1.5 seconds. | Defective power source PWB. | Replace the power source PWB and check for correct operation (see page 1-5-38). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 1010 | Lift motor 1 error After cassette 1 is inserted, the lift sensor 1 does not turn on within 15 s . This error is detected five times successively. | Defective bottom plate elevation mechanism in the cassette. | Check to see if the bottom plate can move smoothly and repair any problem that is found. |
|  |  | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity of the connector cable. If necessary, replace the cable. Lift motor 1 and engine PWB (YC15) |
|  |  | Defective drive transmission system of the lift motor. | Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if necessary. |
|  |  | Defective lift motor. | Replace the lift motor 1. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 1020 | Lift motor 2 error <br> After cassette 2 is inserted, PF lift sensor 2 does not turn on within 15 s . This error is detected five times successively. | Defective bottom plate elevation mechanism in the cassette. | Check to see if the bottom plate can move smoothly and repair any problem that is found. |
|  |  | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity of the connector cable. If necessary, replace the cable. <br> Lift motor 2 and Video PWB (YC8) |
|  |  | Defective drive transmission system of the PF lift motor 1. | Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if necessary. |
|  |  | Defective lift motor. | Replace the PF lift motor 2. |
|  |  | Defective PWB. | Replace the video PWB and check for correct operation (see page 1-5-39). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 1030 | PF lift motor 1 error (paper feeder) <br> After cassette 3 is inserted, PF lift sensor 1 does not turn on within 15 s . This error is detected five times successively. | Defective bottom plate elevation mechanism in the cassette. | Check to see if the bottom plate can move smoothly and repair it if any problem is found. |
|  |  | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity of the connector cable. If necessary, replace the cable. <br> PF lift motor 1 and PF main PWB (YC4) |
|  |  | Defective drive transmission system of the PF lift motor 1. | Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any. |
|  |  | Defective PF lift motor 1. | Replace the PF lift motor 1. |
|  |  | Defective PWB. | Replace the PF main PWB (Refer to the service manual of the paper feeder). |
| 1040 | PF lift motor 2 error (paper feeder) After cassette 4 is inserted, PF lift sensor 2 does not turn on within 15 s . This error is detected five times successively. | Defective bottom plate elevation mechanism in the cassette. | Check to see if the bottom plate can move smoothly and repair it if any problem is found. |
|  |  | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity of the connector cable. If necessary, replace the cable. <br> PF lift motor 2 and PF main PWB (YC7) |
|  |  | Defective drive transmission system of the PF lift motor 2. | Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any. |
|  |  | Defective PF lift motor 2. | Replace the PF lift motor 2. |
|  |  | Defective PWB. | Replace the PF main PWB (Refer to the service manual of the paper feeder). |
| 1800 | Paper feeder communication error A communication error is detected 10 times in succession. | Improper installation of the paper feeder. | Follow the installation instruction carefully again. |
|  |  | Defective connector cable or poor contact of the connector. | Reinsert the connector. Also check for continuity of the connector cable. If necessary, replace the cable. <br> PF main PWB (YC3) and engine PWB (YC9) |
|  |  | Defective PWB. | Replace the engine PWB or the PF main PWB (see page 1-5-35, Refer to the service manual of the paper feeder). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 1900 | Paper feeder EEPROM error When writing the data, the write data and the read data is not continuously in agreement 4 times. | Defective PWB. | Replace the PF main PWB (Refer to the service manual of the paper feeder). |
|  |  | Device damage of EEPROM. | Contact the Service Administrative Division. |
| 2101 | Developer motor K steadystate error <br> The rated speed signal detected the stability OFF continuously for 1 s after the developer motor K stabilizes. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity of the connector cable. If necessary, replace the cable. <br> Developer motor K and engine PWB (YC4) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if necessary. |
|  |  | Defective motor. | Replace the Developer motor K. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 2102 | Developer motor YCM steady-state error The rated speed signal detected the stability OFF continuously for 1 s after the developer motor YCM stabilizes. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Developer motor YCM and engine PWB (YC3) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any. |
|  |  | Defective motor. | Replace the Developer motor YCM. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 2111 | Developer motor K startup error <br> Developer motor K is not stabilized within 3 s since the motor is activated. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity of the connector cable. If necessary, replace the cable. <br> Developer motor $K$ and engine PWB (YC4) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if necessary. |
|  |  | Defective motor. | Replace the Developer motor K. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 2112 | Developer motor YCM startup error Developer motor YCM is not stabilized within 3 s since the motor is activated. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If necessary, replace the cable. <br> Developer motor YCM and engine PWB (YC3) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if necessary. |
|  |  | Defective motor. | Replace the Developer motor YCM. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 2201 | Drum motor K steady-state error <br> The rated speed signal detected the stability OFF continuously for 1 s after the drum motor $K$ stabilizes. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Drum motor K and engine PWB (YC3) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any. |
|  |  | Defective motor. | Replace the Drum motor K. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 2202 | Drum motor YCM steadystate error The rated speed signal detected the stability OFFcontinuously for 1 s after the drum motor YCM stabilizes. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Drum motor YCM and engine PWB (YC3) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any. |
|  |  | Defective motor. | Replace the Drum motor YCM. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 2211 | Drum motor K startup error Drum motor K is not stabilized within 3 s since the motor is activated. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Drum motor K and engine PWB (YC3) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any. |
|  |  | Defective motor. | Replace the Drum motor K. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 2212 | Drum motor YCM startup error Drum motor YCM is not stabilized within 3 s since the motor is activated. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Drum motor YCM and engine PWB (YC3) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any. |
|  |  | Defective motor. | Replace the Drum motor YCM. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 2300 | Fuser motor steady-state error <br> The rated speed signal detected the stability OFF continuously for 1 s after the fuser motor stabilizes. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser motor and engine PWB (YC4) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any. |
|  |  | Defective motor. | Replace the Fuser motor. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 2310 | Fuser motor startup error Fuser motor is not stabilized within 3 s since the motor is activated. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser motor and engine PWB (YC4) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any. |
|  |  | Defective motor. | Replace the fuser motor. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 2500 | Conveying motor 2 steadystate error The rated speed signal detected the stability OFF continuously for 1 s after the conveying motor 2 stabilizes. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Conveying motor 2 and video PWB (YC5) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any. |
|  |  | Defective motor. | Replace the Conveying motor 2. |
|  |  | Defective PWB. | Replace the video PWB and check for correct operation (see page 1-5-39). |
| 2510 | Conveying motor 2 startup error <br> Conveying motor 2 is not stabilized within 2 s since the motor is activated. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Conveying motor 2 and engine PWB (YC2) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any. |
|  |  | Defective motor. | Replace the conveying motor 2. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 2550 | Conveying motor 1 steadystate error <br> The rated speed signal detected the stability OFF continuously for 1 s after the conveying motor 1 stabilizes. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Conveying motor 1 and engine PWB (YC2) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any. |
|  |  | Defective motor. | Replace the Conveying motor 1. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 2560 | Conveying motor 1 startup error Conveying motor 1 is not stabilized within 2 s since the motor is activated. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Conveying motor 1 and engine PWB (YC2) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any. |
|  |  | Defective motor. | Replace the conveying motor 1. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 2600 | PF drive motor error (paper feeder) When the PF drive motor is driven, error signal is detected continuously for 1 s . | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> PF drive motor and PF main PWB (YC2) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any. |
|  |  | Defective motor. | Replace the PF drive motor. |
|  |  | Defective PWB. | Replace the PF main PWB (Refer to the service manual for the paper feeder). |
| 2700 | TC belt motor error When the TC belt motor is driven, error signal is detected continuously for 3 s . | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> TC belt motor and TC PWB(YC2) TC PWB and TC connect PWB(YC1) TC connect PWB and engine $\operatorname{PWB}(\mathrm{YC} 5)$ |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any. |
|  |  | Defective motor. | Replace the TC belt motor. |
|  |  | Defective PWB. | Replace the engine PWB or TC PWB or TC connect PWB check for correct operation (see page 1-5-35). |
| 3100 | ISU home position error ON/OFF of the HP sensor doesn't change after a prescribed pulse passes from power supply ON. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Home position sensor and ISC PWB (YC8) ISC PWB and main PWB (YC11) |
|  |  | Defective home position sensor. | Replace the home position sensor. |
|  |  | Defective ISU motor. | Replace the ISU motor. |
|  |  | Defective CCD PWB. | Replace the image scanner unit (see page 1-5-22). |
|  |  | Defective PWB. | Replace the main PWB and check for correct operation (see page 1-5-33). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 3220 | Exposure lamp error When the white standard data at the time of an initial is lower than a rated value. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> CCD PWB and ISC PWB (YC9) <br> ISC PWB and main PWB (YC11) |
|  |  | Defective LED PWB. | Replace the LED unit and check for correct operation (see page 1-5-22). |
|  |  | Defective PWB. | Replace the main PWB and check for correct operation (see page 1-5-33). |
| 3300 | Optical system (AGC) error After AGC, correct input is not obtained at CCD. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> LED PWB and ISC PWB (YC6) CCD PWB (YC2) and ISC PWB (YC9) ISC PWB (YC3) and main PWB (YC11) |
|  |  | Defective LED PWB or CCD PWB. | Replace the image scanner unit (see page 1-5-22). |
|  |  | Defective PWB. | Replace the ISC PWB or the main PWB and check for correct operation (see page 1-533). |
| 3500 | Communication error A wrong read-back value. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> CCD PWB and ISC PWB (YC9) <br> ISC PWB and main PWB (YC11) |
|  |  | Defective CCD PWB. | Replace the image scanner unit (see page 1-5-22). |
|  |  | Defective PWB. | Replace the main PWB and check for correct operation (see page 1-5-33). |
| 3600 | Scanner sequence error | Defective main PWB or engine PWB. | Replace the main PWB or the engine PWB and check for correct operation (see page 1-5-33 or 1-5-35). |
| 3700 | Scanner device error | CCD connector inserted incorrectly. | Reinsert the image scanner unit connector if necessary. |
| 3800 | AFE error When writing the data, read and write data does not match 3 times in succession. | Defective ISC PWB. | Replace the ISC PWB and check for correct operation. |
| 3900 | Backup memory read/write error (ISC PWB) <br> Read and write data does not match. | Defective backup memory or PWB. | Replace the ISC PWB and check for correct operation. |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 4001 | Polygon motor (K) steadystate error <br> The rated speed signal detected the stability OFF continuously for 1 s after the polygon motor (K) stabilizes. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Laser scanner unit (K) and LSU connect PWB(YC5) <br> LSU connect PWB and engine PWB (YC12) |
|  |  | Defective motor. | Replace the Laser scanner unit (K) (see page 1-5-21). |
|  |  | Defective PWB. | Replace the engine PWB or LSU connect PWB and check for correct operation (see page 1-5-35). |
| 4002 | Polygon motor (C) steadystate error <br> The rated speed signal detected the stability OFF continuously for 1 s after the polygon motor (C) stabilizes. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Laser scanner unit (C) and LSU connect PWB(YC6) <br> LSU connect PWB and engine PWB (YC12) |
|  |  | Defective motor. | Replace the Laser scanner unit (C) (see page 1-5-21). |
|  |  | Defective PWB. | Replace the engine PWB or LSU connect PWB and check for correct operation (see page 1-5-35). |
| 4003 | Polygon motor (M) steadystate error <br> The rated speed signal detected the stability OFF continuously for 1 s after the polygon motor (M) stabilizes. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Laser scanner unit (M) and LSU connect PWB(YC7) <br> LSU connect PWB and engine PWB (YC12) |
|  |  | Defective motor. | Replace the Laser scanner unit (M) (see page 1-5-21). |
|  |  | Defective PWB. | Replace the engine PWB or LSU connect PWB and check for correct operation (see page 1-5-35). |
| 4004 | Polygon motor ( Y ) steadystate error <br> The rated speed signal detected the stability OFF continuously for 1 s after the polygon motor $(\mathrm{Y})$ stabilizes. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Laser scanner unit ( Y ) and LSU connect PWB(YC8) <br> LSU connect PWB and engine PWB (YC12) |
|  |  | Defective motor. | Replace the Laser scanner unit ( Y ) (see page 1-5-21). |
|  |  | Defective PWB. | Replace the engine PWB or LSU connect PWB and check for correct operation (see page 1-5-35). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 4011 | Polygon motor (K) startup error <br> Polygon motor $(\mathrm{K})$ is not stabilized within 10 s since the motor is activated. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Laser scanner unit (K) and LSU connect PWB(YC5) <br> LSU connect PWB and engine PWB (YC12) |
|  |  | Defective motor. | Replace the Laser scanner unit (K) (see page 1-5-21). |
|  |  | Defective PWB. | Replace the engine PWB or LSU connect PWB and check for correct operation (see page 1-5-35). |
| 4012 | Polygon motor (C) startup error <br> Polygon motor (C) is not stabilized within 10 s since the motor is activated. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Laser scanner unit (C) and LSU connect PWB(YC7) <br> LSU connect PWB and engine PWB (YC12) |
|  |  | Defective motor. | Replace the Laser scanner unit (C) (see page 1-5-21). |
|  |  | Defective PWB. | Replace the engine PWB or LSU connect PWB and check for correct operation (see page 1-5-35). |
| 4013 | Polygon motor (M) startup error <br> Polygon motor ( $M$ ) is not stabilized within 10 s since the motor is activated. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Laser scanner unit (M) and LSU connect PWB(YC6) <br> LSU connect PWB and engine PWB (YC12) |
|  |  | Defective motor. | Replace the Laser scanner unit (M) (see page 1-5-21). |
|  |  | Defective PWB. | Replace the engine PWB or LSU connect PWB and check for correct operation (see page 1-5-35). |
| 4014 | Polygon motor ( Y ) startup error <br> Polygon motor $(\mathrm{Y})$ is not stabilized within 10 s since the motor is activated. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Laser scanner unit ( Y ) and LSU connect PWB(YC8) <br> LSU connect PWB and engine PWB (YC12) |
|  |  | Defective motor. | Replace the Laser scanner unit ( Y ) (see page 1-5-21). |
|  |  | Defective PWB. | Replace the engine PWB or LSU connect PWB and check for correct operation (see page 1-5-35). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 4101 | BD initialization problem (K) $B D$ is not detected within two seconds after the polygon motor stabilizes. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> BDPWB and APCPWB <br> APCPWB and LSU connect PWB (YC1) <br> LSU connect PWB and engine PWB (YC12) |
|  |  | Defective APCPWB. | Replace the Laser scanner unit (K). (see page 1-5-21) |
|  |  | Defective BDPWB. |  |
|  |  | Defective PWB. | Replace the engine PWB or LSU connect PWB and check for correct operation (see page 1-5-35). |
| 4102 | BD initialization problem (C) $B D$ is not detected within two seconds after the polygon motor stabilizes. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> BDPWB and APCPWB <br> APCPWB and LSU connect PWB (YC3) <br> LSU connect PWB and engine PWB (YC12) |
|  |  | Defective APCPWB. | Replace the Laser scanner unit (C). (see page 1-5-21) |
|  |  | Defective BDPWB. |  |
|  |  | Defective PWB. | Replace the engine PWB or LSU connect PWB and check for correct operation (see page 1-5-35). |
| 4103 | BD initialization problem (M) <br> $B D$ is not detected within two seconds after the polygon motor stabilizes. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> BDPWB and APCPWB <br> APCPWB and LSU connect PWB (YC2) <br> LSU connect PWB and engine PWB (YC12) |
|  |  | Defective APCPWB. | Replace the Laser scanner unit (M). (see page 1-5-21) |
|  |  | Defective BDPWB. |  |
|  |  | Defective PWB. | Replace the engine PWB or LSU connect PWB and check for correct operation (see page 1-5-35). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 4104 | BD initialization problem (Y) BD is not detected within two seconds after the polygon motor stabilizes. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> BDPWB and APCPWB <br> APCPWB and LSU connect PWB (YC4) <br> LSU connect PWB and engine PWB (YC12) |
|  |  | Defective APCPWB. | Replace the Laser scanner unit (M). (see page 1-5-21) |
|  |  | Defective BDPWB. |  |
|  |  | Defective PWB. | Replace the engine PWB or LSU connect PWB and check for correct operation (see page 1-5-35). |
| 4600 | LSU cleaning motor error When the LSU cleaning motor is driven, an error signal is detected continuously for 2 s . | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity of the connector cable. If none, replace the cable. <br> LSU cleaning motor and LSU connect PWB(YC11) <br> LSU connect PWB and engine PWB(YC12) |
|  |  | Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any. |
|  |  | Defective motor. | Replace the LSU cleaning motor. |
|  |  | Defective PWB. | Replace the engine PWB or LSU connect PWB check for correct operation (see page 1-5-35). |
| 4700 | VIDEO ASIC device error Mismatch of reading data from two locations occurs eight times successively. Mismatch between writing data and reading data occurs eight times successively. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Main PWB (YC105) and engine PWB (YC17) |
|  |  | Defective PWB. | Replace the main PWB or the engine PWB and check for correct operation (see page 1-5-33, 1-5-35). |
| 4950 | LSU CPU communication error <br> A communication error is detected 10 times in succession. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Main PWB and video PWB (YC1) video PWB and LSU connect PWB (YC10) |
|  |  | Defective PWB. | Replace the main PWB or video PWB and check for correct operation (see page 1-5-33, 1-5-39). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 6000 | Broken fuser heater wire Fuser thermistor 2 does not reach $80^{\circ} \mathrm{C} / 176{ }^{\circ} \mathrm{F}$ even after20 s during warming up. The detected temperature of fuser thermistor2 does not reach the specified temperature (ready indication temperature) for 200 s in warming up after reached to $80^{\circ} \mathrm{C} / 176{ }^{\circ} \mathrm{F}$. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> IH coil unit and IHPWB <br> IHPWB and engine PWB (YC7) |
|  |  | Deformed connector pin. | If the I/F connector pins of the fuser unit and the main unit are deformed owing to foreign matters, such as paper dusts, replace the connectors or the units including the connectors. |
|  |  | Fuser thermostat triggered. | Reinsert the fuser unit (see page 1-5-18). |
|  |  | Broken fuser heater wire. |  |
|  |  | Defective PWB. | Replace the IH PWB or the engine PWB and check for correct operation (see page 1-543, 1-5-35). |
| 6020 | Abnormally high fuser thermistor 2 (center) temperature <br> The fuser thermistor 2 detects a temperature higher than $240^{\circ} \mathrm{C} / 464^{\circ} \mathrm{F}$ continuously for 1 s . | Deformed connector pin. | If the I/F connector pins of the fuser unit and the main unit are deformed owing to foreign matters, such as paper dusts, replace the connectors or the units including the connectors. |
|  |  | Shorted fuser thermistor. | Replace the fuser unit (see page 1-5-18). |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 6030 | Fuser thermistor 2 (center) break error <br> A/D value of the fuser thermistor 2 exceeds 1010 bit continuously for 1 s during warming up. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Fuser thermister2 and fuser PWB (YC2) Fuser unit and engine PWB (YC22) |
|  |  | Deformed connector pin. | If the I/F connector pins of the fuser unit and the main unit are deformed owing to foreign matters, such as paper dusts, replace the connectors or the units including the connectors. |
|  |  | Defective fuser thermistor. | Replace the fuser unit (see page 1-5-18). |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 6040 | NC sensor error | Deformed connector pin. | If the I/F connector pins of the fuser unit and the main unit are deformed owing to foreign matters, such as paper dusts, replace the connectors or the units including the connectors. |
|  |  | Shorted fuser thermistor. | Replace the fuser unit (see page 1-5-18). |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 6050 | Abnormally low fuser thermistor 2 (center) temperature <br> The fuser temperature lower than $100^{\circ} \mathrm{C} / 212^{\circ} \mathrm{F}$ is detected continuously for 1 s during printing. | Deformed connector pin. | If the I/F connector pins of the fuser unit and the main unit are deformed owing to foreign matters, such as paper dusts, replace the connectors or the units including the connectors. |
|  |  | Defective fuser thermistor. | Replace the fuser unit (see page 1-5-18). |
|  |  | Defective fuser heater. |  |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 6120 | Abnormally high fuser thermistor 3 (press roller) temperature The fuser temperature exceeds $200^{\circ} \mathrm{C} / 392{ }^{\circ} \mathrm{F}$ for 1 s. | Deformed connector pin. | If the I/F connector pins of the fuser unit and the main unit are deformed owing to foreign matters, such as paper dusts, replace the connectors or the units including the connectors. |
|  |  | Defective fuser thermistor. | Replace the fuser unit (see page 1-5-18). |
|  |  | Defective PWB. | Replace the IH PWB or the engine PWB and check for correct operation (see page 1-543, 1-5-35). |
| 6130 | Fuser thermistor 3 (press roller) break error Fuser thermistor 3 detects a temperature of $-14^{\circ} \mathrm{C} / 6.8^{\circ} \mathrm{F}$ Fuser thermistor 3 does not reach $30^{\circ} \mathrm{C} / 86^{\circ} \mathrm{F}$ even after60 s during warming up. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Fuser thermistor 3 and fuser PWB (YC4) Fuser unit and engine PWB (YC22) |
|  |  | Deformed connector pin. | If the I/F connector pins of the fuser unit and the main unit are deformed owing to foreign matters, such as paper dusts, replace the connectors or the units including the connectors. |
|  |  | Defective fuser thermistor. | Replace the fuser unit (see page 1-5-18). |
|  |  | Defective PWB. | Replace the IH PWB or the engine PWB and check for correct operation (see page 1-543, 1-5-35). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 6150 | Abnormally low fuser thermistor 3 (press roller) temperature The fuser temperature lower than $30^{\circ} \mathrm{C} / 86^{\circ} \mathrm{F}$ is detected continuously for 1 s . | Deformed connector pin. | If the I/F connector pins of the fuser unit and the main unit are deformed owing to foreign matters, such as paper dusts, replace the connectors or the units including the connectors. |
|  |  | Defective fuser thermistor. | Replace the fuser unit (see page 1-5-18). |
|  |  | Defective fuser heater. |  |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 6200 | Broken fuser edge heater wire <br> Fuser thermistor 1 does not reach $50^{\circ} \mathrm{C} / 122^{\circ} \mathrm{F}$ even after20 s during warming up. The detected temperature of fuser thermistor1 does not reach the specified temperature (ready indication temperature) for 60 s in warming up after reaching $50^{\circ} \mathrm{C} / 122^{\circ} \mathrm{F}$. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> IH coil unit and IHPWB <br> IHPWB and engine PWB (YC7) |
|  |  | Deformed connector pin. | If the I/F connector pins of the fuser unit and the main unit are deformed owing to foreign matters, such as paper dusts, replace the connectors or the units including the connectors. |
|  |  | Fuser thermostat triggered. | Reinsert the fuser unit (see page 1-5-18). |
|  |  | Broken fuser heater wire. |  |
|  |  | Defective PWB. | Replace the IH PWB or the engine PWB and check for correct operation (see page 1-543, 1-5-35). |
| 6220 | Abnormally high fuser thermistor 1 (edge) temperature <br> The fuser temperature exceeds $240^{\circ} \mathrm{C} / 464^{\circ} \mathrm{F}$ for 1 s. | Deformed connector pin. | If the I/F connector pins of the fuser unit and the main unit are deformed owing to foreign matters, such as paper dusts, replace the connectors or the units including the connectors. |
|  |  | Defective cooling fan motor. | Replace the fuser fan motor. |
|  |  | Defective fuser thermistor. | Replace the fuser unit (see page 1-5-18). |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 6230 | Fuser thermistor 1 (edge) break error <br> During warming up a hearter, fuser thermistor 2 detects a temperature of $100^{\circ} \mathrm{C} / 212^{\circ} \mathrm{F}$ or higher and, fuser thermistor 1 detects a temperature of 37 ${ }^{\circ} \mathrm{C} / 99^{\circ} \mathrm{F}$ or lower. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Fuser thermistor 1 and fuser PWB (YC3) Fuser unit and engine PWB (YC22) |
|  |  | Deformed connector pin. | If the I/F connector pins of the fuser unit and the main unit are deformed owing to foreign matters, such as paper dusts, replace the connectors or the units including the connectors. |
|  |  | Defective fuser thermistor. | Replace the fuser unit (see page 1-5-18). |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 6250 | Abnormally low fuser thermistor 1 (edge) temperature <br> The fuser temperature lower than $80^{\circ} \mathrm{C} / 176^{\circ} \mathrm{F}$ is detected continuously for 1 s during printing. | Deformed connector pin. | If the I/F connector pins of the fuser unit and the main unit are deformed owing to foreign matters, such as paper dusts, replace the connectors or the units including the connectors. |
|  |  | Defective fuser thermistor | Replace the fuser unit (see page 1-5-18). |
|  |  | Defective fuser heater. |  |
|  |  | Defective PWB. | Replace the IH PWB or the engine PWB and check for correct operation (see page 1-543, 1-5-35). |
| 6410 | Fuser unit type mismatch problem Absence of the fuser unit is detected. | Fuser unit connector inserted incorrectly. | Reinsert the fuser unit connector if necessary. |
|  |  | Different type of the fuser unit is installed. | Install the correct fuser unit (see page 1-5-18). |
| 6600 | Belt rotation error <br> The belt was detected to stop for 2 s continuously during motor remote is on. | Defective fuser motor. | Replace the fuser motor. |
|  |  | Defective IH belt. | Replace the fuser unit (see page 1-5-18). |
|  |  | Defective IH PWB. | Replace the IH PWB and check for correct operation (see page 1-5-43). |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 6710 | CPU thermal runaway (IHPWB) | Defective PWB. | Replace the IH PWB and check for correct operation (see page 1-5-43). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 6720 | Belt rotation error (IHPWB) | Defective PWB. | Replace the IH PWB and check for correct operation (see page 1-5-43). |
|  |  | Defective fuser motor. | Replace the fuser motor. |
|  |  | Defective fuser unit. | Replace the fuser unit (see page 1-5-18). |
| 6730 | Abnormally high IGBT1 temperature (IHPWB) | Defective PWB. | Replace the IH PWB and check for correct operation (see page 1-5-43). |
|  |  | Defective cooling fan motor. | Replace the IH fan motor. |
| 6740 | Abnormally high IGBT2 temperature (IHPWB) | Defective PWB. | Replace the IH PWB and check for correct operation (see page 1-5-43). |
|  |  | Defective cooling fan motor. | Replace the IH fan motor. |
| 6750 | Abnormally output overcurrent (IHPWB) | Defective PWB. | Replace the IH PWB and check for correct operation (see page 1-5-43). |
|  |  | Defective fuser unit. | Replace the fuser unit (see page 1-5-18). |
| 6760 | Abnormally AC input overcurrent (IHPWB) | Defective PWB. | Replace the IH PWB and check for correct operation (see page 1-5-43). |
| 6770 | Abnormally low electric power (IHPWB) | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. |
|  |  | Defective PWB. | Replace the IH PWB and check for correct operation (see page 1-5-43). |
| 6930 | IH coil fan motor error The alarm signal was detected for 5 seconds continuously during operation. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> IH coil fan motor and engine PWB(YC21) |
|  |  | Defective cooling fan motor. | Replace the container fan motor. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| 6950 | IH CPU communication error <br> A communication error is detected 3 times in succession. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. |
|  |  | Defective PWB. | Replace the IH PWB or the engine PWB and check for correct operation (see page 1-543, 1-5-35). |



| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 7402 | Developer unit C type mismatch error Absence of the developer unit C is detected. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Developer unit C and drum connect PWB (YC7) <br> Drum connect PWB and engine PWB (YC4) |
|  |  | Different type of the developer unit is installed. | Install the correct developer unit (see page 1-5-14). |
| 7403 | Developer unit M type mismatch error Absence of the developer unit $M$ is detected. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Developer unit M and drum connect PWB (YC8) <br> Drum connect PWB and engine PWB (YC4) |
|  |  | Different type of the developer unit is installed. | Install the correct developer unit (see page 1-5-14). |
| 7404 | Developer unit Y type mismatch error Absence of the developer unit Y is detected. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Developer unit Y and drum connect PWB (YC6) <br> Drum connect PWB and engine PWB (YC4) |
|  |  | Different type of the developer unit is installed. | Install the correct developer unit (see page 1-5-14). |
| 7411 | Drum unit K type mismatch problem Absence of the drum unit K is detected. | Drum unit connector inserted incorrectly. | Reinsert the drum unit K connector if necessary. |
|  |  | Different type of the drum unit is installed. | Install the correct drum unit (see page 1-5-16). |
| 7412 | Drum unit C type mismatch problem Absence of the drum unit C is detected. | Drum unit connector inserted incorrectly. | Reinsert the drum unit C connector if necessary. |
|  |  | Different type of the drum unit is installed. | Install the correct drum unit (see page 1-5-16). |
| 7413 | Drum unit M type mismatch problem Absence of the drum unit $M$ is detected. | Drum unit connector inserted incorrectly. | Reinsert the drum unit M connector if necessary. |
|  |  | Different type of the drum unit is installed. | Install the correct drum unit (see page 1-5-16). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 7414 | Drum unit $Y$ type mismatch problem Absence of the drum unit Y is detected. | Drum unit connector inserted incorrectly. | Reinsert the drum unit $Y$ connector if necessary. |
|  |  | Different type of the drum unit is installed. | Install the correct drum unit (see page 1-5-16). |
| 7420 | Transfer belt unit type mismatch problem Absence of the transfer belt unit is detected. | Transfer belt unit connector inserted incorrectly. | Reinsert the transfer belt unit connector if necessary. |
|  |  | Different type of the transfer belt unit is installed. | Install the correct transfer belt unit (see page 1-5-17). |
| 7601 | ID sensor 1 (front) error | Defective ID sensor. | Replace the ID sensor 1. |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |
| 7602 | ID sensor 2 (rear) error | Defective ID sensor. | Replace the ID sensor 2. |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |
| 7611 | ID sensor (K) density error When the concentration in a bias calibration is unusual. | Defective ID sensor. | Replace the ID sensor. |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |
| 7612 | ID sensor (C) density error When the concentration in a bias calibration is unusual. | Defective ID sensor. | Replace the ID sensor. |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |
| 7613 | ID sensor (M) density error When the concentration in a bias calibration is unusual. | Defective ID sensor. | Replace the ID sensor. |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |
| 7614 | ID sensor (Y) density error When the concentration in a bias calibration is unusual. | Defective ID sensor. | Replace the ID sensor. |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |
| 7620 | ID sensor timing error Color registration correction was failed. | Defective ID sensor. | Replace the ID sensor. |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 7800 | Broken external thermistor wire <br> The external thermistor delivers 0.3 V or more. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Temperature sensor and engine PWB (YC29) |
|  |  | Defective temperature sensor. | Replace the temperature sensor. |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |
| 7810 | Short-circuited external thermistor wire external thermistor delivers 3 V or more. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Temperature sensor and engine PWB (YC29) |
|  |  | Defective temperature sensor. | Replace the temperature sensor. |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |
| 7901 | Drum unit K EEPROM error <br> No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. <br> Mismatch of reading data from two locations occurs eight times successively. Mismatch between writing data and reading data occurs eight times successively. | Poor contact in the connector terminals. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Drum unit (K) and drum connect PWB(YC5) drum connect PWB and engine connect PWB (YC4) <br> Engine connect PWB and engine PWB (YC9) |
|  |  | Defective drum PWB. | Replace the drum unit K (see 1-5-16). |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |
| 7902 | Drum unit C EEPROM error <br> No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. Mismatch of reading data from two locations occurs eight times successively. Mismatch between writing data and reading data occurs eight times successively. | Poor contact in the connector terminals. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Drum unit (C) and drum connect PWB(YC3) drum connect PWB and engine connect PWB (YC4) <br> Engine connect PWB and engine PWB (YC9) |
|  |  | Defective drum PWB. | Replace the drum unit C (see 1-5-16). |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 7903 | Drum unit M EEPROM error <br> No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. <br> Mismatch of reading data from two locations occurs eight times successively. Mismatch between writing data and reading data occurs eight times successively. | Poor contact in the connector terminals. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Drum unit (M) and drum connect PWB(YC4) drum connect PWB and engine connect PWB (YC4) <br> Engine connect PWB and engine PWB (YC9) |
|  |  | Defective drum PWB. | Replace the drum unit M (see 1-5-16). |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |
| 7904 | Drum unit Y EEPROM error <br> No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. <br> Mismatch of reading data from two locations occurs eight times successively. Mismatch between writing data and reading data occurs eight times successively. | Poor contact in the connector terminals. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Drum unit ( Y ) and drum connect $\mathrm{PWB}(\mathrm{YC} 2)$ drum connect PWB and engine connect PWB (YC4) <br> Engine connect PWB and engine PWB (YC9) |
|  |  | Defective drum PWB. | Replace the drum unit Y (see 1-5-16). |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |
| 7911 | Developer unit K EEPROM error <br> No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. <br> Mismatch of reading data from two locations occurs eight times successively. Mismatch between writing data and reading data occurs eight times successively. | Poor contact in the connector terminals. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Developer unit (K) and drum connect PWB(YC9) <br> drum connect PWB and engine connect PWB (YC4) <br> Engine connect PWB and engine PWB (YC12) |
|  |  | Defective developer PWB. | Replace the developer unit K (see 1-5-14). |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 7912 | Developer unit C EEPROM error <br> No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. <br> Mismatch of reading data from two locations occurs eight times successively. Mismatch between writing data and reading data occurs eight times successively. | Poor contact in the connector terminals. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Developer unit (C) and drum connect PWB(YC7) <br> drum connect PWB and engine connect PWB (YC4) <br> Engine connect PWB and engine PWB (YC12) |
|  |  | Defective developer PWB. | Replace the developer unit C (see 1-5-14). |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |
| 7913 | Developer unit M EEPROM error <br> No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. <br> Mismatch of reading data from two locations occurs eight times successively. Mismatch between writing data and reading data occurs eight times successively. | Poor contact in the connector terminals. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Developer unit ( $M$ ) and drum connect PWB(YC8) drum connect PWB and engine connect PWB (YC4) <br> Engine connect PWB and engine PWB (YC12) |
|  |  | Defective developer PWB. | Replace the developer unit $M$ (see 1-5-14). |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |
| 7914 | Developer unit Y EEPROM error <br> No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. <br> Mismatch of reading data from two locations occurs eight times successively. <br> Mismatch between writing data and reading data occurs eight times successively. | Poor contact in the connector terminals. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Developer unit (Y) and drum connect PWB(YC6) <br> drum connect PWB and engine connect PWB (YC4) <br> Engine connect PWB and engine PWB (YC12) |
|  |  | Defective developer PWB. | Replace the developer unit Y (see 1-5-14). |
|  |  | Defective PWB. | Replace the engine PWB check for correct operation (see page 1-5-35). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 8030 | Tray upper limit detection problem (document finisher) <br> When the tray elevation motor raises a tray, the ON status of the tray upper limit sensor is detected. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Tray upper limit sensor and DF main PWB (CN5) <br> Paper surface sensor $1 / 2$ and DF main PWB (CN6) |
|  |  | Defective tray upper limit sensor, paper surface sensor 1/2. | Replace the sensor. |
|  |  | Defective PWB. | Replace the DF main PWB and check for correct operation. |
| 8040 | Belt problem (document finisher) <br> The belt sensor does not turn on/off within specified time of the belt solenoid turning on. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Belt sensor and DF main PWB (CN10) Belt solenoid and DF main PWB (CN21) |
|  |  | Defective belt sensor. | Replace the belt sensor. |
|  |  | Defective belt solenoid. | Replace the belt solenoid. |
|  |  | Defective PWB. | Replace the DF main PWB and check for correct operation. |
| 8140 | Tray elevation motor problem (document finisher) The tray low limit sensor or paper surface sensor 1/2 cannot be detected to be on within 10 s since the tray elevation motor is activated. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Tray elevation motor and DF main PWB (CN15) |
|  |  | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Tray lower limit sensor, and DF main PWB (CN5) <br> Paper surface sensor $1 / 2$ and DF main PWB (CN6) |
|  |  | The tray elevation motor malfunctions. | Replace the tray elevation motor. |
|  |  | Defective tray lower limit sensor, paper surface sensor 1/2. | Replace the sensor. |
|  |  | Defective PWB. | Replace the DF main PWB and check for correct operation. |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 8210 | Stapler problem (document finisher) Jam 7013 or 7023 is indicated. | Defective connector cable of staple or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. |
|  |  | The stapler is blocked with a staple. | Remove the stapler cartridge, and check the cartridge and the stapling section of the stapler. |
|  |  | The stapler is broken. | Replace the stapler and check for correct operation. |
|  |  | Defective PWB. | Replace the DF main PWB and check for correct operation. |
| 8320 | Adjustment motor 2 problem (document finisher) The adjustment sensor 2 does not turn on/off within specified time of the adjustment motor 2 turning on. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Adjustment motor 2 and DF main PWB (CN18) <br> Adjustment sensor 2 and DF main PWB (CN7) |
|  |  | Defective adjustment sensor 2. | Replace the adjustment sensor 2. |
|  |  | Defective adjustment motor 2. | Replace the adjustment motor 2. |
|  |  | Defective PWB. | Replace the DF main PWB and check for correct operation. |
| 8330 | Adjustment motor 1 problem (document finisher) The adjustment sensor 1 does not turn on/off within specified time of the adjustment motor 1 turning on. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Adjustment motor 1 and DF main PWB (CN18) <br> Adjustment sensor 1 and DF main PWB (CN7) |
|  |  | Defective adjustment sensor 1. | Replace the adjustment sensor 1. |
|  |  | Defective adjustment motor 1. | Replace the adjustment motor 1. |
|  |  | Defective PWB. | Replace the DF main PWB and check for correct operation. |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 8350 | Roller motor problem (document finisher) <br> The roller sensor does not turn on/off within specified time of the roller motor turning on. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Roller motor and DF main PWB (CN20) <br> Roller sensor and DF main PWB (CN11) |
|  |  | Defective roller sensor. | Replace the roller sensor. |
|  |  | Defective roller motor. | Replace the roller motor. |
|  |  | Defective PWB. | Replace the DF main PWB and check for correct operation. |
| 8360 | Slide motor problem (document finisher) <br> The slide sensor does not turn on/off within specified time of the slide motor turning on. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Slide motor and DF main PWB (CN14) <br> Slide sensor and DF main PWB (CN22) |
|  |  | Defective slide sensor. | Replace the slide sensor. |
|  |  | Defective slide motor. | Replace the slide motor. |
|  |  | Defective PWB. | Replace the DF main PWB and check for correct operation. |
| 8460 | EEPROM problem (document finisher) Reading from or writing to EEPROM cannot be performed. | Defective EEPROM or DF main PWB. | Replace the DF main PWB and check for correct operation. |
| 8800 | Document finisher communication error <br> A communication error is detected 10 times in succession. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Engine PWB (YC9) and Engine connect PWB (YC1) <br> Engine connect PWB (YC7) and DF relay PWB (YC2) DF relay PWB (YC3) and DF main PWB (CN1) |
|  |  | Defective DF main PWB. | Replace the DF main PWB and check for correct operation. |
|  |  | Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |


$\left.$| Code | Contents | Causes | Check procedures/ <br> corrective measures |
| :---: | :--- | :--- | :--- |
| $\mathbf{8 8 3 0}$ | Bridge communication <br> error (document finisher) <br> A communication error is <br> detected 10 times in succes- <br> sion. | Defective connec- <br> tor cable or poor <br> contact in the con- <br> nector. | Reinsert the connector. Also check for conti- <br> nuity within the connector cable. If none, <br> replace the cable. <br> Engine PWB (YC9) and Engine connect <br> PWB (YC1) <br> Engine connect PWB (YC7) and DF relay <br> PWB (YC2) <br> DF relay PWB (YC4) and bridge PWB (YC5) |
|  |  |  | Defective PWB. | | Replace the bridge PWB or the engine PWB |
| :--- |
| and check for correct operation |
| (see page 1-5-35). | \right\rvert\, | 8990 |
| :--- |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 9100 | Coin vender control PWB error <br> Communication error has been detected at the coin mec of the coin vender control PWB. | Defective coin vender control PWB. | Replace the coin mec. |
| 9110 | Coin vender error Communication error has been detected in connection with the coin mec and the rejector. | Rejector installed incorrectly. | Check the rejector is properly installed and, if not, perform the corrective action. |
|  |  | Defective rejector. | Replace the rejector. |
| 9120 | Sensor error in coin vender change (Yen 10) Change is empty despite change is enough. | Coin jam in the change tube | Check visually and remedy. |
|  |  | Poor contact in the connector | Check if the change empty sensor is intact. |
|  |  | Defective change empty sensor. | Replace the coin mec. |
|  |  | Defective coin vender control PWB. |  |
| 9130 | Sensor error in coin vender change (Yen 50) Change is empty despite change is enough. | Coin jam in the change tube | Check visually and remedy. |
|  |  | Poor contact in the connector. | Check if the change empty sensor is intact. |
|  |  | Defective change empty sensor. | Replace the coin mec. |
|  |  | Defective coin vender control PWB. |  |
| 9140 | Sensor error in coin vender change (Yen 100) Change is empty despite change is enough. | Coin jam in the change tube | Check visually and remedy. |
|  |  | Poor contact in the connector | Check if the change empty sensor is intact. |
|  |  | Defective change empty sensor. | Replace the coin mec. |
|  |  | Defective coin vender control PWB. |  |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| 9150 | Sensor error in coin vender change (Yen 500) Change is empty despite change is enough. | Coin jam in the change tube | Check visually and remedy. |
|  |  | Poor contact in the connector. | Check if the change empty sensor is intact. |
|  |  | Defective change empty sensor. | Replace the coin mec. |
|  |  | Defective coin vender control PWB. |  |
| 9160 | Coin vender pay-out error Coin is paid out despite the pay-out motor is determined not active. | Defective pay-out motor. | Replace the coin mec. |
| 9170 | Coin vender pay-out sensor error <br> Coin is paid out despite the pay-out motor is determined not active. | Change jam at the pay-out. | Check visually and remedy. |
|  |  | Defective pay-out motor. | Replace the coin mec. |
|  |  | Defective pay-out sensor. |  |
| 9500 |  |  | Contact the Service Administrative Division. |
| 9510 |  |  |  |
| 9520 |  |  |  |
| 9530 |  |  | Contact the Service Administrative Division. |
| 9540 |  |  |  |
| 9550 |  |  |  |
| F000 | Main PWB - operation panel PWB communication error | Defective main PWB. | Turn the main power switch off/on to restart the machine. If the error is not resolved, replace main PWB (see page 1-5-33). |
|  |  | Defective operation panel PWB. | Replace the operation panel PWB and check for correct operation. |
| F010 | Main PWB checksum error | Defective main PWB. | Turn the main power switch off/on to restart the machine. If the error is not resolved, replace main PWB (see page 1-5-33). |
| F011 |  |  |  |
| F012 |  |  |  |
| F013 |  |  |  |
| F040 | Main PWB - print engine communication error | Defective main PWB. | Turn the main power switch off/on to restart the machine. If the error is not resolved, replace main PWB (see page 1-5-33). |
|  |  | Defective engine PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |


| Code | Contents | Causes | Check procedures/ corrective measures |
| :---: | :---: | :---: | :---: |
| F041 | Communication error between main PWB and scanner engine | Defective main PWB. | Turn the main power switch off/on to restart the machine. If the error is not resolved, replace main PWB (see page 1-5-33). |
|  |  | Defective ISC PWB. | Replace the ISC PWB and check for correct operation. |
| F050 | Print engine ROM checksum error | Defective engine PWB. | Turn the main power switch off/on to restart the machine. If the error is not resolved, replace engine PWB (see page 1-5-35). |
| F051 | Scanner engine ROM checksum error | Defective Scanner software. | Install the Scanner software. |
|  |  | Defective ISC PWB. | Turn the main power switch off/on to restart the machine. If the error is not resolved, replace ISC PWB. |

## NOTE:

The other $F$ codes are indicated to the appendix (see page 2-4-10).

## 1-4-3 Image quality problems

If the part causing the problem is not designated as a service part, replace with the assembly comprising the part.
(1) No image
appears (entirely
white).


See page 1-4-44
(6) Black streaks are printed vertically.
(2) No image appears (entirely black).


See page 1-4-44
(7) Streaks are printed horizontally.
(3) Image is too light.

See page 1-4-45
(8) One side of the print image is darker than the other.

See page 1-4-46
(11) The leading edge of the image is consistently misaligned with the original.

See page 1-4-46
(12)The leading edge of the image is sporadically misaligned with the original.

(13)Paper is wrinkled.

See page 1-4-46
See page 1-4-47
(14)Offset occurs.


(4) The background is colored.


See page 1-4-45
(9) Spots are printed.


See page 1-4-47
(15)Part of image is missing.
(10)Image is
(10)Image is
blurred.
(5) White streaks are printed vertically.


See page 1-4-45

$$
\text { ( }+2
$$

See page 1-4-47
(16)Fusing is loose. (17)Image is out of focus.

See page 1-4-48
See page 1-4-48


See page 1-4-48


See page 1-4-49

See page 1-4-48
(18)Image center does not align with the original center.


See page 1-4-49
(1) No image appears (entirely white).

| Print example | Causes |  | Check procedures/corrective measures |
| :---: | :---: | :---: | :---: |
|  | Defective transfer bias output. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity of the connector cable. If necessary, replace the cable. <br> High voltage PWB and engine PWB (YC15) High voltage PWB sub and engine PWB (YC13) |
|  |  | Defective high voltage PWB. | Replace the high voltage PWB. |
|  |  | Defective high voltage PWB sub. | Replace the high voltage PWB sub. |
|  |  | Defective engine PWB. | Replace the engine PWB (see page 1-5-35). |
|  | Defective developer bias output. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity of the connector cable. If necessary, replace the cable. <br> High voltage PWB and engine PWB (YC15) |
|  |  | Defective high voltage PWB. | Replace the high voltage PWB. |
|  |  | Defective engine PWB. | Replace the engine PWB (see page 1-5-35). |
|  | No LSU laser is output. | Defective laser scanner unit. | Replace the laser scanner unit (see page 1-5-21). |
|  |  | Defective main PWB. | Replace the main PWB (see page 1-5-33). |

## (2) No image appears (entirely black).

| Print example | Causes |  | Check procedures/corrective measures |
| :---: | :--- | :--- | :--- |
|  | No main <br> charging. | Defective connector cable <br> or poor contact in the con- <br> nector. | Reinsert the connector. Also check for conti- <br> nuity within the connector cable. If none, <br> replace the cable. <br> High voltage PWB and engine PWB (YC15) |
|  |  | Defective charger roller unit. | Replace the charger roller unit <br> (see page 1-5-16). |
|  |  | Defective high voltage <br> PWB. | Replace the high voltage PWB. |
|  | Defective engine PWB. | Replace the engine PWB (see page 1-5-35). |  |

(3) Image is too light.

| Print example | Causes |  | Check procedures/corrective measures |
| :---: | :---: | :---: | :---: |
|  | Defective transfer charger output. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> High voltage PWB and engine PWB (YC15) High voltage PWB sub and engine PWB (YC13) |
|  |  | Defective high voltage PWB. | Replace the high voltage PWB. |
|  |  | Defective high voltage PWB sub. | Replace the high voltage PWB sub. |
|  |  | Defective engine PWB. | Replace the engine PWB (see page 1-5-35). |
|  | Insufficient toner. |  | If the display shows the message requesting toner replenishment, replace the container. |
|  | Deteriorated toner. |  | Perform the drum refresh operation. |

(4) The background is colored.

| Print example | Causes |  | Check procedures/corrective measures |
| :---: | :---: | :---: | :---: |
|  | Defective main charger output. | Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> High voltage PWB and engine PWB (YC15) |
|  |  | Defective high voltage PWB. | Replace the high voltage PWB. |
|  |  | Defective engine PWB. | Replace the engine PWB (see page 1-5-35). |
|  | Deteriorated toner. |  | Perform the drum refresh operation. |

(5) White streaks are printed vertically.

| Print example | Causes | Check procedures/corrective measures |
| :---: | :---: | :---: |
|  | Foreign matter in the developer unit. | Check if the magnetic brush is formed uniformly. Replace the developer unit if any foreign matter (see page 1-5-14). |
|  | Dirty shading plate. | Clean the shading plate. |
|  | Adhesion of soiling to transfer belt. | Clean the transfer belt. Replace the intermadiate transfer unit if it is extremely dirty (see page 1-5-17). |
|  | Adhesion of soiling to transfer roller. | Clean the transfer roller. Replace the transfer roller unit if it is extremely dirty (see page 1-5-17). |
|  | Dirty LSU dust shield glass. | Perform the LSU dust shield glass cleaning. |

(6) Black streaks are printed vertically.

| Print example | Causes | Check procedures/corrective measures |
| :--- | :--- | :--- |
|  | Dirty contact glass. | Clean the contact glass. |
|  | Dirty slit glass. | Clean the slit glass. |
|  | Dirty or flawed drum. | Perform the drum refresh operation. <br> Flawed drum. Replace the drum unit (see page 1-5-16). |
|  | Deformed or worn cleaning <br> blade in the drum unit. | Replace the drum unit (see page 1-5-16). |
|  | Defective transfer belt. | Replace the intermediate transfer unit (see page 1-5-17). |
|  | Defective transfer roller. | Replace the transfer roller unit(see page 1-5-17). |
|  | Dirty scanner mirror. | Clean the scanner mirror. |

(7) Streaks are printed horizontally.

| Print example | Causes | Check procedures/corrective measures |
| :---: | :--- | :--- |
|  Dirty or flawed drum. Perform the drum refresh operation. <br> Flawed drum. Replace the drum unit (see page 1-5-16). <br>  Dirty developer section. Clean any part contaminated with toner in the developer <br> section. <br>  Poor contact of grounding ter- <br> minal of drum unit. Check the installation of the drum unit. If it operates incor- <br> rectly, replace it (see page 1-5-16). |  |  |

(8) One side of the print image is darker than the other.

| Print example | Causes | Check procedures/corrective measures |
| :---: | :--- | :--- |
|  | Defective exposure lamp. | Replace the LED PWB (see page 1-5-25). |
|  |  |  |
|  |  |  |

(9) Spots are printed.

| Print example | Causes | Check procedures/corrective measures |
| :--- | :--- | :--- |
| $\because$ | Dirty contact glass. | Clean the contact glass. |
|  | Dirty or flawed drum. | Perform the drum refresh operation. <br> Flawed drum. Replace the drum unit (see page 1-5-16). |
|  | $\ddots$ | Deformed or worn cleaning <br> blade in the drum unit. |
|  | Flawed developer roller. | Replace the developer unit (see page 1-5-14). |
|  | Dirty heat roller and press <br> roller. | Clean the heat roller and press roller. |

(10) Image is blurred.

| Print example | Causes | Check procedures/corrective measures |
| :---: | :---: | :---: |
|  | Scanner moves erratically. | Check if there is any foreign matter on the front and rear scanner rails. If any, remove it. |
|  | Deformed press roller. | Replace the fuser unit (see page 1-5-18). |
|  | Paper conveying section drive problem. | Check the gears and belts and, if necessary, grease them. |

(11) The leading edge of the image is consistently misaligned with the original.

| Print example | Causes | Check procedures/corrective measures |
| :---: | :--- | :--- |
|  | Misadjusted leading edge reg- <br> istration. | Run maintenance mode U034 to readjust the leading edge <br> registration (see page 1-3-35). |
|  | Run maintenance mode U066 to readjust the scanner <br> leading edge registration (see page 1-3-44). |  |

(12) The leading edge of the image is sporadically misaligned with the original.

| Print example | Causes | Check procedures/corrective measures |
| :---: | :--- | :--- |
| $\square$ | Paper feed clutch, registra- <br> tion clutch or duplex clutch <br> operating incorrectly. | Check the installation of the clutch. If it operates incor- <br> rectly, replace it. |

(13) Paper is wrinkled.

| Print example | Causes | Check procedures/corrective measures |
| :---: | :---: | :---: |
|  | Paper curled. | Check the paper storage conditions. |
|  | Paper damp. | Check the paper storage conditions. |
|  | Defective pressure springs. | Replace the fuser unit (see page 1-5-18). |

(14) Image is off-set.

| Print example | Causes | Check procedures/corrective measures |
| :---: | :---: | :---: |
|  | Deformed or worn cleaning blade in the drum unit. | Replace the drum unit (see page 1-5-16). |
|  | Defective fuser unit. | Replace the fuser unit (see page 1-5-18). |
|  | Wrong types of paper. | Check if the paper meets specifications. Replace paper. |

(15) Part of image is missing.

| Print example | Causes | Check procedures/corrective measures |
| :---: | :---: | :---: |
|  | Paper damp. | Check the paper storage conditions. |
|  | Paper creased. | Replace the paper. |
|  | Drum condensation. | Perform the drum refresh operation. |
|  | Dirty or flawed drum. | Perform the drum refresh operation. Flawed drum. Replace the drum unit (see page 1-5-16). |
|  | Dirty transfer belt. | Clean the transfer belt. Replace the intermidate transfer unit if it is extremely dirty (see page 1-5-17). |
|  | Dirty transfer roller. | Clean the transfer roller. Replace the transfer roller unit if it is extremely dirty (see page 1-5-17). |

(16) Fusing is loose.

| Print example | Causes | Check procedures/corrective measures |
| :---: | :---: | :---: |
|  | Wrong types of paper. | Check if the paper meets specifications, replace paper. |
|  | Flawed heat roller or press roller. | Replace the fuser unit (see page 1-5-18). |
|  | Defective pressure springs. |  |
|  | Defective fuser heater. |  |

(17) Image is out of focus.

| Print example | Causes | Check procedures/corrective measures |
| :---: | :--- | :--- |
|  | Defective image scanning <br> unit. | Replace the image scanning unit (see page 1-5-22). |
|  | Drum condensation. | Perform the drum refresh operation. |

(18) Image center does not align with the original center.

| Print example | Causes | Check procedures/corrective measures |
| :---: | :--- | :--- |
|  | Misadjusted image center <br> line. | Run maintenance item U034 to readjust the center line of <br> image printing (see page 1-3-35). |
|  | Misadjusted scanner center <br> line. | Run maintenance item U067 to readjust the scanner lead- <br> ing edge registration (see page 1-3-45). |
|  | Original is not placed cor- <br> rectly. | Place the original correctly. |

## 1-4-4 Electric problems

If the part causing the problem s not designated as a service part, replace with the assembly comprising the part.
Troubleshooting to each failure must be made in the order of the numbered Problems.

| Problem | Causes | Check procedures/corrective measures |
| :---: | :---: | :---: |
| (1) <br> The machine does not operate when the main power switch is turned on | 1. No electricity at the power outlet. | Measure the input voltage. |
|  | 2. The power cord is not plugged in properly. | Check the contact between the power plug and the outlet. |
|  | 3. Broken power cord. | Check for continuity. If none, replace the cord. |
|  | 4. Defective main power switch. | Check for continuity across the contacts. If none, replace the power switch. |
|  | 5. Defective interlock switch. | Check for continuity across the contacts of interlock switch. If none, replace the power source PWB (see page 1-5-38). |
|  | 6. Defective power source PWB. | Replace the power source PWB (see page 1-5-38). |
| (2) ISU motor does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> ISU motor and ISC PWB (YC5) <br> ISC PWB (YC5) and main PWB (YC11) |
|  | 2. Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any. |
|  | 3. Defective motor. | Replace the ISU motor. |
|  | 4. Defective PWB. | Replace the main PWB and check for correct operation (see page 1-5-33). |
| (3) Eject motor does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Eject motor and engine PWB (YC20) |
|  | 2. Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any. |
|  | 3. Defective motor. | Replace the eject motor. |
|  | 4. Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |


| Problem | Causes | Check procedures/corrective measures |
| :---: | :---: | :---: |
| (4) ID Shutter motor does not operate | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> ID Shutter motor and engine connect PWB (YC17) engine connect PWB and engine PWB (YC9) |
|  | 2. Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any. |
|  | 3. Defective motor. | Replace the ID Shuttermotor. |
|  | 4. Defective PWB. | Replace the engine PWB or engin connect PWB and check for correct operation (see page 1-5-35). |
| (5) <br> Fuser pressure release motor does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Fuser pressure release motor and engine PWB (YC22) |
|  | 2. Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any. |
|  | 3. Defective motor. | Replace the Fuser pressure release motor. |
|  | 4. Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| (6) Controller fan motor does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Controller fan motor and main PWB (YC23) |
|  | 2. Defective motor. | Replace the controller fan motor. |
|  | 3. Defective PWB. | Replace the main PWB and check for correct operation (see page 1-5-33). |
| (7) <br> Power source fan motor does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Power source fan motor and engine connect PWB (YC11) engine connect PWB and engine PWB (YC9) |
|  | 2. Defective motor. | Replace the power source fan motor. |
|  | 3. Defective PWB. | Replace the engine PWB or engine connect PWB and check for correct operation (see page 1-5-35). |
| (8) <br> Developer fan motor 1 does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Developer fan motor 1 and engine PWB (YC21) |
|  | 2. Defective motor. | Replace the developer fan motor 1. |
|  | 3. Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |


| Problem | Causes | Check procedures/corrective measures |
| :---: | :---: | :---: |
| (9) <br> Developer fan motor 2/3 does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer fan motor $2 / 3$ and engine connect PWB (YC6) engine connect PWB and engine PWB (YC9) |
|  | 2. Defective motor. | Replace the developer fan motor 2/3. |
|  | 3. Defective PWB. | Replace the engine PWB or the engine connect PWB and check for correct operation (see page 1-5-35). |
| (10) <br> LSU fan motor does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. LSU fan motor and engine connect PWB (YC6) Engine connect PWB and engine PWB (YC9) |
|  | 2. Defective motor. | Replace the LSU fan motor. |
|  | 3. Defective PWB. | Replace the engine PWB engine connect PWB and check for correct operation (see page 1-5-35). |
| (11) <br> IH fan motor does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. IH fan motor and engine PWB (YC24) |
|  | 2. Defective motor. | Replace the IH fan motor. |
|  | 3. Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| (12) <br> Fuser fan motor does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser fan motor and engine PWB (YC24) |
|  | 2. Defective motor. | Replace the Fuser fan motor. |
|  | 3. Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| (13) <br> Container fan motor does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Container fan motor and engine PWB (YC21) |
|  | 2. Defective motor. | Replace the container fan motor. |
|  | 3. Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| (14) <br> Imaging fan motor does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Imaging fan motor and engine connect PWB (YC11) Engine connect PWB and engine PWB(YC9) |
|  | 2. Defective motor. | Replace the Imaging fan motor. |
|  | 3. Defective PWB. | Replace the engine PWB or engine connect PWB and check for correct operation (see page 1-5-35). |


| Problem | Causes | Check procedures/corrective measures |
| :---: | :---: | :---: |
| (15) <br> Paper feed clutch 1 does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Paper feed clutch 1 and engine PWB (YC2) |
|  | 2. Defective clutch. | Replace the paper feed clutch 1. |
|  | 3. Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| (16) <br> Paper feed clutch 2 does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Paper feed clutch 2 and video PWB (YC5) video PWB and main PWB |
|  | 2. Defective clutch. | Replace the paper feed clutch 2. |
|  | 3. Defective PWB. | Replace the video PWB or the main PWB and check for correct operation (see page 1-5-39, 1-5-33). |
| (17) <br> Mid clutch 1 does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Mid clutch 1 and engine PWB (YC2) |
|  | 2. Defective clutch. | Replace the mid clutch 1. |
|  | 3. Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| (18) <br> Mid clutch 2 does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Mid clutch 2 and video PWB (YC5) |
|  | 2. Defective clutch. | Replace the mid clutch 2. |
|  | 3. Defective PWB. | Replace the video PWB or the main PWB and check for correct operation (see page 1-5-39, 1-5-33). |
| (19) <br> Registration clutch does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Registration clutch and engine PWB (YC2) |
|  | 2. Defective clutch. | Replace the registration clutch. |
|  | 3. Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| (20) <br> Duplex clutch does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Duplex clutch and engine PWB (YC2) |
|  | 2. Defective clutch. | Replace the duplex clutch. |
|  | 3. Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |


| Problem | Causes | Check procedures/corrective measures |
| :---: | :---: | :---: |
| (21) <br> Developer stop clutch does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer stop clutch and engine PWB (YC3) |
|  | 2. Defective clutch. | Replace the developer stop clutch. |
|  | 3. Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| (22) <br> MP solenoid does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. MP solenoid and engine PWB (YC2) |
|  | 2. Defective solenoid. | Replace the MP solenoid. |
|  | 3. Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| (23) <br> Feedshift solenoid does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Feedshift solenoid and engine PWB (YC20) |
|  | 2. Defective solenoid. | Replace the Feedshift solenoid. |
|  | 3. Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| (24) <br> The message requesting paper to be loaded is shown when paper is present on the cassette 1. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Paper sensor $1 / 2$ and engine connect PWB (YC15) <br> Engine connect PWB to engine PWB (YC9) |
|  | 2. Deformed actuator of the paper sensor. | Check visually and replace if necessary. |
|  | 3. Defective paper sensor. | Replace the paper sensor 1/2. |
|  | 4. Defective PWB. | Replace the engine PWB or engine connect PWB and check for correct operation (see page 1-5-35). |
| (25) <br> The message requesting paper to be loaded is shown when paper is present on the cassette 2. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Paper sensor 3/4 and video PWB (YC7) <br> Video PWB to main PWB (YC9) |
|  | 2. Deformed actuator of the paper sensor. | Check visually and replace if necessary. |
|  | 3. Defective paper sensor. | Replace the paper sensor 3/4. |
|  | 4. Defective PWB. | Replace the video PWB or main PWB and check for correct operation (see page 1-5-39, 1-5-33). |


| Problem | Causes | Check procedures/corrective measures |
| :---: | :---: | :---: |
| (26) <br> The message requesting paper to be loaded is shown when paper is present on the MP tray. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. MP paper sensor and engine PWB (YC5) |
|  | 2. Deformed actuator of the MP paper sensor. | Check visually and replace if necessary. |
|  | 3. Defective MP paper sensor. | Replace the MP paper sensor. |
|  | 4. Defective PWB. | Replace the engine PWB and check for correct operation (see page 1-5-35). |
| (27) <br> The size of paper on the cassette 1 is not displayed correctly. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Paper size width switch 1 and engine connect PWB (YC14) Paper size length switch 1 and engine connect PWB (YC14) <br> Engine connect PWB and engine PWB (YC9) |
|  | 2. Defective cassette size switch. | Replace the paper size width switch 1 or paper size length switch 1. |
|  | 3. Defective PWB. | Replace the engine PWB or the engine connect PWB and check for correct operation (see page 1-5-35). |
| (28) <br> The size of paper on the cassette 2 is not displayed correctly. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> Paper size width switch 2 and video PWB (YC6) <br> Paper size length switch 2 and video PWB (YC6) <br> Video PWB and main PWB |
|  | 2. Defective cassette size switch. | Replace the paper size width switch 1 or paper size length switch 1. |
|  | 3. Defective PWB. | Replace the video PWB or the main PWB and check for correct operation (see page 1-5-39, 1-5-33). |
| (29) <br> A paper jam in the paper feed, paper conveying or eject section is indicated when the main power switch is turned on. | 1. A piece of paper torn from paper is caught around registration sensor, duplex sensor , feed sensor 1/2 or eject sensor. | Check visually and remove it, if any. |
|  | 2. Defective sensor. | Replace the registration sensor, duplex sensor, feed sensor 1/2 or eject sensor. |
| (30) <br> A message indicating cover open is displayed when the front cover or right cover $1 / 2$ is closed. | 1. Deformed actuator of the interlock switch. | Check visually and replace if necessary. |
|  | 2. Defective interlock switch. | Replace the interlock switch. |


| Problem | Causes | Check procedures/corrective measures |
| :---: | :---: | :---: |
| (31) <br> The LED lamp does not turn on when original is present on the DP. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> DP original sensor and DP main PWB (YC3) <br> DP main PWB (YC1) and engine PWB (YC18) |
|  | 2. Defective sensor. | Replace the DP original sensor. |
|  | 3. Defective PWB. | Replace the DPLED PWB or the engine PWB and check for correct operation (see page 1-5-35). |
| (32) <br> The size of original on the DP is not displayed correctly. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> DP original size width sensor and DP main PWB (YC4) DP original size length sensor and DP main PWB (YC2) DP main PWB (YC1) and engine PWB (YC18) |
|  | 2. Defective sensor. | Replace the DP original size width sensor or DP original size length sensor. |
|  | 3. Defective PWB. | Replace the DP main PWB or engine PWB and check for correct operation (see page 1-5-31,1-5-35). |
| (33) <br> DP paper feed motor does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. <br> DP paper feed motor and DP main PWB (YC9) DP main PWB (YC1) and engine PWB (YC18) |
|  | 2. Defective drive trans mission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any. |
|  | 3. Defective motor. | Replace the DP paper feed motor. |
|  | 4. Defective PWB. | Replace the DP main PWB or engine PWB and check for correct operation (see page 1-5-31,1-5-35). |
| (34) <br> DP switchback motor does not operate. | 1. Defective connector cable or poor contact in the connector. | Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DP switchback motor and DP main PWB (YC9) DP main PWB (YC1) and engine PWB (YC18) |
|  | 2. Defective drive transmission system. | Check if the rollers and gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any. |
|  | 3. Defective motor. | Replace the DP switchback motor. |
|  | 4. Defective PWB. | Replace the DP main PWB or engine PWB and check for correct operation (see page 1-5-31,1-5-35). |


| Problem | Causes | Check procedures/corrective measures |
| :--- | :--- | :--- |
| (35) <br> DP paper feed <br> clutch does not <br> operate. | 1. Defective connector <br> cable or poor con- <br> tact in the connector. | Reinsert the connector. Also check for continuity within the <br> connector cable. If none, replace the cable. <br> DP paper feed clutch and DP main PWB (YC8) <br> DP main PWB (YC1) and engine PWB (YC18) |
|  | 2. Defective clutch. | Replace the DP paper feed clutch. |
|  | 3. Defective PWB. | Replace the DP main PWB or engine PWB and check for <br> correct operation (see page 1-5-31,1-5-35). |
| (36) <br> DP registration <br> clutch does not <br> operate. | 1. Defective connector <br> cable or poor con- <br> tact in the connector. | Reinsert the connector. Also check for continuity within the <br> connector cable. If none, replace the cable. <br> DP registration clutch and DP main PWB (YC8) <br> DP main PWB (YC1) and engine PWB (YC18) |

## 1-4-5 Mechanical problems

If the part causing the problem was not supplied, use the unit including the part for replacement.

| Problem | Causes/check procedures | Corrective measures |
| :---: | :---: | :---: |
| (1) <br> No primary paper feed. | Check if the surfaces of the following rollers are dirty with paper dusts. <br> Pickup roller <br> Paper feed roller <br> MP paper feed roller | Clean with isopropyl alcohol. |
|  | Check if any of the following rollers is deformed. <br> Pickup roller <br> Paper feed roller <br> MP paper feed roller | Check visually and replace any deformed (see page 1-5-9, 1-5-10). |
|  | Defective paper feed clutch installation. | Check visually and remedy if necessary. |
| (2) No secondary paper feed. | Check if the surfaces of the following rollers are dirty with paper powder. <br> Right registration roller <br> Left registration roller | Clean with isopropyl alcohol. |
|  | Defective registration clutch installation. | Check visually and remedy if necessary. |
| (3) <br> Skewed paper feed. | Paper width guide in the cassette are installed incorrectly. | Check the paper width guide visually and remedy or replace if necessary. |
| (4) <br> Multiple sheets of paper are fed. | Check if the paper is excessively curled. | Change the paper. |
|  | Paper is loaded incorrectly. | Load the paper correctly. |
|  | Check if the retard roller is worn. | Replace the retard roller if it is worn (see page 1-5-9). |
| (5) Paper jams. | Check if the paper is excessively curled. | Change the paper. |
|  | Check if the contact between the right and left registration rollers is correct. | Check visually and remedy if necessary. |
|  | Check if the heat roller or press roller is extremely dirty or deformed. | Check visually and replace the fuser unit (see page 1-5-18). |
| (6) <br> Toner drops on the paper conveying path | Check if the drum unit or developer unit is extremely dirty. | Clean the drum unit or developer unit. |


| Problem | Causes/check procedures | Corrective measures |
| :---: | :---: | :---: |
| (7) <br> Abnormal noise is heard. | Check if the rollers, pulleys and gears operate smoothly. | Grease the bushes and gears. |
|  | Check if the following clutches are installed correctly. <br> Paper feed clutch <br> Mid clutch <br> Registration clutch <br> Duplex clutch | Check visually and remedy if necessary. |
| (8) <br> No primary original feed. | Check if the surfaces of the following pulleys are dirty with paper powder. <br> DP forwarding pulley <br> DP paper feed roller | Clean with isopropyl alcohol. |
|  | Check if the following pulleys is deformed. <br> DP forwarding pulley <br> DP paper feed roller | Check visually and replace any deformed (see page 1-5-29). |
| (9) <br> Multiple sheets of original are fed. | Original is not correctly set. | Set the original correctly. |
|  | Check if the DP separation pulley is worn. | Replace the DP separation pulley if it is worn (see page 1-5-29). |
| (10) <br> Originals jam. | Originals being used do not conform with the specifications. | Use only originals conforming to the specifications. |
|  | Check if the surfaces of the following pulleys are dirty with paper powder. <br> DP forwarding pulley <br> DP paper feed roller | Clean with isopropyl alcohol. |
|  | Check if the contact between the registration roller and registration pulley is correct. | Check visually and remedy if necessary. |
|  | Check if the contact between the conveying roller and conveying pulley is correct. | Check visually and remedy if necessary. |
|  | Check if the contact between the eject roller and eject pulley is correct. | Check visually and remedy if necessary. |
|  | Check if the contact between the switchback roller and switchback pulley is correct. | Check visually and remedy if necessary. |

## 1-4-6 Send error code

This section describes the scanning errors and descriptions, preventive actions, as well as corrective actions. Error codes not described here could fall within software errors.
If such an error is encountered, turn power off then on, and advise the service representative.
(1) Scan to SMB error codes

| Code | Contents | Check procedures/corrective measures |
| :---: | :--- | :--- |
| 1101 | Host destined does not exist on the net- <br> work. | 1. Confirm the destined host. <br> 2. Confirm thedevice's network parameters. <br> 3. Confirm the parameters of the network to which the <br> device is connected are correct. |
| 1102 | Login to the host has failed. | 1. Confirm user name and password. <br> 2. Confirm the parameters of the network to which the <br> device is connected are correct. <br> 3. Check the host if the folder is properly shared. |
| 1103 | Destined host, folder, and/or file names <br> are invalid. | 1. Check illegal characters are not contained within <br> these names. <br> 2. Check the name of the folder and files conform with <br> the naming syntax. |
| 1105 | SMB protocol is not enabled. | 3. Confirm destined host and folder. |
| 2101 | 1. Confirm device's SMB protocols. |  |

(2) Scan to FTP error codes

| Code | Contents | Check procedures/corrective measures |
| :---: | :---: | :---: |
| 1101 | FTP server does not exist on the network. | 1. Check the FTP server name. <br> 2. Confirm device's network parameters. <br> 3. Confirm the parameters of the network to which the device is connected are correct. |
| 1102 | Login to the FTP server has failed. | 1. Confirm user name and password. <br> 2. Check the FTP server name. |
| 1103 | Destined folder is invalid. | 1. Check that the illegal characters are not contained within these names. <br> 2. Check the FTP server name. |
| 1105 | FTP protocol is not enabled. | 1. Confirm device's FTP protocols. |
| 1131 | Initializing TLS has failed. | 1. Confirm device's security parameters. |
| 1132 | TLS negotiation has failed. | 1. Confirm device's security parameters. <br> 2. Check the FTP server name. |
| 2101 | Access to the FTP server has failed. | 1. Check the FTP server name. <br> 2. Confirm that the LAN cable is properly connected to the device. <br> 3. Check the FTP port number. <br> 4. Confirm device's network parameters. <br> 5. Confirm the network parameters the device is connected. <br> 6. Check the FTP server name. |
| 2102 | Access to the FTP server has failed. (Connection timeout) | 1. Check the FTP server name. <br> 2. Check the FTP port number. <br> 3. Confirm device's network parameters. <br> 4. Confirm the network parameters the device is connected. <br> 5. Check the FTP server name. |
| 2103 | The server cannot establish communication. | 1. Check the FTP server name. <br> 2. Check the FTP port number. <br> 3. Confirm device's network parameters. <br> 4. Confirm the network parameters the device is connected. <br> 5. Check the FTP server name. |
| 2201 | Connection with the FTP server has failed. | 1. Confirm device's network parameters. <br> 2. Confirm the network parameters the device is connected. <br> 3. Confirm destined folder. <br> 4. Check the FTP server name. |
| 2202 | Connection with the FTP server has failed. <br> (Timeout) | 1. Confirm device's network parameters. <br> 2. Confirm the network parameters the device is connected. |
| 2203 | No response from the server during a certain period of time. | 1. Confirm device's network parameters. <br> 2. Confirm the network parameters the device is connected. |


| Code | Contents | Check procedures/corrective measures |
| :--- | :--- | :--- |
| 2231 | Connection with the FTP server has <br> failed. <br> (FTPS communication) | 1. Confirm device's network parameters. <br> 2. Confirm the network parameters the device is con- <br> nected. |
| 3101 | FTP server responded with an error. | 1. Confirm device's network parameters. <br> 2. Confirm the network parameters the device is con- <br> nected. <br> 3. Check the FTP server. |
|  |  |  |

## (3) Scan to E-mail error codes

| Code | Contents | Check procedures/corrective measures |
| :---: | :---: | :---: |
| 1101 | SMTP/POP3 server does not exist on the network. | 1. Check the SMTP/POP3 server name. <br> 2. Confirm device's network parameters. <br> 3. Confirm the parameters of the network to which the device is connected are correct. |
| 1102 | Login to the SMTP/POP3 server has failed. | 1. Confirm user name and password. <br> 2. Check the SMTP/POP3 server. |
| 1104 | The domain the destined address belongs is prohibited by scanning restriction. | 1. Confirm device's SMTP parameters. |
| 1105 | SMTP protocol is not enabled. | 1. Confirm device's SMTP protocols. |
| 1106 | Sender's address is not specified. | 1. Confirm device's SMTP protocols. |
| 2101 | Connection to the SMTP/POP3 server has failed. | 1. Check the SMTP/POP3 server name. <br> 2. Confirm that the LAN cable is properly connected to the device. <br> 3. Check the SMTP/POP3 port number. <br> 4. Confirm device's network parameters. <br> 5. Confirm the network parameters the device is connected. <br> 6. Check the SMTP/POP3 server. |
| 2102 | Connection to the SMTP/POP3 server has failed. <br> (Connection timeout) | 1. Check the SMTP/POP3 server name. <br> 2. Check the SMTP/POP3 port number. <br> 3. Confirm device's network parameters. <br> 4. Confirm the network parameters the device is connected. <br> 5. Check the SMTP/POP3 server. |
| 2103 | The server cannot establish communication. | 1. Check the SMTP/POP3 server name. <br> 2. Check the SMTP/POP3 port number. <br> 3. Confirm device's network parameters. <br> 4. Confirm the network parameters the device is connected. <br> 5. Check the SMTP/POP3 server. |
| 2201 | Connection to the SMTP/POP3 server has failed. | 1. Confirm device's network parameters. <br> 2. Confirm the network parameters the device is connected. |
| 2202 | Connection to the SMTP/POP3 server has failed. <br> (Timeout) | 1. Confirm device's network parameters. <br> 2. Confirm the network parameters the device is connected. |
| 2204 | The size of scanning exceeded its limit. | 1. Confirm device's network parameters. |
| 3101 | SMTP/POP3 server responded with an error. | 1. Confirm device's network parameters. <br> 2. Confirm the network parameters the device is connected. <br> 3. Check the SMTP/POP3 server. |
| 3201 | No SMTP authentication is found. | 1. Check the SMTP server. <br> 2. The device supports SMTP authentication services including CRAM-MD5, DIGEST-MD5, PLAIN and LOGIN. |


| Code | Contents | Check procedures/corrective measures |
| :--- | :--- | :--- |
| 4803 | Failed to establish the SSL session. | 1. Verify the self certificate of the device. <br> 2. Check the server certificate of the SMTP/POP3 <br> server. <br> 3. Check the SMTP/POP3 configuration of the device <br> and the SMTP/POP3 server. |
|  |  |  |
|  |  |  |

## 1-4-7 Error codes

## (1) Error code

Error codes are listed on the communication reports, activity report, etc. The codes consist of an error code indication $U$ followed by a 5-digit number. (Error codes for $V 34$ communication errors start with an E indication, followed by five digits.)
The upper three of the five digits indicate general classification of the error and its cause, while the lower two indicate the detailed classification. Items for which detailed classification is not necessary have 00 as the last two digits.

Error code


Figure 1-4-3

## (2) Table of general classification

| Error code | Description |
| :---: | :---: |
| U00000 | No response or busy after the set number of redials. |
| U00100 | Transmission was interrupted by a press of the stop/clear key. |
| U00200 | Reception was interrupted by a press of the stop/clear key. |
| U00300 | Recording paper on the destination unit has run out during transmission. |
| U004XX | A connection was made but interrupted during handshake with the receiver unit (See page 1-4-69). |
| U00500 | Multiple communication was interrupted and call was not made on destination units after interruption. |
| U006XX | Communication was interrupted because of a machine problem (See page 1-4-70). |
| U00700 | Communication was interrupted because of a problem in the destination unit. |
| U008XX | A page transmission error occurred in G3 mode (See page 1-4-70). |
| U009XX | A page reception error occurred in G3 mode (See page 1-4-70 ). |
| U010XX | Transmission in G3 mode was interrupted by a signal error (See page 1-4-71). |
| U011XX | Reception in G3 mode was interrupted by a signal error (See page 1-4-73). |
| U01400 | An invalid one-touch key was specified during communication. |
| U01500 | A communication error occurred when calling in V .8 mode. |
| U01600 | A communication error occurred when called in V .8 mode. |
| U017XX | A communication error occurred before starting T. 30 protocol during transmission in V .34 mode (See page 1-4-74). |
| U018XX | A communication error occurred before starting T. 30 protocol during reception in V. 34 mode (See page 1-4-75). |
| U02000 | Relay broadcast was refused by a relay station because of a mismatch in permit ID number and permit telephone number when a relay command was issued. |
| U02100 | A relay command failed because the destination unit (relay station) had no relay broadcast capability. |
| U02200 | A relay command from a command station failed because a telephone number that was not registered in the relay station was specified. Or, relay broadcast was requested to a relay station but failed because a telephone number that was not registered in the relay station was specified. Or, Subaddress-based relay broadcast transmission failed because the data registered in the Subaddress relay box was deleted. |
| U023XX | Receiving station information was not normally received in reception of a relay command (See page 1-4-75). |
| U02400 | An interoffice subaddress-based relay transmission was interrupted because of a mismatch in the specified relay box number. |
| U03000 | No document was present in the destination unit when polling reception started. |
| U03100 | In reverse polling, although no original was set in the destination unit, transmission was complete. |
| U03200 | In confidential polling reception, data was not accumulated in the specified box in the destination unit. Or, in interoffice subaddress-based bulletin board reception, data was not stored in the box specified by the destination unit. |


| Error code | Description |
| :---: | :---: |
| U03300 | In polling reception from a unit of our make, operation was interrupted due to a mismatch in permit ID or telephone number. Or, in interoffice subaddress-based bulletin board reception, operation was interrupted due to a mismatch in permit ID or telephone number. |
| 003400 | Polling reception was interrupted because of a mismatch in individual numbers (destination unit is either of our make or by another manufacturer). |
| 003500 | In confidential polling reception, the specified confidential box No. was not registered in the destination. Or, in interoffice subaddress-based bulletin board reception, the specified Subaddress confidential box number was not registered in the destination unit. Or, the destination was being accessed. |
| 003600 | Confidential polling reception was interrupted because of a mismatch in specified confidential box No. Or, an interoffice subaddress-based bulletin board reception was interrupted because of a mismatch in the specified subaddress confidential box number. |
| U03700 | Confidential polling reception failed because the destination unit had no confidential polling transmission capability or data was not accumulated in any box in the destination unit. Or, interoffice subaddress-based bulletin board reception failed because the destination unit had no subaddress-based bulletin board transmission capability, or data was not stored in any subaddress confidential box in the destination unit. |
| U04000 | The confidential box specified for confidential transmission was not registered in the destination unit. Or, in interoffice subaddress-based transmission mode, the specified subaddress box number was not registered in the destination unit. Or, the destination was being accessed. |
| U04100 | Confidential transmission failed because the destination unit had no confidential capability. Or, subaddress-based transmission failed because the destination unit had no sub-address-based reception capability. |
| U04200 | In encrypted transmission, the specified encryption box was not registered in the destination unit. |
| U04300 | Encrypted transmission failed because the destination unit had no encrypted communication capability. |
| U044XX | Communication was interrupted because of an encryption key error during encrypted transmission (See page 1-4-75). |
| U04500 | Encrypted reception was interrupted because of a mismatch in encryption keys. |
| U05000 | In transmission with a specified number, the set number of originals was different from the number of transmitted originals. |
| U05100 | Password check transmission or restricted transmission was interrupted because the permit ID's did not agree with. |
| U05200 | Password check reception or restricted reception was interrupted because the permit ID's did not match, the rejected FAX number's did match, or the destination receiver did not return its phone number. |
| 005300 | The password check reception or the restricted reception was interrupted because the permitted numbers did not match, the rejected numbers did match, or the machine in question did not acknowledge its phone number. |
| U09000 | G3 communication was attempted but failed because the destination unit was a G2 machine. |


| Error code | Description |
| :---: | :--- |
| $\mathbf{U 1 2 0 0 0}$ | Relay broadcast was requested from a command station but memory overflowed during <br> reception. Or, in subaddress-based relay reception, memory overflowed. |
| $\mathbf{U 1 2 1 0 0}$ | Relay was commanded but memory overflowed in the destination unit (relay station). |
| $\mathbf{U 1 4 0 0 0}$ | Memory overflowed during confidential reception. Or, in subaddress-based confidential <br> reception, memory overflowed. |
| $\mathbf{U 1 4 1 0 0}$ | Memory overflowed in the destination unit during confidential transmission. Or, in interof- <br> fice subaddress-based transmission, memory overflowed in the destination unit. |
| $\mathbf{U 1 9 0 0 0}$ | Memory overflowed during memory reception. |
| $\mathbf{U 1 9 1 0 0}$ | Memory overflowed in the destination unit during transmission. |
| $\mathbf{U 1 9 2 0 0}$ | Memory transmission failed because a decoding error occurred. |
| $\mathbf{U 1 9 3 0 0}$ | Transmission failed because an error occurred during JBIG encoding. |
| $\mathbf{U 1 9 4 0 0}$ | Reception failed because an error occurred during JBIG decoding. |

## (2-1) U004XX error code table: Interrupted phase B

| Error code | Description |
| :---: | :---: |
| U00420 | A relay request was received from the host center but interrupted because of a mismatch in permit ID or telephone number. |
| U00421 | Subaddress-based relay reception was interrupted because of a mismatch in the specified subaddress relay box number. |
| U00430 | Polling request (confidential or reverse) was received but interrupted because of a mismatch in permit number. Or, subaddress-based bulletin board transmission request was received but interrupted because of a mismatch in permit ID in the transmitting unit. |
| U00431 | Confidential polling transmission was interrupted because the specified confidential box No. was not registered. Or, an subaddress-based bulletin board transmission was interrupted because the specified subaddress confidential box was not registered. |
| U00432 | Confidential polling transmission was interrupted because of a mismatch in confidential box ID number. Or, an subaddress-based bulletin board transmission was interrupted because of a mismatch in Subaddress confidential box numbers. |
| U00433 | Confidential polling request was received but data was not present in the confidential box. Or, subaddress-based bulletin board transmission request was received but data was not present in the subaddress confidential box. |
| U00434 | Confidential polling request was received but interrupted because the specified confidential box No. was intended for encryption. |
| U00435 | Confidential polling request was received but interrupted because the specified confidential box was being accessed. Or, subaddress-based bulletin board transmission request was received but interrupted because the specified subaddress confidential box was being accessed. |
| U00440 | Confidential reception was interrupted because the specified confidential box No. was not registered. Or, subaddress-based confidential reception or subaddress-based relay reception was interrupted because the specified subaddress box was not registered. Or, subaddress based confidential reception or subaddress relay command reception was interrupted because the specified subaddress box No. was being accessed. |
| U00441 | Confidential reception was interrupted because the specified confidential box No. was intended for encryption. |
| U00450 | The destination transmitter disconnected because the permit ID's did not agree with while the destination transmitter is in password-check transmission or restricted transmission. |
| U00460 | Encrypted reception was interrupted because the specified encryption box number was not registered. Or, encrypted reception request was received but interrupted because the specified encryption box was being accessed. |
| U00462 | Encrypted reception was interrupted because the encryption key for the specified encryption box was not registered. |

## (2-2) U006XX error code table: Problems with the unit

| Error code |  |
| :---: | :--- |
| U00600 | The document processor cover is open. |
| U00601 | Document jam or the document length exceeds the maximum. |
| U00602 | Image scanning section problem. |
| U00603 | No document feed. |
| U00604 | Document length exceeded the limit of the bitmap memory capacity. |
| $\mathbf{U 0 0 6 1 0}$ | Recording section cover is open. |
| $\mathbf{U 0 0 6 1 1}$ | Recording paper JAM |
| $\mathbf{U 0 0 6 1 3}$ | Image writing section problem |
| $\mathbf{U 0 0 6 1 4}$ | Nearly empty of recording paper |
| $\mathbf{U 0 0 6 1 5}$ | Empty of recording paper |
| $\mathbf{U 0 0 6 2 0}$ | Copier fixing unit problem |
| $\mathbf{U 0 0 6 2 2}$ | Copier drive motor problem |
| $\mathbf{U 0 0 6 5 5}$ | CTS was not activated after RTS due to a modem error. |
| $\mathbf{U 0 0 6 5 6}$ | Data was not transmitted after CTS was activated due to a modem error. |
| $\mathbf{U 0 0 6 7 0}$ | Power was cut off during communication. |
| $\mathbf{U 0 0 6 7 7}$ | There was no file to transmit in the memory transmission mode. |
| $\mathbf{U 0 0 6 9 0}$ | System error. |

## (2-3) U008XX error code table: Page transmission error

| Error code | Description |
| :---: | :--- |
| U00800 | A page transmission error occurred because of reception of a RTN or PIN signal. |
| U00810 | A page transmission error reoccurred after retry of transmission in the ECM mode. |

## (2-4) U009XX error code table: Page reception error

| Error code | Description |
| :---: | :--- |
| U00900 | An RTN or PIN signal was transmitted because of a page reception error. |
| U00910 | A page reception error remained after retry of transmission in the ECM mode. |

(2-5) U010XX error code table: G3 transmission

| Error code | Description |
| :---: | :---: |
| U01000 | An FTT signal was received for a set number of times after TCF signal transmission at 2400 bps . Or, an RTN signal was received in response to a $Q$ signal (excluding EOP) after transmission at 2400 bps . |
| U01001 | Function of the unit differs from that indicated by a DIS signal. |
| U01010 | No relevant signal was received after transmission of a DNL (MPS or EOM) signal, and the preset number of command retransfers was exceeded (between units of our make). |
| U01011 | No relevant signal was received after transmission of a DCS, TCF signal, and the preset number of command retransfers was exceeded. |
| U01012 | No relevant signal was received after transmission of an NSS1, NSS2 (TCF) signal, and the preset number of command retransfers was exceeded (between units of our make). |
| U01013 | No relevant signal was received after transmission of an NSS3, TCF signal, and the preset number of command retransfers was exceeded (between units of our make). |
| U01014 | No relevant signal was received after transmission of an MPS signal, and the preset number of command retransfers was exceeded. |
| U01015 | No relevant signal was received after transmission of an EOM signal, and the preset number of command retransfers was exceeded. |
| U01016 | An MCF signal was received but no DIS signal was received after transmission of an EOM signal, and T1 timeout was detected. |
| U01017 | No relevant signal was received after transmission of an EOP signal, and the preset number of command retransfers was exceeded. |
| U01018 | No relevant signal was received after transmission of a PRI-EOP signal, and the preset number of command retransfers was exceeded. |
| U01019 | No relevant signal was received after transmission of a CNC signal, and the preset number of command retransfers was exceeded (between units of our make). |
| U01020 | No relevant signal was received after transmission of a CTC signal, and the preset number of command retransfers was exceeded (ECM). |
| U01021 | No relevant signal was received after transmission of an EOR.Q signal, and the preset number of command retransfers was exceeded (ECM). |
| U01022 | No relevant signal was received after transmission of an RR signal, and the preset number of command retransfers was exceeded (ECM). |
| U01023 | No relevant signal was received after transmission of a PSS.NULL signal, and the preset number of command retransfers was exceeded (ECM). |
| U01024 | No relevant signal was received after transmission of a PSS.MPS signal, and the preset number of command retransfers was exceeded (ECM). |
| U01025 | No relevant signal was received after transmission of a PPS.EOM signal, and the preset number of command retransfers was exceeded (ECM). |
| U01026 | No relevant signal was received after transmission of a PPS.EOP signal, and the preset number of command retransfers was exceeded (ECM). |
| U01027 | No relevant signal was received after transmission of a PPS.PRI-EOP signal, and the preset number of command retransfers was exceeded (ECM). |
| U01028 | T5 time-out was detected during ECM transmission (ECM). |


| Error code | Description |
| :---: | :---: |
| U01040 | A DCN or other inappropriate signal was received during standby for DIS signal reception. |
| U01041 | A DCN signal was received after transmission of a DNL (MPS or EOM) signal (between units of our make). |
| U01042 | A DCN signal was received after transmission of a DCS, TCF signal. |
| U01043 | A DCN signal was received after transmission of an NSS1, NSS2 (TCF) signal (between units of our make). |
| U01044 | A DCN signal was received after transmission of an NSS3, TCF signal (between units of our make). |
| U01045 | A DCN or other inappropriate signal was received after transmission of an MPS signal. |
| U01046 | A DCN or other inappropriate signal was received after transmission of an EOM signal. |
| U01047 | A DCN or other inappropriate signal was received after transmission of an EOP signal. |
| U01048 | A DCN signal was received after transmission of a PRI-EOP signal. |
| U01049 | A DCN signal was received after transmission of a CNC signal (between units of our make). |
| U01050 | A DCN signal was received after transmission of a CTC signal (ECM). |
| U01051 | A DCN signal was received after transmission of an EOR.Q signal (ECM). |
| U01052 | A DCN signal was received after transmission of an RR signal (ECM). |
| U01053 | A DCN signal was received after transmission of a PPS.NULL signal (ECM). |
| U01054 | A DCN signal was received after transmission of a PPS.MPS signal (ECM). |
| U01055 | A DCN signal was received after transmission of a PPS.EOM signal (ECM). |
| U01056 | A DCN signal was received after transmission of a PPS.EOP signal (ECM). |
| U01057 | A DCN signal was received after transmission of a PPS.PRI-EOP signal (ECM). |
| U01070 | Polarity reversal was detected during handshake. |
| U01071 | Polarity reversal was detected during message transmission. |
| U01072 | A break in loop current was detected during transmission. |
| U01073 | During reverse polling in V .34 mode at the receiver unit, a CM signal was not detected when transmitting after reception. |
| U01080 | A PIP signal was received after transmission of a PPS.NULL signal. |
| U01091 | During transmission in V. 34 mode, communication was interrupted because a PPR signal was received over 10 times even after reducing the communication speed to the minimum with the symbol speed maintained at the level of connection. |
| U01092 | During transmission in V. 34 mode, communication was interrupted because of an impossible combination of the symbol speed and communication speed. |

## (2-6) U011XX error code table: G3 reception

| Error code | Description |
| :---: | :---: |
| U01100 | Function of the unit differs from that indicated by a DCS signal. |
| U01101 | Function of the unit (excl. communication mode select) differs from that indicated by an NSS signal. |
| U01102 | A DTC (NSC) signal was received when no transmission data was in the unit. |
| U01110 | No response after transmission of a DIS signal. |
| U01111 | No response after transmission of a DTC (NSC) signal. |
| U01112 | No training reception after reception of a DCS or NSS signal. |
| U01113 | No response after transmission of an FTT signal. |
| U01114 | No message reception after transmission of a CFR signal. |
| U01115 | No message reception after transmission of an MCF signal. |
| U01116 | No message reception after transmission of a PPR signal. |
| U01117 | No message reception after transmission of a CTR signal. |
| U01118 | No message reception after transmission of an ERR signal. |
| U01119 | No further signals were received after reception of a message. |
| U01120 | No response after transmission of an MCF signal. |
| U01121 | No response after transmission of an RTP signal. |
| U01122 | No response after transmission of an RTN signal. |
| U01123 | No response after transmission of a PIP signal. |
| U01124 | No response after transmission of a PIN signal. |
| U01125 | No response after transmission of a CNS signal (between units of our make). |
| U01126 | No response after transmission of a PPR signal (ECM). |
| U01127 | No response after transmission of an ERR signal (ECM). |
| U01128 | No response after transmission of an RNR signal (ECM). |
| U01129 | No response after transmission of an SPA signal (short protocol). |
| U01140 | A DCN signal was received after transmission of a DIS signal. |
| U01141 | A DCN signal was received after transmission of a DTC signal. |
| U01142 | A DCN signal was received after transmission of a DCS or NSS signal. |
| U01143 | A DCN signal was received after transmission of an FTT signal. |
| U01144 | A DCN signal was received after transmission of a CFR signal. |
| U01145 | A DCN signal was received after reception of a message. |
| U01146 | A DCN signal was received after transmission of an MCF signal (interoffice communication after reception of an MPS, EOM signal or confidential interoffice communication). |
| U01147 | A DCN signal was received after transmission of an RTP signal. |
| U01148 | A DCN signal was received after transmission of an RTN signal. |
| U01149 | A DCN signal was received after transmission of a PIP signal. |
| U01150 | A DCN signal was received after transmission of a PIN signal. |
| U01151 | A DCN signal was received after transmission of a PPR signal (ECM). |


| Error code | Description |
| :---: | :--- |
| $\mathbf{U 0 1 1 5 2}$ | A DCN signal was received after transmission of a CTR signal (ECM). |
| $\mathbf{U 0 1 1 5 3}$ | A DCN signal was received after transmission of an ERR signal (ECM). |
| $\mathbf{U 0 1 1 5 4}$ | A DCN signal was received after transmission of an RNR signal (ECM). |
| $\mathbf{U 0 1 1 5 5}$ | A DCN signal was received after transmission of an SPA signal (short protocol). |
| $\mathbf{U 0 1 1 6 0}$ | During message reception, transmission time exceeded the maximum transmission time <br> per line. |
| $\mathbf{U 0 1 1 6 1}$ | Number of error lines exceeded limits during message reception. |
| $\mathbf{U 0 1 1 6 2}$ | A break in loop current was detected during message reception. |
| $\mathbf{U 0 1 1 6 3}$ | Polarity reversal was detected during message reception. |
| $\mathbf{U 0 1 1 6 4}$ | One page length exceeded the specified length during message reception. |
| $\mathbf{U 0 1 1 7 0}$ | A decoding error occurred during MMR message reception. |
| $\mathbf{U 0 1 1 7 2}$ | During reverse polling in V.34 mode at the transmitting unit, a JM signal was not <br> detected after transmission of a CM signal when receiving after transmission. |
| $\mathbf{U 0 1 1 9 1}$ | Communication was interrupted because an error occurred during an image data recep- <br> tion sequence in the V.34 mode. |
| $\mathbf{U 0 1 1 9 9}$ | A DIS signal with different FIF was received after transmission of a DIS signal. |

## (2-7) U017XX error code table: V. 34 transmission

| Error code | Description |
| :---: | :--- |
| U01700 | A communication error occurred in phase 2 (line probing). |
| U01720 | A communication error occurred in phase 4 (modem parameter exchange). |
| U01721 | Operation was interrupted due to the absence of a common communication speed <br> between units. |

U01700: A communication error that occurs at the transmitting unit in the period after transmission of INFOO before entering phase 3 (primary channel equivalent device training). For example, INFOO/A/Abar (B/Bbar, for polling transmission)/INFOh was not detected.
U01720: A communication error that occurs at the transmitting unit in the period after initiating the control channel before entering the T. 30 process. For example, PPh/ALT/MPh/E was not detected.
U01721: In the absence of a common communication speed between units (including when an impossible combination of communication speed and symbol speed occurs) after MPh exchange; 1) a DCN signal was received from the destination unit, and the line was cut; or 2) a DIS (NSF, CSI) signal was received from the destination unit and, in response to the signal, the unit transmitted a DCN signal, and the line was cut.

## (2-8) U018XX error code table: V. 34 reception

| Error code | Description |
| :---: | :--- |
| U01800 | A communication error occurred in phase 2 (line probing). |
| U01810 | A communication error occurred in phase 3 (primary channel equivalent device training). |
| U01820 | A communication error occurred in phase 4 (modem parameter exchange). |
| U01821 | Operation was interrupted due to the absence of a common communication speed <br> between units. |

U01800: A communication error that occurs at the receiver unit in the period after transmission of INFO0 before entering phase 3 (primary channel equivalent device training). For example, INFOO/B/Bbar (A/Abar, for polling reception)/probing tone was not detected.
U01810: A communication error that occurs at the receiver unit in phase 3 (primary channel equivalent device training).
For example, S/Sbar/PP/TRN was not detected.
U01820: A communication error that occurs at the receiver unit in the period after initiating the control channel before entering the T. 30 process. For example, PPh/ALT/MPh/E was not detected.
U01821: In the absence of a common communication speed between units (including when an impossible combination of communication speed and symbol speed occurs) after MPh exchange, a DCN signal was transmitted to the destination unit and the line was cut.

## (2-9) U023XX error code table: Relay command abnormal reception

| Error code | Description |
| :---: | :--- |
| U02303 | Timeout was detected before a correct DNL signal was received. |
| U02304 | A signal other than MPS or EOM signal was received after a DNL signal was received. |

## (2-10) U044XX error code table: Encrypted transmission

| Error code | Description |
| :---: | :--- |
| U04400 | Encrypted transmission was interrupted because encryption keys did not agree. |
| U04401 | Calling failed during encrypted transmission because the encryption key was not regis- <br> tered. |

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## 1-5-1 Precautions for assembly and disassembly

## (1) Precautions

Before starting disassembly, press the Power key on the operation panel to off. Make sure that the Power lamp is off before turning off the main power switch. Unplug the power cable from the wall outlet.
When the fax kit is installed, be sure to disconnect the modular code before starting disassembly.
When handling PWBs (printed wiring boards), do not touch parts with bare hands.
The PWBs are susceptible to static charge.
Do not touch any PWB containing ICs with bare hands or any object prone to static charge.
When removing the hook of the connector, be sure to release the hook.
Take care not to get the cables caught.
To reassemble the parts, use the original screws. If the types and the sizes of screws are not known, refer to the PARTS LIST.

## (2) Drum unit

Note the following when handling or storing the drum unit.
When removing the drum unit, never expose the drum surface to strong direct light.
Keep the drum unit at an ambient temperature between $-20^{\circ} \mathrm{C} /-4^{\circ} \mathrm{F}$ and $40^{\circ} \mathrm{C} / 104^{\circ} \mathrm{F}$ and at a relative humidity not higher than $85 \%$ RH. Avoid abrupt changes in temperature and humidity.
Avoid exposure to any substance which is harmful to or may affect the quality of the drum unit.
Do not touch the drum surface with any object. Should it be touched by hands or stained with oil, clean it.

## (3) Toner

Store the toner containers in a cool, dark place.
Avoid exposing the toner containers to direct light and high humidity.

## (4) How to tell a genuine Kyocera toner container

As a means of brand protection, the Kyocera toner container utilizes an optical security technology to enable visual validation. A validation viewer is required to accomplish this.

Hold the validation viewer over the left side part of the brand protection seal on the toner container. Through each window of the validation viewer, the left side part of the seal should be seen as follows:

A black-colored band when seen through the left side window ( )

A shiny or gold-colored band when seen through the right side window ( - $_{-\infty}^{-\quad \text { ) }) ~}$

The above will reveal that the toner container is a genuine Kyocera branded toner container, otherwise, it is a counterfeit.


Figure 1-5-1
The brand protection seal has an incision as shown below to prohibit reuse.


Figure 1-5-2

## 1-5-2 Outer covers

## (1) Detaching and refitting the front cover

## Procedure

1. Remove the cassette.
(See page 1-5-9)
2. Open the front cover.


Figure 1-5-3
3. Unhitch the straps by squeezing the hooks inward as shown.


Figure 1-5-4
4. Remove two fulcrum axes of the front cover.
5. Remove the front cover.


Figure 1-5-5

## (2) Detaching and refitting the rear cover

## Procedure

1. Remove the power cord. If the document finisher is installed, remove its interface connector.
2. Remove two screws of the DP interface connector and then remove the DP interface connector.
3. Remove eight screws.
4. Pull the rear cover upwards and then release three hooks.
5. Remove the rear cover.


Figure 1-5-6

## (3) Detaching and refitting the inner tray

## Procedure

1. Release the lock lever and then remove the job separator tray.

ATTENTION: When refitting the Job separator tray, are cautious of the position of a paper guide.


Figure 1-5-7
2. Remove the rear cover.
(See page 1-5-5)
3. Remove the cassette.
(See page 1-5-9)
4. Open the front cover.
5. Remove four screws.
6. Release seven hooks A.
7. Pull the left lower cover upwards and then release eight hooks $B$.
8. Remove the left lower cover.


Figure 1-5-8
9. Release the hook of the front upper cover.
10. Tilt the front upper cover forward.


Figure 1-5-9
11. Remove the inner tray.


Figure 1-5-10

## (4) Detaching and refitting the eject rear cover

## Procedure

1. Release two hooks by using a flat screwdriver and then remove the tray left cover.


Flat screwdriver
$\qquad$


Figure 1-5-11
2. Remove the eject rear cover.


Figure 1-5-12

## 1-5-3 Paper feed section

## (1) Detaching and refitting the primary paper feed unit

## Procedure

1. Remove the cassette.


Figure 1-5-13
2. Release the paper feed lever and then remove the primary paper feed unit.
3. Check or replace the primary paper feed unit and refit all the removed parts.
4. When replacing the new unit, proceed as follows:
1)Performs maintenance mode U901 (Checking copy counts by paper feed locations) (see page 1-3-167).


Figure 1-5-14

## (2) Detaching and refitting the MP paper feed roller and MP separation pad

## Procedure

1. Open the right cover 1.


Figure 1-5-15
2. While squeezing the holder inward, remove the MP paper feed roller.


Figure 1-5-16
3. Tilt the MP separation pad forward and then remove it upwards.
4. Check or replace the MP paper feed roller and MP separation pad and refit all the removed parts.
5. When replacing the new parts, proceed as follows:
1)Performs maintenance mode U901 (Checking copy counts by paper feed locations) (see page 1-3-167).


Figure 1-5-17

## (3) Detaching and refitting the registration roller

## Procedure

1. Open the right cover 1.
2. Remove the transfer roller unit.
(See page 1-5-17)
3. Remove two springs at the front and back of the registration roller right.
4. Remove the cap and gear.
5. Slide and remove the registration roller right.
6. Check or replace the registration roller right and refit all the removed parts.


Figure 1-5-18

## (4) Detaching and refitting the registration cleaner

## Procedure

1. Open the front cover.
2. Open the duct cover. (See page 1-5-15)
3. Set the cleaner lever up and draw the registration cleaner frontward.
4. Check or replace the registration cleaner and refit all the removed parts.


Figure 1-5-19

## (5) Detaching and refitting the MP tray

## Procedure

1. Open the right cover 1.
2. Remove the MPF wire cover and then remove the connector.
3 . Close the right cover 1.


Figure 1-5-20
4. Open the MP tray.
5. Release two fulcrums of the MP tray by using a flat screwdriver.
6. Pull two straps upwards to remove.
7. Remove the MP tray.


Figure 1-5-21

## 1-5-4 Developing section

## (1) Detaching and refitting the developing unit

## Procedure

1. Open the front cover.
2. Release the lock lever and then remove the waste toner box.


Figure 1-5-22
3. Turn the lock lever to the right using a coin and then knock down the duct cover forwards.


Figure 1-5-23
4. Lift the lever and turn the duct holder upwards.

## 1-5-5 Drum section

## (1) Detaching and refitting the drum unit

## Procedure

1. Open the front cover.
2. Release the waste toner box.
(See page 1-5-14)
3. Turn the lock lever to the right and then knock down the duct cover forwards. (See page 1-5-15)
4. Lift the lever and turn the duct holder upwards.(See page1-5-15 )
5. Push the lock lever of the drum unit upwards and then remove the drum unit.
6. Check or replace the drum unit and refit all the removed parts.
7. When replacing the new unit, proceed as follows:
1)Performs maintenance mode $\cup 410$ (Adjusting the halftone automatically) (see page 1-3-109).


Figure 1-5-26

## (2) Detaching and refitting the chager roller unit

## Procedure

1. Remove the drum unit.
(See page 1-5-16)
2. Release two lock levers and then remove the chager roller unit.
3. Check or replace the chager roller unit and refit all the removed parts.


Figure 1-5-27

## 1-5-6 Transfer/separation section

## (1) Detaching and refitting the intermediate transfer unit

## Procedure

1. Open the right cover 1.
2. Pull the intermediate transfer unit forwards by holding two knobs A.
3. Change to the knob B from the knob $A$ and then remove the intermediate transfer unit.
4. Check or replace the intermediate transfer unit and refit all the removed parts.
5. When replacing the new unit, proceed as follows:
1)Performs maintenance mode $\cup 410$ (Adjusting the halftone automatically) (see page 1-3-109).


Figure 1-5-28

## (2) Detaching and refitting the secondary transfer roller unit

## Procedure

1. Open the right cover 1.
2. Release two lock levers and then remove the secondary transfer roller unit.
3. Check or replace the secondary transfer roller unit and refit all the removed parts.
4. When replacing the new unit,proceed as follows:
1)Performs maintenance mode U127 (Clearing the transfer count) (see page 1-3-69).
2)Performs maintenance mode U410 (Adjusting the halftone automatically) (see page 1-3-109).

ATTENTION:When refitting the secondary transfer roller unit, insert it in place until it clicks in.


Figure 1-5-29

## 1-5-7 Fuser section

## (1) Detaching and refitting the fuser unit

## Procedure

1. Open the right cover 1.
2. Release two mount levers and then pull the fuser unit forwards


Figure 1-5-30
3. Grip two knobs of the fuser unit.
4. Lift the fuser unit upwards and then remove the fuser unit.
5. Check or replace the fuser unit and refit all the removed parts.
6. When replacing the new unit, proceed as follows:
1)Performs maintenance mode U410 (Adjusting the halftone automatically) (see page 1-3-109).


Figure 1-5-31

## 1-5-8 Drive section

## (1) Detaching and refitting the drive unit 1

## Procedure

1. Remove the rear cover.
(See page 1-5-5)
2. Remove the connector.
3. Remove four screws and then remove the drive unit 1.
4. Check or replace the drive unit 1 and refit all the removed parts.


Figure 1-5-32

NOTE: When refitting the drive unit 1 , checks that the position of a cam is in the A side from the upper limit line.
NOTE: When cam isn't in the A side from the upper limit line, turn the motor by hand and bring the cam into the A side.


Figure 1-5-33

## (2) Detaching and refitting the drive unit 2

## Procedure

1. Remove the rear cover.
(See page 1-5-5)
2. Remove five connectors.
3. Remove four screws and then remove the drive unit 2.
4. Check or replace the drive unit 2 and refit all the removed parts.


Figure 1-5-34

## (3) Detaching and refitting the drive unit 3

## Procedure

1. Remove the rear cover. (See page 1-5-5)
2. Remove two connectors.
3. Remove two wire holders and then release the wires.
4. Remove four screws.
5. Release the hook and remove the drive unit 3.
6. Check or replace the drive unit 3 and refit all the removed parts.


Figure 1-5-35

## 1-5-9 Optical section

## (1) Detaching and refitting the laser scanner unit

## Procedure

1. Remove the cassette.
(See page 1-5-9)
2. Remove the rear cover and left lower cover.(See page 1-5-5, 1-5-6)
3. Remove two connectors.
4. Remove four screws and then remove the laser scanner unit assy by pulling it forwards.


Figure 1-5-36
5. Release the clamp and then remove the FFC from the connector.
6. Remove two screws.
7. Remove the pin and spring and then remove the unit holder Y .
8. Lift the laser scanner unit $Y$ upwards and then remove the laser scanner unit Y (LSU-Y).
9. Similarly, remove the laser scanner unit C/M/K(LSU-C/M/K).
10. Check or replace the laser scanner unit and refit all the removed parts.


Figure 1-5-37

## (2) Detaching and refitting the image scanner unit

## Procedure

1. Remove the DP. (See page 1-5-28)
2. Remove two screws and then remove the scanner right cover.

ATTENTION: To reinstall the scanner right cover, position it close to the platen.


Figure 1-5-38
3. Remove the platen by pull rightward.


Figure 1-5-39
4. Remove five screws and then remove the scanner cover.


Figure 1-5-40
5. Remove the FFC and the connector.
6. Remove four screws and then remove the image scanner unit.


Figure 1-5-41

## Refitting the ISU

7. When re-installation, fix the image scanner unit by matching to the scale of a former position.

When exchange, decide the fix position of ISU by the following.

The right and left of machine:
Confirm the number marked (a) and then match the line (c) of ISU to the positioning line (b) of same number on frame side.
(Line (c) is the one which is marked with the appropriate number.)

The rear and front of machine: Match the edge (e) of ISU to the positioning line (d) on frame side.
8. Fix the ISU as before with four screws.
9. Check or replace the image scanner unit and refit all the removed parts.


Figure 1-5-42

## (3) Detaching and refitting the LED unit

## Procedure

1. Remove the sanner right cover and platen.(See page 1-5-22)
2. Remove two screws and then remove the ISU rear cover.
3. Remove the rear cover.


Figure 1-5-43
4. Remove the ISU front cover.


Figure 1-5-44
5. Unhook five hooks and then remove the ISU front cover.


Figure 1-5-45
6. Remove the job separator tray.
7. Remove the operation panel unit.
8. Remove the ISU front cover.


Figure 1-5-46
9. Move the exposure unit to the cutting lack part.
10. Peel off the sheet.
11. Release the hook and then remove the FFC cover.


Figure 1-5-47
12. Remove the FFC from the connector.
13. Remove two screws and then remove the LED unit.
14. Check or replace the LED unit and refit all the removed parts.


Figure 1-5-48

## 1-5-10 Document processor

## (1) Detaching and refitting the document processor

## Procedure

1. Remove the restriction parts.
2. Open the document processor on vertically.


Figure 1-5-49
3. Remove two screws and then remove the DP interface connector.
4. Pull the document processor upwards out.


Figure 1-5-50
(2) Detaching and refitting the DP paper feed roller and DP separation pulley

## Procedure

1. Open the DP top cover.


Figure 1-5-51
2. Pull the DP paper feed lever down and then open it.
3. Knock the DP paper feed roller down forward.


Figure 1-5-52
4. Release the hook and then remove DP separation pulley cover.


Figure 1-5-53


Figure 1-5-54

## (3) Detaching and refitting the DP main PWB

## Procedure

1. Open the document processor.
2. Release three hooks of the DP rear cover.


Figure 1-5-55
3. Release two hooks of the DP rear cover and then remove it.


Figure 1-5-56
4. Remove all connectors from DP main PWB.
5. Remove five clamps and then remove the waires from holder.
6. Remove two screws and then remove the holder.


Figure 1-5-57
7. Remove six screws and then remove the DP main PWB.
8. Check or replace the DP main PWB and refit all the removed parts.

CAUTION: When replacing the DP main PWB, remove the EEPROM from the DP main PWB that has been removed and then reattach it to the new DP main PWB.


Figure 1-5-58

## 1-5-11 PWBs

## (1) Detaching and refitting the main PWB

## Procedure

1. Remove the rear cover.
(See page 1-5-5)
2. Remove fifteen screws and then remove the controller box cover.


Figure 1-5-59
3. Remove five connectors and FFC for the main PWB.
4. Remove six wire holders and then release the wires and the FFC.
5. Remove the connector of controller fan motor from the main PWB.
6. Unhook two hooks of wire guide and then remove the wire guide from the controller box.


Figure 1-5-60
7. Remove all connectors and FFC from the main PWB.
8. Remove seven screws and then remove the main PWB.
9. Check or replace the main PWB and refit all the removed parts.


Figure 1-5-61

## (2) Detaching and refitting the engine PWB

## Procedure

1. Remove the rear cover.
(See page 1-5-5)
2. Remove fifteen screws and then remove the controller box cover.


Figure 1-5-62
3. Remove five connectors and the FFC from the main PWB.
4. Remove six wire holders and then release the wires and the FFC.
5. Remove the connector of the controller fan moutor from the main PWB.
6. Remove two hooks of the wire guide and then remove the wire guide from the controller box.


Figure 1-5-63
7. Remove four screws.
8. Release seven hooks A.
9. Pull the left lower cover upwards and release eight hooks B.
10. Remove the left lower cover.


Figure 1-5-64
11. Remove eight screws and then remove the main PWB with mount board.


Figure 1-5-65
12. Remove all connectors from the video PWB.
13. Release three wire holders and three edgings and remove the wires and the FFC.
14. Remove nine screws and then remove the controller box.


Figure 1-5-66


Figure 1-5-67

## (3) Detaching and refitting the power source PWB

## Procedure

1. Remove the rear cover.
(See page 1-5-5)
2. Remove seven screws and then remove the controller box cover.


Figure 1-5-68
3. Remove all connecters from the power source PWB.
4. Remove eight screws and then remove the power source PWB.
5. Check or replace the power source PWB and refit all the removed parts.


Figure 1-5-69

## (4) Detaching and refitting the video PWB

## Procedure

1. Remove the rear cover.
(See page 1-5-5)
2. Remove the controller box.
3. Remove the slot 1 cover and the slot 2 cover by removing each two screws.
4. Remove two screws and then remove the mount board for CF slot.
5. Remove two screws and then remove the hard disk.


Figure 1-5-70


Figure 1-5-71
8. Remove eight screws and then remove the video PWB.
9. Check or replace the video PWB and refit all the removed parts.


Figure 1-5-72

## (5) Detaching and refitting the operation panel PWB main

## Procedure

1. Open the front cover.
2. Remove the front upper cover.
3. Remove two screws and then remove the operation panel lower cover.


Figure 1-5-73
4. Remove three screws and then rotate the operation panel upper unit.


Figure 1-5-74
5. Remove three connectors from the operation panel PWB main.
6. Remove the operation panel upper unit.
7. Remove all connectors and FFC from the operatioon panel PWB main.
8. Remove four screws and then remove the operation panel PWB main.
9. Check or replace the operation panel PWB main and refit all the removed parts.


Figure 1-5-75


Figure 1-5-76

## (6) Detaching and refitting the IH PWB

## Procedure

1. Remove the rear cover.
(See page 1-5-5)
2. Remove the scanner right cover. (See page 1-5-22)
3. Remove the right upper cover.
4. Remove the right rear cover.


Figure 1-5-77
5. Remove two screws and then remove the IH box cover.
6. Remove all connectors from the IH PWB.
7. Remove six screws and then remove the IH PWB.
8. Check or replace the IH PWB and refit all the removed parts.


Figure 1-5-78

## 1-5-12 Others

## (1) Detaching and refitting the language sheet

## Procedure

1. Insert a flat-head screwdriver and slide the operation panel covers $A$ and $B$ to remove them.


Figure 1-5-79
2. Remove the clear panel.


Figure 1-5-80
3. Remove the operation panel sheet.
4. Replace the operation panel sheet of the corresponding language.
5. Refit the clear panel.
6. Refit the operation panel covers $A$ and B.


Figure 1-5-81

## (2) Detaching and refitting the conveying unit

## Procedure

1. Remove the MP tray.(See page 1-5-13)
2. Open the right cover 1.


Figure 1-5-82
3. Remove two screws and then remove two straps.


Figure 1-5-83
4. Rotate the wire cover.
5. Remove two connectors.
6. Rotate the fulcrum axis and slide it forward.
7. Pull the right cover 1 backward and then remove it.


Figure 1-5-84

## (3) Direction of installing the principal fan motors

When detaching or refitting the fan moter, be careful of the airflow direction (intake or exhaust).


Figure 1-5-85


Figure 1-5-86

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## 1-6-1 Upgrading the firmware

Follow the procedure to upgrade the firmware below.

```
* Main PWB (CTRL)
* Engine PWB (ENGN)
* DP main PWB (DP)
* FAX PWB (FAX)
* First color table (CLT1)
* Second color table (CLT2)
* Language data (OPT)
* Dictionary data (DIC)
* Operation panel PWB (PANL)
```


## Preparation

Extract the file that has the download firmware and store them in a USB Memory.
NOTE: To improve Firmware Upgrade speed, a separate SKIP file can be added to the USB Memory Stick with the Firmware Upgrade package. The Skip file will allow ONLY the Firmware that has been Upgraded to a New Version to load, skipping duplicate Firmware Levels.

## Procedure

1. Turn ON the main power switch and confirm if the screen shows "Ready to print" then, turn OFF the main power switch.
2. Insert USB memory that has the firmware in the USB memory slot.
3. Turn ON the main power switch.
4. About 50 seconds later, "Farmware Update" will be displayed (this shows that downloading is ready to start).
5. Select the firmware to upgrade by referring to the following codes:

$$
\begin{aligned}
& \mathrm{CTRL} \rightarrow \mathrm{DP} \rightarrow \mathrm{PF} \rightarrow \mathrm{DF} \rightarrow \mathrm{AK} \rightarrow \mathrm{IH} \\
& \rightarrow \mathrm{LSU} \rightarrow \mathrm{IO} \rightarrow \mathrm{ENGN} \rightarrow \mathrm{FAX} \rightarrow \mathrm{CLT} 1 \\
& \rightarrow \mathrm{CLT} 2 \rightarrow \mathrm{OPT} \rightarrow \mathrm{DIC} \rightarrow \mathrm{PANL}
\end{aligned}
$$



Figure 1-6-1

## Caution:

Never turn off the power switch or remove the USB flash device during upgrading.

## Example:

| ================= |  |
| :---: | :--- |
| Firmware Update | First line: Status of upgrading. |
| CTRL | Second line: Firm ware for upgrading. |
| xxx\% | Third line: The progress of upgrading in \%. |

=================
6. Confirm that upgrading is completed.
7. Confirm that the version of the firmware is correctly displayed.
8. Turn OFF the main power switch and remove the USB memory.

## Emergency-UPDATE

If the device is accidentally switched off and upgrading was incomplete, upgrade becomes impossible from a USB flash device.
In that case, retry upgrading after recovering the software by following the procedure below.

## Preparation

The CF memory card must be formatted in FAT or FAT32 in advance.
Extract the main firmware to download from the file.
Rename the file which was extracted from the archive. [DL_CTRL.2MV] to [KM_EMRG.2MV]
Copy the all extracted files to the root of the CF memory.

## Procedure

1. Turn the main power switch off.
2. Install the CF memory card which contains the firmware onto the main PWB.
3. Turn the main power switch on.
4. Rewriting of the PWB software will start for restoration.
The memory and attention LEDs will be blinking.
5. Only the Memory LED will be blinking when rewriting is successful.
*: Only the Attention LED will be blinking when rewriting is failed.
6. Turn the main power switch off.
7. Wait for several seconds and then remove the CF memory from the main PWB.
8. Extract the firmware to download from the archive and copy to the root of the USB flash device.
NOTE: Deletes the "ES_SKIP.on" file When it is contained directly under the USB memory.

9. Insert the USB flash device in which the firmware was copied into the slot on the machine.
10. Perform steps 3 to 8 on the previous page.

Figure 1-6-2
11. Turn the main power switch on.
12. Perform maintenance item U000 (Print a maintenance report) to check that the version of ROM U109 has been upgraded.

## 1-6-2 Remarks on PWB replacement

## (1) Main PWB

NOTE: When replacing the main PWB, remove the EEPROM (YC14) and code DIMM (YS4) from the main PWB that has been removed and then reattach it to the new main PWB.


Figure 1-6-3
NOTE: When refitting DIMM, check "CODE" and "FLS" marked on the PWB and refit them to the original positions.


Figure 1-6-4

NOTE: If the code DIMM (YS4) was replaced with a service supplied part, perform the following.

1. Insert the USB flash device in which the latest firmware was copied, into the slot on the machine and turn power on.(see page P.1-6-1)
2. Referring to the U000 maintenance report printed previously, enter the following values.

U252 Setting the destination
U265 Setting OEM purchaser code
U278 Setting the delivery date
U402 Adjusting margins of image printing
U952 Maintenance mode workflow
3. Reset machine settings.( Resets system menu settings modified at setup to their defaults.)

Main items for settings
[Date/Timer] - Date/Time settings
[Date/Timer] - Timer settings (Sleep timer)
[Edit Destination] - One-touch presetting
[User/Job accounting] - Defaults for user authentication and job accounting only.
Resettings are not required as the data are stored in hard disk.
[FAX] - FAX transmittion settings (tel. no. of itself)
[System] - Network settings (IP address)
[Adjustment/Maintenance] - Silent Mode setting
4. Run the maintenance mode for image adjustments which follows.

1. Performs maintenance mode U464 (Calibration) (see page P.1-3-124).
2. Performs maintenance mode U469 (Auto color registration correction) (see page P.1-3-128).
3. Performs maintenance mode U410 (Adjusting the halftone automatically) (see page P.1-3-109).

NOTE: When connecting the hard disk cables (YC1, YC2) to the PWB, match "BLACK" and "BLUE" marked on the PWB with the connector colors.


Figure 1-6-5
NOTE: When connecting the USB cables (YC17, YC21) to the PWB, match "BK" and "WH" marked on the PWB with the connector colors.


Figure 1-6-6

## (2) Engine PWB

NOTE: When replacing the PWB, remove the EEPROM (U15) from the PWB and then reattach it to the new PWB.

## (3) DP main PWB

NOTE: When replacing the PWB, remove the EEPROM (YS1) from the PWB and then reattach it to the new PWB.

Figure 1-6-7


Figure 1-6-8

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## 2-1-1 Paper feed/conveying section

The paper feed/conveying section consists of the paper feed unit that feeds paper from the cassette and the MP tray paper feed unit that feeds paper from the MP tray, and the paper conveying section that conveys the fed paper to the transfer/separation section.

## (1) Cassette paper feed section

The cassette can contain 500 sheets. The sheet from the cassette is pulled out by rotation of the pickup roller and sent to the paper conveying section by rotation of the paper feed roller. Also the retard roller prevents multiple feeding of paper.


Figure 2-1-1 Cassette paper feed section

1. Pickup roller
2. Paper feed roller
3. Feed holder
4. Retard roller
5. Retard holder
6. Paper length guide
7. Bottom plate
8. Lift work plate
9. Cassette base
10. Actuator (paper sensor)
11. Cassette 1
12. Cassette 2
13. Acutuator (feed sensor 1)


Figure 2-1-2 Cassette paper feed section block diagram

## (2) MP tray paper feed section

The MP tray can contain 100 sheets. Feeding from the MP tray is performed by the rotation of the MP paper feed roller. Also, function of the MP separation pad prevents paper from multiple feeding.


Figure 2-1-3 MP tray paper feed section

1. MP paper feed roller
2. MP (multi purpose)tray
3. MP separation pad
4. MP tray extension
5. MP bottom plate
6. MP paper width guide
7. Actuator(MP paper feed sensor)
8. Actuator (MP paper length switch)


Figure 2-1-4 MP tray paper feed section block diagram

## (3) Conveying section

The conveying section conveys paper to the transfer/separation section as paper feeding from the cassette or MP tray, or as paper refeeding for duplex printing. Paper by feeding is conveyed by the paper feed roller to the position where the registration sensor (RS) is turned on, and then sent to the transfer/separation section by the right registration roller and left registration roller.


Figure 2-1-5 Conveying section

1. Left registration roller
2. Right feed roller
3. Right registration roller
4. Actuator (registration sensor)
5. Left feed roller
6. Registration cleaner


Figure 2-1-6 Paper conveying section block diagram

## 2-1-2 Drum section

The drum section consists of the drum, the charger roller unit, and the cleaning unit, and the drum surface is uniformly charged in preparation for formation of residual image by laser beam.
After transfer is complete, toner remaining on the drum surface is chipped off with the cleaning blade and is collected to the waste toner box with the sweep roller. The cleaning lamp (CL) consists of LEDs and removes residual charge on the drum before main charging.


Figure 2-1-7 Drum section

1. Drum
2. Sweep roller
3. Charger roller
4. Drum frame
5. Charger cleaning roller
6. Cleaning lamp (CL)
7. Charger case
8. Cleaning blade


Figure 2-1-8 Drum section block diagram

## 2-1-3 Developing section

The developing unit consists of the sleeve roller that forms the magnetic brush, the magnet roller, the developing blade and the developing screws that agitate the toner.Also, the toner sensor (TS) checks whether or not toner remains in the developing unit.


Figure 2-1-9 Developer section

1. Sleeve roller
2. Developing blade
3. Magnet roller
4. Developer case
5. Developing screw A
6. Developer base
7. Developing screw B
8. Toner sennsor (TS)


Figure 2-1-10 Developing section block diagram

## 2-1-4 Optical section

The optical section consists of the image scanner section for scanning and the laser scanner section for printing.

## (1) Image scanner section

The original image is illuminated by the exposure lamp (EL) and scanned by the CCD image sensor in the CCD PWB (CCDPWB) via the three mirrors and ISU lens, the reflected light being converted to an electrical signal.
If a document processor is used, the image scanner unit stops at the position of the DP contact glass and scans sequentially one row of the image on the original in synchronization with the moving timing of the original in the sub scan direction by driving the DP.


Figure 2-1-11 Scanner unit

1. Platen
2. ISU frame
3. Original size indicator plate
4. DP contact glass
5. ISU motor (ISUM)
6. ISU wire


Figure 2-1-12 Image scanner unit (ISU)

1. The first mirror frame
2. Exposure lamp (EL)
3. Exposure lens
4. Reflector
5. Mirror A
6. The second mirror frame
7. Mirror B
8. Mirror $C$
9. ISU lens
10. CCD PWB (CCDPWB)
11. Scanner cover


Figure 2-1-13 Scanner unit block diagram

## (2) Laser scanner section

The charged surface of the drum is then scanned by the laser beam from the laser scanner unit. The laser beam is dispersed as the polygon motor (PM) revolves to reflect the laser beam over the drum. Various lenses and mirror are housed in the laser scanner unit, adjust the diameter of the laser beam, and focalize it at the drum surface. Also the LSU cleaning motor (LSUCM) is activated to conduct automatically cleaning of the LSU dust shield glass.


Figure 2-1-14 Laser scanner unit (LSU)

1. Polygon motor (PM)
2. Porygon mirrer
3. f $\theta$ lens A
4. f $\theta$ lens $B$
5. Mirrer $A$
6. Mirrer B
7. Mirrer C
8. LSU dust shield glass
9. LSU cleaning spiral


Figure 2-1-15 Laser scanner unit block diagram

## 2-1-5 Transfer/Separation section

The transfer/separation section consists of the intermediate transfer unit section and the secondary transfer roller section.

## (1) Intermediate transfer unit section

The intermediate transfer unit section consists of the transfer cleaning unit, the transfer belt, and the four primary transfer rollers for respective color drums, and forms a full-color toner image by superimposing and transferring single-color toner images formed on each drum onto the transfer belt. Also with the ID sensors (IDS) mounted on the machine frame, the toner density on the transfer belt is measured.
The transfer cleaning unit collects toner remaining on the transfer belt after secondary transfer and forwards it as waste toner to the waste toner box.


Figure 2-1-16 Inter mediate transfer unit section

1. Tension roller
2. Drive roller
3. Primary transfer roller K
4. Primary transfer roller $M$
5. Primary transfer roller $C$
6. Primary transfer roller $Y$
7. Transfer belt
8. Cleaning fur brush
9. Cleaning roller
10. Cleaning blade
11. Cleaning screw
12. ID sensors (IDS)


Figure 2-1-17 Intermediate transfer unit section block diagram

## (2) Secondary transfer roller section

The secondary transfer roller section consists of the secondary transfer roller mounted to the paper conveying unit and the separation needle. To the secondary transfer roller, DC bias is applied from the high voltage PWB (HVPWB). The toner image formed on the transfer belt is transferred to the paper by the potential difference. Paper after transfer is separated from the drum by applying separation charging that is output from the high voltage PWB (HVPWB) to the separation electrode.


Figure 2-1-18 Secondary transfer roller section

1. Secondary transfer roller
2. Separation needle
3. Separation needle holder
4. Fuser pre sensor
5. Paper chute guide


Figure 2-1-19 Secondary transfer roller section block diagram

## 2-1-6 Fuser section

The paper sent from the transfer/separation section is interleaved between the heat roller and the press roller. The heat roller is heated by the IH coil (IHC), and the toner is fused by heat and pressure and fixed onto the paper because the press roller is pressed by the fuser press spring. The surface temperature of heat roller is detected by the fuser thermistor1 (FTH1), fuser thermistor2 (FTH2) and the surface temperature of press roller is detected by the fuser thermistor3 (FTH3) and controlled by the engine PWB (EPWB). If the fuser section shows extremely high temperature, the power line will be shut off and the IH coil $(\mathrm{IHC})$ is forced to turn off.


Figure 2-1-20 Fuser section

1. Heat roller
2. Fuser thermistor 2 (FTH2)
3. Press roller
4. Uniformity heat roller
5. IH coil (IHC)
6. Core
7. Separate plate
8. Fuser thermistor 1 (FTH1)
9. Fuser thermistor 3 (FTH3)
10. Fuser thermostat (FTS)
11. Actuator (eject sensor)
12. Eject roller
13. Eject pulley


Figure 2-1-21 Fuser section block diagram

## 2-1-7 Eject/Feedshift section

The paper eject/feedshift section consists of the conveying path which sends the paper that has passed the fuser section to the inner tray, the job separator tray or the duplex conveying section.


Figure 2-1-22 Eject/Feedshift section

1. Eject roller $A$
2. Actuator (paper full sensor)
3. Eject pulley A
4. Eject roller B
5. Eject pulley B
6. Actuator
(job paper full sensor)
7. Feedshift guide
8. Actuator (job eject paper sensor)


Figure 2-1-23 Eject/Feed shift section block diagram

## 2-1-8 Duplex conveying section

The duplex conveying section consists of conveying path which sends the paper sent from the eject/feedshift section to the paper feed/conveying section when duplex printing.


Figure 2-1-24 Duplex conveying section

1. Right cover 1
2. Duplex feed roller $A$
3. Duplex feed pulley $A$
4. Duplex feed roller B
5. Duplex feed pulley B
6. Duplex feed roller $C$
7. Duplex feed pulley C
8. Duplex feed roller D
9. Duplex feed pulley D
10. Actuater(duplex sensor)


Figure 2-1-25 Duplex conveying section block diagram

## 2-1-9 Document processor

## (1) Original feed section

The original feed section consists of the parts shown in figure. An original placed on the original tray is conveyed to the original conveying section. Original is fed by the rotation of the DP forwarding pulley and DP paper feed roller.


Figure 2-1-26 Original feed section

1. DP forwarding pulley
2. DP paper feed roller
3. DP feed holder
4. DP separation pulley
5. Front separation pad
6. Actuator (DP original sensor)
7. PF stopper
8. Original tray


Figure 2-1-27 Original feed section block diagram

## (2) Original conveying section

The original conveying section consists of the parts shown in figure. A conveyed original is scanned by the optical section (CCD) on the main machine when it passes through the slit glass of main machine.


Figure 2-1-28 Original conveying section

1. DP top cover
2. DP registration roller
3. DP registration pulley
4. Conveying roller
5. Conveying pulley
6. Eject roller
7. Eject pulley
8. Actuator (DP paper feed sensor)
9. Actuator (DP registration sensor)
10. Actuator (DP timing sensor)
11. Switchback guide
12. Reading guide
13. Slit glass


Figure 2-1-29 Original conveying section block diagram

## (3) Original switchback/eject sections

The original switchback/eject sections consists of the parts shown in figure. An original of which scanning is complete is ejected to the original eject table by the eject roller. In the case of duplex switchback scanning, an original is conveyed temporarily to the switchback tray and conveyed again to the original conveying section by the switchback roller.


Figure 2-1-30 Original switchback/eject sections

1. Feedshift guide
2. Eject roller
3. Eject pulley
4. Switchback roller
5. Switchback pulley
6. Original eject table
7. Switchback tray


Figure 2-1-31 Original switchback/eject sections block diagram

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## 2-2-1 Electrical parts layout

## (1) PWBs



Figure 2-2-1 PWBs

1. Main PWB (MPWB) $\qquad$ Controls the software for print data processing and provides the interface with computers.
2. Engine PWB (EPWB)........................... Controls printer hardware such as high voltage/bias output control, paper conveying system control, and fuser temperature control, etc.
3. High voltage PWB (HVPWB) ................ Generates main charging, developing bias, secondary transfer bias and separation bias.
4. High voltage PWB sub (HVPWB-S). Generates primary transfer bias, cleaning bias.

|  | ter full-wave rectification of AC power source input, switching r converting to 24 V DC for output. Controls the fuser heater. |
| :---: | :---: |
| 6. Operation panel PWB main (OPPWB-M) |  |
| 7. Operation panel PWB sub |  |
| 8. LCD (LCD) | CD display. |
| 9. Touch panel ( | Operates the operation panel. |
| 10. ISC PWB (ISCPWB) .......................... Controls the scanne |  |
| 11. LED PWB (LEDPWB) |  |
| 12. CCD PWB (CCDPWB) |  |
| 13. Video PWB (VPWB).............................. Controls the output of LSU, the paper feed system and the option system. |  |
| 14. APC PWB (APCPWB) |  |
| 15. BD PWB (BDPWB) ........................... Controls horizontal synchronizing timing of laser beam. |  |
| 16. Drum connect PWB (DRCPWB) Consists of wiring relay circuit between engine PWB and the drum unit. |  |
| 17. Drum PWB Y (DRPWB-Y) | Relays wirings from electrical components on the drum unit for yellow. |
|  | Stores the drum's identifications a EEPROM. |
| 18. Drum PWB C (DRPWB-C) | Relays wirings from electrical components on the drum unit for cyan. |
|  | Stores the drum's identifications a EEPROM. |
| 19. Drum PWB M (DRPWB-M) | Relays wirings from electrical components on the drum unit for magenta. |
|  | Stores the drum's identifications a EEPROM. |
| 20. Drum PWB K (DRPWB-K) | Relays wirings from electrical components on the drum unit for black. |
|  | Stores the drum's identifications a EEPROM. |
| 21. Developer PWB Y (DEVPWB-Y) | Relays wirings from electrical components on the developing unit for yellow. |
|  | Stores the developer's identifications a EEPROM. |
| 22. Developer PWB C (DEVPWB-C) | Relays wirings from electrical components on the developing unit for cyan. |
|  | Stores the developer's identifications a EEPROM. |
| 23. Developer PWB M (DEVPWB-M) | Relays wirings from electrical components on the developing unit for magenta. |
|  | Stores the developer's identifications a EEPROM. |
| 24. Developer PWB K (DEVPWB-K) | Relays wirings from electrical components on the developing unit for black. |
|  | Stores the developer's identifications a EEPROM. |
| 25. RFID PWB (RFPWB)......................... Reads the container information. |  |
| 26. LSU connect PWB (LSUCPWB)........... Consists of wiring relay circuit between Video PWB, engine connect PWB and LSU unit. |  |
| 27. Engine connect PWB (ECPWB) ........... Consists of wiring relay circuit between engine PWB and drum connect PWB, transfer connect PWB, option unit. |  |
| 28. AC connect PWB (ACCPWB)............. Branch of AC power supply input, and relay. |  |
| 29. IH PWB (IHPWB) .............................. Controls the temperature of the fuser unit. |  |
| 30. Fuser PWB (FUPWB) | Relays wirings from electrical components on the fuser unit. Fuser individual information in EEPROM storage. |
| VB | Relays wirings from electrical components on the intermediate transfer unit. <br> Intermediate transfer individual information in EEPROM storage |


| 32. Transfer connect PWB (TC | Consists of wiring relay circuit between engine connect PWB Transfer PWB. |
| :---: | :---: |
| 33. DP main PWB (DPMPWB) | Consists the motor and clutch driver circuit and wiring relay circuit. |
| 34. DP LED PWB (DPLEDPWB) | Displays the presence of the original. |

## PWB names conversion

| No. | Name used in service manual | Name used in parts list |
| :---: | :---: | :---: |
| 1 | Main PWB (MPWB) | PARTS PWB MAIN ASSY SP |
| 2 | Engine PWB (EPWB) | PARTS PWB ENGINE ASSY SP |
| 3 | High voltage PWB (HVPWB) | PARTS HVU1 SP |
| 4 | High voltage PWB sub (HVPWB-S) | PARTS HVU2 SP |
| 5 | Power source PWB (PSPWB) | PARTS LVU MAIN 200 SP |
| 6 | Operation panel PWB main (OPPWB-M) | PARTS PWB PANEL MAIN ASSY SP |
| 7 | Operation panel PWB sub (OPPWB-S) | - |
| 8 | LCD (LCD) | PARTS LCD COLOR SP |
| 9 | Touch panel (TP) | - |
| 10 | ISC PWB (ISCPWB) | PARTS PWB ISC ASSY SP |
| 11 | LED PWB (LEDPWB) | - |
| 12 | CCD PWB (CCDPWB) | - |
| 13 | Video PWB (VPWB) | PARTS PWB VIDEO ASSY SP |
| 14 | APC PWB (APCPWB) | - |
| 15 | BD PWB (BDPWB) | - |
| 16 | Drum connect PWB (DRCPWB) | PARTS PWB DRUM DLP CONNECT ASSY SP |
| 17 | Drum PWB Y (DRPWB-Y) | - |
| 18 | Drum PWB C (DRPWB-C) | - |
| 19 | Drum PWB M (DRPWB-M) | - |
| 20 | Drum PWB K (DRPWB-K) | - |
| 21 | Developer PDB Y (DEVPWB-Y) | - |
| 22 | Developer PDB C (DEVPWB-C) | - |
| 23 | Developer PDB M (DEVPWB-M) | - |
| 24 | Developer PDB K (DEVPWB-K) | - |
| 25 | RFID PWB (RFIDPWB) | PARTS PWB RFID ASSY SP |
| 26 | LSU connect PWB (LSUCPWB) | PARTS PWB LSU CONNECT ASSY SP |
| 27 | Engine connect PWB (ECPWB) | PARTS PWB ENGINE CONNECT ASSY SP |


| No. | Name used in service manual | Name used in parts list |
| :---: | :--- | :--- |
| 28 | AC connect PWB (ACCPWB) | - |
| 29 | IH PWB (IHPWB) | - |
| 30 | Fuser PWB (FUPWB) | - |
| 31 | Transfer PWB (TCPWB) | PARTS PWB IH 200 ASSY SP |
| 32 | Transfer connect PWB (TCCPWB) | PARTS PWB TRANSFER CONNECT ASSY SP |
| 33 | DP main PWB (DPMPWB) | PARTS PWB LED ASSY SP |
| 34 | DP LED PWB (DPLEDPWB) |  |

## (2) Switches and sensors



Figure 2-2-2 Switches and sensors

1. Home position sensor (HPS) ................ Detects the ISU in the home position.
2. Original detection switch (ODSW) ........ Operates the original size detection sensor.
3. Original size sensor (OSS) ................... Detects the size of the original.
4. Front cover switch (FCSW)................... Detects the opening and closing of the front cover.
5. Right cover switch 1 (RCSW1) ............. Detects the opening and closing of the right cover 1.
6. Right cover switch 2 (RCSW2) ............. Detects the opening and closing of the right cover 2.
7. Feed sensor 1 (FS1)............................ Detects a paper misfeed in the vertical conveying section.
8. Feed sensor 2 (FS2) ............................ Detects a paper misfeed in the vertical conveying section.
9. MP paper sensor (MPPS) ..................... Detects the presence of paper on the MP tray.
10. MP sub tray detection switch
(MPTDSW).......................................... Detects the position of the MP sub tray.
11. MP paper width switch (MPPWSW)...... Detects the width of paper in the MP tray.
12. MP paper length switch (MPPLSW)...... Detects the length of paper in the MP tray.


## (3) Motors



Figure 2-2-3 Motors

1. ISU motor (ISUM) $\qquad$ Drives the ISU.
2. Fuser motor (FUM)

Drives the fuser section.
3. Eject motor (EM).

Drives the eject section.
4. Lift motor 1 (LM1)................................. Operates the bottom plate in the cassette 1.
5. Lift motor 2 (LM2)................................. Operates the bottom plate in the cassette 2.
6. Drum motor $\mathrm{K}(\mathrm{DRM}-\mathrm{K})$........................ Drives the drum unit K .
7. Drum motor CMY (DRM-CMY)

Drives the drum unit CMY.
8. Developer motor K (DEVM-K).

Drives the developer unit K.
9. Developer motor CMY (DEVM-CMY) .

Drives the developer unit CMY.
10. Conveying motor 1 (CM1)

Drives the paper feed section and conveying section.
11. Conveying motor 2 (CM2)

Drives the paper feed section and conveying section.
12. Toner motor $Y$ (TM-Y)

Replenishes toner to the developer unit Y .
13. Toner motor $C$ (TM-C)

Replenishes toner to the developer unit C .


## (4) Others



Figure 2-2-4 Others

1. Paper feed clutch 1 (PFCL1) $\qquad$ Controls the primary paper feed from cassette 1.
2. Paper feed clutch 2 (PFCL2) $\qquad$ Controls the primary paper feed from cassette 2.
3. Mid clutch 1 (MCL1).............................. Controls the paper conveying.
4. Mid clutch 2 (MCL2)............................. Controls the paper conveying.
5. Registration clutch (RCL)

Controls the secondary paper feed.
6. Duplex clutch (DUCL)

Controls the drive of the duplex feed roller.
7. Developer stop clutch (DEVSCL).......... Controls the drive of the developer.
8. MP solenoid (MPSOL) .......................... Controls the MP bottom plate.
9. Feedshift solenoid (FSSOL).................. Operates the feedshift guide.
10. Exposure lamp (EL)

Exposes originals.
11. Cleaning lamp $Y$ (CL-Y) $\qquad$
12. Cleaning lamp $C$ (CL-C).
13. Cleaning lamp $M$ (CL-M) $\qquad$
Eliminates the residual electrostatic charge on the drum.
14. Cleaning lamp K (CL-K) $\qquad$ Eliminate the residual electrostatic charge on the drum. Eliminates the residual electrostatic charge on the drum. Eliminates the residual electrostatic charge on the drum.
15. Fuser thermostat (FTS)........................ Prevents overheating of the heat roller.
16. Speaker (SPK)

Generates an error sound.
17. Job LED (JLED)

Displays the presence of a paper in the job separator.
18. Hard disk (HDD).

Storages the image data and information of job accounting mode.
19. Cassette heater (CH)

Dehumidifies the cassette section.
20. DP paper feed clutch (DPPFCL)........... Controls the drive of the DP forwarding pulley and DP paper feed roller.
21. DP registration clutch (DPRCL) ............ Controls the secondary paper feed.

## 2-3-1 Main PWB



Figure 2-3-1 Main PWB silk-screen diagram

| Connector | Pin | Signal | 1/0 | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC1 | 1 | GND |  |  | Ground |
| Connected to hard disk. | 2 | TXP | 0 | - | HDD data signal |
|  | 3 | TXN | 0 | - | HDD data signal |
|  | 4 | GND | - | - | Ground |
|  | 5 | RXN | 1 | - | HDD data signal |
|  | 6 | RXP | 1 | - | HDD data signal |
|  | 7 | GND | - | - | Ground |
| YC3 | 1 | GND | - | - | Ground |
| Connected to video PWB. | 2 | EGSCLK | 0 | 0/3.3 V DC(pulse) | Engine clock sijgnal |
|  | 3 | EGSI | 0 | 0/3.3 V DC(pulse) | serial communication data signal |
|  | 4 | EGSDIR | 0 | $0 / 3.3$ V DC | Engine communication direction signal |
|  | 5 | EGSBSY | $\bigcirc$ | $0 / 3.3$ V DC | Engine busy signal |
|  | 6 | EGSO | 1 | 0/3.3 V DC(pulse) | serial communication data signal |
|  | 7 | EGSIRN | $\bigcirc$ | 0/3.3 V DC | Engine interrupt sijgnal |
|  | 8 | GND | - | - | Ground |
|  | 9 | GND | - | - | Ground |
|  | 10 | HOLD_ENG | 0 | 0/3.3 V DC | Engine hold signal |
|  | 11 | SLEEP | $\bigcirc$ | 0/3.3 V DC | Sleep signal |
|  | 12 | HSYNCD_P | $\bigcirc$ | 0/3.3 V DC(pulse) | Image control signal |
|  | 13 | HSYNCD_N | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 14 | HSYNCC_P | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 15 | HSYNCC_N | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 16 | HSYNCB_P | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 17 | HSYNCB_N | $\bigcirc$ | 0/3.3 V DC(pulse) | Image control signal |
|  | 18 | HSYNCA_P | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 19 | HSYNCA_N | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 20 | VSYNCD_P | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 21 | VSYNCD_N | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 22 | VSYNCC_P | $\bigcirc$ | 0/3.3 V DC(pulse) | Image control signal |
|  | 23 | VSYNCC_N | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 24 | VSYNCB_P | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 25 | VSYNCB_N | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 26 | VSYNCA_P | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 27 | VSYNCA_N | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 28 | GND | - | - | Ground |
|  | 29 | TCLKP | 0 | 0/3.3 V DC(pulse) | Clock signal |
|  | 30 | TCLKN | $\bigcirc$ | 0/3.3 V DC(pulse) | Clock signal |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC3 | 31 | GND | - | - | Ground |
| Connected to video PWB. | 32 | TCP | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 33 | TCN | $\bigcirc$ | 0/3.3 V DC(pulse) | Image control signal |
|  | 34 | GND | - | - | Ground |
|  | 35 | TBP | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 36 | TBN | $\bigcirc$ | 0/3.3 V DC(pulse) | Image control signal |
|  | 37 | GND | - | - | Ground |
|  | 38 | TAP | 0 | 0/3.3 V DC(pulse) | Image control signal |
|  | 39 | TAN | $\bigcirc$ | 0/3.3 V DC(pulse) | Image control signal |
|  | 40 | GND | - | - | Ground |
| YC5 | 1 | TD1+ | 0 | 0/3.3 V DC(pulse) | Transmission data |
| Connected to ethernet | 2 | TD1- | 0 | 0/3.3 V DC(pulse) | Transmission data |
|  | 3 | TD2+ | 0 | 0/3.3 V DC(pulse) | Transmission data |
|  | 4 | TD2- | 0 | 0/3.3 V DC(pulse) | Transmission data |
|  | 5 | CT1 | 0 | 3.3 V DC | 3.3 V DC power output |
|  | 6 | CT2 | 0 | 3.3 V DC | 3.3 V DC power output |
|  | 7 | TD3+ | 0 | 0/3.3 V DC(pulse) | Transmission data |
|  | 8 | TD3- | 0 | 0/3.3 V DC(pulse) | Transmission data |
|  | 9 | TD4+ | 0 | 0/3.3 V DC(pulse) | Transmission data |
|  | 10 | TD4- | 0 | 0/3.3 V DC(pulse) | Transmission data |
|  | 11 | GRLED_A1 | 0 | 0/3.3 V DC | LED emitter signal |
|  | 12 | GRLED_K1 | 0 | 0/3.3 V DC | LED emitter signal |
|  | 13 | YWLED_A2 | 0 | 0/3.3 V DC | LED emitter signal |
|  | 14 | YWLED_K2 | 0 | 0/3.3 V DC | LED emitter signal |
| YC7 | 1 | KMDET | 1 | 0/3.3 V DC | KMAS set signal |
| Connected to KMAS | 2 | NC | - | - | Not used |
|  | 3 | KMDREQ | 1 | 0/3.3 V DC | KMAS control signal |
|  | 4 | KMACK | 0 | 0/3.3 V DC | KMAS control signal |
|  | 5 | KMRXD | 0 | 0/3.3 V DC(pulse) | KMAS received data signal |
|  | 6 | SGND | - |  | Ground |
|  | 7 | KMTXD | 1 | 0/3.3 V DC(pulse) | KMAS transmission data signal |
|  | 8 | SGND | - | - | Ground |
|  | 9 | SGND | - | - | Ground |
|  | 10 | SGND | - | - | Ground |
|  | 11 | +5V | 0 | 5 V DC | 5 V DC power to KMAS |
|  | 12 | $+5 \mathrm{~V}$ | 0 | 5 V DC | 5 V DC power to KMAS |


| Connector | Pin | Signal | 1/0 | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC8 | 1 | RESET | 1 | 0/3.3 V DC | Reset signa |
| Connected to | 2 | WAKEUPO | 0 | 0/3.3 V DC | Control signal |
| Video PWB. | 3 | AUDIOO | 1 | Analog | Audio signal |
|  | 4 | GND | - | - | Ground |
|  | 5 | USB_DP0 | I/O | - | USB data signal |
|  | 6 | USB_DN0 | I/O |  | USB data signal |
|  | 7 | VBUSO | O | 3.3 V DC | 3.3 V DC power output to VPWB |
|  | 8 | GND | - |  | Ground |
|  | 9 | RESET1 | 1 | 0/3.3 V DC | Reset signal |
|  | 10 | WAKEUP1 | $\bigcirc$ | 0/3.3 V DC | Control signal |
|  | 11 | AUDIO1 | 1 | Analog | Audio signal |
|  | 12 | GND | - | - | Ground |
|  | 13 | USB_DP1 | I/O |  | USB data signal |
|  | 14 | USB_DN1 | I/O | - | USB data signal |
|  | 15 | VBUS1 | O | 3.3 V DC | 3.3 V DC power output to VPWB |
| YC9 | 1 | GND | - | - | Ground |
| Connected to | 2 | 5V_CUT0 | 1 | 0/3.3 V DC | 5 V DC cut signal |
| Video PWB | 3 | GND | - |  | Ground |
|  | 4 | 5 V | 0 | 5 V DC | 5 V DC power output to VPWB |
|  | 5 | GND | - |  | Ground |
|  | 6 | 5V_CUT1 | 1 | 0/3.3 V DC | 5 V DC cut signal |
| YC11 |  | GND | - | - | Ground |
| Connected to ISC PWB | 2 | SC_IRN | 0 | 0/3.3 V DC | Scanner interrupt signal |
|  | 3 | SC_DIR | 0 | $0 / 3.3$ V DC | Scanner communication direction signal |
|  | 4 | SC_HLDN | 0 | 0/3.3 V DC | Scanner hold signal |
|  | 5 | SC_BSY | 0 | 0/3.3 V DC | Scanner busy signal |
|  | 6 | SC_SI | $\bigcirc$ | 0/3.3 V DC(pulse) | Serial communication data signal |
|  | 7 | SC_SO | 1 | 0/3.3 V DC(pulse) | Serial communication data signal |
|  | 8 | SC_CLK | 0 | 0/3.3 V DC(pulse) | Scanner clock signal |


| Connector | Pin | Signal | 1/0 | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC12 | 1 | $\begin{aligned} & \text { DEEP_POWE } \\ & \text { RON } \end{aligned}$ | O | 0/3.3 V DC | Sleep return signal |
| Connected to operation panel PWB main | 2 | $\begin{aligned} & \text { ENERGY_SA } \\ & \text { VE } \end{aligned}$ | 0 | 0/3.3 V DC | Energy save signal |
|  | 3 | SUPND_POW ER | 0 | DC3.3V | $3.3 \vee$ DC power output to OPPWB-M |
|  | 4 | $\begin{aligned} & \text { LED_MEMOR } \\ & \text { Y_N } \end{aligned}$ | O | 0/3.3 V DC | Memory LED control signal |
|  | 5 | $\begin{aligned} & \text { LED_ATTENT } \\ & \text { ION_N } \end{aligned}$ | 0 | 0/3.3 V DC | Attention LED control signal |
|  | 6 | $\begin{aligned} & \text { LED_PROCE } \\ & \text { SSING_N } \end{aligned}$ | 0 | $0 / 3.3 \vee \mathrm{DC}$ | Processing LED control signal |
|  | 7 | SHUT_DOWN | 0 | $0 / 3.3$ V DC | 24 V down signal |
|  | 8 | OWERON | O | 0/3.3 V DC | Sleep return signal |
|  | 9 | AUDIO | 0 | Analog | Audio output signal |
|  | 10 | PANEL RESET | O | 0/3.3 V DC | Reset signal |
|  | 11 | INT_POWER KEY_N | 1 | $0 / 3.3 \vee \mathrm{DC}$ | Power key: On/Off |
|  | 12 | PANEL_STAT <br> us <br> GND | 1 | 0/3.3 V DC | Operation panel status signal |
|  | 13 |  | - | - | Ground |
| YC16 | 1 | GND | - | - | Ground |
| Connected to CF card | 2 | D3 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 3 | D4 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 4 | D5 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 5 | D6 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 6 | D7 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 7 | /CE1 | $\bigcirc$ | 0/3.3 V DC | Control signal |
|  |  | A10 | 0 | 0/3.3 V DC(pulse) | Address bus signal |
|  | 9 | IOE | 0 | 0/3.3 V DC | Control signal |
|  | 10 | A9 |  | 0/3.3 V DC(pulse) <br> 0/3.3 V DC(pulse) | Address bus signal |
|  | 11 | A8 | 0 |  | Address bus signal |
|  | 2 | A7 | 0 | 0/3.3 V DC(pulse) | Address bus signal |
|  | 13 |  | 0 | 0/3.3 V DC | Control signal |
|  |  | A6 | 0 | 0/3.3 V DC(pulse) | Address bus signal |
|  | 15 | A5 | 0 | /3.3 V DC(pulse) <br> /3.3 V DC(pulse) | Address bus signal <br> Address bus signal |
|  | 16 |  |  |  |  |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC16 | 17 | A3 | $\bigcirc$ | 0/3.3 V DC(pulse) | Address bus signal |
| Connected to CF card | 18 | A2 | 0 | 0/3.3 V DC(pulse) | Address bus signal |
|  | 19 | A1 | 0 | 0/3.3 V DC(pulse) | Address bus signal |
|  | 20 | A0 | 0 | 0/3.3 V DC(pulse) | Address bus signal |
|  | 21 | D0 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 22 | D1 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 23 | D2 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 24 | WP | 0 | 0/3.3 V DC | Control signal |
|  | 25 | /CD2 | 0 | 0/3.3 V DC | Control signal |
|  | 26 | /CD1 | 0 | 0/3.3 V DC | Control signal |
|  | 27 | D11 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 28 | D12 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 29 | D13 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 30 | D14 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 31 | D15 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 32 | /CE2 | 0 | 0/3.3 V DC | Control signal |
|  | 33 | VS1 | 0 | 0/3.3 V DC | Control signal |
|  | 34 | /IORD | 0 | 0/3.3 V DC | Control signal |
|  | 35 | /IOWD | 0 | 0/3.3 V DC | Control signal |
|  | 36 | /WE | 0 | 0/3.3 V DC | Control signal |
|  | 37 | RDY /BSY | 1 | 0/3.3 V DC | Control signal |
|  | 38 | VCC | 0 | 0/3.3 V DC | Control signal |
|  | 39 | /CSEL | 0 | 0/3.3 V DC | Control signal |
|  | 40 | /VS2 | $\bigcirc$ | 0/3.3 V DC | Control signal |
|  | 41 | RESET | 1 | 0/3.3 V DC | Reset signal |
|  | 42 | /WAIT | $\bigcirc$ | 0/3.3 V DC | Control signal |
|  | 43 | IINPACK | $\bigcirc$ | 0/3.3 V DC | Control signal |
|  | 44 | /REG | 1 | 0/3.3 V DC | REG signal |
|  | 45 | BVD2 | 0 | 0/3.3 V DC | Control signal |
|  | 46 | BVD1 | $\bigcirc$ | 0/3.3 V DC | Control signal |
|  | 47 | D8 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 48 | D9 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 49 | D10 | I/O | 0/3.3 V DC(pulse) | Data bus signal |
|  | 50 | GND | - | - | Ground |


| Connector | Pin | Signal | 1/0 | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC17 | 1 | VBUS | O | 5 V DC | 5 V DC power output |
| Connected to operation panel PWB main | 2 | DATA - | I/O | - | USB data signal |
|  | 3 | DATA + | I/O | - | USB data signal |
|  | 4 | NC | - | - | Not used |
|  | 5 | GND | - | - | Ground |
| YC20 | D1 | VBUS_D | O | 5 V DC | 5 V DC power output |
| Connected to USB | D2 | D-_D | I/O |  | USB data signal |
|  | D3 | D+_D | I/O | - | USB data signal |
|  | D4 | GND_D | - | - | Ground |
|  | H1 | VBUS_H | 0 | 5 V DC | 5 V DC power output |
|  | H2 | D-_H | I/O | - | USB data signal |
|  | H3 | D+_H | I/O | - | USB data signal |
|  | H4 | GND_H | - | - | Ground |
| YC21 | 1 | VBUS | 0 | 5 V DC | 5 V DC power output |
| Connected to USB host | 2 | DATA- | I/O | - | USB data signal |
|  | 3 | DATA+ | 1/0 | - | USB data signal |
|  | 4 |  | - | - | Not used |
|  | 5 | GND | - | - | Ground |
| YC23 | 1 | SC | 0 | 5 V DC | CONFM: On/Off |
| Connected to controller fan motor | 2 | GND | - | - | Ground |
|  | 3 | 5 V | 0 | 5 V DC | 5 V DC power output |
| YC24 | 1 | 12V0 | 0 | 12 V DC | 12 V DC power input from VPWB |
| Connected to video PWB | 2 | 12V0 | 0 | 12 V DC | 12 V DC power input from VPWB |
|  | 3 | 12V0 | 0 | 12 V DC | 12 V DC power input from VPWB |
|  | 4 | 12V0(N.C) | - | - | Not used |
|  | 5 | GND | - | - | Ground |
|  | 6 | GND | - | - | Ground |
|  | 7 | GND | - | - | Ground |
|  | 8 | GND(N.C) | - | - | Not used |
| YC25 | 1 | GND | - | - | Ground |
| Connected to ISC PWB | 2 | HTPDN | 1 | 0/3.3 V DC | Control signal |
|  | 3 | LOCKN | 1 | 0/3.3 V DC | Lock signal |
|  | 4 | GND | - | - | Ground |
|  | 5 | RXON | 1 | 0/3.3 V DC(pulse) | Received data signal |
|  | 6 | RXOP | 1 | 0/3.3 V DC(pulse) | Received data signal |
|  | 7 | GND | - | - | Ground |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC27 <br> Connected to hard disk | $\begin{aligned} & 1 \\ & 2 \\ & 3 \end{aligned}$ | GND $+5 \mathrm{~V} \_\mathrm{HDD}$ <br> GND | $0$ | $5 \text { V DC }$ | Ground <br> 5 V DC power output to HDD <br> Ground |
| YC30 | 1 | +5V | 0 | 5 V DC | 5 V DC power input from OPPWB-M |
| Connected to operation panel PWB main | $\begin{aligned} & 2 \\ & 3 \\ & 4 \\ & 5 \\ & 6 \end{aligned}$ | $+5 \mathrm{~V}$ <br> $+5 \mathrm{~V}$ <br> GND <br> GND <br> GND | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 5 \mathrm{~V} \text { DC } \\ & 5 \mathrm{~V} \text { DC } \end{aligned}$ | 5 V DC power input from OPPWB-M <br> 5 V DC power input from OPPWB-M Ground <br> Ground <br> Ground |

## 2-3-2 Engine PWB



Figure 2-3-2 Engine PWB silk-screen diagram

| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC1 | 1 | GND |  |  | GROUND |
| Connected to power source PWB | 2 | GND | - | - | GROUND |
|  | 3 | GND | - | - | GROUND |
|  | 4 | 24V4 | 1 | 24 V DC | 24 V DC power input from PSPWB |
|  | 5 | 24 V 4 | 1 | 24 V DC | 24 V DC power input from PSPWB |
|  | 6 | 24 V 4 | 1 | 24 V DC | 24 V DC power input from PSPWB |
| YC2 | 1 | 24V4 | 0 | 24 V DC | 24 V DC power output to MPSOL |
| Connected to MP solenoid, duplex clutch, registration clutch, mid clutch 1, paper feed clutch 1, conveying motor 1 | 2 | $\begin{aligned} & \text { MPF_SOL_R } \\ & \text { EM } \end{aligned}$ | $\bigcirc$ | 0/24 V DC | MPSOL: On/Off |
|  | 3 | DU_CL_REM | 0 | 0/24 V DC | DUCL: On/Off |
|  | 4 | 24V4 | 0 | 24 V DC | 24 V DC power output to DUCL |
|  | 5 | $\begin{aligned} & \text { REG_CL_RE } \\ & \mathrm{M} \end{aligned}$ | $\bigcirc$ | 0/24 V DC | RCL: On/Off |
|  | 6 | 24V4 | 0 | 24 V DC | 24 V DC power output to RCL |
|  | 7 | MID_CL_REM | 0 | 0/24 V DC | MCL1: On/Off |
|  | 8 | 24V4 | 0 | 24 V DC | 24 V DC power output to MCL1 |
|  | 9 | CAS_CL_RE | 0 | 0/24 V DC | PFCL1: On/Off |
|  | 10 | 24V4 | 0 | 24 V DC | 24 V DC power output to PFCL1 |
|  | 11 | FEED_MT_DI | 0 | 0/5 V DC | CM1 drive shift signal |
|  | 12 | FEED_MT_R | 1 | 0/3.3 V DC | CM1 ready signal |
|  | 13 | FEED_MT_CL | 0 | 0/5 V DC (pulse) | CM1 clock signal |
|  | 14 | FEED_MT_R | 0 | 0/5 V DC | CM1: On/Off |
|  | 15 | GND | - | - | GROUND |
|  | 16 | 24 VIL | 0 | 24 V DC | 24 V DC power output to CM1 |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC3 | 1 | $\begin{aligned} & \hline \text { DLPC_MT_DI } \\ & \text { R } \end{aligned}$ | 0 | 0/5V DC | DEVM-YCM drive shift signal |
| Connected to developer motor YCM, developer stop clutch, drum motor YCM, drum motor K | 2 | $\begin{array}{\|l\|l} \hline \text { DLPC_MT_R } \\ \text { DY } \end{array}$ | 1 | 0/3.3 V DC | DEVM-YCM ready signal |
|  | 3 | $\begin{aligned} & \text { DLPC_MT_CL } \\ & \text { K } \end{aligned}$ | 0 | 0/5 V DC (pulse) | DEVM-YCM clock signal |
|  | 4 | $\begin{aligned} & \text { DLPC_MT_R } \\ & \text { EM } \end{aligned}$ | 0 | 0/5 V DC | DEVM-YCM: On/Off |
|  | 5 | GND | - | - | GROUND |
|  | 6 | 24V4 | 0 | 24 V DC | 24 V DC power output to DEVM-YCM |
|  | 7 | 24V4 | 0 | 24 V DC | 24 V DC power output to DEVSCL |
|  | 8 | DLP_CL_REM | 0 | 0/3.3 V DC | DEVSCL: On/Off |
|  | 9 | $\begin{aligned} & \text { DRMC_MT_DI } \\ & \text { R } \end{aligned}$ | $\bigcirc$ | 0/5 V DC | DRM-YCM drive shift signal |
|  | 10 | $\begin{aligned} & \text { DRMC_MT_R } \\ & \text { DY } \end{aligned}$ | 1 | 0/3.3 V DC | DRM-YCM ready signal |
|  | 11 | $\begin{aligned} & \text { DRMC_MT_C } \\ & \text { LK } \end{aligned}$ | 0 | 0/5 V DC (pulse) | DRM-YCM clock signal |
|  | 12 | $\begin{aligned} & \text { DRMC_MT_R } \\ & \text { EM } \end{aligned}$ | 0 | 0/5 V DC | DRM-YCM: On/Off |
|  | 13 | GND | - | - | GROUND |
|  | 14 | 24VIL | 0 | 24 V DC | 24 V DC power output to DRM-YCM |
|  | 15 | $\mathrm{l}_{\mathrm{R}}^{\mathrm{DRMK}} \mathrm{MT} \text { IDI }$ | $\bigcirc$ | 0/5 V DC | DRM-K drive shift signal |
|  | 16 | DRMK_MT_R DY | 1 | 0/3.3 V DC | DRM-K ready signal |
|  | 17 | $\begin{aligned} & \text { DRMK_MT_C } \\ & \text { LK } \end{aligned}$ | 0 | 0/5 V DC (pulse) | DRM-K clock signal |
|  | 18 | $\begin{aligned} & \text { DRMK_MT_R } \\ & \text { EM } \end{aligned}$ | O | 0/5 V DC | DRM-K: On/Off |
|  | 19 | GND | - |  | GROUND |
|  | 20 | 24 VIL | 0 | 24 V DC | 24 V DC power output to DRM-K |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC4 | 1 | $\begin{aligned} & \hline \text { DLPK_MT_DI } \\ & \text { R } \end{aligned}$ | 0 | 0/5 V DC | DEVM-K drive shift signal |
| Connected to developer motor K, fuser motor | 2 | $\begin{aligned} & \text { DLPK_MT_R } \\ & \text { DY } \end{aligned}$ | 1 | 0/3.3 V DC | DEVM-K ready signal |
|  | 3 | $\begin{aligned} & \text { DLPK_MT_CL } \\ & \text { K } \end{aligned}$ | 0 | 0/5 V DC (pulse) | DEVM-K clock signal |
|  | 4 | $\begin{aligned} & \text { DLPK_MT_RE } \\ & \text { M } \end{aligned}$ | O | 0/5 V DC | DEVM-K: On/Off |
|  | 5 | $\begin{array}{\|l\|} \hline \text { GND } \\ 24 \mathrm{VIL} \end{array}$ | - | - | GROUND |
|  | 6 |  | 0 | 24 V DC | 24 V DC power output to DEVM-K |
|  | 7 | FUSER_MT_ DIR | 0 | $0 / 5 \mathrm{~V}$ DC | FUM drive shift signal |
|  | 8 | FUSER_MT_ RDY | 1 | $0 / 3.3 \vee \mathrm{DC}$ | FUM ready signal |
|  | 9 | FUSER_MT_ CLK | 0 | 0/5 V DC (pulse) | FUM clock signal |
|  | 10 | FUSER_MT_ REM | 0 | $0 / 5 \mathrm{~V}$ DC | FUM: On/Off |
|  | 11 | GND | - |  | GROUND |
|  | 12 | 24 VIL | 0 | 24 V DC | 24 V DC power output to FUM |
| YC5 | 1 | 3.3 V 4 | 0 | 3.3 V DC | 3.3 V DC power output to DUS |
| Connected to duplex sensor, MP paper sensor, eject paper sensor, feed sensor1 | 2 | GND | - | - | GROUND |
|  | 3 | DUSW | 1 | 0/3.3 V DC | DUS: On/Off |
|  | 4 | GND | - |  | GROUND |
|  | 5 | ROOP | - | - | FUPS: On/Off |
|  | 6 | 5V4 | O | $\begin{aligned} & 5 \mathrm{~V} \text { DC } \\ & 3.3 \mathrm{~V} D C \end{aligned}$ | 5 V DC power output to FUPS |
|  | 7 | 3.3V0 |  |  | 3.3 V DC power output to MPPS |
|  | 8 | GND |  |  | GROUND <br> MPPS: On/Off |
|  | 9 | MPF_SENSE <br> 3.3V4 <br> GND <br> FEEDSW | 0 | $\begin{aligned} & 3.3 \vee \mathrm{DC} \\ & 3 \vee \mathrm{DC} \\ & 3.3 \vee \mathrm{DC} \end{aligned}$ |  |
|  | 10 |  |  |  | 3.3 V DC power output to FS1 <br> GROUND <br> FS1: On/Off |
|  | 11 |  |  |  |  |
|  | 12 |  |  |  |  |
| YC6 | $\begin{aligned} & 1 \\ & 2 \\ & 3 \\ & 4 \end{aligned}$ | $\begin{aligned} & \text { SUB_SCL } \\ & \text { SUB_SDA } \\ & \text { GND } \\ & 3.3 \mathrm{~V} 4 \end{aligned}$ | $\begin{gathered} 0 \\ 1 / 0 \\ - \\ 0 \end{gathered}$ | $\begin{aligned} & 3.3 \mathrm{VDC} \\ & 3.3 \mathrm{VDC} \\ & - \\ & 3.3 \mathrm{VDC} \end{aligned}$ | Clock signal <br> Data signal <br> GROUND <br> 3.3 V DC power output to SUBPWB |
| Connected to |  |  |  |  |  |
| sub PWB |  |  |  |  |  |
|  |  |  |  |  |  |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC7 | 1 | RXD | 1 | 3.3 V DC | Data input |
| Connected to IH PWB | 2 | TXD | 0 | 3.3 V DC | Data output |
|  |  | ROTATION | 0 | 3.3 V DC | Rotation detection |
|  | 4 | IH_REM | 0 | 3.3 V DC | Heater remote |
|  | 5 | 3.3 V 4 | O | 3.3 V DC | 3.3 V DC power output to IHPWB |
|  | 6 | GND | - | - | GROUND |
| YC8 | 1 | 24V4 | 0 | 24 V DC | 24 V DC power output to TM-Y |
| Connected to toner motor Y/C/M/K | 2 | TNMYDRN | 0 | 0/24 V DC | TM-Y: On/Off |
|  | 3 | 24V4 | $\bigcirc$ | 24 V DC | 24 V DC power output to TM-C |
|  | 4 | TNMCDRN | $\bigcirc$ | 0/24 V DC | TM-C: On/Off |
|  | 5 | 24V4 | 0 | 24 V DC | 24 V DC power output to TM-M |
|  | 6 | TNMMDRN24 V 4TNMKDRN | 0 | 0/24 V DC | TM-M: On/Off |
|  | 7 |  | 0 | 24 V DC | 24 V DC power output to TM-K |
|  | 8 |  | $\bigcirc$ | 0/24 V DC | TM-K: On/Off |
| YC9 | 1 | GND | - | - | GROUND |
| Connected to engine connect PWB | 2 | GND | - | - | GROUND |
|  | 3 | GND | - | - | GROUND |
|  | 4 | ID2S | 1 | Analog | IDS2 detection signal |
|  | 5 | ID2P | 1 | Analog | IDS2 detection signal |
|  | 6 | ID1S | 1 | Analog | IDS1 detection signal |
|  | 7 | ID1P | 1 | Analog | IDS1 detection signal |
|  | 8 | LEDREF2 | 0 | Analog | IDS2 control signal |
|  | 9 | LEDREF1 | $\bigcirc$ | Analog | IDS1 control signal |
|  | 10 | RESIST | 1 | 0/3.3 V DC | RS: On/Off |
|  | 11 | NC | - | - | Not used |
|  | 12 | PAPWSIZE1 | 1 | 0/3.3 V DC | PWSW1: On/Off |
|  | 13 | PAPLSIZE1 | 1 | 0/3.3 V DC | PLSW1: On/Off |
|  | 14 | PAPLSIZE2 | 1 | 0/3.3 V DC | PLSW1: On/Off |
|  | 15 | PAPLSIZE3 | 1 | 0/3.3 V DC | PLSW1: On/Off |
|  | 16 | LMOTOCP | 1 | 0/3.3 V DC | LM1 detection signal |
|  | 17 | LMOTRE | $\bigcirc$ | $0 / 3.3 \mathrm{~V}$ DC | LM1: On/Off |
|  | 18 | PAPEMP2 | 1 | 0/3.3 V DC | PS2: On/Off |
|  | 19 | PAPEMP1 | 1 | 0/3.3 V DC | PS1: On/Off |
|  | 20 | LIFTFULL | 1 | 0/3.3 V DC | LS1: On/Off |
|  | 21 | FANBHALF | $\bigcirc$ | 0/3.3 V DC | CM1 drive shift signal |
|  | 22 | FANBFULL | $\bigcirc$ | 0/3.3 V DC | CM1: On/Off |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC9 | 23 | LIGHTSLEEP <br> N | 0 | 0/3.3 V DC | Sleep signal: On/Off |
| Connected to engine connect PWB | 24 | PFPAUSE | 0 | $0 / 3.3 \vee \mathrm{DC}$ | Paper feeder control signal |
|  | 25 | PFSET | O | 0/3.3 V DC | Paper feeder sleep return signal |
|  | 26 | DFSET | 0 | $0 / 3.3 \vee$ DC | Finisher set signal |
|  | 27 | DFSEL | $\bigcirc$ | $0 / 3.3 \vee$ DC | Finisher selection signal |
|  | 28 | BRSEL | 0 | $0 / 3.3 \mathrm{~V}$ DC | Bridge selection signal |
|  | 29 | PFSEL | $\bigcirc$ | $0 / 3.3 \vee$ DC | Paper feed selection signal |
|  | 30 | EHRDY | 1 | 0/3.3 V DC | Ready signal |
|  | 31 | EHSO | $\bigcirc$ | 0/3.3 V DC (pulse) | Serial communication data signal |
|  | 32 | EHSI | 1 | 0/3.3 V DC (pulse) | Serial communication data signal |
|  | 33 | EHCLK | 0 | 0/3.3 V DC (pulse) | Clock signal |
|  | 34 | FANCHALF | $\bigcirc$ | 0/3.3 V DC | FM2 drive shift signal |
|  | 35 | FANCFULL | 0 | 0/3.3 V DC | FM2: On/Off |
|  | 36 | NC | - | - | Not used |
|  | 37 | $\begin{aligned} & \text { ERASER_RE } \\ & \text { M(K) } \end{aligned}$ | 0 | 0/3.3 V DC | CL-K: On/Off |
|  | 38 | DLP_TH | 1 | Analog | DEVTH detection voltege |
|  | 39 | TCSENSE(K) | 1 | $0 / 3.3 \vee$ DC | TS-K: On/Off |
|  | 40 | TCSENSE(M) | 1 | $0 / 3.3 \mathrm{~V}$ DC | TS-M: On/Off |
|  | 41 | TCSENSE(C) | 1 | 0/3.3 V DC | TS-C: On/Off |
|  | 42 | $\begin{aligned} & \text { ERASER_RE } \\ & \text { M(COL) } \end{aligned}$ | $\bigcirc$ | 0/3.3 V DC | CL-YCM: On/Off |
|  | 43 | TCSENSE(Y) | 1 | 0/3.3 V DC | TS-Y: On/Off |
|  | 44 | GND | - | - | GROUND |
|  | 45 | SDAC | I/O | 0/3.3 V DC | Data |
|  | 46 | GND | - | - | GROUND |
|  | 47 | SCLC | 0 | 0/3.3 V DC | Clock signal |
|  | 48 | GND | - | - | GROUND |
|  | 49 | SDAA | I/O | 0/3.3 V DC | Data |
|  | 50 | GND | - | - | GROUND |
|  | 51 | SCLA | 0 | 0/3.3 V DC | Clock signal |
|  | 52 | GND | - | - | GROUND |
|  | 53 | BLTHP2 | 1 | $0 / 3.3 \vee D C$ | BDS2: On/Off |
|  | 54 | BLTHP1 | 1 | $0 / 3.3 \vee D C$ | BDS1: On/Off |
|  | 55 | WTCFULLIN | 1 | Analog | WTDS detection voltage |



| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC12 | A8 | MP(C)_CLK | $\bigcirc$ | 0/3.3 V DC (pulse) | PM clock signal |
| Connected to LSU connect PWB | A9 | MP(M)_RDY | 1 | 0/3.3 V DC | PM ready signal |
|  | A10 | MP(M)_CLK | $\bigcirc$ | 0/3.3 V DC (pulse) | PM clock signal |
|  | A11 | MP(K)_CLK | 0 | 0/3.3 V DC (pulse) | PM clock signal |
|  | A12 | GND |  |  | GROUND |
|  | A13 | 24V4 | 0 | 24 V DC | 24 V DC power output to PM |
|  | $\begin{aligned} & \mathrm{A} 14 \\ & \mathrm{~A} 15 \end{aligned}$ | GND | - | - | GROUND |
|  |  | 24V4 | 0 | 24 V DC | 24 V DC power output to PM |
| YC13 | 1 | GND |  |  | GROUND |
| Connected to high voltage PWB sub | 2 | T1KCNT | 0 | Analog | Primary transfer bias control voltage (Black) |
|  | 3 | T1CCNT | 0 | Analog | Primary transfer bias control voltage (Magenta) |
|  | 4 | HVREM | O | Analog | Cleaning bias control signal |
|  | 5 |  |  | $\begin{array}{\|l} 0 / 10 \text { to } 24 \mathrm{~V} \text { DC } \\ \text { (pulse) } \end{array}$ | Transfer bias remote signal |
|  | 6 | T1YCNT | $\bigcirc$ | Analog | Primary transfer bias control voltage (Yellow) |
|  | 7 | T1MCNT | 0 | Analog | Primary transfer bias control voltage (Cyan) |
|  | 8 | 24VIL | 0 | 24 V DC | 24 V DC power output to HVPWB-S |
| YC14 | 1 | BRSET | 1 | 0/3.3 V DC | BRDSW: On/Off |
| Connected to bridge detection switch | 2 | GND | - | - | GROUND |
| YC15 | B1 | GND | - | - | GROUND |
| Connected to | B2 | GND | - | - | GROUND |
| high voltage | B3 | SCNT | 0 | Analog |  |
| PWB | B4 | T2CNT | 0 | Analog | Secondary transfer bias control voltage |
|  | B5 | MISENS | 1 | Analog | Chager roller AC current signal <br> Developer bias remote signal |
|  | B6 | HVREM | $\bigcirc$ | 0/10 to 24 V DC (pulse) |  |
|  | B7 | BKSCNT | 0 | Analog | Developer sleeve roller bias control voltage (Black) |
|  | B8 | BMMCNT | 0 | Analog | Developer magnet roller bias control voltage (Magenta) |
|  | B9 | BKMCNT | 0 | Analog | Developer magnet roller bias control voltage (Black) |
|  | B10 | BMSCNT | 0 | Analog | Developer sleeve roller bias control voltage (Magenta) |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC15 | B11 | MKCNT | 0 | Analog | Chager roller control voltage (Black) |
| Connected to high voltage PWB | $\begin{aligned} & \mathrm{B} 12 \\ & \text { B13 } \end{aligned}$ | MMCNT BKBACCNT | 0 | Analog <br> Analog | Chager roller control voltage (Magenta) Developing AC bias control voltage (Black) |
|  |  |  | $\bigcirc$ |  |  |
|  | B14 | HVCLKK | O | 0/10 V DC (pulse) | Developer bias clock signal (Black) |
|  | B15 | HVCLKM | $\bigcirc$ | 0/10 V DC (pulse) | Developer bias clock signal (Magenta) |
|  | B16 | 24VIL | 0 | 24 V DC | 24 V DC power output to HVPWB |
|  | B17 | 24VIL | 0 | 24 V DC | 24 V DC power output to HVPWB |
|  | A1 | CBACCNT | 0 | Analog | Developer AC bias control voltage (Cyan) |
|  | A2 | MBACCNT | $\bigcirc$ | Analog | Developer AC bias control voltage (Magenta) |
|  | A3 | MCCNT | 0 | Analog | Chager roller control voltage (Cyan) |
|  | A4 | HVCLKC | 0 | 0/10 V DC (pulse) | Developer bias clock signal (Cyan) |
|  | A5 | BCSCNT | $\bigcirc$ | Analog | Developer sleeve roller bias control voltage (Cyan) |
|  | A6 | BYMCNT | 0 | Analog | Developer magnet roller bias control voltage (Yellow) |
|  | A7 | BCMCNT | O | Analog | Developer magnet roller bias control voltage (Cyan) |
|  | A8 | BYSCNT | 0 | Analog | Developer sleeve roller bias control voltage (Yellow) |
|  | A9 | MYCNT | 0 | Analog | Chager roller control voltage (Yellow) |
|  | A10 | YBACCNT | $\bigcirc$ | Analog | Developer AC bias control voltage (Yellow) |
|  | A11 | HVCLKY | O | 0/10 V DC (pluse) | Developer bias clock signal (Yellow) |
| YC19 | 1 | GND | - | - | GROUND |
| Connected to IH PWB | $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | $\begin{aligned} & \text { RELAY } \\ & 24 \mathrm{~V} 4 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 3.3 \mathrm{VDC} \\ & 24 \mathrm{~V} D C \end{aligned}$ | Relay remote <br> 24 V DC power output to IHPWB |


| Connector | Pin | Signal | 1/0 | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC20 | 1 | $\begin{aligned} & \hline \text { EJE_SOL_RE } \\ & \text { TURN } \end{aligned}$ | O | 0/24 V DC | FSSOL: On/Off |
| Connected to shift solenoid, eject motor, paper full sensor, job paper full sensor, job eject paper sensor | 2 | 24V4 | 0 | 24 V DC | 24 V DC power output to FSSOL |
|  | 3 | EJECT_/B | 0 | 0/24 V DC (pluse) | EM drive control signal |
|  | 4 | EJECT_/A | O | 0/24 V DC (pluse) | EM drive control signal |
|  | 5 | EJECT_B | 0 | 0/24 V DC (pluse) | EM drive control signal |
|  | 6 | EJECT_A | 0 | 0/24 V DC (pluse) | EM drive control signal |
|  | 7 | 3.3V4 | O | 3.3 V DC | 3.3 V DC power output to PFS |
|  | 8 | GND | - | - | GROUND |
|  | 9 | $\begin{aligned} & \text { EJE_FULL_U } \\ & \text { P } \end{aligned}$ | 1 | 0/3.3 V DC | PFS: On/Off |
|  | 10 | 3.3 V 4 | O | 3.3 V DC | 3.3 V DC power output to JEPS |
|  | 11 | GND | - |  | GROUND |
|  | 12 | $\begin{aligned} & \text { EJE_FULL_D } \\ & \text { WN } \end{aligned}$ | 1 | 0/3.3 V DC | JEPS: On/Off |
| YC21 | 1 | 24V4 | O | 24 V DC | 24 V DC power output to CFM |
| Connected to container fan motor, developer fan motor and eject fan motor | 2 | $\begin{aligned} & \text { IH_FAN2_RE } \\ & \mathrm{M} \end{aligned}$ | O | 0/24 V DC | CFM: On/Off |
|  | 3 | $\begin{aligned} & \text { IH_FAN2_AL } \\ & \text { M } \end{aligned}$ | 1 | 0/3.3 V DC | CFM alarm signal |
|  | 4 | 24VIL | 0 | 24 V DC | 24 V DC power output to DEVFM |
|  | 5 | $\begin{aligned} & \text { DLP_FAN_RE } \\ & \text { M } \end{aligned}$ | O | 0/24 V DC | DEVFM: On/Off |
|  | 6 | $\begin{aligned} & 24 \mathrm{~V} 4 \\ & \text { CON_FAN_R } \\ & \text { EM } \end{aligned}$ | 0 | 24 V DC | 24 V DC power output to EFM |
|  | 7 |  | O | 0/24 V DC | EFM: On/Off |
| YC22 | 1 | FUSREMA | O | 0/24 V DC | PRM: On/Off |
| Connected to thermistor1, thermistor2, eject sensor, fuser press release motor | 2 | FUSREMB | 0 | 24 V DC | 24 V DC power output to PRM |
|  | 3 | 3.3 V | O | 3.3 V DC | 3.3 V DC power output to ES |
|  | 4 | GND | - |  | GROUND |
|  | 5 | FUSER_JAM | 1 | 0/3.3 V DC | ES: On/Off |
|  | 6 | 3.3 V 4 | - | - | Not used |
|  | 7 | GND | - | - | Not used |
|  | 8 | FUSER_PRE | - | - | Not used |
|  | 9 | SUBSDA | I/O | 3.3 V DC | Data |
|  | 10 | SUBSCL | 0 | 3.3 V DC | Clock |
|  | 11 | PR_TH | 1 | Analog | FTH detection voltage (Press roller) |
|  | 12 | HR_NCTH1 | 1 | Analog | FTH detection voltage (Center) |
|  | 13 | HR_NCTH2 | 1 | Analog | FTH detection voltage (Center) |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC22 | 14 | 3.3V4 | 0 | 3.3 V DC | 3.3 V DC power output to FTH |
| Connected to thermistor1, thermistor2, eject sensor, fuser press release motor | 15 | EG_TH | 1 | Analog | FTH detection voltage (Edge) |
|  | 16 | GND | - |  | GROUND |
|  | 17 | Rotation | 1 | 3.3 V DC | Rotation detection |
| YC24 | 1 | 24V4 | 0 | 24 V DC | 24 V DC power output to IHFM |
| Connected to IH fan motor | 2 | $\begin{aligned} & \text { IH_FAN1_RE } \\ & \mathrm{M} \end{aligned}$ | $\bigcirc$ | 0/24 V DC | IHFM: On/Off |
|  | 3 | $\begin{aligned} & \mathrm{IH} \text { _FAN1_AL } \\ & \mathrm{M} \end{aligned}$ | 1 | 0/3.3 V DC | IHFM alarm signal |
| YC25 | 1 | 24VIL2 | 1 | 24 V DC | 24 V DC power input from RCSW1 |
| Connected to right cover switch 1, front cover switch | 2 | 24VIL1 | 0 | 24 V DC | 24 V DC power output to RCSW1 |
|  | 3 | 24VIL1 | 0 | 24 V DC | 24 V DC power output to FCSW |
|  | 4 | 24V4 | 1 | 24 V DC | 24 V DC power input from FCSW |
|  | 5 | 3.3 V 0 | 0 | 3.3 V DC | 3.3 V DC power output to FCSW |
| YC26 | 1 | BDN_E(Y) | 0 | 0/3.3 V DC (pulse) | Horizontal synchronizing signal (Yellow) |
| Connected to video PWB | 2 | BDN_E(C) | 0 | 0/3.3 V DC (pulse) | Horizontal synchronizing signal (Cyan) |
|  | 3 | BDN_E(M) | O | 0/3.3 V DC (pulse) | Horizontal synchronizing signal (Magenta) |
|  | 4 | BDN_E(K) | O | 0/3.3 V DC (pulse) | Horizontal synchronizing signal (Black) |
|  | 5 | NC | - | - | Not used |
|  | 6 | ENG_IRN | 0 | 0/3.3 V DC | Interruption signal |
|  | 7 | ENG_DIR | 0 | $0 / 3.3 \mathrm{~V}$ DC | Communication direction change signal |
|  | 8 | ENG_BSY | O | $0 / 3.3 \mathrm{~V}$ DC | Busy signal |
|  | 9 | ENG_SO | 1 | 0/3.3 V DC (pulse) | Serial communication data signal input |
|  | 10 | ENG_SI | $\bigcirc$ | 0/3.3 V DC (pulse) | Serial communication data signal output |
|  | 11 | ENG_CLK | 1 | 0/3.3 V DC (pulse) | Clock signal |
|  | 12 | DC1_COUNT | $\bigcirc$ | $0 / 3.3 \vee$ DC | Key counter count signal |
|  | 13 | NC |  |  | Not used |
|  | 14 | PVSYNC | 0 | 0/3.3 V DC (pulse) | Vertical synchronizing signal |
|  | 15 | $\begin{aligned} & \text { MCV_EJ_CO } \\ & \text { UNT } \end{aligned}$ | $\bigcirc$ | 0/3.3 V DC | Coin vender control signal |
|  | 16 | $\begin{aligned} & \text { MCV_FED_C } \\ & \text { OUNT } \end{aligned}$ | O | 0/3.3 V DC | Coin vender control signal |
|  | 17 | MCV_RXD | 1 | 0/3.3 V DC (pulse) | MCV: On/Off |
|  | 18 | MCV_TXD | $\bigcirc$ | 0/3.3 V DC (pulse) | Serial communication data signal output |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC26 | 19 | $\begin{aligned} & \hline \text { MCV_COPY_ }_{\text {SIG }} \\ & \text { S } \end{aligned}$ | O | 0/3.3 V DC | Coin vender control signal |
| Connected to video PWB | 20 | MCV_ENBL | 1 | 0/3.3 V DC | Coin vender enable signal |
|  | 21 | DEBUGRXD | 0 | 0/3.3 V DC (pulse) | Serial communication data signal output |
|  | 22 | DEBUGTXD | 0 | 0/3.3 V DC (pulse) | Serial communication data signal output |
|  | 23 | GND |  |  | GROUND |
|  | 24 | GND | - |  | GROUND |
|  | 25 | GND | - |  | GROUND |
|  | 26 | GND | - |  | GROUND |
|  | 27 | GND | - |  | GROUND |
|  | 28 | NC | - |  | Not used |
|  | 29 | 3.3 V 4 | 0 | 3.3 V DC | 3.3 V DC power output to VPWB |
|  | 30 | 3.3 V 4 | 0 | 3.3 V DC | 3.3 V DC power output to VPWB |
|  | 31 | 3.3 V 0 | 0 | 3.3 V DC | 3.3 V DC power output to VPWB |
|  | 32 | 5 V 4 | 0 | 5 V DC | 5 V DC power output to VPWB |
|  | 33 | NC | - | - | Not used |
|  | 34 | NC | - | - | Not used |
|  | 3536 | Power_Off | 1 | $0 / 3.3 \vee$ DC | Sleep signal |
|  |  | MK2-ENBL | 1 | $0 / 3.3 \mathrm{~V}$ DC | Key card enable signal |
|  | 36 37 | ENG_HLD | 1 | $0 / 3.3 \mathrm{~V}$ DC | Engine hold signal |
|  | 38 | NC(SLEEPOF <br> F) | - | - | Not used |
| YC28 | 1 | 24VIL <br> FUSER_FAN_ <br> REM <br> 24VIL <br> FUSER_FAN_ <br> REM | $\begin{aligned} & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 24 \vee D C \\ & 0 / 24 \vee D C \\ & 24 \vee D C \\ & 0 / 24 \vee D C \end{aligned}$ | 24 V DC power output to FUFM1 FUFM1: On/Off <br> 24 V DC power output to FUFM2 FUFM2: On/Off |
| Connected to fuser fan | 2 |  |  |  |  |
| motor 1,fuser | 3 |  |  |  |  |
| fan motor 2 | 4 |  |  |  |  |
| YC29 | 12345 | GND <br> TMPDATA WETCLK0 WETCLK1 HUMDATA | $\begin{gathered} - \\ 1 \\ 0 \\ 0 \\ 1 \end{gathered}$ | Analog <br> 0/3.3 V DC (pulse) <br> 0/3.3 V DC (pulse) <br> Analog | GROUND <br> TEMS detection voltage (Temperature) <br> TEMS clock signal <br> TEMS clock signal <br> TEMS detection voltage (Humidity) |
| Connected to temperature sensor |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC40 | 1 | 24V4 | 0 | 24 V DC | 24 V DC power output to ISU |
| Connected to image scanner unit | 2 | 24V4 | 0 | 24 V DC | 24 V DC power output to ISU |
|  | 3 | GND | - | - | GROUND |
|  | 4 | GND | - | - | GROUND |
|  | 5 | GND | - | - | GROUND |
|  | 6 | 24V4 | 0 | 24 V DC | 24 V DC power output to ISU |
| YC41 | 1 | 24VIL | 0 | 24 V DC | 24 V DC power output to VPWB |
| Connected to video PWB | 2 | GND | - |  | GROUND |
|  | 3 | GND | - | - | GROUND |
|  | 4 | GND | - | - | GROUND |
|  | 5 | 24V4 | 0 | 24 V DC | 24 V DC power output to VPWB |
|  | 6 | 24V4 | 0 | 24 V DC | 24 V DC power output to VPWB |
| YC42 | 1 | $\begin{aligned} & \hline \text { FEED_MT2_R } \\ & \text { EM } \end{aligned}$ | 0 | 0/5 V DC | CM2: On/Off |
| Connected to video PWB | 2 | $\begin{array}{\|l} \text { FEED_MT2_C } \\ \text { LK } \end{array}$ | O | 0/5 V DC (pulse) | CM clock signal |
|  | 3 | FEED_MT2_R DY | 1 | $0 / 3.3 \vee$ DC | CM ready signal |
|  | 4 | $\begin{aligned} & \text { MID2_CL_RE } \\ & \text { M } \end{aligned}$ | 0 | 0/24 V DC | MCL2: On/Off |
|  | 5 | $\begin{aligned} & \text { CAS2_CL_RE } \\ & \text { M } \end{aligned}$ | O | 0/24 V DC | PFCL2: On/Off |
|  | 6 | LMOTOCP2 | 1 | 0/3.3 V DC | LM2 detection signal |
|  | 7 | BO2_REM | 0 | 0/3.3 V DC | LM2: On/Off |
|  | 8 | PAPWSIZE2_ <br> 1 | 1 | $0 / 3.3 \vee$ DC | PWSW2: On/Off |
|  | 9 | PAPLSIZE2_1 | 1 | 0/3.3 V DC | PLSW2: On/Off |
|  | 10 | PAPLSIZE2_2 | 1 | 0/3.3 V DC | PLSW2: On/Off |
|  | 11 | PAPLSIZE2_3 | 1 | $0 / 3.3 \vee$ DC | PLSW2: On/Off |
|  | 12 | $\begin{aligned} & \text { RIGHT_COVE } \\ & \text { R_SET } \end{aligned}$ | 1 | 0/3.3 V DC | RCSW2: On/Off |
|  | 13 | FEEDSW2 | 1 | 0/3.3 V DC | FS2: On/Off |
|  | 14 | LIFTFULL2 | 1 | $0 / 3.3 \mathrm{~V}$ DC | LS2: On/Off |
|  | 15 | PAPEMP4 | 1 | $0 / 3.3 \vee$ DC | PS4: On/Off |
|  | 16 | PAPEMP3 | 1 | 0/3.3 V DC | PS3: On/Off |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC43 | 1 | VIDEO_SEL | 0 | 0/3.3 V DC (pulse) | Video select signal |
| Connected to video PWB | 2 | VIDEO_READ Y | 1 | 0/3.3 V DC (pulse) | Video ready signal |
|  | 3 | VIDEO_SCL | 0 | 0/3.3 V DC (pulse) | Video clock signal |
|  | 4 | VIDEO_RXD | $\bigcirc$ | 0/3.3 V DC (pulse) | Video serial communication data signal |
|  | 5 | VIDEO_TXD | $\bigcirc$ | 0/3.3 V DC (pulse) | Video serial communication data signal |
| YC44 | 1 | 3.3V4 | 0 | 3.3 V DC | 3.3 V DC power output to MPPWSW |
| Connected to MP tray detection switch, MP paper length switch, MP paper width switch | 2 | MPFWSIZE | 1 | $0 / 3.3 \mathrm{~V}$ DC | MPPWSW: On/Off |
|  | 3 | MPFLSIZE | 1 | $0 / 3.3 \vee$ DC | MPPLSW: On/Off |
|  | 4 | GND | - |  | GROUND |
|  | 5 | 3.3V4 | 0 | 3.3 V DC | 3.3 V DC power output to MPPLSW |
|  | 6 | MPF TRAY | 1 | $0 / 3.3 \vee$ DC | MPTDSW: On/Off |
|  | 7 | GND | - | - | GROUND |
| YC45 | 1 | 2nd Tray SW | 1 | 0/3.3 V DC | JEPS: On/Off |
| Connected to job eject paper sensor, job LED | 2 | GND | - |  | GROUND |
|  | 3 | 2nd Tray LED | O | 0/5 V DC | JLED: On/Off |
|  | 4 | GND | - |  | GROUND |

## 2-3-3 Video PWB



Figure 2-3-3 Video PWB silk-screen diagram

| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC1 | 1 | GND | - | - | Ground |
| Connected to main PWB | 2 | G6_EG_SCLK | 1 | 0/3.3 V DC (pulse) | Engine clock signal |
|  | 3 | G6_EG_S | 1 | 0/3.3 V DC (pulse) | Serial communication data signal |
|  | 4 | G6_EG_SDIR | 1 | 3.3 V DC | Engine communication direction signal |
|  | 5 | G6_EG_SBSY | 1 | 3.3 V DC | Engine busy signal |
|  | 6 | G6_EG_SO | $\bigcirc$ | 0/3.3 V DC (pulse) | Serial communication data signal |
|  | 7 | G6_EG_IRN | 1 | 3.3 V DC | Engine interrupt signal |
|  | 8 | GND | - | - | Ground |
|  | 9 | GND | - | - | Ground |
|  | 10 | HLD_ENG | 1 | 3.3 V DC | Engine hold signal |
|  | 11 | SLEEP_ENG | 1 | 3.3 V DC | Sleep signal |
|  | 12 | HSYNC_DP | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 13 | HSYNC_DN | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 14 | HSYNC_CP | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 15 | HSYNC_CN | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 16 | HSYNC_BP | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 17 | HSYNC_BN | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 18 | HSYNC_AP | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 19 | HSYNC_AN | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 20 | VSYNC_DP | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 21 | VSYNC_DN | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 22 | VSYNC_CP | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 23 | VSYNC_CN | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 24 | VSYNC_BP | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 25 | VSYNC_BN | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 26 | VSYNC_AP | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 27 | VSYNC_AN | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 28 | GND | - | - | Ground |
|  | 29 | SAR_VCLK_P | 1 | 0/3.3 V DC (pulse) | Clock signal |
|  | 30 | SAR_VCLK_N | 1 | 0/3.3 V DC (pulse) | Clock signal |
|  | 31 | GND | - | - | Ground |
|  | 32 | SAR_CH3_P | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 33 | SAR_CH3_N | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 34 | GND | - | - | Ground |
|  | 35 | SAR_CH2_P | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 36 | SAR_CH2_N | 1 | 0/3.3 V DC (pulse) | Image control signal |
|  | 37 | GND | - | - | Ground |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC1 | 38 | SAR_CH1_P | 1 | 0/3.3 V DC (pulse) | Image control signal |
| Connected to main PWB | 39 40 | $\begin{aligned} & \text { SAR_CH1_N } \\ & \text { GND } \end{aligned}$ | 1 | 0/3.3 V DC (pulse) | Image control signal Ground |
| YC2 | 1 | VDN(K) | 0 | LVDS | Video data LVDS(-) (black) |
| Connected to LSU connect PWB | 2 | VDP(K) | O | LVDS | Video data LVDS(+) (black) |
|  | 3 | SH(K) | 0 | 0/3.3 V DC | Sample / hold signal (black) |
|  | 4 | BD(K) | 1 | 0/3.3 V DC (pulse) | Horizontal synchronization signal (black) |
|  | 5 | SGND | - | - | Ground |
|  | 6 | VDN(M) | 0 | LVDS | Video data LVDS(-) (magenta) |
|  | 7 | VDP?M? | 0 | LVDS | Video data LVDS(+) (magenta) |
|  | 8 | SH(M) | O | 0/3.3 V DC | Sample / hold signal (magenta) |
|  | 9 | BD(M) | 1 | 0/3.3 V DC (pulse) | Horizontal synchronization signal (magenta) |
|  | 10 | SGND | - | - | Ground |
|  | 11 | VDN?C? | 0 | LVDS | Video data LVDS(-) (cyan) |
|  | 12 | VDP?C? | 0 | LVDS | Video data LVDS(+) (cyan) |
|  | 13 | SH?C? | 0 | 0/3.3 V DC | Sample / hold signal (cyan) |
|  | 14 | BD?C? | 1 | 0/3.3 V DC (pulse) | Horizontal synchronization signal (cyan) |
|  | 15 | SGND | - | - | Ground |
|  | 16 | VDN?Y? | 0 | LVDS | Video data LVDS(-) (yellow) |
|  | 17 | VDP?Y? | 0 | LVDS | Video data LVDS(+) (yellow) |
|  | 18 | SH?Y? | 0 | 0/3.3 V DC | Sample / hold signal (yellow) |
|  | 19 | BD? Y ? | 1 | 0/3.3 V DC (pulse) | Horizontal synchronization signal (yellow) |
|  | 20 | SGND | - | - | Ground |
| YC3 | 1 | N.C (SLEEPOFF) | - | - | Not used |
| Connected to engine PWB | 2 | ENG_HLD | 0 | $0 / 3.3 \vee \mathrm{DC}$ | Engine hold signal |
|  | 3 | MK2-ENBL | 0 | 0/3.3 V DC | Key card enable signal |
|  | 4 | Power_Off | 0 | 0/3.3 V DC | Sleep signal |
|  | 5 | NC | - | - | Not used |
|  | 6 | NC | - | - | Not used |
|  | 7 | 5V4 | 1 | 5 V DC | 5 V DC power output to EPWB |
|  | 8 | 3.3V0 | 1 | 3.3 V DC | 3.3 V DC power output to EPWB |
|  | 9 | 3.3 V 4 | 1 | $3.3 \vee \mathrm{DC}$ | 3.3 V DC power output to EPWB |
|  | 10 | 3.3 V 4 | 1 | 3.3 V DC | 3.3 V DC power output to EPWB |
|  | 11 | NC | - | - | Not used |
|  | 12 | GND | - | - | Ground |
|  | 13 | GND | - | - | Ground |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC3 | 14 | GND | - | - | Ground |
| Connected to engine PWB | 15 | GND | - | - | Ground |
|  | 16 | GND | - | - | Ground |
|  | 17 | DEBUGTXD | 1 | 0/3.3 V DC (pulse) | Serial communication data signal output |
|  | 18 | DEBUGRXD | 1 | 0/3.3 V DC (pulse) | Serial communication data signal output |
|  | 19 | MCV_ENBL | $\bigcirc$ | $0 / 3.3 \vee$ DC | Coin vender enable signal |
|  | 20 | $\begin{aligned} & \text { MCV_COPY_ } \\ & \text { SIG } \end{aligned}$ | 1 | 0/3.3 V DC | Coin vender control signal |
|  | 21 | MCV_TXD | 1 | 0/3.3 V DC (pulse) | Serial communication data signal output |
|  | 22 | MCV_RXD | 0 | 0/3.3 V DC (pulse) | MCV: On/Off |
|  | 23 | $\begin{aligned} & \text { MCV_FED_C } \\ & \text { OUNT } \end{aligned}$ | 1 | $0 / 3.3$ V DC | Coin vender control signal |
|  | 24 | $\begin{aligned} & \text { MCV_EJ_CO } \\ & \text { UNT } \end{aligned}$ | 1 | 0/3.3 V DC | Coin vender control signal |
|  | 25 | PVSYNC | 1 | 0/3.3 V DC (pulse) | Vertical Synchronization signal |
|  | 26 | NC | - | - | Not used |
|  | 27 | DC1_COUNT | 1 | 0/3.3 V DC | Key counter count signal |
|  | 28 | ENG_CLK | 0 | 0/3.3 V DC (pulse) | Clock signal |
|  | 29 | ENG_SI | 1 | 0/3.3 V DC (pulse) | Serial communication data signal output |
|  | 30 | ENG_SO | $\bigcirc$ | 0/3.3 V DC (pulse) | Serial communication data signal input |
|  | 31 | ENG_BSY | 1 | 0/3.3 V DC | Busy signal |
|  | 32 | ENG_DIR | 1 | $0 / 3.3$ V DC | Communication direction switch signal |
|  | 33 | ENG_IRN | 1 | 0/3.3 V DC | Interrupt signal |
|  | 34 | NC | - | - | Not used |
|  | 35 | BDN_E(K) | 1 | 0/3.3 V DC (pulse) | Horizontal synchronization signal (black) |
|  | 36 | BDN_E(M) | 1 | 0/3.3 V DC (pulse) | Horizontal synchronization signal (magenta) |
|  | 37 | BDN_E(C) | 1 | 0/3.3 V DC (pulse) | Horizontal synchronization signal (cyan) |
|  | 38 | BDN_E(Y) | 1 | 0/3.3 V DC (pulse) | Horizontal synchronization signal (yellow) |
| YC4 | 1 | PAPEMP3 | $\bigcirc$ | 0/3.3 V DC | PS3: On/Off |
| Connected to engine PWB | 2 | PAPEMP4 | $\bigcirc$ | 0/3.3 V DC | PS4: On/Off |
|  | 3 | LIFTFULL2 | $\bigcirc$ | 0/3.3 V DC | LS2: On/Off |
|  | 4 | FEEDSW2 | $\bigcirc$ | 0/3.3 V DC | FS2: On/Off |
|  | 5 | RIGHT_COVE | $\bigcirc$ | 0/3.3 V DC | RCSW2: On/Off |
|  | 6 | PAPLSIZE2_3 | O | 0/3.3 V DC | PLSW2: On/Off |
|  | 7 | PAPLSIZE2_2 | $\bigcirc$ | 0/3.3 V DC | PLSW2: On/Off |
|  | 8 | PAPLSIZE2_1 | $\bigcirc$ | 0/3.3 V DC | PLSW2: On/Off |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC4 | 9 | PAPWSIZE2 | $\bigcirc$ | 0/3.3 V DC | PWSW2: On/Off |
| Connected to engine PWB | 10 | BO2_REM | 1 | $0 / 3.3$ V DC | LM2: On/Off |
|  | 11 | LMOTOCP2 | 0 | $0 / 3.3 \vee \mathrm{DC}$ | LM2 detection signal |
|  | 12 | M | 1 | 0/24 V DC | PFCL2: On/Off |
|  | 13 | $\begin{aligned} & \text { MID2_CL_RE } \\ & \mathrm{M} \end{aligned}$ | 1 | 0/24 V DC | MCL2: On/Off |
|  | 14 | FEED_MT2_R DY | 0 | 0/3.3 V DC | CM2 ready signal |
|  | 15 | FEED_MT2_C <br> LK <br> FEED_MT2_R <br> EM | 1 | $0 / 5 \mathrm{~V}$ DC (pulse) | CM2 clock signal |
|  | 16 |  | 1 | 0/5 V DC | CM2: On/Off |
| YC5 | 1 | FEED_MT2_C <br> W <br> FEED_MT2_R <br> DY | 0 | 0/5 V DC | CM2 drive switch signal |
| Connected to conveying motor 2, paper feed clutch 2, mid clutch 2 | 2 |  | 1 | $0 / 3.3 \vee D C$ | CM2 ready signal |
|  | 3 | $\begin{aligned} & \text { FEED_MT2_C } \\ & \text { LK } \end{aligned}$ | 0 | 0/5 V DC (pulse) | CM2 clock signal |
|  | 4 | $\begin{aligned} & \text { FEED_MT2_R } \\ & \text { EM } \end{aligned}$ | 0 | $0 / 5 \mathrm{~V} D \mathrm{C}$ | CM2: On/Off |
|  | 5 | GND | - |  | GROUND |
|  | 6 7 | CAS2_CL_RE <br> M | O | 24 V DC | 24 V DC power output to CM2 |
|  | 7 |  | O | 0/24 V DC | PFCL2: On/Off |
|  |  | $\begin{aligned} & \text { 24V4 } \\ & \text { MID2_CL_RE } \end{aligned}$ | 0 | $24 \mathrm{~V} D C$ | 24 V DC power output to PFCL2 <br> MCL2: On/Off |
|  | 8 | $\begin{aligned} & \text { MID2_CL_RE } \\ & \text { M } \\ & 24 \mathrm{~V} 4 \end{aligned}$ | 00 | $0 / 24$ V DC <br> 24 V DC | 24 V DC power output to MCL2 |
|  | 10 |  |  |  |  |
| YC6 |  | $\begin{aligned} & \mathrm{CN}-3 \\ & \mathrm{CN}-2 \end{aligned}$ | I |  | PWSW2: On/Off |
| Connected to paper length switch 2, paper width switch 2 | 2 |  | 1 | $0 / 3.3 \vee D C$ | PWSW2: On/Off |
|  | 3 | GND | - | - | GROUND |
|  | 4 | $\mathrm{CN}-1$ | 1 | $0 / 3.3 \vee$ DC | PWSW2: On/Off |
|  | 5 | SIZE-1 | 1 | 0/3.3 V DC | PLSW2: On/Off |
|  | 6 | GND | - |  | GROUND |



| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC13 | 6 | USB_DN0 | I/O | - | USB data signal |
| Connected to main PWB | 7 | VBUSO | 1 | 3.3 V DC | 3.3 V DC power output to USB |
|  | 8 | GND | - | - | GROUND |
|  | 9 | RESET1 | 0 | 0/3.3 V DC | Reset signal |
|  | 10 | WAKEUP1 | 1 | 0/3.3 V DC | Control signal |
|  | 11 | AUDIO1 | $\bigcirc$ | Analog | AUDIO signal |
|  | 12 | GND | - | - | GROUND |
|  | 13 | USB_DP1 | I/O | - | USB data signal |
|  | 14 | USB_DN1 | I/O | - | USB data signal |
|  | 15 | VBUS1 | 1 | 3.3 V DC | 3.3 V DC power output to USB |
| YC14 | 1 | 5V_CUT0 | 0 | 0/3.3 V DC | DC5V cut signal |
| Connected to main PWB | 2 | GND | - | - | GROUND |
|  | 3 | 5V3 | 1 | 5 V DC | 5 V DC power output to MPWB |
|  | 4 | GND | - | - | GROUND |
|  | 5 | 5V_CUT1 | 0 | 0/3.3 V DC | DC5V cut signal |
|  | 6 | GND | - | - | GROUND |
| YC15 | 1 | 12V0 | 1 | 24 V DC | 24 V DC power input from PSPWB |
| Connected to powersource unit | 2 | 12Vo | 1 | 24 V DC | 24 V DC power input from PSPWB |
|  | 3 | 12V0 | 1 | 24 V DC | 24 V DC power input from PSPWB |
|  | 4 | 12Vo | 1 | 24 V DC | 24 V DC power input from PSPWB |
|  | 5 | GND | - | - | GROUND |
|  | 6 | GND | - | - | GROUND |
|  | 7 | GND | - | - | GROUND |
|  | 8 | GND | - | - | GROUND |
| YC16 | 1 | 24V4 | 1 | 24 V DC | 24 V DC power output to EPWB |
| Connected to engine PWB | 2 | 24V4 | 1 | 24 V DC | 24 V DC power output to EPWB |
|  | 3 | GND | - | - | GROUND |
|  | 4 | GND | - | - | GROUND |
|  | 5 | GND | - | - | GROUND |
|  | 6 | 24VIL | 1 | 24 V DC | 24 V DC power output to EPWB |
| YC17 | 1 | 12V0 | 1 | 24 V DC | 24 V DC power input from MPWB |
| Connected to main PWB | 2 | 12V0 | 1 | 24 V DC | 24 V DC power input from MPWB |
|  | 3 | 12Vo | 1 | 24 V DC | 24 V DC power input from MPWB |
|  | 4 | GND | - | - | GROUND |
|  | 5 | GND | - | - | GROUND |
|  | 6 | GND | - | - | GROUND |




## 2-3-4 ISC PWB



Figure 2-3-4 ISC PWB silk-screen diagram


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC8 | 1 | 3.3V5 | O | 3.3 V DC | 3.3 V DC power output to HPS |
| Connected to home position sensor | 2 3 | $\begin{aligned} & \text { GND } \\ & \text { HP_SW } \end{aligned}$ | - | 0/3.3 V DC | Ground <br> HPS: On/Off |
| YC9 | 1 | GND <br> CCDCLK1 |  | 0/3.3 V DC (pulse) | Ground |
| Connected to | 2 |  |  |  | Clock signal |
| CCD PWB | 3 | GND | - | - | Ground |
|  | 4 | CCDCLK2 | O | 0/3.3 V DC (pulse) | Clock signal |
|  | 5 | GND | - | - | Ground |
|  | 6 | CP | 0 | 0/3.3 V DC | Clamp signal |
|  | 7 | GND | - | - | Ground |
|  | 8 | RS | 0 | 0/3.3 V DC | Reset signal |
|  | 9 | VSG | 0 | 0/3.3 V DC | Control signal |
|  | 10 | TG | 0 | 0/3.3 V DC | Control signal |
|  | 11 | SH | 0 | 0/3.3 V DC | Shift gate signal |
|  | 12 | AFE_SI | 1 | 0/3.3 V DC (pulse) | Serial communication data signal |
|  | 13 | AFE_EN | 0 | 0/3.3 V DC (pulse) | Enable signal |
|  | 14 | AFE_SO | 0 | 0/3.3 V DC (pulse) | Serial communication data signal |
|  | 15 | AFECLK | 0 | 0/3.3 V DC (pulse) | Clock signal |
|  | 16 | GND | - | - | Ground |
|  | 17 | DIS_CIS_1N | 1 | 0/3.3 V DC (pulse) | Image data signal |
|  | 18 | DIS_CIS_1P | 1 | 0/3.3 V DC (pulse) | Image data signal |
|  | 19 | GND | - | - | Ground |
|  | 20 | DIS_CIS_2N | 1 | 0/3.3 V DC (pulse) | Image data signal |
|  | 21 | DIS_CIS_2P | 1 | 0/3.3 V DC (pulse) | Image data signal |
|  | 22 | GND | - | - | Ground |
|  | 23 | DIS_CIS_3N | 1 | 0/3.3 V DC (pulse) | Image data signal |
|  | 24 | DIS_CIS_3P | 1 | 0/3.3 V DC (pulse) | Image data signal |
|  | 25 | GND | - | - | Ground |
|  | 26 | DIS_CIS_4N | 1 | 0/3.3 V DC (pulse) | Image data signal |
|  | 27 | DIS_CIS_4P | 1 | 0/3.3 V DC (pulse) | Image data signal |
|  | 28 | GND | - | - | Ground |
|  | 29 | DIS_CIS_5N | 1 | 0/3.3 V DC (pulse) | Image data signal |
|  | 30 | DIS_CIS_5P | 1 | 0/3.3 V DC (pulse) | Image data signal |
|  | 31 | GND | - | - | Ground |
|  | 32 | DIS_CISCKN | 1 | 0/3.3 V DC (pulse) | Clock signal |
|  | 33 | DIS_CISCKP | 1 | 0/3.3 V DC (pulse) | Clock signal |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC9 | 34 | GND |  | - | Ground |
| Connected to CCD PWB | 35 | CCDSEL | 1 | 0/3.3 V DC | Select signal |
|  | 36 | GND | - | - | Ground |
|  | 37 | AFE_MCLK | O | 0/3.3 V DC (pulse) | Clock signal |
|  | 38 | GND(AFE_SH <br> D) | - | - | Ground |
|  | 39 | CLPIN | O | 0/3.3 V DC | Clamp signal |
|  | 40 | GND(AFE_SH <br> P) | - | - | Ground |
|  | 41 | GND | - | - | Ground |
| YC11 | 1 | 5.1V5 | O | 5 V DC | 5 V DC power output to CCDPWB |
| Connected to CCD PWB | 2 | GND | - | - | Ground |
|  | 3 | 10V5 | O | DC10V | 10 V DC power output to CCDPWB |
|  | 4 | GND | - | - | Ground |
|  | 5 | 3.3V5 | 0 | 3.3 V DC | 3.3 V DC power output to CCDPWB |
|  | 6 | GND | - | - | Ground |
| YC12 | 1 | GND(SPARE) | - | - | Ground |
| Connected to DP main PWB | 2 | DP_TMG | 1 | 0/3.3 V DC | DPTS: On/Off |
|  | 3 | DP_RDY | 1 | $0 / 3.3 \vee$ DC | Ready signal |
|  | 4 | DP_SEL | 0 | $0 / 3.3 \vee$ DC | Select signal |
|  | 5 | DP_CLK | 0 | 0/3.3 V DC (pulse) | Clock signal |
|  | 6 | DP_SO | 0 | 0/3.3 V DC (pulse) | Serial communication data signal |
|  | 7 | DP_SI | 1 | 0/3.3 V DC (pulse) | Serial communication data signal |
|  | 8 | DP_OPEN | 1 | 0/3.3 V DC | DPOCSW: On/Off |
|  | 9 | NC | - |  | Not used |
|  | 10 | GND | - | - | Ground |
|  | 11 | GND | - |  | Ground |
|  | 12 | GND | - | - | Ground |
|  | 13 | NC | - | - | Not used |
|  | 14 | 24V4 | 0 | 24 V DC | 24 V DC power output to DPMPWB |
|  | 15 | 24 V 4 | 0 | 24 V DC | 24 V DC power output to DPMPWB |
|  | 16 | 24V4 | 0 | 24 V DC | 24 V DC power to DPMPWB |
| YC13 | 1 | GND | - | - | Ground |
| Connected to original size sensor | 2 | ORG_SW | 1 | $0 / 3.3 \vee D C$ | OSS: On/Off |
|  | 3 | 5.1V5 | $\bigcirc$ | 5 V DC | 5 V DC power output to OSS |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC14 | 1 | 3.3 V 5 | O | 3.3 V DC | 3.3 V DC power output to ODSW |
| Connected to original detection switch | 2 3 | GND CO_SW | 1 | $0 / 3.3 \mathrm{~V} \text { DC }$ | Ground ODSW: On/Off |

## 2-3-5 IH PWB



Figure 2-3-5 IH PWB silk-screen diagram

| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC1 <br> Connected to AC connect PWB |  | IH_NEUTRAL <br> IH_LIVE | 1 | $\begin{aligned} & \text { AC100V } \\ & \text { AC100V } \end{aligned}$ | AC input voltage $A C$ input voltage |
| YC3 <br> Connected to <br> IH control <br> PWB |  | TH2 <br> TH1 <br> AC_CURREN <br> T <br> AC_VOLTAGE <br> OUT_CURRE <br> NT <br> IH_REM <br> ROTATION <br> RXD <br> TXD <br> S1 <br> IGBT1 <br> IGBT2 <br> S2 <br> ERROR <br> 5 V <br> GND | - - - - - - - - - - - - - - - - | Analog <br> Analog <br> Analog <br> Analog <br> Analog <br> 0/5 V DC <br> 0/5 V DC <br> $0 / 5 \mathrm{~V}$ DC (pulse) <br> 0/5 V DC (pulse) <br> 0/5 V DC <br> 0/5 V DC <br> 0/5 V DC <br> 0/5 V DC <br> 0/5 V DC <br> 5 V DC | Low side IGBT case temperature <br> High side IGBT case temperature <br> AC input current <br> AC input voltage <br> Output current <br> IH: On/off <br> TCBM control signal <br> Serial communication data signal input <br> Serial communication data signal output <br> For soft distinction <br> gate output <br> gate output <br> For soft distinction <br> Error signal <br> 5 V DC power output to IHCONPWB <br> Ground |
| YC4 <br> Connected to <br> engine PWB | $\begin{aligned} & 2 \\ & 3 \\ & 4 \\ & 5 \\ & 6 \end{aligned}$ | SGND <br> 3.3V4 <br> IH_REM <br> ROTATION <br> RXD <br> TXD | 0 1 1 1 0 | 3.3 V DC <br> $0 / 3.3 \vee D C$ <br> $0 / 3.3 \mathrm{~V}$ DC <br> 0/3.3 V DC (pulse) <br> 0/3.3 V DC (pulse) | Ground <br> 3.3 V DC power output to EPWB <br> IH: On/off <br> TCBM control signal <br> Serial communication data signal input <br> Serial communication data signal output |
| YC6 <br> Connected to <br> thermostat | 1 | $\begin{aligned} & +15 \mathrm{~V}-1 \\ & +15 \mathrm{~V}-2 \end{aligned}$ |  | $\begin{aligned} & \hline 15 \mathrm{~V} \text { DC } \\ & 15 \mathrm{~V} D \mathrm{C} \end{aligned}$ | Control power supply Gate drive power supply |
| YC8 <br> Connected to engine PWB | $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | 24VIL <br> RELAY <br> PGND | 0 | $\begin{aligned} & \hline 24 \mathrm{~V} \text { DC } \\ & 0 / 3.3 \mathrm{~V} D \mathrm{C} \end{aligned}$ | 24 V DC power output from EPWB RSW: On/Off <br> Ground |
| YC9 <br> Connected to <br> IH coil | 1 | IH_OUT1 | 0 | 390 V DC | Resonance circuit output |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :--- | :---: | :---: | :---: | :---: | :---: |
| YC10 | 1 | IH_OUT2 | O | 1000 V DC | Resonance circuit output |
| Connected to <br> IH coil |  |  |  |  |  |
|  |  |  |  |  |  |

CAUTION: Connectors YC1, YC3, YC6, YC9 and YC10 are not grounded, therefore, use caution not to damage the connectors during measurement of voltages.

## 2-3-6 Operation panel PWB main



Figure 2-3-6 Operation panel PWB main silk-screen diagram

| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC1 | 1 | +5V | 1 | 5 V DC | 5 V DC power input from MPWB |
| Connected to main PWB | 2 | +5V | 1 | 5 V DC | 5 V DC power input from MPWB |
|  | 3 | +5V | 1 | 5 V DC | 5 V DC power input from MPWB |
|  | 4 | GND | - | - | Ground |
|  | 5 | GND | - | - | Ground |
|  | 6 | GND | - | - | Ground |
| YC2 | 1 | VBUS | 1 | 5 V DC | 5 V DC power input |
| Connected to main PWB | 2 | DN | I/O | - | USB data signal |
|  | 3 | DP | I/O | - | USB data signal |
|  | 4 | ID | - | - | Not used |
|  | 5 | GND | - | - | Ground |
| YC3 | 1 | GND | - | - | Ground |
| Connected to main PWB | 2 | $\begin{aligned} & \text { SECOND_TR } \\ & \text { AY_SW } \end{aligned}$ | - | - | Not used |
|  | 3 | BEEP_POWE RON | 1 | 0/3.3 V DC | Sleep return signal |
|  | 4 | $\begin{aligned} & \text { ENERGY_SA } \\ & \text { VE } \end{aligned}$ | 1 | $0 / 3.3 \vee D C$ | Energy save signal |
|  | 5 | SUPND_POW ER | 1 | 3.3 V DC | 3.3 V DC power input from MPWB |
|  | 6 | $\begin{aligned} & \text { LED_MEMOR } \\ & \text { Y_N } \end{aligned}$ | 1 | 0/3.3 V DC | Memory LED control signal |
|  | 7 | LED_ATTENT ION_N | 1 | 0/3.3 V DC | Attention LED control signal |
|  | 8 | LED_PROCE SSING_N | 1 | 0/3.3 V DC | Processing LED control signal |
|  | 9 | SHUT_DOWN | 1 | 0/3.3 V DC | 24 V down signal |
|  | 10 | LIGHTOFF_P OWERON | 1 | 0/3.3 V DC | Sleep return signal |
|  | 11 | AUDIO | 1 | Analog | Audio output signal |
|  | 12 | PANEL RESET | 1 | 0/3.3 V DC | Reset signal |
|  | 13 | INT_POWER KEY_N | 0 | 0/3.3 V DC | Power key: On/Off |
|  | 14 | PANEL_STAT US | 0 | $0 / 3.3 \vee D C$ | Operation panel status signal |
|  | 15 | SGND | - | - | Ground |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC4 | 1 | SGND | - | - | Ground |
| Connected to LCD | 2 | SGND | - | - | Ground |
|  | 3 | CK | 0 | 0/3.3 V DC (pulse) | LCD clock signal |
|  | 4 | SGND | - | - | Ground |
|  | 5 | SGND | - | - | Ground |
|  | 6 | SC | 0 | 0/3.3 V DC | LCD Control signal |
|  | 7 | R0(LSB) | 0 | $0 / 3.3$ V DC | LCD Control signal |
|  | 8 | R1 | 0 | $0 / 3.3 \vee$ DC | LCD Control signal |
|  | 9 | R2 | 0 | 0/3.3 V DC | LCD Control signal |
|  | 10 | SGND | - | - | Ground |
|  | 11 | R3 | 0 | 0/3.3 V DC | LCD Control signal |
|  | 12 | R4 | 0 | DC0V/3.3V | LCD control signal |
|  | 13 | R5(MSB) | 0 | DC0V/3.3V | LCD control signal |
|  | 14 | SGND | - | - | Ground |
|  | 15 | G0(LSB) | 0 | DC0V/3.3V | LCD control signal |
|  | 16 | G1 | $\bigcirc$ | DC0V/3.3V | LCD control signal |
|  | 17 | G2 | 0 | DC0V/3.3V | LCD control signal |
|  | 18 | SGND | - | - | Ground |
|  | 19 | G3 | 0 | DC0V/3.3V | LCD control signal |
|  | 20 | G4 | 0 | DC0V/3.3V | LCD control signal |
|  | 21 | G5(MSB) | 0 | DC0V/3.3V | LCD control signal |
|  | 22 | SGND | - | - | Ground |
|  | 23 | B0(LSB) | 0 | DC0V/3.3V | LCD control signal |
|  | 24 | B1 | 0 | DC0V/3.3V | LCD control signal |
|  | 25 | B2 | 0 | DC0V/3.3V | LCD control signal |
|  | 26 | SGND | - | - | Ground |
|  | 27 | B3 | 0 | DC0V/3.3V | LCD control signal |
|  | 28 | B4 | 0 | DC0V/3.3V | LCD control signal |
|  | 29 | B5(MSB) | 0 | DC0V/3.3V | LCD control signal |
|  | 30 | SGND | - | - | Ground |
|  | 31 | H_SYNC | 0 | 0/3.3 V DC(pulse) | LCD horizontal synchronizing signal |
|  | 32 | SGND | - | - | Ground |
|  | 33 | V_SYNC | O | 0/3.3 V DC(pulse) | LCD vertical synchronizing signal |
|  | 34 | SGND | - | - | Ground |
|  | 35 | ENB | 0 | DC0V/3.3V | LCD enable signal |
|  | 36 | CM | 0 | DC0V/3.3V | LCD mode switch signal |
|  | 37 | 3.3 V | 0 | 3.3 V DC | 3.3 V DC power output to LCD |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC4 <br> Connected to LCD | $\begin{aligned} & 38 \\ & 39 \\ & 40 \end{aligned}$ | $\begin{aligned} & 3.3 \mathrm{~V} \\ & 3.3 \mathrm{~V} \\ & 3.3 \mathrm{~V} \end{aligned}$ | $\begin{aligned} & \mathrm{O} \\ & \mathrm{O} \\ & \mathrm{O} \end{aligned}$ | $\begin{aligned} & 3.3 \mathrm{~V} \mathrm{DC} \\ & 3.3 \mathrm{~V} \mathrm{DC} \\ & 3.3 \mathrm{VDC} \end{aligned}$ | 3.3 V DC power output to LCD <br> 3.3 V DC power output to LCD <br> 3.3 V DC power output to LCD |
| YC5 <br> Connected to touch panel | $\begin{aligned} & 1 \\ & 2 \\ & 3 \\ & 4 \end{aligned}$ | BOT Y- <br> LEFT X+ <br> TOP Y+ <br> RIGHT X- |  | Analog <br> Analog <br> Analog <br> Analog | Touch panel Y- position signal Touch panel $X+$ position signal Touch panel $\mathrm{Y}+$ position signal Touch panel X - position signal |
| YC6 | 1 | KEY4 | 1 | 0/3.3 V DC (pulse) | Operation panel key scan return signal 4 |
| Connected to operation panel PWB sub | $\begin{gathered} 2 \\ 3 \\ \\ 4 \\ 5 \\ \\ 6 \\ \\ 7 \\ 8 \\ 9 \\ 10 \\ 11 \\ 12 \\ 13 \\ 14 \\ 15 \\ 16 \\ 17 \\ 18 \\ 19 \\ 20 \end{gathered}$ | SCAN2 <br> INT_POWER <br> KEY_N <br> SCAN1 <br> LED1 <br> SUPND_POW ER <br> KEY3 <br> KEY2 <br> KEY1 <br> LED0 <br> KEYO <br> SCAN4 <br> SCAN3 <br> SCANO <br> GND <br> GND <br> GND <br> GND <br> GND <br> GND | 0 <br> I <br> 0 <br> 0 <br> 0 <br> I <br> I <br> I <br> 0 <br> I <br> 0 <br> 0 <br> 0 <br> $-$ <br> $-$ <br> - <br> $-$ <br> $-$ | 0/3.3 V DC (pulse) <br> 0/3.3 V DC <br> 0/3.3 V DC (pulse) <br> 0/3.3 V DC (pulse) <br> 3.3 V DC <br> 0/3.3 V DC (pulse) <br> 0/3.3 V DC (pulse) <br> 0/3.3 V DC (pulse) <br> 0/3.3 V DC (pulse) <br> 0/3.3 V DC (pulse) <br> 0/3.3 V DC (pulse) <br> 0/3.3 V DC (pulse) <br> 0/3.3 V DC (pulse) | Scan signal 2 <br> Power key: On/Off <br> Scan signal 1 <br> Operation panel LED display drive signal 1 <br> 3.3 V DC power output to OPWB2 <br> Operation panel key scan return signal 3 <br> Operation panel key scan return signal 2 <br> Operation panel key scan return signal 1 <br> Operation panel LED display drive signal 0 <br> Operation panel key scan return signal 0 <br> Scan signal 4 <br> Scan signal 3 <br> Scan signal 0 <br> Ground <br> Ground <br> Ground <br> Ground <br> Ground <br> Ground |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC7 | 1 | SCAN4 | 0 | 0/3.3 V DC (pulse) | Scan signal 4 |
| Connected to operation panel PWB sub | 2 | KEY5 | 1 | 0/3.3 V DC (pulse) | Operation panel key scan return signal 5 |
|  | 3 | KEY6 | 1 | 0/3.3 V DC (pulse) | Operation panel key scan return signal 6 |
|  | 4 | KEY7 | 1 | 0/3.3 V DC (pulse) | Operation panel key scan return signal 7 |
|  | 5 | SCANO | $\bigcirc$ | 0/3.3 V DC (pulse) | Scan signal 0 |
|  | 6 | SCAN1 | $\bigcirc$ | 0/3.3 V DC (pulse) | Scan signal 1 |
|  | 7 | SCAN2 | 0 | 0/3.3 V DC (pulse) | Scan signal 2 |
|  | 8 | SCAN3 | 0 | 0/3.3 V DC (pulse) | Scan signal 3 |
|  | 9 | LED2 | $\bigcirc$ | 0/3.3 V DC (pulse) | Operation panel LED display drive signal 2 |
|  | 10 | LED3 | O | 0/3.3 V DC (pulse) | Operation panel LED display drive signal 3 |
|  | 11 | LED4 | O | 0/3.3 V DC (pulse) | Operation panel LED display drive signal 4 |
|  | 12 | GND | - | - | Ground |
| YC8 | 1 | PROCESSIN G_LED | 0 | 0/3.3 V DC | Processing LED control signal |
| Connected to operation panel LED PWB | 2 | $\begin{aligned} & \text { MEMORY } \\ & \text { LED } \end{aligned}$ | 0 | 0/3.3 V DC | Memory LED control signal |
|  | 3 | $\begin{aligned} & \text { ATTENTION_ } \\ & \text { LED } \end{aligned}$ | 0 | 0/3.3 V DC | Attention LED control signal |
|  | 4 | GND | - | - | Ground |
| YC11 | 1 | $\begin{array}{\|l\|l\|} \hline \mathrm{VO} 2 \\ \mathrm{VO} 1 \end{array}$ | 0 | Analog <br> Analog | Speaker sound signal (+) <br> Speaker sound signal (-) |
| Connected to speaker | 2 |  |  |  |  |
| YC14 | 3 | $\begin{array}{\|l} \hline \text { LED_A } \\ \text { NC } \\ \text { LED_C } \\ \text { NC } \end{array}$ | 0-1 | $0 / 3.3 \mathrm{~V} \text { DC }$$0 / 3.3 \text { V DC }$ | LED control signal Not used <br> LED control signal Not used |
| Connected to LCD |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

## 2-3-7 Power source PWB



Figure 2-3-7 Power source PWB silk-screen diagram

| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| TB <br> Connected to AC inlet and AC connect PWB | $3$ | LIVE <br> NEUTRAL <br> LIVE | $\begin{aligned} & \text { । } \\ & \text { । } \end{aligned}$ | $\begin{aligned} & 220-240 \mathrm{~V} \mathrm{AC} \\ & 220-240 \mathrm{~V} \mathrm{AC} \\ & 220-240 \mathrm{~V} \mathrm{AC} \end{aligned}$ | AC power input AC power input AC power input |
| YC1 <br> Connected to main power switch |  | MSW_OUT <br> MSW_IN | $0$ | $\begin{aligned} & 220-240 \mathrm{~V} \mathrm{AC} \\ & 220-240 \mathrm{~V} \mathrm{AC} \end{aligned}$ | AC power output to MSW AC power input from MSW |
| YC3 <br> Connected to AC connect PWB | $2$ | LIVE(M) <br> NC NEUTRAL | $\begin{aligned} & 0 \\ & - \\ & 0 \end{aligned}$ | AC100V <br> AC100V | AC power output to ACCPWB <br> Not used <br> AC power output to ACCPWB |
| YC4 <br> Connected to paper feeder detection switch | 1 4 | LIVE_CASSE <br> TE_IN <br> LIVE_CASSE <br> TE_OUT | I <br> 0 | $\begin{aligned} & \text { AC100V } \\ & \text { AC100V } \end{aligned}$ | AC power input from PFDSW <br> AC power output to PFDSW |
| YC5 | 1 | LIVE_CASSE TE OUT | O |  | AC power output to CH |
| Connected to cassette heater | $\begin{aligned} & 2 \\ & 3 \\ & 4 \\ & 5 \\ & 6 \end{aligned}$ | LIVE_CASSE <br> TE_OUT <br> NC <br> NC <br> NEUTRAL <br> NEUTRAL | 0 | $220-240 \text { V AC }$ | Not used <br> Not used <br> Not used <br> AC power output to CH <br> Not used |
| YC10 | 1 | 24V4 | 0 | 24 V DC | 24 V DC power output to EPWB |
| Connected to engine PWB, engine connect PWB | 2 3 4 5 6 7 8 9 10 11 12 13 | 24V4 <br> 24 V 4 <br> 24V4 <br> 24V4 <br> 24V4(N.C) <br> 24V4(N.C) <br> 24V4(N.C) <br> GND <br> GND <br> GND <br> GND <br> GND | $\begin{aligned} & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 24 \mathrm{~V} D C \\ & 24 \mathrm{~V} D C \\ & 24 \mathrm{~V} D C \\ & 24 \mathrm{~V} D C \end{aligned}$ | 24 V DC power output to EPWB <br> 24 V DC power output to EPWB <br> 24 V DC power output to ECPWB <br> 24 V DC power output to ECPWB <br> Not used <br> Not used <br> Not used <br> Ground <br> Ground <br> Ground <br> Ground <br> Ground |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC10 | 14 | GND(N.C) | - | - | Not used |
| Connected to engine PWB, engine connect PWB | $\begin{aligned} & 15 \\ & 16 \end{aligned}$ | GND(N.C) <br> GND(N.C) | - | - | Not used Not used |
| YC11 | 1 | GND |  |  | Ground |
| Connected to | 2 | GND | - | - | Ground |
| video PWB | 3 | GND | - | - | Ground |
|  | 4 | GND | - | - | Ground |
|  | 5 | 12V0 | 0 | 12 V DC | 12 V DC power output to VPWB |
|  | 6 | 12 V 0 | 0 | 12 V DC | 12 V DC power output to VPWB |
|  | 7 | 12 V 0 | 0 | 12 V DC | 12 V DC power output to VPWB |
|  | 8 | 12V0 | O | 12 V DC | 12 V DC power output to VPWB |
| YC14 | 1 | POWER_OFF | 1 | 0/3.3 V DC | Sleep mode signal: On/Off |
| Connected to engine connect PWB | 2 | $\begin{aligned} & \text { DRUM_HEAT } \\ & \text { _REM } \end{aligned}$ | 1 | 0/3.3 V DC | FH: On/Off |
|  | 3 | GND | - | - | Not used |
|  | 4 | FSR_RELAY_ <br> REM | - | - | Not used |

## 2-3-8 DP main PWB



Figure 2-3-8 DP main PWB silk-screen diagram

| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC1 | 1 | FG |  |  | Ground |
| Connected to engine PWB | 2 | $\begin{aligned} & \text { DP_PAGESE } \\ & \mathrm{T} \end{aligned}$ | O | 0/3.3 V DC | DPTS: On/Off |
|  | 3 | ENG_RDY | O | 0/3.3 V DC | Ready signal |
|  | 4 | ENG_SEL | 1 | 0/3.3 V DC | Select signal |
|  | 5 | ENG_CLK | 1 | 0/3.3 V DC(pulse) | Clock signal |
|  | 6 | ENG_SI | 1 | 0/3.3 V DC(pulse) | Serial communication data signal |
|  | 7 | ENG_SO | $\bigcirc$ | 0/3.3 V DC(pulse) | Serial communication data signal |
|  | 8 | ENG_OPEN | $\bigcirc$ | 0/3.3 V DC | DPOCS: On/Off |
|  | 9 | NC | - | - | Not used |
|  | 10 | GND | - | - | Ground |
|  | 11 | GND | - | - | Ground |
|  | 12 | GND | - | - | Ground |
|  | 13 | NC | - | - | Not used |
|  | 14 | +24V | 0 | 24 V DC | 24 V DC power input from ISCPWB |
|  | 15 | +24V | 0 | 24 V DC | 24 V DC power input from ISCPWB |
|  | 16 | +24V | 0 | 24 V DC | 24 V DC power input from ISCPWB |
| YC2 | 1 | ANODE | 0 | 3.3 V DC | 3.3 V DC power output to DPOLS |
| Connected to | $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | $\begin{aligned} & \text { GND } \\ & \text { LS_SW } \end{aligned}$ | I | $0 / 3.3 \vee D C$ | Ground DPOLS: On/Off |
| DP original size length sensor |  |  |  |  |  |
| YC3 | 123 | $\begin{aligned} & \text { ANODE } \\ & \text { GND } \\ & \text { SET_SW } \end{aligned}$ | $0$$1$ | $\begin{aligned} & 3.3 \text { V DC } \\ & - \\ & 0 / 3.3 \vee D C \end{aligned}$ | 3.3 V DC power output to DPOS Ground DPOS: On/Off |
| Connected to |  |  |  |  |  |
| DP original sensor |  |  |  |  |  |
| YC4 | 1234 | WID1 <br> GND <br> WID2 <br> WID3 | I | $\begin{aligned} & 0 / 3.3 \vee D C \\ & - \\ & 0 / 3.3 \vee D C \\ & 0 / 3.3 \vee D C \end{aligned}$ | DPOWS: On/Off Ground DPOWS: On/Off DPOWS: On/Off |
| Connected to |  |  |  |  |  |
| DP original |  |  |  |  |  |
| sensor |  |  |  |  |  |


| Connector | Pin | Signal | I/O | Voltage | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| YC5 | 1 | ANODE | O | 3.3 V DC | 3.3 V DC power output to DPPFS |
| DConnected | 2 | GND |  |  | Ground |
| to DP paper | 3 | FEED SW | 1 | 0/3.3 V DC | DPPFS: On/Off |
|  | 4 | ANODE | 0 | $3.3 \vee \mathrm{DC}$ | 3.3 V DC power output to DPRS |
| registration | 5 | GND | - |  | Ground |
| sensor, DP | 6 | REGIST_SW | 1 | $0 / 3.3 \vee D C$ | DPRS: On/Off |
| open/close | 7 | ANODE | O | 3.3 V DC | 3.3 V DC power output to DPOCS |
| switchback | 8 | GND |  |  | Ground |
| sensor and | 9 | DP_OPENSW | 1 | 0/3.3 V DC | DPOCS: On/Off |
| DP timing | 10 | ANODE | 0 | 3.3 V DC | 3.3 V DC power output to DPSBS |
|  | 11 | GND | - |  | Ground |
|  | 12 | HP_SW | 1 | $0 / 3.3 \vee$ DC | DPSBS: On/Off |
|  | 13 | ANODE | 0 | 3.3 V DC | $3.3 \vee \mathrm{DC}$ power output to DPTS |
|  | 14 | GND | - |  | Ground |
|  | 15 | TMG_SW | 1 | 0/3.3 V DC | DPTS: On/Off |
| YC6 | 1 | GND |  |  | Ground |
| Connected to | 2 | LED_REM | 0 | 0/3.3 V DC | LED control signal |
| DP LED PWB | 3 | LED_PW | $\bigcirc$ | 0/3.3 V DC | LED control signal |
| YC7 | 1 | +24V | 0 | 24 V DC | 24 V DC power output to DPILSW |
| Connected to | 2 | GND | - |  | Ground |
| DP interlock switch | 3 | +R24V | 1 | 24 V DC | 24 V DC power input from DPILSW |
| YC8 | 1 | FEED_CL | 0 | 0/24 V DC | DPPFCL: On/Off |
| Connected to | 2 | +R24V | $\bigcirc$ | 24 V DC | 24 V DC power output to DPPFCL |
| DP paper | 3 | REGIST_CL | 0 | 0/24 V DC | DPRCL: On/Off |
| feed clutch <br> and DP | 4 | +R24V | 0 | 24 V DC | 24 V DC power output to DPRCL |
| YC9 | 1 | OUT1B | 0 | 0/24 V DC(pulse) | DPPFM drive control signal |
| Connected to DP paper feed motor and DP switchback motor | 2 | OUT1A | 0 | 0/24 V DC(pulse) | DPPFM drive control signal |
|  | 3 | OUT2A | 0 | 0/24 V DC(pulse) | DPPFM drive control signal |
|  | 4 | OUT2B | 0 | 0/24 V DC(pulse) | DPPFM drive control signal |
|  | 5 | OUT1B | $\bigcirc$ | 0/24 V DC(pulse) | DPSBM drive control signal |
|  | 6 | OUT1A | 0 | 0/24 V DC(pulse) | DPSBM drive control signal |
|  | 7 | OUT2A | $\bigcirc$ | 0/24 V DC(pulse) | DPSBM drive control signal |
|  | 8 | OUT2B | O | 0/24 V DC(pulse) | DPSBM drive control signal |

## 2-4-1 Appendixes

(1) Maintenance kits

| Maintenance part name |  | Parts No. | Alternative part No. |
| :---: | :---: | :---: | :---: |
| Name used in service | Name used in parts list |  |  |
| MK-8315A/MAINTENANCE <br> KIT <br> (200,000 sheets) <br> Transfer roller unit <br> Drum unit <br> Developer unit K <br> Intermediate transfer unit <br> Fuser unit <br> Primary feed unit <br> MP separation pad <br> MP paper feed roller | MK-8315A/MAINTENANCE KIT <br> HOLDER TRANSFER ASSY <br> DRUM UNIT MK <br> DLP UNIT BK MK <br> IMAGE UNIT MK <br> FUSER UNIT MK <br> PRIMARY FEED ASS'Y <br> PAD SEPARATION ASSY SP <br> ROLLER MPF ASSY SP | 1702MVOUNO | 072MVOUN |
| MK-8315B/MAINTENANCE <br> KIT <br> (200,000 sheets) <br> Drum unit <br> Developer unit C <br> Developer unit M <br> Developer unit $Y$ | MK-8315B/MAINTENANCE KIT <br> DRUM UNIT <br> DLP UNIT C <br> DLP UNIT M <br> DLP UNIT Y | 1702MV0UN1 | 072MVOU1 |

## (2) Repetitive defects gauge

First occurrence of defect
 65.7 mm/2 9/16" Transfer roller
94.2 mm/3 11/16" Drum/Press roller
125.7 mm/4 15/16" Heat roller

## (3) Firmware environment commands

The printer maintains a number of printing parameters in its memory. These parameters may be changed permanently with the FRPO (Firmware RePrOgram) commands.
This section provides information on how to use the FRPO command and its parameters using examples.

## Using FRPO commands for reprogramming the firmware

The current settings of the FRPO parameters are listed as the optional values on the service status page.

Note: Before changing any FRPO parameters, print out a service status page, so you will know the parameter values before the changes are made. To return FRPO parameters to their factory default values, send the FRPO INIT (FRPO-INITialize) command.(!R! FRPO INIT; EXIT;)

The FRPO command is sent to the printer in the following sequence:
!R! FRPO parameter, value; EXIT;
Example: Changing emulation mode to PC-PR201/65A
!R! FRPO P1, 11; EXIT;
FRPO parameters

| Item | FRPO | Setting values | Factory setting |
| :---: | :---: | :---: | :---: |
| Default pattern resolution | B8 | $\begin{aligned} & 0: 300 \mathrm{dpi} \\ & 1: 600 \mathrm{dpi} \end{aligned}$ | 0 |
| Copy count | C0 | Number of copies to print:1-999 | 1 |
| Page orientation | C1 | 0 : Portrait <br> 1: Landscape | 0 |
| Default font No. * | $\begin{aligned} & \text { C2 } \\ & \text { C3 } \\ & \text { C5 } \end{aligned}$ | Middle two digits of power-up font Last two digits of power-up font First two digits of power-up font | $\begin{aligned} & 0 \\ & 0 \\ & 0 \end{aligned}$ |
| PCL font switch | C8 | $0: H P$ compatibility mode (Characters higher than 127 are not printed.) <br> 32:Conventional mode (Characters higher than 127 are printed. Supported symbol sets: ISO60 Norway [00D], ISO-15 Italian [00I], ISO-11 Sweden [00S], ISO-6 ASCII [00U], ISO-4 U.K. [01E], ISO-69 France [01F], ISO-21 Germany [01G], ISO-17 Spain [02S], Symbol [19M]a) | 0 |
| Total host buffer size | H8 | 0 to 99 in units of the size defined by FRPO S5 | 5 |
| Form feed time-out value | H9 | Value in units of 5 seconds (0 to 99). | 6 |
| Duplex binding | N4 | 0: Off <br> 1: Long edge <br> 2: Short edge | 0 |
| Sleep timer time-out time | N5 | 1 to 240 minutes [0: Off] | 15 |
| Ecoprint level | N6 | $\begin{aligned} & \text { 0: Off } \\ & \text { 2: On } \end{aligned}$ | 0 |


| Item | FRPO | Setting values | Factory setting |
| :---: | :---: | :---: | :---: |
| Default emulation mode | P1 | $\begin{aligned} & \text { 6: PCL } 6 \\ & \text { 9: KPDL } \end{aligned}$ | 6 |
| Carriage-return action * | P2 | 0 : Ignores 0x0d <br> 1: Carriage-return <br> 2: Carriage-return+linefeed | 1 |
| Linefeed action * | P3 | 0 : Ignores 0x0d <br> 1: Linefeed <br> 2: Linefeed+carriage-return | 1 |
| Automatic emulation sensing (For KPDL3) | P4 | 0 : AES disabled <br> 1: AES enabled | 0 |
| Automatic emulation switching trigger <br> (For KPDL3) | P7 | 0 : Page eject commands <br> 1: None <br> 2: Page eject and prescribe EXIT <br> 3: Prescribe EXIT <br> 4: Formfeed (^L) <br> 6: Page eject, prescribe EXIT and formfeed <br> 10: Page eject commands; if AES fails, resolves to KPDL | 10 |
| Command recognition character | P9 | ASCII code of 33 to 126 | 82 (R) |
| Default stacker | R0 | $\begin{aligned} & 1 \text { (inner tray) } \\ & 3 \\ & 5 \end{aligned}$ | 1 |


| Item | FRPO | Setting values | Factory setting |
| :---: | :---: | :---: | :---: |
| Default paper size | R2 | 0: Size of the default paper cassette (See R4.) <br> 1: Monarch (3-7/8 $\times 7-1 / 2$ inches) <br> 2: Business (4-1/8 $\times 9-1 / 2$ inches) <br> 3: International DL ( $11 \times 22 \mathrm{~cm}$ ) <br> 4: International C5 ( $16.2 \times 22.9 \mathrm{~cm}$ ) <br> 5: Executive ( $7-1 / 4 \times 10-1 / 2$ inches) <br> 6: US Letter ( $8-1 / 2 \times 11$ inches) <br> 7: US Legal ( $8-1 / 2 \times 14$ inches) <br> 8: A4 ( $21.0 \times 29.7 \mathrm{~cm}$ ) <br> 9: JIS B5 ( $18.2 \times 25.7 \mathrm{~cm}$ ) <br> 10: A3 ( $29.7^{\prime} 42 \mathrm{~cm}$ ) <br> 11: B4 ( $25.7^{\prime} 36.4 \mathrm{~cm}$ ) <br> 12: US Ledger ( 11 ' 17 inches) <br> 13: ISO A5 <br> 14: A6 (10.5 $\times 14.8 \mathrm{~cm}$ ) <br> 15: JIS B6 (12.8 $\times 18.2 \mathrm{~cm})$ <br> 16: Commercial \#9 (3-7/8 $\times 8-7 / 8$ inches) <br> 17: Commercial \#6 (3-5/8 $\times 6-1 / 2$ inches) <br> 18: ISO B5 ( $17.6 \times 25 \mathrm{~cm}$ ) <br> 19: Custom ( $11.7 \times 17.7$ inches) <br> 30: C4 (22.9' 32.4 cm ) <br> 31: Hagaki ( $10 \times 14.8 \mathrm{~cm}$ ) <br> 32: Ofuku-hagaki $(14.8 \times 20 \mathrm{~cm})$ <br> 33: Officio II <br> 39: 8K <br> 40: 16K <br> 42: $8.5 \times 13.5$ inches <br> 50: Statement <br> 51: Folio <br> 52: Youkei 2 <br> 53: Youkei 4 | 0 |
| Default cassette | R4 | 0: MP tray <br> 1: Cassette 1 <br> 2: Cassette 2 <br> 3: Cassette 3 <br> 4: Cassette 4 | 1 |
| MP tray paper size | R7 | Same as the R2 values except: 0 | 8 |
| A4/letter equation | S4 | $\begin{aligned} & \text { 0: Off } \\ & \text { 1: On } \end{aligned}$ | 1 |
| Host buffer size | S5 | $\begin{aligned} & \text { 0: } 10 \mathrm{kB}(\mathrm{x} \mathrm{H8}) \\ & \text { 1: } 100 \mathrm{kB}(\mathrm{x} \mathrm{H8}) \\ & \text { 2: } 1024 \mathrm{kB}(\mathrm{x} \mathrm{H8}) \end{aligned}$ | 1 |
| Wide A4 | T6 | $\begin{aligned} & \text { 0: Off } \\ & \text { 1: On } \end{aligned}$ | 0 |
| Line spacing * | U0 | Lines per inch (integer value) | 6 |
| Line spacing * | U1 | Lines per inch (fraction value) | 0 |
| Character spacing * | U2 | Characters per inch (integer value) | 10 |


| Item | FRPO | Setting values | Factory setting |
| :---: | :---: | :---: | :---: |
| Character spacing * | U3 | Characters per inch (fraction value) | 0 |
| Country code | U6 | 0: US-ASCII <br> 1: France <br> 2: Germany <br> 3: UK <br> 4: Denmark <br> 5: Sweden <br> 6: Italy <br> 7: Spain <br> 8: Japan <br> 9: US Legal <br> 10: IBM PC-850 (Multilingual) <br> 11: IBM PC-860 (Portuguese) <br> 12: IBM PC-863 (Canadian French) <br> 13: IBM PC-865 (Norwegian) <br> 14: Norway <br> 15: Denmark 2 <br> 16: Spain 2 <br> 17: Latin America <br> 21: US ASCII (U7 = 50 SET) <br> 77: HP Roman-8 (U7 = 52 SET) | 41 |
| Code set at power up in daisywheel emulation | U7 | 0 : Same as the default emulation mode (P1) <br> 1: IBM <br> 6: IBM PC-8 <br> 50: US ASCII (U6 = 21 SET) <br> 52: HP Roman-8 (U6 = 77 SET) | 53 |
| Font pitch for fixed pitch scalable font | U8 | Integer value in cpi: 0 to 99 | 10 |
|  | U9 | Fraction value in 1/100 cpi: 0 to 99 | 0 |
| Font height for the default scalable font * | V0 | Integer value in 100 points: 0 to 9 | 0 |
|  | V1 | Integer value in points: 0 to 99 | 12 |
|  | V2 | Fraction value in $1 / 100$ points: $0,25,50,75$ | 0 |
| Default scalable font * | V3 | Name of typeface of up to 32 characters, enclosed with single or double quotation marks | Courier |


| Item | FRPO | Setting values | Factory setting |
| :---: | :---: | :---: | :---: |
| Default weight (courier and letter Gothic) | V9 | 0: Courier = darkness <br> Letter Gothic = darkness <br> 1: Courier = regular <br> Letter Gothic = darkness <br> 4: Courier = darkness <br> Letter Gothic = regular <br> 5: Courier = regular Letter Gothic = regular | 5 |


| Color mode | W1 | 0: Monochrome (grayscale) <br> 1: Color (CMYK) | 1 |
| :---: | :---: | :---: | :---: |
| Gloss mode | W6 | $\begin{aligned} & \text { 0: Low (normal) } \\ & \text { 1: High } \end{aligned}$ | 0 |
| Paper type for the MP tray | X0 | 1: Plain 1 <br> 2: Transparency <br> 3: Preprinted <br> 4: Label <br> 5: Bond <br> 6: Recycle <br> 7: Vellum <br> 9: Letterhead <br> 10: Color <br> 11: Prepunched <br> 12: Envelope <br> 13: Cardstock <br> 16: Thick <br> 17: High quality <br> 21: Custom1 <br> 22: Custom2 <br> 23: Custom3 <br> 24: Custom4 <br> 25: Custom5 <br> 26: Custom6 <br> 27: Custom7 <br> 28: Custom8 | 1 |


| Item | FRPO | Setting values | Factory setting |
| :---: | :---: | :---: | :---: |
| Paper type for paper cassettes 1 | X1 | 1: Plain | 1 |
| to 2 | X2 | 3: Preprinted |  |
|  |  | 5: Bond |  |
|  |  | 6: Recycled |  |
|  |  | 9: Letterhead |  |
|  |  | 10: Color |  |
|  |  | 11: Prepunched |  |
|  |  | 17: High quality |  |
|  |  | 21: Custom1 |  |
|  |  | 22: Custom2 |  |
|  |  | 23: Custom3 |  |
|  |  | 24: Custom4 |  |
|  |  | 25: Custom5 |  |
|  |  | 26: Custom6 |  |
|  |  | 27: Custom7 |  |
|  |  | 28: Custom8 |  |


| Paper type for paper cassettes 3 to 4 | $\begin{aligned} & \mathrm{X} 3 \\ & \mathrm{X} 4 \end{aligned}$ | 1: Plain <br> 3: Preprinted <br> 5: Bond <br> 6: Recycled <br> 9: Letterhead <br> 10: Color <br> 11: Prepunched <br> 17: High quality <br> 21: Custom1 <br> 22: Custom2 <br> 23: Custom3 <br> 24: Custom4 <br> 25: Custom5 <br> 26: Custom6 <br> 27: Custom7 <br> 28: Custom8 |  |
| :---: | :---: | :---: | :---: |
| PCL paper source | X9 | 0 : Performs paper selection depending on media type. <br> 1: Performs paper selection depending on paper sources. | 0 |


| Automatic continue for 'Press <br> GO' | Y0 | $0:$ Off <br> $1:$ On | 0 |
| :--- | :---: | :--- | :---: |
| Automatic continue timer | Y1 | Number from 0 to 99 in increments of 5 sec- <br> onds | 6 <br> $(30$ secons $)$ |
| Error message for device error | Y3 | $0:$ Not detect <br> $1:$ Detect | 0 |


| Item | FRPO | Setting values | Factory setting |
| :---: | :---: | :---: | :---: |
| Duplex operation for specified paper type (Prepunched, Preprintedand Letterhead) | Y4 | $\begin{aligned} & \text { 0: Off } \\ & \text { 1: On } \end{aligned}$ | 0 |
| Default operation for PDF direct printing | Y5 | 0: Enlarges or reduces the image to fit in the current paper size. Loads paper from the current paper cassette. <br> 1: Through the image. Loads paper which is the same size as the image. <br> 2: Enlarges or reduces the image to fit in the current paper size. Loads Letter, A4 size paper depending on the image size. <br> 3: Through the image. Loads Letter, A4 size paper depending on the image size. <br> 8: Through the image. Loads paper from the current paper cassette. <br> 9: Through the image. Loads Letter, A4 size paper depending on the image size. <br> 10: Enlarges or reduces the image to fit in the current paper size. Loads Letter, A4 size paper depending on the imagesize. | 0 |
| e-MPS error | Y6 | 0:Does not print the error report and display the error message. <br> 1:Prints the error report. <br> 2:Displays the error message. <br> 3:Prints the error report and displays the error message. | 3 |

a. Characters higher than 127 are printed regardless of the C 8 value. However, setting C 8 to 0 does not print character code 160.

## (4) System Error (Fxxxx) Outline

The document is subscribed to describe the outline of the factors of the Fxxx errors that are not described in the
service manual. Please utilize it to refer to checking the factors.
Please utilize it as the measures when the system is not recovered after power off/on or it frequently occurs.

* : It may be from the hardware factor while the error (Fxxx) is indicated.

Please initially check the following.

Check the DDR2 memory and neighboring parts:
Check the contact of YS1 or YS2 with the memory. Replace the memory if the error repeats.
Check the HDD if the error repeats after replacing the main board.
Take care, however, of handling the data when formatting or replacing the HDD.
Check the HDD : Replace the HDD if the error repeats after formatting the HDD.

| No. | Content | Check procedure \& check point | Remark 1 | TASKalfa 2550ci |
| :---: | :---: | :---: | :---: | :---: |
| - | Lock-up at Welcome display (TASKalfa/Ecosys) (The display unchages after a certain time (Notes1: *** seconds)) | 1) Check connection of the harness (Panel to Main board), (Main board to HDD) and connectors and check function. <br> 2) Check contact of the DDR memory by detaching and reattaching. and check function. replace it if available and check function. <br> 3) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 4) Execute the U021Memory initializing to initialize the controller backup memory and check function. <br> 5) Replace the panelmain board and check function. <br> 6) Replace the main board and check function. <br> 7) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. | *User data and installed software is deleted if executing the U024. Reinstallation is required. | [Main - Panel Interface] <br> Main board:YC12, YC17,YC30 <br> Panel board: YC1, YC2,YC3 <br> [Main - HDD] <br> Main board: YC1,YC27 <br> [Check the contact with the DDR2 memory] Main board: YS1 <br> (Notes1) 190 seconds |
| F000 | CF000 appears in a certain time (Notes2: *** seconds) after the Welcome display continues <br> Panel-Main board communication error | 1) Check connection of the harness (Panel to Main board), (Main board to HDD) and connectors and check function. <br> 2) Check contact of the DDR memory by detaching and reattaching. and check function. replace it if available and check function. <br> 3) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 4) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 5) Replace the main board and check function. <br> 6) Replace the panelmain board and check function. <br> 7) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  | [Main-Panel Interface] Main board: YC12, YC17, YC30 Panel borad: YC1, YC2, YC3 <br> If the LEDs are in the state belwo when the F000 appears, the DDR2 memory failure may be the cause. Check contact of the YS1 with the memory. <br> Memory LED turned on Attention LED turned on <br> (Note2) 190 seconds |
| F10X F11X | An error is detected at OS or some of device drivers. | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F12X | An error is detected at the Scan control section | 1) Check connection of the harness (Scan/DP - Main board) and connectors and check function. <br> 2) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 3) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 4) Replace the Scan/DP board and check function. <br> 5) Replace the main board and check function. <br> 6) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  | [Main-Scan Interface] Main board:YC11,YC25 ISC board: YC3, YC4 |


| No. | Content | Check procedure \& check point | Remark 1 | TASKalfa 2550ci |
| :---: | :---: | :---: | :---: | :---: |
| F13X | An error is detected at the Panel control section | 1) Check connection of the harness (Panel - Main board) and connectors and check function. <br> 2) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 3) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 4) Replace the panel board and check function. (*2) <br> 5) Replace the main board and check function. <br> 6) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. <br> (*2) For the model separating the main/panel PWBs. |  | [Main-Panel Interface] Main board: YC12,YC17,YC30 Panel board: YC1,YC2,YC3 |
| F14X | An error is detected at the FAX control section | 1) Check connection of the harness (FAX - Main board) and connectors and check function. <br> 2) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 3) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 4) Execute the U671 Clear FAX back up data (FAX DIMM clear) and check function. (*3) (Take cae of the received data since it is cleared) <br> 5) Replace the FAX_DIMM and check function. <br> 6) Replace the FAX board and check function. <br> 7) Replace the main board and check function. <br> 8) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. <br> (*3) For the models using the main PWB with the flash for the FAX data. |  | F14A,F14F: KUIO error Main board (USB hub) <br> [Main-KUIO Interface] <br> Main board: YC8, YC9 <br> Video board: YC13, YC14 |
| F15X | An error is detected at the authentication device control section | 1) Check connection of the harness (Authentication device - Main board) and connectors and check function. <br> 2) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 3) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 4) Replace the main board and check function. <br> 5) Replace the HDD and check function. (*1) <br> 6) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. | Authentication device: Card Reader, etc. |  |
| F16X | An error is detected at the KMAS control section | 1) Check connection of the harness (KMAS - Main board) and connectors and check function. <br> 2) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 3) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  | [KMAS Interface] <br> Main board: YC7 |


| No. | Content | Check procedure \& check point | Remark 1 | TASKalfa 2550ci |
| :---: | :---: | :---: | :---: | :---: |
| F17X | An error is detected at the print data control section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F18X | An error is detected at the Video control secion | 1) Check connection of the harness (Engine - Main board) and connectors and check function. <br> 2) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 3) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 4) Replace the engine board and check function. <br> 5) Replace the main board and check function. <br> 6) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  | [Main - Video Interface] <br> Main board:YC3 <br> Video board: YC1 <br> [Video - Engine Interface] <br> Video board: YC3 <br> Engine board: YC26 |
| F19X F1AX | An error is detected at the OS or some of device drivers | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F1BX | An error is detected at the Security management section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F1CX | An error is detected at the File System management section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. | *The F1C4 error appears with the HDD security kit at work. |  |


| No. | Content | Check procedure \& check point | Remark 1 | TASKalfa 2550ci |
| :---: | :---: | :---: | :---: | :---: |
| F1DX | An error is detected at the Image memory management section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. | *The F1D4 error is RAM allocation error. <br> 1. Check it with the U340 <br> 2. Initialize the setting valued with the U021 |  |
| F1EX <br> F1FX <br> F20X | An error is detected at the OS or some of device drivers | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F21X F22X F23X | An error is detected at the Image processing section | 1) Check contact of the DDR memory and check function. <br> 2) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 3) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 4) Replace the main board and check function. <br> 5) Replace the HDD and check function. (*1) <br> 6) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  | [DDR2 memory contact check] Main board:YS1 <br> A certain part of the memory may be faulty. The frequency of faiure occurrence is dependent on the frequency of access to the faulty bit. The ASIC may be faulty if the memory is not sensitive. |
| F24X | An error is detected at the System management section | 1) Check contact of the DDR memory and check function. <br> 2) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 3) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 4) Replace the main board and check function. <br> 5) Replace the HDD and check function. (*1) <br> 6) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. | *The F248 eror is printer process error. if it repeats with a certain print data, retrieve the capture data and USBLOG. | [DDR2 memory contact check] Main board:YS1 <br> A certain part of the memory may be faulty. The frequency of failure occurrence is dependent on the frequency of access to the faulty bit. The ASIC may be faulty if the memory is not sensitive. |
| F25X | An error is detected at the Network management section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Retrieve the USBLOG and contact the Service Administratuve Division. <br> (or retrieve the packet capture data depending on the reult of analysis) <br> (*1) For the HDD standard model only. | *This may be owing to the users network environment. |  |
| F26X <br> F27X <br> F28X <br> F29X <br> F2AX | An error is detected at the System management section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |


| No. | Content | Check procedure \& check point | Remark 1 | TASKalfa 2550ci |
| :---: | :---: | :---: | :---: | :---: |
| F2BX | An error is detected at the Network control section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Retrieve the USBLOG and contact the Service Administratuve Division. (or retrieve the packet capture data depending on the reult of analysis) (*1) For the HDD standard model only. |  |  |
| F2CX |  |  |  |  |
| F2EX |  |  |  |  |
| F2FX |  |  |  |  |
| F30X |  |  |  |  |
| F31X |  |  |  |  |
| F33X | An error is detected at the Scan management section | 1) Check connection of the harness (Scan/DP board - main board) and connectors and check function. <br> 2) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 3) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 4) Replace the Scan/DP board and check function. <br> 5) Replace the main board and check function. <br> 6) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F34X | An error is detected at the Panel management section | 1) Check connection of the harness (Panel board - main board) and connectors and check function. <br> 2) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 3) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 4) Replace the panel board and check function. (*2) <br> 5) Replace the main board and check function. <br> 6) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. <br> (*2) For the models separating the panel/main PWBs. |  |  |
| F35X | An error is detected at the Print control section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F36X | An error is detected at the Print management section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |


| No. | Content | Check procedure \& check point | Remark 1 | TASKalfa 2550ci |
| :---: | :---: | :---: | :---: | :---: |
| F37X | An error is detected at the FAX management section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Execute the U671 Clear FAX back up data (FAX DIMM clear) and check function. (*3) (Take cae of the received data since it is cleared) <br> 4) Replace the FAX_DIMM and check function. <br> 5) Replace the main board and check function. <br> 6) Replace the HDD and check function. (*1) <br> 7) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. <br> (*3) For the models using the main PWB with the flash for the FAX data. |  | F14A,F14F:KUIO error Main board (USB hub) <br> [Main-KUIO Interface] Main board: YC8,YC9 Video board: YC13,YC14 |
| F38X | An error is detected at the Authentication/permit management section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F39X | An error is detected at the KMAS control section | 1) Check connection of the harness (KMAS - Main board) and connectors and check function. <br> 2) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 3) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  | [KMAS Interface] <br> Main board: YC7 |
| F3AX | An error is detected at the Entity management section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F3BX |  |  |  |  |
| F3CX |  |  |  |  |
| F3DX |  |  |  |  |
| F3EX |  |  |  |  |
| F40X |  |  |  |  |
| F41X |  |  |  |  |
| F43X |  |  |  |  |
| F44X |  |  |  |  |
| F45X |  |  |  |  |
| F46X | An error is detected at the Print image process section | 1) Replace the main board and check function. <br> 2) Retrieve the USBLOG <br> (or retrieve the print capture data by case) | *The F46F is printer process error. If it repeats with a certain print data, retrieve the capture data and USBLOG. |  |


| No. | Content | Check procedure \& check point | Remark 1 | TASKalfa 2550ci |
| :---: | :---: | :---: | :---: | :---: |
| F47X F48X F49X | An error is detected at the Image edit process control section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F4AX F4CX | An error is detected at the Print image process section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F4DX F4EX | An error is detected at the Entity control section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F4FX | An error is detected at the Job control section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F50X | An error is detected at the FAX control section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F51X | An error is detected at the Job execution section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F52X |  |  |  |  |
| F53X |  |  |  |  |
| F55X |  |  |  |  |
| F56X |  |  |  |  |
| F57X |  |  |  |  |


| No. | Content | Check procedure \& check point | Remark 1 | TASKalfa 2550ci |
| :---: | :---: | :---: | :---: | :---: |
| F58X | An error is detected at the Service management section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F59X |  |  |  |  |
| F5AX |  |  |  |  |
| F5BX |  |  |  |  |
| F5CX |  |  |  |  |
| F5DX |  |  |  |  |
| F5FX | An error is detected at the Service execution section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F60X | An error is detected at the Maintenance mode management section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F61X | An error is detected at the Report compiling section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F62X | An error is detected at the Service execution section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F63X | An error is detected at the Device control section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |


| No. | Content | Check procedure \& check point | Remark 1 | TASKalfa 2550ci |
| :---: | :---: | :---: | :---: | :---: |
| F64X | An error is detected at the Print image process section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F65X |  |  |  |  |
| F66X |  |  |  |  |
| F67X |  |  |  |  |
| F68X | An error is detected at the Storage device control section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. | *F684 is overwrite error with the HDD security kit |  |
| F69X | An error is detected at the HyPAS control section | 1) Format the HDD and check function. (U024 FULL formatting) (*1) <br> 2) Execute the U021 Memory initializing to initialize the controller backup memory and check function. <br> 3) Replace the main board and check function. <br> 4) Replace the HDD and check function. (*1) <br> 5) Retrieve the USBLOG and contact the Service Administrative Division. <br> (*1) For the HDD standard model only. |  |  |
| F6AX |  |  |  |  |
| F6BX |  |  |  |  |
| F6CX |  |  |  |  |
| F6DX | An error is detected at the External Server management section | 1) Check the external server and check function. <br> 2) Chekc the connection to the external server and check function. <br> 3) Check the network settings and check function. <br> 4) Replace the bridge board and check function. <br> 5) Replace the main board and check function. <br> 6) Retrieve the USBLOG and contact the Service Administrative Division. | *FieryOption related | --- |
| F6EX |  |  |  |  |
| F6FX |  |  |  |  |
| F71X |  |  |  |  |
| F72X |  |  |  |  |
| F73X |  |  |  |  |
| F75X |  |  |  |  |


| Adjusting order | Item | Image | Description | Maintenance mode |  | Original | Page | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Item No. | Mode |  |  |  |
| 1 | Adjusting the magnification in the main scanning direction (printing adjustment) | $\xrightarrow{\mid H 1}$ | Polygon motor speed adjustment | U053 | POLYGON | U053 test pattern | P.1-3-40 |  |
| 2 | Adjusting the magnification in the auxiliary scanning direction (printing adjustment) | $\square$ | Drive motor speed adjustment | U053 | MAIN | U053 test pattern | P.1-3-40 |  |
| 3 | Adjusting the center line of the MP tray (printing adjustment) |  | Adjusting the LSU print start timing | U034 | LSU OUT LEFT /MPT LSU OUT LEFT / DUPLEX | U034 test pattern | P.1-3-35 | To make an adjustment for duplex copying, select LSU OUT LEFT /DUPLEX. |
| 4 | Adjusting the center line of the cassettes (printing adjustment) |  | Adjusting the LSU print start timing | U034 | LSU OUT LEFT / CASSETTE 1, CASSETTE 2, CASSETTE 3, CASSETTE 4 | U034 test pattern | P.1-3-35 | Cassette 1: select LSU OUT LEFT /CASSETTE1 Cassette 2: select LSU OUT LEFT /CASSETTE2 Cassette 3: select LSU OUT LEFT /CASSETTE3 Cassette 3: select LSU OUT LEFT /CASSETTE4 |
| 5 | Adjusting the leading edge registration of the MP tray (printing adjustment) |  | Registration motor turning on timing (secondary paper feed start timing) | U034 | LSU OUT TOP /MPT LSU OUT TOP / DUPLEX | U034 test pattern | P.1-3-35 | To make an adjustment for duplex copying, select LSU OUT TOP /DUPLEX. <br> PAPER WIDTH 218mm or more |
| 6 | Adjusting the leading edge registration of the cassette (printing adjustment) |  | Registration motor turning on timing (secondary paper feed start timing) | U034 | LSU OUT TOP / CASSETTE | U034 test pattern | P.1-3-35 | PAPER WIDTH 218 mm or more |
| 7 | Adjusting the leading edge margin (printing adjustment) |  | LSU illumination start timing | U402 | LESD | U402 test pattern | P.1-3-105 |  |
| 8 | Adjusting the trailing edge margin (printing adjustment) |  | LSU illumination end timing | U402 | TRAIL | U402 test pattern | P.1-3-105 |  |
| 9 | Adjusting the left and right margins (printing adjustment) |  | LSU illumination start/end timing | U402 | A MARGIN C MARGIN | U402 test pattern | P.1-3-105 |  |
| 10 | Adjusting magnification of the scanner in the main scanning direction (scanning adjustment) | $\square$ <br> $\square$ | Data processing | U065 | MAIN SCAN | Test chart | P.1-3-42 |  |


| Adjusting order | Item | Image | Description | Maintenance mode |  | Original | Page | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Item No. | Mode |  |  |  |
| 11 | Adjusting magnification of the scanner in the auxiliary scanning direction (scanning adjustment) |  | Original scanning speed | $\begin{aligned} & \hline \text { U065 } \\ & \text { U070 } \end{aligned}$ | SUB SCAN <br> SUB SCAN (F) <br> SUB SCAN (B) | Test chart | $\begin{aligned} & \text { P.1-3-42 } \\ & \text { P.1-3-47 } \end{aligned}$ | U065: For copying an original placed on the platen. <br> U070: For copying originals from the DP. To make an adjustment for second side: select SUB SCAN(B) |
| 12 | Adjusting the center line (scanning adjustment) |  | Adjusting the original scan data (image adjustment) | U067 <br> U072 | FRONT ROTATE <br> FRONT BACK | Test chart | $\begin{aligned} & \text { P.1-3-45 } \\ & \text { P.1-3-50 } \end{aligned}$ | U067: For copying an original placed on the platen. <br> To make an adjustment for rotate copying, select ROTATE. <br> U072: For copying originals from the DP. <br> To make an adjustment for duplex copying, select BACK. |
| 13 | Adjusting the leading edge registration (scanning adjustment) |  | Original scan start timing | U066 <br> U071 | FRONT ROTATE <br> FRONT HEAD BACK HEAD | Test chart | $\begin{array}{\|l} \hline \text { P.1-3-44 } \\ \text { P.1-3-48 } \end{array}$ | U066: For copying an original placed on the platen. <br> To make an adjustment for rotate copying, select ROTATE. <br> U071: For copying originals from the DP. To make an adjustment for duplex copying, select BACK HEAD. |
| 14 | Adjusting the leading edge margin (scanning adjustment) |  | Adjusting the original scan data (image adjustment) | $\begin{aligned} & \text { U403 } \\ & \text { U404 } \end{aligned}$ | B MARGIN <br> B MARGIN | Test chart | $\begin{aligned} & \text { P.1-3-106 } \\ & \text { P.1-3-107 } \end{aligned}$ | U403: For copying an original placed on the contact glass U404: For copying originals from the DP. |
| 15 | Adjusting the trailing edge margin (scanning adjustment) |  | Adjusting the original scan data (image adjustment) | $\begin{aligned} & \text { U403 } \\ & \text { U404 } \end{aligned}$ | D MARGIN <br> D MARGIN | Test chart | $\begin{aligned} & \text { P.1-3-106 } \\ & \text { P.1-3-107 } \end{aligned}$ | U403: For copying an original placed on the contact glass U404: For copying originals from the DP. |
| 16 | Adjusting the left and right margins (scanning adjustment) |  | Adjusting the original scan data (image adjustment) | $\begin{aligned} & \hline \text { U403 } \\ & \text { U404 } \end{aligned}$ | A MARGIN C MARGIN A MARGIN C MARGIN | Test chart | $\begin{aligned} & \hline \text { P.1-3-106 } \\ & \text { P.1-3-107 } \end{aligned}$ | U403: For copying an original placed on the contact glass U404: For copying originals from the DP. |

When maintenance item U411 (Automatic adjustment in the scanner) is run using the specified original (P/N 7505000005)
the following adjustments are automatically made
Adjusting the scanner magnification (U065)
Adjusting the scanner leading edge registration (U066)
Adjusting the scanner center line (U067)
When maintenance item U411 (Automatic adjustment in the DP) is run using the specified original (P/N 7505000005)
the following adjustments are automatically made:
Adjusting the DP magnification (U070)
Adjusting the DP leading edge registration (U071)
Adjusting the DP center line (U072)

Image quality

| Item | Specifications |
| :--- | :--- |
| $100 \%$ magnification | Machine: $\pm 0.8 \%$ |
| Enlargement/reduction | Using DP: $\pm 1.5 \%$ |
|  | Machine: $\pm 1.0 \%$ |
| Lateral squareness | Using DP: $\pm 1.5 \%$ |
|  | Machine: $\pm 1.5 \mathrm{~mm} / 375 \mathrm{~mm}$ |
| Leading edge registration | Using DP: $\pm 3.0 \mathrm{~mm} / 375 \mathrm{~mm}$ |
|  | Cassette: $\pm 2.5 \mathrm{~mm}$ |
|  | MP tray: $\pm 2.5 \mathrm{~mm}$ |
|  | Duplex: $\pm 2.5 \mathrm{~mm}$ |
| Skewed paper feed | Cassete: $: 1.5 \mathrm{~mm}$ or less |
| (left-right difference) | MP tray: 1.5 mm or less |
| Lateral image shifting | Duplex: 2.0 mm or less |
|  | Cassette: $\pm 2.0 \mathrm{~mm}$ |
|  | MP tray: $\pm 2.0 \mathrm{~mm}$ |
|  | Duplex: $\pm 3.0 \mathrm{~mm}$ |

## (6) Wiring diagram










## PF-790 (Paper feeder) Installation Guide

INSTALLATION GUIDE

GUIDE D＇INSTALLATION

## GUÍA DE INSTALACION

## INSTALLATIONSANLEITUNG

## GUIDA ALL’INSTALLAZIONE

安装手册
설치안내서
設置手順書

## PF－790



English
Supplied parts
A．Paper feeder .....  .1
B．Fixing pin ..... 2
C．Retainer ..... ． 1
D． S Tite screw M3 $\times 12$ ..... 2
Français
Pièces fournies
A．Bureau papier ..... 1
B．Broches de fixation ..... 2
C．Élément de retenue ..... $\begin{array}{r}1 \\ \\ \hline\end{array}$
D．Vis S Tite M3 $\times 12$ ..... 2
E．Stopper R ..... 1
F．Stopper L ..... 1
G．S Tite screws M4×20
H．Pin .4
I．Paper size plate ..... ．．． 2Be sure to remove any tape and／or cushioning

Be sure to remove any tape and／or cushioning material from supplied parts．

## Español

## Partes suministradas

A．Alimentador de papel．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
B．Pasador de fijación1
C．Retén．． 1
D．Tornillos S Tite M3 $\times 12$ ..... ．． 2
E．Butée R．． 1
F．Butée LVeillez à retirer les morceaux de bande adhé－G．Vis S Tite M4 $\times 20$H．Broche．
． 8
H．Broche．
I．Plateau de format du papier ..... ． 2sive et／ou les matériaux de rembourrage des sive et／ou les matériaux de rembourrage des pièces fournies．

## Deutsch

Gelieferte Teile
A．Papiereinzug．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
B．Fixierstift ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 2
C．Halterung ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
D．S－Tite－Schrauben M3 $\times 12$ ．．．．．．．．．．．．．．．．．．．．．．． 2

E．Tope R ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
F．Tope L．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
G．Tornillo S Tite M4 × 20 ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 4
H．Clavija ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 8
I．Placa de tamaño de papel．．．．．．．．．．．．．．．．．．．．．．．． 2

Asegúrese de despegar todas las cintas y／o material amortiguador de las partes suministra－ das．

## Italiano

## Parti di fornitura

A．Unità di alimentazione della carta ．．．．．．．．．．．． 1
B．Perno di fissaggio ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 2
C．Fermo ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1


E．Anschlag R ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
F．Anschlag L．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
G．S－Tite－Schraube M4 $\times 20$ ．．．．．．．．．．．．．．．．．．．．．．．．．． 4
H．Stift．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 8

Entfernen Sie Klebeband und／oder Dämpfungs－ material vollständig von den mitgelieferten Teilen．


E．Fermo R．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
F．Fermo L ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
G．Vite S Tite M4 $\times 20$ ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 4
H．Perno ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 8
I．Piastra formato carta ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 2

Accertarsi di rimuovere tutti i nastri adesivi e／o il materiale di imbottitura dalle parti fornite．

## 简体中文

附属品
A．供纸工作台．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1

D．紧固型 $S$ 螺丝 M3 $\times 12 \ldots \ldots \ldots \ldots \ldots$ ．．．．．．．．． 2

|  |
| :---: |
|  |  |

E．限位器 $\mathrm{F} \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots$
G．紧固型 S 疊丝 M $4 \times 20 \ldots \ldots \ldots$
H．销 $\ldots \ldots$ ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 8
I．纸张尺寸插片 ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 2


## 日本語

同梱品
A．ペーパーフィーダー．．．．．．．．．．．．．．．．．．．．．．． 1
B．固定ピン．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 2
C．取付板．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
D．ビス $\mathrm{M} 3 \times 12 \mathrm{~S}$ タイト．．．．．．．．．．．．．．．．．．．．． 2

E．전도방지쇠 R．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
F．전도방지쇠 L．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
G．나사 $M 4 \times 20$ S 타이트 ．．．．．．．．．．．．．．．．．．．．．．．．．．．． 4
H．핀．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 8
I．용지크기 플레이트．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 2

동봉품에 고정 테이프，완충재가 붙어 있는 경 우에는 반드시 제거할 것．

| E．転倒防止金具R | 同梱品に固定テープ，緩衝材が付いている場合 |
| :---: | :---: |
| F．転倒防止金具L． | は必ず取り外すこと。 |
| G．ビス $\mathrm{M} 4 \times 20 \mathrm{~S}$ タイト |  |
| H．ピン ．${ }^{\text {a }}$ ．．．．．．．． |  |
| 1．用紙サイズプレート |  |

E．転倒防止金具 $R \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots$
G．ビス $\mathrm{M} 4 \times 20 \mathrm{~S}$ タイト．．．．．．．．．．．．．．．．．．．．．．．． 4
H．ピン $\ldots \ldots \ldots \ldots \ldots \ldots \ldots$ ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 8
I．用紙サイズプレート．．．．．．．．．．．．．．．．．．．．．．．．． 2

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同梱品に固定テープ,緩衝材が付いている場合
    は必ず取り外すこと。
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## Procedure

Be sure to turn the MFP main power switch off and disconnect the MFP power plug from the wall outlet before starting to install the paper feeder．


1．Place the MFP（2）on the paper feeder（A） so that the pins（1）at the rear left and rear right of the paper feeder（A）are aligned with the holes in the base of the MFP．

## Procédure

Veiller à bien mettre l＇interrupteur principal du MFP hors tension et à débrancher la fiche d＇ali－ mentation du MFP de la prise murale avant de commencer l＇installation du bureau papier．

1．Monter le MFP（2）sur le bureau papier（A） de sorte que les broches（1）à l＇arrière gauche et à l＇arrière droit du bureau papier （A）soient alignées avec les trous dans la base du MFP．

2．Retirer le tiroir inférieur（3）du MFP．

## Procedimiento

Asegúrese de apagar el interruptor principal del MFP y de desconectar el enchufe del MFP del receptáculo de pared antes de empezar a insta－ lar el alimentador de papel．

1．Coloque el MFP（2）sobre el alimentador de papel（A）de forma tal que las clavijas（1）en los lados posteriores izquierdo y derecho del alimentador de papel（A）estén alineados con los orificios de la base del MFP．

2．Nehmen Sie die untere Papierlade（3）vom MFP ab．

2．Quite el cajón de papel inferior（3）del MFP．

## Verfahren

Schalten Sie unbedingt den Hauptschalter des MFP aus，und ziehen Sie den Netzstecker des MFP von der Netzsteckdose ab，bevor Sie mit der Installation des Papiereinzugs beginnen．

1．Den MFP（2）so auf den Papiereinzug（A） setzen，dass die Stifte（1）hinten links und hinten rechts am Papiereinzug（A）auf die Öffnungen im Boden des MFP ausgerichtet sind．


2．Remove the lower paper cassette（3）from the MFP．

## Procedura

Prima di dare inizio alla procedura di installazi－ one dell＇unità di alimentazione della carta，non mancare di spegnere l＇MFP usando l＇interruttore principale di alimentazione e di disinserire la spina del cavo di alimentazione dalla presa a muro della rete elettrica．

## 安装步骤

安装供纸工作台时，必须先关闭 MFP 主机上的主
电源开关，并拔出电源插头后方可进行工作。

1．Posizionare l＇MFP（2）sull＇unità di alimenta－ zione della carta（A），in modo che i perni（1） alla parte posteriore destra e sinistra dell＇unità di alimentazione della carta（A） siano allineati con i fori nella base dell＇MFP．

2．Rimuovere il cassetto inferiore della carta（3） dall＇MFP．

## 설치순서

급지대를 설치할 때에는 반드시 MFP 본체의 주 전원 스위치를 OFF 로 하고 MFP 본체 전원 플 러그를 빼고 작업을 할 것．

1．将 MFP（2）放置在供纸工作台（A）上，使供纸工作台（A）左后和右后部的固定插销（1）与 MFP 基座中的孔对齐。

2．取出 MFP 主机的下部供纸盒（3）。


## 取付手順

ペーパーフィーダーを取り付ける際は，必ずMFP本体の主電源スイッチを OFFにし，MFP 本体の電源プラグを抜いてから作業をおこならこと。

1．급지대（A）의 후면 좌측과 후면 우측에 있는 핀들（1）이 MFP 의 바닥면에 있는 구멍에 맞 도록 MFP（2）를 급지대（A）위에 놓습니다．

2．MFP 본체의 하단 카세트（3）를 꺼냅니다

1．ペーパーフィーダー（A）の左右後方の各ピ ン（1）と MFP 本体のベースの穴が合うよう に，ペーパーフィーダー（A）にMFP 本体（2） を載せる。


3．Fixer le MFP（2）au bureau papier（A）avec
les 2 broches de fixation（B）．
4．Insérer le tiroir（3）dans la machine．

5．Installer l＇élément de retenue（C）à l＇endroit indiqué sur la figure avec 2 vis $S$ Tite M3× 12 （D）．

6．Faire tourner les dispositifs de réglage de chacun des coins（4）jusqu＇à ce qu＇ils touchent le sol et fixer ensuite le bureau papier．

3．Asegure el MFP（2）al alimentador de papel
（A）con los 2 pasadores de fijación（B）．
4．Coloque la bandeja（3）en la máquina．

5．Instale el retén（C）en el lugar que muestra la ilustración，mediante los 2 tornillos $S$ Tite M3 $\times 12$（D）．

6．Gire los reguladores en cada esquina（4） hasta que lleguen al piso y，a continuación， asegure el alimentador de papel．

3．Den MFP（2）mit den 2 Fixierstiften（B）am
Papiereinzug（A）sichern．
4．Die Kassette（3）in die Maschine einsetzen．

5．Die Halterung（C）an der dargestellten Stelle mit den 2 S－Tite－Schrauben M3 $\times 12$（D） befestigen．

6．Die Einsteller an jeder Ecke（4）drehen，bis sie den Boden berühren，und dann den Papiereinzug sichern．

3．Fissare I＇MFP（2）all＇unità di alimentazione della carta（A）con i 2 perni di fissaggio（B）．
4．Inserire il cassetto（3）nella macchina．

5．Installare il fermo（C）nella posizione mostrata in figura，utilizzando le 2 viti $S$ Tite M3 $\times 12$（D）．

6．Ruotare i regolatori（4）presenti su ciascun angolo finché vengano a contatto con il pavi－ mento，e quindi fissare l＇unità di alimentazi－ one della carta．

3．使用 2 个固定销（B）将 MFP（2）固定至供纸
工作台（A）上。
4．将供纸盒（3）装回原来的位置。

5．使用 2 颗紧固型 S 螺丝 M3 $\times 12$（D）将安装板（C）安装在图示位置。

6．转动四角上的调节器（4）直至与地面接触，然后再固定供纸盒。

3．고정핀（B） 2 개로 MFP（2）를 급지대（A）에
단단히 고정합니다．
4．카세트（3）를 본체에 삽입합니다．

5．S 타이트M3 $\times 12$ 나사（D） 2 개를 사용하여 리테이너（C）를 그림에 표시된 위치에 설치 합니다．

6．네 곳의 어져스터（4）를 맨 밑에 닿을 위치까 지 돌려 급지대를 고정합니다．

3．固定ピン（B） 2 本で MFP 本体（ 2 ）をペー
パーフィータター（A）に固定する。
4．カセット（3）を元通り挿入する。

[^6]6．四隅のアジャスター（4）を床に接触する位置まで回し，ペーパーフィーダーを固定す る。


7．Select holes（5）and install each stopper（E，F）with 2 S Tite screws M4×20（G）so that the stoppers will be grounded on the floor．

7．Sélectionner les trous（5）et installer chaque butée（E，F）avec 2 vis $S$ Tite $M 4 \times 20(G)$ de sorte que les butées reposent sur le sol．

7．Seleccione los orificios（5）e instale cada tope（E，F）con los 2 tornillos S Tite M4×20（G）de manera que los topes se conecten a tierra en el suelo．

7．Wählen Sie die Öffnungen（5）und befestigen Sie jeden Anschlag（E，F）mit den 2 S－Tite－Schrau－ ben M4 $\times 20(\mathrm{G})$ so an，dass die Anschläge am Boden aufsitzen．

7．Selezionare i fori（5）ed installare ogni fermo（E，F）con le 2 viti S Tite M4 $\times 20(G)$ in modo che i fermi siano posti a terra sul pavimento．

7．在孔（5）处各用 2 颗 M $4 \times 20$ 紧固型 S 螺丝（G）安装限位器（E，F），使之和地板接触。

7．전도방지쇠（E，F）가 바닥면에 접지될 수 있도록 구멍（5）을 선택해 나사 $M 4 \times 20 \mathrm{~S}$ 타이트（G） 각 2 개로 설치합니다．

7．転倒防止金具（E，F）が床面に接地するように，穴（5）を選択してビス M $4 \times 20 \mathrm{~S}$ タイト（G）各 2 本 で取り付ける。


## Fix Paper Width Guide

You can fix the paper width guide using the supplied retaining pins（H）．
Follow the steps below as necessary．
1．Pull out the cassette．
2．Align the paper width guide holes with the holes in the cassette for the paper width you want to set．
3．Insert the pin $(\mathrm{H})$ into the holes aligned in step 2 to fix the paper guide in place．
4．Push the cassette back in．

## Fixation du guide de largeur du papier

Vous pouvez fixer le guide de largeur du papier en utilisant les goupilles de fixation（H）fournies．
Suivez les étapes ci－dessous en fonction des besoins．
1．Sortir le tiroir．
2．Aligner les trous du guide de largeur de papier sur les trous du tiroir en fonction du papier qui doit être posé．
3．Insérer la broche $(H)$ dans les trous alignés au point 2 pour maintenir le guide de papier en place． 4．Remettre le tiroir en place．

## Fijar la guía de anchura del papel

Puede fijar la guía de anchura del papel con los pernos de retén（H）proporcionados．
Siga los pasos siguientes según sea necesario．
1．Extraiga el cajón．
2．Alinee los orificios de la guía de ajuste de la anchura con los orificios del cajón que corresponden a la anchura de papel que desee ajustar．
3．Inserte la clavija $(\mathrm{H})$ en los orificios alienados en el paso 2 para fijar la guía de papel en su lugar．
4．Vuelva a introducir el cajón．

## Papierbreitenführung befestigen

Sie können die Papierbreitenführung mit den gelieferten Haltebolzen $(H)$ befestigen．
Folgen Sie den Schritten unten falls notwendig．
1．Ziehen Sie die Papierlade heraus．
2．Richten Sie die Breiteneinstellungslöcher für das Papier auf jene Löcher in der Papierlade aus，die der gewünschten Papierbreite entsprechen．
3．Stecken Sie den Stift（H）in die bei Schritt 2 ausgerichteten Löcher，um die Papierführung zu arretieren．
4．Schieben Sie die Papierlade wieder hinein．

## Fissare la guida di larghezza carta

Per fissare la guida di larghezza carta，utilizzare i perni di fissaggio（H）forniti．
Eseguire i seguenti punti come necessario．
1．Estrarre il cassetto．
2．Allineare i fori della guida carta con i fori nel cassetto，alla larghezza della carta che si desidera impostare．
3．Inserire il perno $(\mathrm{H})$ nei fori allineati nel passo 2 per fissare la guida carta in posizione．
4．Spingere il cassetto all＇interno．

## 固定纸张宽度导板

您可以使用附带的定位销（H）固定纸张宽度导板。
必要时执行如下步骤。
1．拉出供纸盒。
2．对齐纸张宽度导板孔和供纸盒中的孔以设定所需的纸张宽度。
3．将销（H）插入步骤 2 中对齐的孔以将纸张导板固定到位。
4．将供纸盒推回机内。

## 용지폭 가이드 고정

기기와 함께 제공된 핀 $(H)$ 로 용지폭 가이드를 고정시킬 수 있습니다 ．
필요하면 아래의 작업을 하십시오．
1．카세트를 밖으로 당깁니다 ．
2．용지폭 가이드 구엉을 설정하고자 하는 용지 폭의 카세트 구멍에 맞춥니다
3．핀 $(\mathrm{H})$ 를 단계 2 에서 정렬한 구멍에 삽입하여 용지 가이드를 제자리에 고정합니다．
4．카세트를 다시 밀어 넣습니다．

## 用紙幅ガイドの固定

用紙幅ガイドは同梱のピン（H）で固定することが可能です。必要に応じて以下の作業を行ってくだ
さい。
1．カセットを引き出す。
2．固定したい用紙幅に合わせて，用紙幅ガイドの穴と，カセットの穴を合わせる。
3．手順 2 で合わせた穴にピン（H）を挿入し，用紙ガイドを固定する。
4．カセットを元に戻す。

Insertion du plateau de format du papier Insérer le plateau de format du papier（I）dans la

## Carga de la placa de tamaño de papel

Inserte la placa de tamaño de papel（I）en la ranura de visualización de tamaño correspondi－ ente．

## Einlegen der Papierformatplatte

Schieben Sie die Papierformatplatte（I）in den entsprechenden Formatanzeigeschlitz．
fente indiquant la taille appropriée．

Loading the paper size plate
Insert the paper size plate（I）into the respective size display slot．

Caricamento della piastra formato carta Inserire la piastra formato carta（I）nello slot di visualizzazione del formato rispettivo．

## 装载纸张尺寸插片

将纸张尺寸插片（I）插入各自显示尺寸的插槽中。

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요ᄋ지 크기 프ᄅ레이트 자ᄋ차ᄀ하기
요ᄋ지 크기 프ᄅ레이트 (I) 르ᄅ 해다ᄋ 크기 표시 스ᄅ로ᄉ
에 사ᄇ이ᄇ하ᄇ니다.

a


C

d

\section*{Adjusting the leading edge timing}

The reference value for the leading edge timing is \(20 \pm 1.0 \mathrm{~mm}\) at position（b）in the correct image（a）．If the timing is outside this range，perform the fol－ lowing adjustment．
1．Set maintenance mode U034，select LSU Out Top and Cassette（L）
2．Adjust the values．
Test pattern（c）：Increase the setting value．Test pattern（d）：Decrease the setting value．
3．Press the Start key to confirm the setting value．
Réglage de la synchronisation du bord de tête
La valeur de référence de la synchronisation du bord de tête est de \(20 \pm 1,0 \mathrm{~mm}\) à la position（b）d＇une image correcte（a）．Si la synchronisation est hors de cette plage，procéder au réglage suivant．
1．Passer en mode maintenance U034，sélectionner LSU Out Top et Cassette（L）．
2．Régler les valeurs．
Mire d＇essai（c）：Augmentez la valeur de réglage．Mire d＇essai（d）：Diminuez la valeur de réglage．
3．Appuyer sur la touche de Start pour confirmer la valeur de réglage．

\section*{Cómo ajustar la sincronización del borde superior}

El valor de referencia de la sincronización del borde superior es de \(20 \pm 1,0 \mathrm{~mm}\) en la posición（b）de la imagen correcta（a）．Si la sincronización estuviera fuera de este rango，haga el siguiente ajuste．
1．Entre al modo de mantenimiento U034，seleccione LSU Out Top y Cassette（L）．
2．Ajuste los valores．
Patrón de prueba（c）：Aumente el valor de configuración．Patrón de prueba（d）：Reduzca el valor de configuración．
3．Pulse la tecla de Start para confirmar el valor de configuración．

\section*{Einstellen des Vorderkanten－Timing}

Der Bezugswert des Vorderkanten－Timing ist \(20 \pm 1,0 \mathrm{~mm}\) an Position（b）des korrekten Bilds（a）．Falls das Timing außerhalb dieses Bereichs liegt，ist fol－ gende Einstellung vorzunehmen．
1．Schalten Sie in den Wartungsmodus U034，wählen Sie LSU Out Top und Cassette（L）．
2．Die Werte einstellen．
Testmuster（c）：Den Einstellwert erhöhen．Testmuster（d）：Den Einstellwert verringern．
3．Den Einstellwert durch Drücken der Start－Taste bestätigen．
Regolazione della sincronizzazione del bordo principale
Il valore di riferimento per la sincronizzazione del bordo principale è \(20 \pm 1,0 \mathrm{~mm}\) alla posizione（b）nell＇immagine corretta（a）．Se la sincronizzazione è all＇infuori di questa gamma，effettuare la regolazione seguente．
1．Impostare la modalità manutenzione U034，selezionare LSU Out Top e Cassette（L）．
2．Regolare i valori．
Modello di prova（c）：Aumentare il valore dell＇impostazione．Modello di prova（d）：Diminuire il valore dell＇impostazione．
3．Premere il tasto di Start per confermare il valore dell＇impostazione．

\section*{前端对位调节}

前端对位的基准值在矫正图像（a）的（b）位置为 \(20 \pm 1.0 \mathrm{~mm}\) 。超出该范围时，须进行以下调节。
1．设置维护模式 U034，选择 LSU Out Top，Cassette（L）。
2．调整设定值。
测试图案（c）：调高设定值。测试图案（d）：调低设定值。
3．按 Start 键，以确定设定值。

\section*{선단 타이밍 조정}

선단 타이잉은 적정화상（a）의（b）위치에서 기준치는 \(20 \pm 1.0 \mathrm{~mm}\) ．여기에서 벗어나는 것은 이하의 조정을 합니다．
1．메인터넌스 모드 U034 를 세트하고 LSU Out Top，Cassette（L）을 선택합니다 ．
2．설정치를 조정합니다．
테트스 패턴（c）：설정치를 높입니다．테스트 패턴（d）：설정치를 내립니다．
3．시작키를 누르고 설정치를 확인합니다．

先端タイミング調整
先端タイミングは，適正画像（a）の（b）の位置で基準値は \(20 \pm 1.0 \mathrm{~mm}\) 。これから外れるときは以下の調整をおこなう。
1．メンテナンスモード U034 をセットし，LSU Out Top，Cassetteを選択する。
2．設定値を調整する。
テストパターン（c）：設定値を上げる。 テストパターン（d）：設定値を下げる。
3．スタートキーを押し，設定値を確定する。

e

g

h

\section*{Adjusting the center line}

The reference value for the center line is \(\pm 0.5 \mathrm{~mm}\) or less at position（ f ）in the correct image（e）．If the center line position is outside this range，perform the following adjustment．
1．Set maintenance mode U034，select LSU Out Left and Cassette3 or Cassette4．
2．Adjust the values．
Test pattern（g）：Increase the setting value．Test pattern（h）：Decrease the setting value．
3．Press the Start key to confirm the setting value．

\section*{Réglage de l＇axe}

La valeur de référence pour l＇axe est de \(\pm 0,5 \mathrm{~mm}\) ou moins à la position（f）d＇une image correcte（e）．Si la position de l＇axe est hors de cette plage， effectuez le réglage suivant．
1．Passer en mode maintenance U034，sélectionner LSU Out Left et Cassette3 ou Cassette4．
2．Régler les valeurs．
Mire d＇essai（g）：Augmentez la valeur de réglage．Mire d＇essai（h）：Diminuez la valeur de réglage．
3．Appuyer sur la touche de Start pour confirmer la valeur de réglage．

\section*{Ajuste de la línea central}

El valor de referencia de la línea central es de \(\pm 0,5 \mathrm{~mm}\) o menor，en la posición（f）de la imagen correcta（e）．Si la posición de la línea central estuviera fuera de este rango，haga el siguiente ajuste．
1．Entre al modo de mantenimiento U034，seleccione LSU Out Left y Cassette3 o Cassette4．
2．Ajuste los valores．
Patrón de prueba（g）：Aumente el valor de configuración．Patrón de prueba（h）：Reduzca el valor de configuración．
3．Pulse la tecla de Start para confirmar el valor de configuración．

\section*{Einstellen der Mittenlinie}

Der Bezugswert für die Mittenlinie ist \(\pm 0,5 \mathrm{~mm}\) oder weniger an Position（f）des korrekten Bilds（e）．Falls die Mittenlinie außerhalb dieses Bereichs liegt， ist folgende Einstellung vorzunehmen．
1．Schalten Sie in den Wartungsmodus U034，wählen Sie LSU Out Left und Cassette3 oder Cassette4．
2．Die Werte einstellen．
Testmuster（g）：Den Einstellwert erhöhen．Testmuster（h）：Den Einstellwert verringern．
3．Den Einstellwert durch Drücken der Start－Taste bestätigen．

\section*{Regolazione della linea centrale}

Il valore di riferimento per la linea centrale è \(\pm 0,5 \mathrm{~mm}\) o inferiore alla posizione（f）nell＇immagine corretta（e）．Se la posizione della linea centrale è all＇infu－ ori di questa gamma，effettuare la regolazione seguente．
1．Impostare la modalità manutenzione U034，selezionare LSU Out Left e Cassette3 o Cassette4．
2．Regolare i valori．
Modello di prova（g）：Aumentare il valore dell＇impostazione．Modello di prova（h）：Diminuire il valore dell＇impostazione．
3．Premere il tasto di Start per confermare il valore dell＇impostazione．

\section*{中心线调节}

中心线的基准值在矫正图像（e）的（f）位置为 \(\pm 0.5 \mathrm{~mm}\) 以内。超出该范围时，须进行以下调节。
1．设置维护模式 U034，选择 LSU Out Left，Cassette3 或 Cassette4。
2．调整设定值。
测试图案（g）：调高设定值。测试图案（h）：调低设定值。
3．按 Start 键，以确定设定值。

\section*{센터라인 조정}

센터라인은 적정화상（e）의（f）위치에서 기준치는 \(\pm 0.5 \mathrm{~mm}\) 이내．여기에서 벗어나는 것은 이하의 조정을 합니다．
1．메인터넌스 모드 U034 를 세트하고 LSU Out Left，Cassette3 또는 Cassette4 를 선택합니다．
2．설정치를 조정합니다．
테트스 패턴（g）：설정치를 높입니다．테스트 패턴（h）：설정치를 내립니다．
3．시작키를 누르고 설정치를 확인합니다．

\section*{センターライン調整}

センターラインは，適正画像（e）の（f）の位置で基準値は \(\pm 0.5 \mathrm{~mm}\) 以内。これから外れるときは以下の調整をおこなう。
1．メンテナンスモード U034をセットし，LSU Out Left，Cassette3 またはCassette4を選択する。
2．設定値を調整する。
テストパターン（g）：設定値を上げる。 テストパターン（h）：設定値を下げる。
3．スタートキーを押し，設定値を確定する。

\section*{DF-470 (Document finisher) Installation Guide}


305JS56740-01


\section*{DT-730 (Document tray) Installation Guide}

INSTALLATION GUIDE
GUIDE D＇INSTALLATION GUÍA DE INSTALACION INSTALLATIONSANLEITUNG GUIDA ALL＇INSTALLAZIONE
安装手册
설치안내서
設置手順書

\section*{for Color MFP 25／25ppm}


DT－730



ENG（I），（J）and（K）are not used． 1 piece of（D）will be left．
（FR（I），（J）et（K）ne sont pas utilisés．Une pièce de（D）sera laissée inutilisée．
（ES）（I），（J）y（K）no se utilizan．Una parte de（D）debe dejarse．
（DE）（I），（J）und（K）werden nicht verwendet． 1 Stück von（D）bleibt übrig．
（IT）（I），（J）e（K）non vengono utilizzati．Rimarrà 1 pezzo di（D）．
（CN）不使用（I），（J），（K）。会剩余（D） 1 个。
KO（I），（J）및（K）가 사용되지 않습니다．（D）피스 하나가 남게 됩니다．
（JP）（I），（J），（K）は使用しません。



\section*{FAX System(W) Installation Guide}

\section*{INSTALLATION GUIDE}

GUIDE D＇INSTALLATION

\section*{GUÍA DE INSTALACION}

\section*{INSTALLATIONSANLEITUNG}

\section*{GUIDA ALL’INSTALLAZIONE}

安装手册
설치안내서
設置手順書

\title{
FAX System（W）
}


\section*{English}

To install the FAX circuit board，see page 1.
To install the FAX circuit board as Dual FAX，see page 12.
If the finisher is already installed，remove the finisher before installing FAX System（W）．
For details，see the instructions on page 17.

\section*{Français}

Pour installer la carte à circuits FAX，se reporter à la page 1.
Pour installer la carte à circuits FAX comme FAX double，se reporter à la page 12.
Si le retoucheur est déjà en place，le déposer avant de monter le FAX System（W）．
Pour plus de précisions，se reporter aux instructions de la page 17.

\section*{Español}

Para instalar la tarjeta de circuitos de FAX，vea la página 1.
Para instalar la tarjeta de circuitos de FAX en el FAX dual，vea la página 12.
Si el finalizador ya se encuentra instalado，desmóntelo antes de instalar el FAX System（W）．
Consulte las instrucciones de la página 17 para obtener información más detallada．

\section*{Deutsch}

Angaben zur Installation der FAX－Leiterplatte finden Sie auf Seite 1.
Angaben zur Installation der FAX－Leiterplatte als Dual FAX finden Sie auf Seite 12.
Falls der Finisher schon installiert ist，müssen Sie ihn ausbauen，bevor Sie das FAX System \((\mathrm{W})\) installieren．
Einzelheiten hierzu finden Sie in den Anleitungen auf Seite 17.

\section*{Italiano}

Per installare la scheda a circuiti FAX，vedere pagina 1.
Per installare la scheda a circuiti FAX come Dual FAX，vedere pagina 12.
Se la finitrice è già installata，rimuovere la finitrice prima di installare il FAX System（W）．
Per maggiori informazioni in merito si prega di leggere le istruzioni riportate a pagina 17.

\section*{简体中文}

安装传真组件时…从第1页开始。
安装多插口组件时 \(\cdot .\). 从第 12 页开始。
已安装装订器时，必须先拆下装订器再安装 FAX System（W）。
有关详情，请参阅第 17 页的说明。

\section*{한국어}

팩스 시스템을 설치하는 경우 \(\cdots 1\) 페이지에서 시작합니다
멀티포트를 설치하는 경우 \(\cdots 12\) 페이지에서 시작합니다
피니셔가 이미 장착되어 있는 경우에는 피니셔를 제거하고 FAX System（W）를 설치할 것．
상세는 17 페이지를 참조해 주십시오．

\section*{日本語}

ファクスシステムを設置する場合 \({ }^{-} 11\) ページから始める。
マルチポートを設置する場合 \(\cdots 12\) ページから始める。
フィニッシャーがすでに装着されている場合は，フィニッシャーを取り外してから，FAX System（W）を取り付けること。
詳細は，17ページ参照の事。


G


Supplied parts
A．FAX circuit board
Option
G．Memory DIMM（ 128 MB ）

\section*{}

C．Terminal seal
＋
D．Alphabet label．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
E．Memory DIMM（ 16 MB ） ．． 1

F．PTT label（110V model only）．．．．．．．．．．．．．．．．．．．．．． 1
Pièces fournies
A．Carte à circuits FAX． ..... 1
C．Joint de borne

\section*{Option}

G．Mémoire DIMM（128 MB）

D．Etiquette de l＇alphabet ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
E．Mémoire DIMM（16 MB）

Partes suministradas
A．Tarjeta de circuitos de fax

\section*{Opción}

G．Memoria DIMM（128 MB）
（B）y（F）no se suministran
1 Cuando instale el fax Dual se necesitan（A），（C）．

C．Sello del terminalD．Etiqueta de alfabeto1
E．Memoria DIMM（16 MB）．． 1


A．FAX－Leiterplatte．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
D．Alphabetaufkleber．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
E．Speicher－DIMM（16 MB）
Parti di fornitura
A．Scheda a circuiti FAX ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1

C．Guarnizione terminale ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
D．Etichetta alfabetica ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
E．Memoria DIMM（16 MB） ．．． 1

\section*{Option}

G．Speicher－DIMM（128 MB）
（B），（F）liegen nicht bei． Für die Installation von Dual FAX sind（A），（C） erforderlich．

\section*{附属品}

A．传真电路板．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．
B．电话线．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
C．端子密封．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1
D．英文字母标签．．．．．．．．．．．．．．．．．．．．．．．．．． 1
E．内存模组 DIMM（16MB）．．．．．．．．．．．．．．．．． 1

\section*{Opzioni \\ G．Memoria DIMM（128 MB）}
\((\mathrm{B})\) is not bundled．
1 When installing the Dual FAX，（A），（C）are required．
\begin{tabular}{|c|c|c|}
\hline 동봉품 & 옵션 & （B），（F）는 동봉되어 있지 않습니다 \\
\hline A．FAX 기판 & G．메로리 DIMM（128MB） & 멀티포트 설치 시에는（A），（B），（C）가 필요합니 \\
\hline C．단자씰 & & 다． \\
\hline D．알파벳 라벨 & & \\
\hline E．메모리 DIMM（16MB） & & \\
\hline
\end{tabular}
\begin{tabular}{|c|}
\hline 同梱品 \\
\hline A．FAX 基板 \\
\hline B．モジュラーコード． \\
\hline C．端子シール． \\
\hline E．メモリーDIMM（16MB） \\
\hline
\end{tabular}

F．规格标签
.1
（B），（F）non sono in dotazione．
Quando si installa il Dual FAX，sono necessari （A），（C）．

D．알파벳 라벨
E．메모리 DIMM（16MB）．．．．．．．．．．．．．．．．．．．．．．．．．． 1

\section*{选购件}

G．内存模组 DIMM（128MB）．．．．．．．．．．．．．．．．． 1

\section*{옵션 \\ G．메로리 DIMM（128MB）}
（B），（F）는 동봉되어 있지 않습니다．
다．

E．メモリーDIMM（16MB）

オプション
G．メモリーDIMM（128MB）
（D），（F）は，同梱されていない。
マルチポート設置時は（A），（B），（C）が必要とな る。


\section*{Procedure}

\section*{Installing the memory DIMM}

1．Remove 2 screws（1），and then remove the cover（2）．


2．Install the memory DIMM（E）or the optional memory DIMM（G）into the memory slot（3） on the lower level（FLS）．
Install it with the IC side facing down．Insert it in the direction of the arrow until it clicks．
3．Replace the cover（2）using the 2 screws（1）．

\section*{Précautions}

Veillez à retirer les morceaux de bande adhé－ sive et／ou les matériaux de rembourrage des pièces fournies．
Veiller à mettre l＇interrupteur principal du MFP hors tension et à débrancher le MFP de la prise secteur avant d＇installer le système fax．

\section*{Procédure}

Installation de la mémoire DIMM
1．Déposez les 2 vis（1）puis enlevez le couver－ cle（2）．

2．Installer la mémoire DIMM（E）ou la mémoire DIMM en option（G）dans la fente mémoire （3）se trouvant au niveau inférieur（FLS）． L＇installer avec le côté IC en bas．L＇insérer dans la direction de la flèche jusqu＇au clic．
3．Reposez le couvercle（2）à l＇aide des 2 vis（1）．

\section*{Precauciones}

Asegúrese de despegar todas las cintas y／o mate－ rial amortiguador de las partes suministradas． Asegúrese de apagar el MFP colocando el interrup－ tor principal a OFF y desenchufe el MFP del sumin－ istro de red eléctrica antes de instalar el sistema de fax．

\section*{Procedimiento}

Instalación de la memoria DIMM
1．Quite 2 tornillos（1）y，después，desmonte la cubierta（2）．

2．Instale la memoria DIMM（E），o la memoria DIMM opcional（G），en la ranura para memoria（3）en el nivel inferior（FLS）
Instálelo con el lado IC hacia abajo．Insértela en la dirección que indica la flecha hasta que escuche un clic．
3．Vuelva a colocar la cubierta（2）utilizando los 2 tornillos（1）．
2．Setzen Sie das DIMM－Speichermodul（ E ）oder das optionale DIMM－Speichermodul（G）in die untere Position（FLS）der Speicherbank（3）ein．
Mit der IC－Seite nach unten weisend installie－ ren．Schieben Sie das Modul in Pfeilrichtung，bis es hörbar einrastet．
3．Bringen Sie die Abdeckung（2）wieder mit den 2 Schrauben（1）an．

\section*{Vorsichtsmaßnahmen}

Entfernen Sie Klebeband und／oder Dämpfungs－ material vollständig von den mitgelieferten Teilen．
Schalten Sie den Netzschalter des MFP aus und trennen Sie den MFP vom Netz，bevor Sie das Faxsystem installieren．

\section*{Precauzioni}

Accertarsi di rimuovere tutti i nastri adesivi e／o il materiale di imbottitura dalle parti fornite．
Assicurarsi di aver spento l＇interruttore dell＇MFP e di aver sfilato la spina dell＇MFP dalla presa prima di installare il sistema fax．

\section*{Verfahren}

Installation der DIMM－Speichermodule
1．Entfernen Sie 2 Schrauben（1）und nehmen Sie dann die Abdeckung（2）ab．

2．Installare la memoria DIMM（E）o la memoria DIMM opzionale（G）nello slot della memoria（3）al livello inferiore（FLS）
Installare con il lato IC rivolto verso il
basso．Inserirla nella direzione della freccia finché non scatta in posizione．
3．Ricollocare il coperchio（2）utilizzando le 2 viti（1）．

注意事项
如果附属品上带有固定胶带，缓冲材料时务必揭下。
请务必关闭 MFP 的开关并拔下电源插头再安装传真组件。

\section*{Procedura}

Installazione della memoria DIMM
1．Rimuovere 2 viti（1），e quindi rimuovere il coperchio（2）．

2．将内存模组 DIMM（E）或选购件内存模组 DIMM（G）安装至下层（FLS）的内存插槽（3）。安装时，将 IC 侧正面朝下。沿箭头方向将其插入到底直至发出喀嗒声。
3．使用 2 个蝶丝（1）重新安装盖板（2）。

\section*{주의사항}

동봉품에 고정 테이프，완충재가 붙어 있는 경
우에는 반드시 제거할 것
팩스 시스템을 설치하는 경우에는 MFP 본체의
주 전원 스위치를 OFF 로 하고 전원 플러그를
뺀 다음 작업을 합니다．

\section*{安装步骤}

安装内存模组DIMM
1．取下 2 个螺丝（1），然后取下盖板（2）。

\section*{注意事項}

同梱品に固定テープ，緩衝材が付いている場合 は必ず取り外すこと。
ファクスシステムを設置する場合は，MFP 本体の主電源スイッチを OFFにし，電源プラグを抜い てから作業をおこなら。

설치순서

\section*{메모리 DIMM 설치}

\section*{1．나사（1） 2 개를 제거하고 커버（2）를 제거합} 니다．

2．메모리 DIMM（E）또는 옵션 메모리 DIMM（G） 를 하단（FLS）의 메모리 슬롯（3）에 장착합니 다．IC 면을 밑으로 할 것 딸칵하고 소리가 날 때까지 화살표 방향으로 삽 입합니다．
3．나사（1） 2 개로 커버（2）를 원래대로 장착합니 다．

\section*{取付手順}

メモリーDIMM の取り付け
1．ビス（1） 2 本を外し，カバー（2）を取り外す。

2．メモリーDIMM（E）または，オプションのメモ リーDIMM（G）を下段（FLS）のメモリース ロット（3）に取り付ける。 IC 面を下向きに取り付けること。 カチッと音がするまで矢印方向に挿入する。
3．ビス（1）2 本で，カバー（2）を元通り取り付 ける。


Removing the slot cover
4．Remove 2 screws（5）and then remove the OPT1 slot cover（4）．
＊Do not use OPT2．

To install the FAX circuit board as Dual FAX，see page 12.

\section*{Dépose du couvercle de la fente}

4．Déposer les 2 vis（5）puis le couvercle de la fente OPT1（4）．
＊Ne pas utiliser OPT2．

Pour installer la carte à circuits FAX comme FAX double，se reporter à la page 12

\section*{Desmontaje de la cubierta de la ranura}

4．Quite 2 tornillos（5）y，después，quite la cubierta de la ranura OPT1（4）．
＊No utilice OPT2．

Para instalar la tarjeta de circuitos de FAX en el FAX dual，vea la página 12.

\section*{Entfernen der Einschubabdeckung}

4．2 Schrauben（5）entfernen und dann die Abdeckung（4）des Einschubs OPT1 entfernen．
＊OPT2 nicht verrwenden
Angaben zur Installation der FAX－Leiterplatte als Dual FAX finden Sie auf Seite 12.

Rimozione del coperchio vano
4．Rimuovere le 2 viti（5）e quinidi rimuovere il coperchio（4）del vano OPT1．
＊Non utilizzare OPT2
Per installare la scheda a circuiti FAX come Dual FAX，vedere pagina 12.

\section*{拆下插槽盖板}

4．拆除 2 颗螺丝（5），拆下 OPT1 的插槽盖板（4）。
※不使用 OPT2。
安装多插口组件时 \(\cdots\) 从第 12 页开始

슬롯커버 제거
4．나사（5） 2 개를 제거하고 OPT1 의 슬롯커버（4）를 제거합니다．
※OPT2 는 사용하지 말 것．
멀티포트를 설치하는 경우 \(\cdots 12\) 페이지에서 시작합니다．

スロットカバーの取り外し
4．ビス（5）2 本を外し，OPT1 のスロットカバー（4）を取り外す。 ※OPT2 は使用しないこと。

マルチポートを設置する場合 \(\cdots 12\) ページから始める。


\section*{Install the FAX circuit board．}

5．Insert the FAX circuit board（A）along the groove in OPT1 and secure the board with two screws （5）that have been removed in step 4.
Do not directly touch the FAX circuit board（A）terminal．Hold the top and bottom of the FAX circuit board，or the projection of the board to insert the FAX circuit board（A）．
Direct the label（6）on to the FAX circuit board（A）as indicated in the illustration and insert the board along the groove．

\section*{Installer la carte à circuits FAX．}

5．Insérer la carte à circuits \(\mathrm{FAX}(\mathrm{A})\) le long de la rainure dans l＇OPT1 et la fixer à l＇aide des deux vis （5）retirées à l＇étape 4.
Ne pas toucher directement la borne de la carte à circuits FAX（A）．Tenir les parties inférieure et supérieure de la carte à circuits FAX ou la saillie de la carte pour insérer la carte à circuits FAX （A）．Orienter l＇étiquette（6）de la carte à circuits FAX（A）comme illustré et insérer la plaquette le long de la rainure．

\section*{Instale la tarjeta de circuitos de fax．}

5．Inserte la tarjeta de circuitos de fax（A）a lo largo de la ranura de OPT1 y asegúrela con los dos tornillos （5）que ha quitado en el paso 4.
No toque directamente el terminal de la tarjeta de circuitos del fax（A）．Sujete las partes superior e infe－ rior de la tarjeta de circuitos de fax o la saliente de la tarjeta para insertar la tarjeta de circuitos de fax （A）．Oriente la etiqueta（6）en la tarjeta de circuitos del FAX（A）como se indica en la ilustración e inserte la tarjeta a lo largo de la ranura．

Installieren der FAX－Leiterplatte．
5．FAX－Leiterplatte（A）in die Nut des Einbauschachts OPT1 einsetzen und Leiterplatte mit den in Schritt 4 ausgebauten Schrauben（5）befestigen．
Berühren Sie die Anschlüsse der FAX－Platine（A）nicht mit den Fingern．Die FAX－Leiterplatte（A） bein Einsetzen oben und unten oder an dem Vorsprung festhalten．
Die FAX－Leiterplatte（A）so in die Nut einsetzen，dass der Aufkleber（6）wie abgebildet zur Leiterplatte zeigt．

Installare la scheda a circuiti FAX
5．Inserire la scheda a circuiti FAX（A）lungo l＇incavo nell＇OPT1 e fissare la scheda con le due viti（5） rimosse nell＇operazione 4.
Non toccare direttamente il terminale della scheda a circuiti FAX（A）．Per inserire il circuito FAX （A），tenere l＇estremit superiore e la base della scheda a circuiti FAX，o la sporgenza della scheda a circuiti FAX．Orientare l＇etichetta（6）sulla scheda a circuiti FAX（A）come indicato nell＇illustra－ zione e inserire la scheda lungo l＇incavo．

\section*{安装传真电路板}

5．沿着 OPT1 的沟槽插入传真电路板（A）并用在步骤 4 中拆下的两颗螺钉（5）固定电路板。请勿直接触摸传真电路板（A）端子。按住传真电路板的顶部和底部，或者按住电路板的突出部将传真电路板（A）插入。将传真电路板（A）上的标签（6）保持图示中的方向，将电路板沿着沟槽方向插入。
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FAX 기파ᄂ 자ᄋ차ᄀ
5. OPT1 구에 부ᄐ여 FAX 기파ᄂ (A) 르ᄅ 사ᄇ이ᄇ하고 수ᄂ서 4 에서 제거하ᄂ 나사 (5) 2 개로 고저ᄋ하ᄇ니다.
FAX 기파ᄂ(A) 의 다ᄂ자에 지ᄀ저ᄇ 다ᄒ지 않게 하ᄅ 거ᄉ.
FAX 기파ᄂ (A) 으ᄅ 사ᄇ이ᄇ 시에느ᄂ 기파ᄂ의 사ᄋ하 또느ᄂ 도ᄅ기르ᄅ 자ᄇ으ᄅ 거ᄉ
FAX 기파ᄂ (A) 으ᄅ 부ᄐ여지ᄂ 라베ᄅ (6) 그리ᄆ 표기 바ᄋ햐ᄋ대로 되도로ᄀ 사ᄇ이ᄇ하ᄅ 거ᄉ.

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FAX 基板の取り付け
5. OPT1 の溝に沿って FAX 基板 (A) を挿入し, 手順 4 で外したビス (5) 2 本で固定する。
FAX 基板 (A) の端子に直接触れないこと。
FAX 基板 (A) の挿入時は基板の上下か突起を持つこと。
FAX 基板 (A) は, 貼り付けられているラベル (6) が図に示す方向になるように, 挿入すること。

```


\section*{Connect the MFP to the telephone line．}

6．Plug the modular connector cable（7）into the line terminal，and then connect the other end to the telephone line．

For 100 V or Chinese models，use the supplied modular connecter cable（B）．

\section*{Connecter le MFP à la ligne de téléphone．}

6．Brancher le câble du connecteur modulaire（7）à la borne de la ligne，puis connecter l＇autre extrémité à la ligne de téléphone．

Pour les modèles 100 V ou Chine，utilisez le câble du connecteur modulaire（B）fourni．

\section*{Conecte el MFP a la línea telefónica．}

6．Enchufe el cable del conector modular（7）en el terminal de línea y，a continuación， conecte el otro extremo a la línea telefónica．

Para los modelos 100 V o chino，utilice el cable del conector modular \((B)\) suministrado．

\section*{Anschließen des MFP an die Telefonleitung．}

6．Telefonmodulkabel（7）in die Gerätebuchse einstecken und das Kabel an der Telefondose anschließen．

Das mitgelieferte Telefonmodulkabel（B）für die 100－V－oder China－Modelle verwenden．

Collegamento dell＇MFP alla linea del telefono．
6．Inserire il cavo connettore modulare（7）nel terminale della linea，e quindi collegare l＇altro termi－ nale alla linea del telefono．

Per modelli da 100 V o Cina，utilizzare il cavo connettore modulare \((B)\) in dotazione．

将 MFP 连接到电话线
6．将模块接插件电缆（7）插入电话线端子，然后将另一端与电话线连接。

对于 100 V 或中国机型，请使用随附的模块接插件电缆（B）。
전화회선과 전속
6．모듈코드（7）를 라인단자에 꼽습니다．다른 한 쪽의 플러그는 전화회선과 접속합니다 ．

100 V 또는 중국 모델의 경우 제공된 모듈형 커
넥터 케이블（B）을 사용하십시오．
\begin{tabular}{ll}
\hline 電話回線との接続 \\
6．モジュラ゙（7）をライン端子に差し込む。もう片方のプラグは，電話回線へ接続する。 & \(100 \mathrm{~V} /\) 中国仕様は付属のモジュラーコード（B） \\
を使用すること。
\end{tabular}


\section*{Connect the MFP to the separate phone ）．}

7．Plug the modular connector cable（8）into the telephone terminal，and then connect the other end to the separate phone．


If you don＇t connect the MFP to the separate phone，wipe the surface of the telephone termi－ nal with alcohol and adhere the terminal seal（C） upon the customer＇s request．

\section*{Connecter le MFP au téléphone séparé．}

7．Brancher le câble du connecteur modulaire（8）à la borne du téléphone，puis connecter l＇autre extrémité au téléphone séparé．

Si le MFP n＇est pas connecté au téléphone séparé à la demande du client，nettoyer la sur－ face de la borne de téléphone avec de l＇alcool et apposer le joint de borne（C）．

\section*{Conecte el MFP al teléfono separado．}

7．Enchufe el cable del conector modular（8）en el terminal del teléfono y，a continuación，conecte el otro extremo al teléfono separado．

Si no conecta el MFP a un teléfono separado， limpie la superficie del terminal del teléfono con alcohol y pegue el sello del terminal（C），a solic－ itud del cliente．

\section*{Anschließen des MFP an das separate Telefon．}

7．Das Telefonmodulkabel（8）in die Telefonbuchse einstecken und das andere Ende an das sepa－ rate Telefon anschließen．

Wenn der MFP nicht an das separate Telefon ange－ schlossen wird，die Oberfläche der Telefonbuchse mit Alkohol abwischen und Verschlusskappe（C） einsetzen，falls vom Kunden gewünscht．

\section*{Collegamento dell＇MFP al telefono separato．}

7．Inserire il cavo connettore modulare（8）nel terminale del telefono，e quindi collegare l＇altro termi－ nale al telefono separato．

Nel caso in cui non si colleghi l＇MFP al telefono separato，pulire la superficie del terminale del telefono con dell＇alcol e applicare la guarnizione terminale（C）a richiesta del cliente．

\section*{将 MFP 连接到其它电话}

7．将模块接插件电缆（8）插入电话端子，然后将另一端与其他电话连接。
如果您没有将 MFP 连接至其他电话，请用酒精擦拭电话端子表面，并按照客户要求粘上端子密封 （C）。


\section*{Attach the alphabet labels（excluding 100 V models）．}

8．Insert a flat－head screwdriver at the tip indicated by the arrows（9）as shown on the left，and slide the operation panel covers（10）（11）to remove them．

\section*{Apposer les étiquettes de l＇alphabet（Sauf sur les modèles 100 V ）．}

8．Insérer un tournevis à lame à l＇endroit repéré par les flèches（9）comme illustré ci－contre à gauche et faire glisser les couvercles du panneau de com－ mande（10）（11）pour les déposer．

Fije las etiquetas de alfabeto（a excepción de los modelos de 100 V ）．
8．Inserte un destornillador de pala plana en la punta que indican las flechas（9）como se muestra a la izquierda y deslice las cubiertas del panel de tra－ bajo（10）（11）para quitarlas．

\section*{Anbringen der Alphabetaufkleber（ausgenommen 100－V－Modelle）．}

8．Einen flachen Schraubendreher an der links mit Pfeilen（9）bezeichneten Spitze einschieben und die Bedienfeldabdeckungen（10）（11）verschieben， um sie dann abzunehmen．

Applicare le etichette alfabetiche（esclusi i modelli da 100 V ）．
8．Inserire un cacciavite a testa piana nel punto indicato dalla freccia（9）come mostrato sulla sinistra，e slittare i coperchi（10）（11）del pannello operativo per rimuoverli．

粘贴英文字母标签（100V 规格以外）
8．如图所示，在 \(\mathbf{\Delta}\) 箭头（9）前方插入一字螺丝刀，滑动并取下操作面板的盖板（10）（11）。

알파벳 라벨의 부착（ 100 V 사양 이외）
8．그림과 같이 \(\boldsymbol{\Delta}\) 표시（9）앞에 마이너스 드라이버를 삽입해 조작 판넬의 커버（10）（11）를 미끄러트리면서 떼어 냅니다．

アルファベットラベルの貼り付け（100V 仕様以外）
8．この作業は不要。


9．Remove the clear panel（12）．


10．Remove the operation panel sheet（13）．

9．Déposer le panneau transparent（12）．10．Déposer la tôle du panneau de commande （13）．

9．Quite el panel transparente（12）．
10．Quite la hoja del panel de trabajo（13）．

9．Die durchsichtige Platte（12）entfernen． 10．Die Bedienfeldfolie（13）entfernen．

9．拆下透明面板（12）。
10．拆下操作面板页（13）。

9．클리어 판넬（12）을 제거합니다．10．조작판넬시트（13）를 제거합니다．
9．この作業は不要。
10．この作業は不要。


11．Wipe the area above the numeric keys on the operation panel sheet （13）with alcohol and attach the alphabet labels（D）．
In Asia and Oceania，use PQRS TUV WXYZ label，and do not use PRS TUV WXY and OPER labels．

11．Nettoyer à l＇alcool la surface au－dessus des touches numériques sur la tôle du panneau de commande（13）et apposer les étiquettes alphabé－ tiques（D）．
En Asie et Océanie，utiliser l＇étiquette PQRS TUV WXYZ et pas les étiquettes PRS TUV WXY et OPER．

11．Limpie el área sobre las teclas numéricas de la hoja del panel de tra－ bajo（13）con alcohol y fije las etiquetas de alfabeto（D）．
En Asia y Oceanía，utilice la etiqueta PQRS TUV WXYZ y no use las PRS TUV WXY ni las OPER．

11．Den Bereich über den Zifferntasten an der Bedienfeldfolie（13）mit Alkohol abwischen und die Alphabetaufkleber（D）hier anbringen． In Asien und Ozeanien den Aufkleber PQRS TUV WXYZ verwenden； nicht die Aufkleber PRS TUV WXY und OPER verwenden．

11．Pulire l＇area sopra i tasti numerici sul foglio del pannello operativo（13） con alcool ed applicare le etichette alfabetiche（D）．
In Asia ed Oceania，utilizzare l＇etichetta PQRS TUV WXYZ e non utiliz－ zare le etichette PRS TUV WXY e OPER．

11．使用酒精清洁操作面板页（13）的数字键上部，粘贴英文字母标签（D）。
在亚洲和大洋州，请使用 PQRS TUV WXYZ 标签，而不要使用 PRS TUV WXY
和 OPER 标签。

11．조작판넬시트（13）의 텐키 윗측을 알코올 청소하고 알파벳 라벨（D）
을 붙입니다．
아시아？오세아니아에서는「PRS TUV WXY」및「OPER」라벨을 사
용하지 말고「PQRS TUV WXYZ」의 라벨을 사용할 것．

\section*{11．この作業は不要。}


12．Fixer la tôle du panneau de commande（13）．13．Reposer le panneau transparent（12）．\(\quad\) 14．Reposer les couvercles du panneau de com－ mande（10）（11）．

12．Fije la hoja del panel de trabajo（13）．
13．Vuelva a instalar el panel transparente（12）．
14．Vuelva a instalar las cubiertas del panel de trabajo（10）（11）．

12．Die Bedienfeldfolie（13）anbringen．
13．Die durchsichtige Platte（12）wieder anbrin－ gen．

14．Die Bedienfeldabdeckungen（10）（11）wieder anbringen．
12．Applicare il foglio del pannello operativo
（13）．

13．Reinstallare il pannello trasparente（12）． （13）．

14．Reinstallare i coperchi（10）（11）del pannello operativo．


Attach the PTT label（for China， 110 V models only）．
15．Attach the PTT label（F）after wiping with alcohol．

When installing the optional Dual FAX（when adding the FAX circuit board to OPT2），proceed to the following procedures．When not installing， proceed to page 16

Fixer l＇étiquette d＇approbation（pour la Chine，modèles 110 V seulement）．
15．Cette étape est superflue．

Lorsqu＇on installe le FAX double en option （lorsqu＇on ajoute la carte à circuits FAX à I＇OPT2），effectuer les procédures suivantes． Si on ne l＇installe pas，passer à la page 16.

Coloque la etiqueta de aprobación（para China，solo para los modelos de 110 V ）．
15．Este paso no es necesario．

Cuando instale el FAX dual opcional（cuando agrega la tarjeta de circuitos de FAX a OPT2）， vaya a los siguientes procedimientos． Cuando no lo instala，vaya a la página 16

Den Genehmigungsaufkleber anbringen（für China nur 110－V－Modelle）．
15．Dieser Schritt ist nicht erforderlich．

Wenn das optionale Dual FAX installiert wird （Hinzufügen der FAX－Leiterplatte zu OPT2），mit den folgenden Verfahren fortfahren． Erfolgt diese Installation nicht，mit Seite 16 fortfahren．

\section*{Applicare l＇etichetta di approvazione（per Cina，solo per i modelli da 110 V）．} 15．Questo passo non è richiesto．

粘贴规格标签（仅限中国，110V 规格）
15．用酒精清洁后，请在如图所示的位置贴上规格标签（F）。

Quando si installa il Dual FAX opzionale （quando si aggiunge la scheda a circuiti FAX all＇OPT2），continuare con la seguente procedura．
Se non si esegue l＇installazione passare alla pagina 16.

規格ラベルの貼り付け（中国，110V 仕様のみ）
15．この作業は不要。

オプションのマルチポートを設置する場合 （FAX 基板を OPT2 に増設する場合）は，次の手順 に進む。
設置しない場合は，16ページへ進む。

Install the Dual FAX
Refer to page 1 for the supplied parts．

\section*{Removing the slot cover}

1．Remove 2 screws（2）and then remove the OPT2 slot cover（1）．

\section*{Installer le FAX double．}

Pour plus de détails concernant les pièces fournies，se reporter à la page 1 ．

\section*{Dépose du couvercle de la fente}

1．Déposer les 2 vis（2）puis le couvercle de la fente OPT2（1）．

Instale el FAX dual
Consulte la página 1 de las piezas suministra－ das．

\section*{Desmontaje de la cubierta de la ranura}

1．Quite 2 tornillos（2）y，después，quite la cubierta de la ranura OPT2（1）．

Installieren des Dual FAX
Die mitgelieferten Teile sind auf Seite 1 aufgelistet

\section*{Entfernen der Einschubabdeckung}

1．2 Schrauben（2）entfernen und dann die Abdeckung（1）des Einschubs OPT2 entfernen．

\section*{Installare il Dual FAX}

Fare riferimento alla pagina 1 per le parti in dot－ azione．

\section*{Rimozione del coperchio vano}

1．Rimuovere le 2 viti（2）e quinidi rimuovere il coperchio（1）del vano OPT2．

\section*{安装多插口组件}

同装品时，参照第 1 页。

拆下插槽盖板
1．拆除 2 颗螺丝（2），拆下 OPT2 的插槽盖板（1）。
\begin{tabular}{ll} 
ㅇㅓㅓ티포트 설치 & 슬롯커버 제거 \\
동봉품은 1 페이지를 참조합니다 & 1. 나사（2） 2 개를 제거하고 OPT2 의 슬롯커버（1）를 제거합니다.
\end{tabular}

マルチポートの設置
同梱品は 1 ページを参照する。

スロットカバーの取り外し
1．ビス（2）2 本を外し，OPT2 のスロットカバー（1）を取り外す。


\section*{Install the FAX circuit board．}

2．Insert the FAX circuit board（A）along the groove in OPT2 and secure the board with two screws（2）that have been removed in step 1 Do not directly touch the FAX circuit board（A）terminal．
Hold the top and bottom of the FAX circuit board，or the projection of the board to insert the FAX circuit board（A）． Direct the label（3）on to the FAX circuit board（A）toward left side and insert the board along the groove．

\section*{Installer la carte à circuits FAX}

2．Insérer la carte à circuits \(\operatorname{FAX}(A)\) le long de la rainure dans l＇OPT2 et la fixer à l＇aide des deux vis（2）retirées à l＇étape 1. Ne pas toucher directement la borne de la carte à circuits FAX（A）．
Tenir les parties inférieure et supérieure de la carte à circuits FAX ou la saillie de la carte pour insérer la carte à circuits FAX（A）． Orienter l＇étiquette（3）de la carte à circuits \(F A X(A)\) comme illustré et insérer la plaquette le long de la rainure．

\section*{Instale la tarjeta de circuitos de FAX．}

2．Inserte la tarjeta de circuitos de fax \((A)\) a lo largo de la ranura de OPT2 y asegúrela con los dos tornillos（2）que ha quitado en el paso 1 ． No toque directamente el terminal de la tarjeta de circuitos del FAX（A）．
Sujete las partes superior e inferior de la tarjeta de circuitos de FAX o la saliente de la tarjeta para insertar la tarjeta de circuitos de FAX（A）．
Oriente la etiqueta（3）en la tarjeta de circuitos del FAX（A）como se indica en la ilustración e inserte la tarjeta a lo largo de la ranura．

Installieren der FAX－Leiterplatte．
2．FAX－Leiterplatte（A）in die Nut des Einbauschachts OPT2 einsetzen und Leiterplatte mit den in Schritt1 ausgebauten Schrauben（2）befestigen． Berühren Sie die Anschlüsse der FAX－Platine（A）nicht mit den Fingern．
Die FAX－Leiterplatte（A）bein Einsetzen oben und unten oder an dem Vorsprung festhalten．
Die FAX－Leiterplatte（A）so in die Nut einsetzen，dass der Aufkleber（3）wie abgebildet zur Leiterplatte zeigt．

\section*{Installare la scheda a circuiti FAX．}

2．Inserire la scheda a circuiti FAX（A）lungo l＇incavo nell＇OPT2 e fissare la scheda con le due viti（2）rimosse nell＇operazione 1 ． Non toccare direttamente il terminale della scheda a circuiti FAX（A），
Per inserire il circuito FAX（A），tenere l＇estremit superiore e la base della scheda a circuiti FAX，o la sporgenza della scheda a circuiti FAX Orientare l＇etichetta（3）sulla scheda a circuiti FAX（A）come indicato nell＇illustrazione e inserire la scheda lungo l＇incavo．

\section*{安装传真电路板}

2．沿着 OPT2 的沟槽插入传真电路板（A）并用在步骤1中拆下的两颗螺钉（2）固定电路板。请勿直接触摸传真电路板（A）端子。
按住传真电路板的顶部和底部，或者按住电路板的突出部将传真电路板（A）插入。将传真电路板（A）上的标签（3）保持图示中的方向，将电路板沿着沟槽方向插入。
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FAX 기파ᄂ 자ᄋ차ᄀ
2. OPT2 구에 부ᄐ여 FAX 기파ᄂ (A) 르ᄅ 사ᄇ이ᄇ하고 수ᄂ서 1 에서 제거하ᄂ 나사 (2) 2 개로 고저ᄋ하ᄇ니다.
FAX 기파ᄂ(A) 의 다ᄂ자에 지ᄀ저ᄇ 다ᄒ지 않게 하ᄅ 거ᄉ.
FAX 기파ᄂ (A) 으ᄅ 사ᄇ이ᄇ 시에느ᄂ 기파ᄂ의 사ᄋ하 또느ᄂ 도ᄅ기르ᄅ 자ᄇ으ᄅ 거ᄉ
FAX 기파ᄂ (A) 으ᄅ 부ᄐ여지ᄂ 라베ᄅ (3) 그리ᄆ 표기 바ᄋ햐ᄋ대로 되도로ᄀ 사ᄇ이ᄇ하ᄅ 거ᄉ.

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FAX 基板の取り付け
2. OPT2 の溝に沿って FAX 基板 (A) を挿入し, 手順 1 で外したビス (2) 2 本で固定する。
FAX 基板 (A) の端子に直接触れないこと。
FAX 基板 (A) の挿入時は基板の上下か突起を持つこと。
FAX 基板 (A) は, 貼り付けられているラベル (3) が図に示す方向になるように, 挿入すること。

```


\section*{Seal the terminal．}

3．Wipe the surface of the telephone terminal with alcohol and adhere the terminal seal（C）． The telephone terminal on the FAX circuit board installed to OPT2 is unavailable（invalid）．Sea the terminal securely to prevent a user from connecting a separate phone．

\section*{Fermer hermétiquement la borne．}

3．Nettoyer la surface de la borne de téléphone avec de l＇alcool，et apposer le joint de borne（C）． La borne de téléphone de la carte à circuits FAX installée sur l＇OPT2 n＇est pas utilisable （invalide）．Fermer hermétiquement la borne pour empêcher tout utilisateur de connecter un télé－ phone séparé．

\section*{Selle el terminal．}

3．Limpie la superficie del terminal de teléfono con alcohol y pegue el sello de terminal（C）．
El terminal de teléfono de la tarjeta de circuitos de FAX instalado en el OPT2 no está disponible （inválido）．Selle firmemente el terminal para evitar que un usuario conecte un teléfono por sepa－ rado．

\section*{VersiegeIn der Anschlussbuchse．}

3．Die Oberfläche der Telefonanschlussbuchse mit Alkohol abwischen und die Verschlusskappe（C） anbringen．
Die Telefonanschlussbuchse der in OPT2 installierten FAX－Leiterplatte ist nicht verfügbar（ungül－ tig）．Die Anschlussbuchse vollkommen versiegeln，um den Anschluss eines separaten Telefons zu verhindern．

\section*{Sigillare il terminale}

3．Pulire la superficie del terminale del telefono con alcol e fare aderire la guarnizione terminale（C）． Il terminale del telefono sulla scheda a circuiti FAX installata su OPT2 non è disponibile（invalido）． Sigillare il terminale saldamente per prevenire a un utente di collegare un telefono separato．

\section*{安装端子密封}

3．用酒精擦拭电话端子表面并粘上端子密封（C）。
安装在 OPT2 上的传真电路板的电话端子不可使用（无效）。为了避免用户错误与其它电话连接，必须确实粘贴好端子密封。

\section*{단자씰의 부착}

3．TEL 단자주위를 알코올청소하고 단자씰（C）을 부착합니다．
OPT2 에 부착한 FAX 기판의 TEL 단자는 사용불가（무효）가 됩니다 ．사용자가 잘못해 외부 전화
를 접속하지 않도록 확실히 부착할 것．

\footnotetext{
端子シールの貼り付け
3．TEL 端子周囲をアルコール清掃し，端子シール（C）を貼り付ける。
OPT2 に取り付けた FAX 基板のTEL 端子は使用不可（無効）となる。ユーザーが誤って外付け電話
を接続しないよう確実に貼り付けること。
}


\section*{Connect the MFP to the telephone line．}

4．Plug the modular connector cable（4）into the line terminal，and then connect the other end to the telephone line． For 100 V or Chinese models，use the supplied modular connecter cable（B）．

\section*{Connecter le MFP à la ligne de téléphone．}

4．Brancher le câble du connecteur modulaire（4）à la borne de la ligne，puis connecter l＇autre extrémité à la ligne de téléphone． Pour les modèles 100 V ou Chine，utilisez le câble du connecteur modulaire（B）fourni．

\section*{Conecte el MFP a la línea telefónica}

4．Enchufe el cable del conector modular（4）en el terminal de línea y，a continuación，conecte el otro extremo a la línea telefónica．
Para los modelos 100 V o chino，utilice el cable del conector modular（B）suministrado．

\section*{Anschließen des MFP an die Telefonleitung．}

4．Telefonmodulkabel（4）in die Gerätebuchse einstecken und das Kabel an der Telefondose anschließen．
Das mitgelieferte Telefonmodulkabel（B）für die 100－V－oder China－Modelle verwenden．

Collegamento dell＇MFP alla linea del telefono．
4．Inserire il cavo connettore modulare（4）nel terminale della linea，e quindi collegare l＇altro terminale alla linea del telefono． Per modelli da 100 V o Cina，utilizzare il cavo connettore modulare \((B)\) in dotazione．

将 MFP 连接到电话线
4．将模块接插件电缆（4）插入电话线端子，然后将另一端与电话线连接。对于 100 V 或中国机型，请使用随附的模块接插件电缆（B）。

\section*{전화회선과의 접속}

4．모듈코드（4）를 라인단자에 꼽습니다．다른 한 쪽의 플러그는 전화회선과 접속합니다 100V 또는 중국 모델의 경우 제공된 모듈형 커넥터 케이블（B）을 사용하십시오．

\footnotetext{
電話回線との接続
4．モジュラーコード（4）をライン端子に差し込む。もう片方のプラグは，電話回線へ接続する。 \(100 \mathrm{~V} /\) 中国仕様は付属のモジュラーコード（B）を使用すること。
}

\section*{（Initialize the FAX circuit board．}

1．Plug the MFP into a power outlet，and turn on the main power．
2．If the FAX circuit board has been installed only in OPT1 or installed both in OPT1 and OPT2（to initialize all FAX circuit boards）Perform the maintenance mode U600 to initialize the fax control assembly．

3．If the FAX circuit board has been added to OPT2（to initialize the FAX circuit board in OPT2）
Initialize OPT2 by pressing［PORT2］，and the Start key in this order in the maintenance mode U698 and executing the maintenance mode U600．If［ALL］is selected in U698，both OPT1 and OPT2 are initialized． For details，see the service manual．

\section*{Initialiser la carte à circuits FAX．}

1．Brancher le MFP sur une prise d＇alimentation et le mettre sous tension．
2．Si la carte à circuits FAX a été installée dans I＇OPT1 seulement，ou a été installée dans l＇OPT1 et dans l＇OPT2（pour initialiser toutes les cartes à circuits FAX）Exécuter le mode de maintenance U600 pour ini－ tialiser l＇ensemble de commande de fax．

3．Si la carte à circuits FAX a été ajoutée à l＇OPT2（pour initialiser la carte à circuits FAX dans l＇OPT2）
Initialiser l＇OPT2 en appuyant sur［PORT2］et la touche Départ dans cet ordre en mode de maintenance U698，et exécuter le mode de maintenance U600．Si［ALL］ est sélectionné dans U698，l＇OPT1 et l＇OPT2 sont tous deux initialisés．Pour plus de détails，se reporter au manuel d＇entretien．

\section*{Inicialice la tarjeta de circuitos FAX．}

1．Conecte el MFP a un receptáculo de pared y encienda el interruptor principal．
2．Si la tarjeta de circuitos de FAX se instaló solo en OPT1 o se instaló tanto en OPT1 como OPT2（para inicializar todas las tarjetas de circuito de FAX）Ejecute el modo de mantenimiento U600 para inicializar el conjunto de control de fax．

\section*{Initialisieren der FAX－Leiterplatte．}

1．Netzstecker des MFP in eine Steckdose stecken und Hauptschalter einschalten．
2．Wenn die FAX－Leiterplatte nur in OPT1 oder sowohl in OPT1 als auch in OPT2 installiert worden ist（um alle FAX－Leiterplatten zu initialisie－ ren）Wartungsmodus U600 ausführen，um die Faxsteuerbaugruppe zu initialisieren．

\section*{Inizializzare la scheda a circuiti FAX．}

1．Collegare l＇MFP ad una presa di corrente e portare l＇interruttore princi－ pale su On．
2．Se la scheda a circuiti FAX è stata installata solo nell＇OPT1 o in entrambi l＇OPT1 e l＇OPT2（per inizializzare tutte le schede di circuito FAX）Eseguire il modo di manutenzione U600 per inizializzare il gruppo di controllo fax．

\section*{传真电话板的初始化}

1．将 MFP 插入电源插座，打开主电源。
2．仅限于在 OPT1 或 OPT1 和 OPT2 上同时安装传真电路板时（全部的传真电路板初始化）
执行维修保养模式 U600，初始化传真控制组件

3．Si la tarjeta de circuitos de FAX se agregó a OPT2（para inicializar la tarjeta de circuitos de FAX en OPT2）
Inicialice el OPT2 presionando［PORT2］y la tecla de Inicio en ese orden en el modo de mantenimiento U698 y ejecutando el modo de mantenimiento U600．Si se selecciona［ALL］en U698，se inicializan ambos OPT1 y OPT2．Para más det－ alles，lea el manual de servicio．

3．Wenn die FAX－Leiterplatte zu OPT2 hinzugefügt worden ist（um die FAX－Leiter－ platte in OPT2 zu in7itialisieren）
OPT2 initialisieren．Dazu［PORT2］und die Start－Taste im
Wartungsmodus U698 in dieser Reihenfolge drücken und den
Wartungsmodus U600 ausführen．Wenn［ALL］in U698 gewählt wird，werden OPT1 und OPT2 initialisiert．Weitere Einzelheiten siehe Wartungsanleitung．

3．Se la scheda a circuiti è stata aggiunta all＇OPT2（per inzializzare la scheda a cir－ cuiti FAX nell＇OPT2）
Inizializzare OPT2 premendo［PORT2］e il tasto Avvio in questo ordine nel modo di manutenzione U698 ed eseguendo il modo di manutenzione U600．Se viene selezionato［ALL］nel modo U698，entrambi OPT1 e OPT2 sono inizializzati．Per ulteriori dettagli leggere il manuale d＇istruzioni．

3．在 OPT2 上增设时
（OPT2 的传真电路板初始化）
只进行 OPT2 初始化时，在维修保养模式 U698 状态下，按顺序按下
＂PORT2＂，开始键，执行维修保养模式 U600
在 U698 状态下设定＂ALL＂时，会使 OPT1 和 OPT2 均初始化。
有关详信息，请参见维修手册。

\section*{FAX 기판의 초기화}

1．MFP 본체 전원플러그를 콘센트에 꼽고 주 전원 스위치를 ON 으로 한 다．
2．OPT1 만 또는 OPT1 와 OPT2 에 FAX 기판을 동시에 설치한 경우（전 부 FAX 기판을 초기화）메인터넌스 모드 U600 을 실행하고 FAX 기판 을 초기화합니다．

3．OPT2 에 증설한 경우（OPT2 의 FAX 기판을 초기화）
메인터넌스모드 U698 에서「PORT2」，시작키 순으로 누릅니다 ．메인터넌 스 모드 U600 을 실행하고 FAX 기판을 초기화합니다．
U698에서「ALL」을 설정하면 OPT1 과 OPT2 양쪽을 초기화하기 때문에 주의할 것．
상세는 서비스 매뉴얼을 참조할 것．

\footnotetext{
FAX 基板の初期化
1．MFP 本体の電源プラグをコンセントに差し込み，主電源スイッチを ON にする。
2．OPT1 のみまたは OPT1 と OPT2 にFAX 基板を同時に設置した場合（すべ ての FAX 基板を初期化）メンテナンスモード U600 を実行し，FAX 基板 を初期化する。
}

3．OPT2 に増設した場合（OPT2 の FAX 基板を初期化）
メンテナンスモード U698 で「PORT2」，スタートキーの順に押す。メンテ ナンスモード U600を実行し，FAX 基板を初期化する。
U698 で「ALL」を設定すると OPT1 と OPT2 両方を初期化するので注意す ること。詳細はサービスマニュアルを参照のこと。

ENG Removing／Installing the Finisher
FR Retrait／Installation du finisseur
ES Extracción／instalación del Finalizador
（DE Montage oder Demontage des Finishers

2

（2）

（IT）Rimozione／Installazione della finitrice．
（CN）拆卸／安装装订器
（KO）피니셔 제거／설치하기
（JP）フィニッシャーの取り外し／取り付け手順


2


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[^0]:    *: Refer to figure 1-4-1 for paper jam location (see page 1-4-1).

[^1]:    *: Refer to figure 1-4-1 for paper jam location (see page 1-4-1).

[^2]:    *: Refer to figure 1-4-1 for paper jam location (see page 1-4-1).

[^3]:    *: Refer to figure 1-4-1 for paper jam location (see page 1-4-1).

[^4]:    *: Refer to figure 1-4-1 for paper jam location (see page 1-4-1).

[^5]:    *: Refer to figure 1-4-1 for paper jam location (see page 1-4-1).

[^6]:    5．イラストの位置に取付板（C）をビス M $3 \times 12 \mathrm{~S}$ タイト（D） 2 本で取り付ける。

