QSS-32 Training Material for Service Personnel Training

For Service Trainers

For Trainees

This Training Material is made for the assembly training using the actual machine, QSS-32.

Also, this material is for the trainees who have taken the initial training course of QSS-28, QSS-29, QSS-30 or QSS-31.

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Service Skills Development and Training Department

Marks used in this material ・・・・・・・・・・・・・・

* (asterisk)

If there are contents for Japan only, the contents are deleted in English. This mark is used instead.

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Chapter 1
Specifications

Explanation

•There is no additional information.

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The point of this chapter

Key points

- Study the specifications of the machine.

  Processing capacity

  Main options

  Spec of PC

Upon completion of the lesson, you will be able to:

- Understand what you can do with the machine and explain it to users.
- Understand processable media and format and explain it to users.
- Understand the standard parts and options and explain it to users.
- Understand the spec of built-in PC.

How to proceed the training

Explain, using the Training materials.

Refer to the “Specifications” manual for details.

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Concept

- The scanner/printer/processor are now compatible. Therefore, it is possible to supply a machine which meets a customer's requirements by changing some units.Also, stock of machines can be reduced.
- Improved the operationality of the edit mode.(Improved the issue of the conventional machines)
- Improve the general image quality such as the resolution for film scanning, image processing, scanner performance, etc.

Note

- Processing capacity of QSS-3101
  89 x 127 2,367 prints/hour
- Processing capacity of QSS-2801/02
  89 x 127 1,901 prints/hour 2,598 prints/hour
- Processing capacity of QSS-2901
  127 x 89 1,480 prints/hour 305 x 457 192 prints/hour
- Processing capacity of Frontia 370
  127 x 89 approx. 1,550 prints/hour

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Concept (Stand alone scanner)

- This machine is the stand alone film scanner using input section of QSS-32 (CS-1 and S-2). The purpose of this machine is saving data to media.

Explanation

- The CS-1 of the QSS-32 which installs the standard PC is possible to modify to the stand alone scanner.

  It is necessary to remove the colorimeter and install the QSS software for the stand alone scanner only.
- It is possible to use the stand alone scanner by modifying the CS-1 of the QSS-32 which installs the standard PC to the stand alone scanner, however, there is no modification kit and manual for modification.
- [1 Frame Magnification display] is not available.

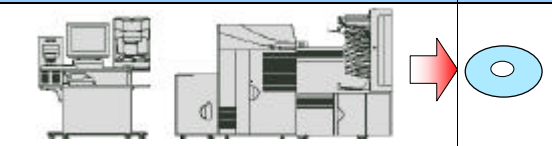
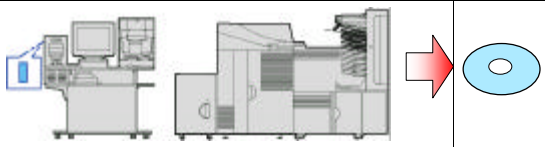
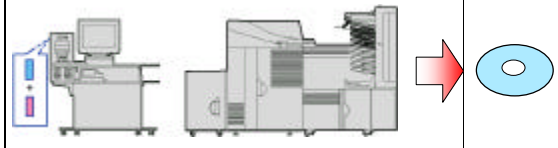
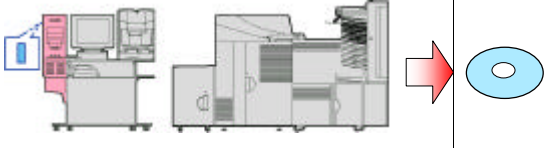
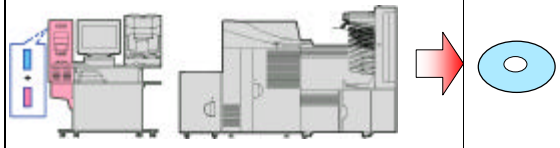
Note

- Equipped personal computer is the same as the standard PC for the QSS-32.
- The QSS software is for the stand alone scanner only.
- The optional software for image editing is not available.

Name of the system and the processing capacity of the QSS-32

Capacity booster A

Capacity booster B

System name	Process Specification	Processing capacity	Combination figure	System software program	Scanner section	Capacity booster A/B	Desk section	Printer section	Processor section	The point of the machine
QSS-3201 Digital	Standard J SM EX II	(Film) 127×89: 900 prints/hour (Media) 127 x 89: 900 prints/hour			S-2	-	CS-1	LP-1700	PP-1213	*Combination of the following sections Possible to print and save the data from the film and the storage media. ・Printer section ・Processor section ・Scanner section ・Desk section (includes PC) *This consists of INITIAL DATA 1/2/3/4.
QSS-3202 Digital	Standard J SM EX II	(Film) 127×89: 1286 prints/hour (Media) 127 x 89: 1273 prints/hour			S-2		CS-1	LP-1700	PP-1213	*Combination of the following sections Possible to print and save the data from the film and the storage media. ・Printer section ・Processor section ・Scanner section ・Desk section (includes PC) *The processing capacity of the scanner section is high. The processing capacity can be increased by attaching the capacity booster A. *This consists of INITIAL DATA 1/2/3/4.
QSS-3203 Digital	Standard J SM EX II	(Film) 127×89: 1620 prints/hour (Media) 127 x 89: 1602 prints/hour			S-2	 ®	CS-1	LP-1700	PP-1217 	*Combination of the following sections Possible to print and save the data from the film and the storage media. ・Printer section ・Processor section ・Scanner section ・Desk section (includes PC) *The processing capacity of the scanner and the processor section is high. The processing capacity can be increased by attaching the capacity booster A,B. The capacity booster B is a part of the processor section. *The processing capacity of the processor section is high. The processing racks are longer than the ones of the PP-1213. *This consists of INITIAL DATA 1/2/3/4.
QSS-3211 Digital	Standard SM	(Film) 127×89: 900 prints/hour (Media) 127 x 89: 900 prints/hour			S-2	-	CS-1	LP-1700	PP-1213	*Combination of the following sections Possible to print and save the data from the film and the storage media. ・Printer section ・Processor section ・Scanner section ・Desk section (includes PC) *The processing capacity of the PC is high. *This consists of INITIAL DATA 1/2/3/4.
QSS-3212 Digital	Standard SM	(Film) 127×89: 1286 prints/hour (Media) 127 x 89: 1273 prints/hour			S-2		CS-1	LP-1700	PP-1213	*Combination of the following sections Possible to print and save the data from the film and the storage media. ・Printer section ・Processor section ・Scanner section ・Desk section (includes PC) *The processing capacity of the scanner section is high. The processing capacity can be increased by attaching the capacity booster A. *The processing capacity of the PC is high. *This consists of INITIAL DATA 1/2/3/4.
QSS-3213 Digital	Standard SM	(Film) 127×89: 1620 prints/hour (Media) 127 x 89: 1602 prints/hour			S-2	 ®	CS-1	LP-1700	PP-1217 	*Combination of the following sections Possible to print and save the data from the film and the storage media. ・Printer section ・Processor section ・Scanner section ・Desk section (includes PC) *The processing capacity of the scanner and the processor section is high. The processing capacity can be increased by attaching the capacity booster A,B. The capacity booster B is a part of the processor section. *The processing capacity of the processor section is high. *The processing capacity of the PC is high. The processing racks are longer than the ones of the PP-1213. *This consists of INITIAL DATA 1/2/3/4.

Explanation

・Printing conditions of the processing capacity from film (With index print, Without panorama intermixed) 135F-24EX, 24-frame exposed

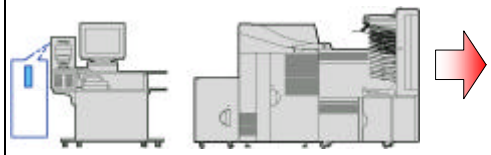
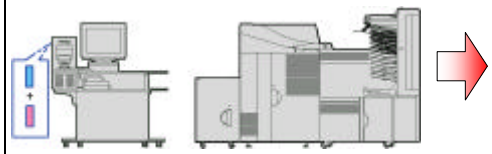
・Pr

・As for the QSS-32, S-900SA, S-1700SA, and QSS-32 PRO, the system software program is different depending on the machine.

Name of the system and the processing capacity of the S-900SA/S-1700SA/QSS-3202PRO/QSS-3203PRO

Capacity booster A

Capacity booster B

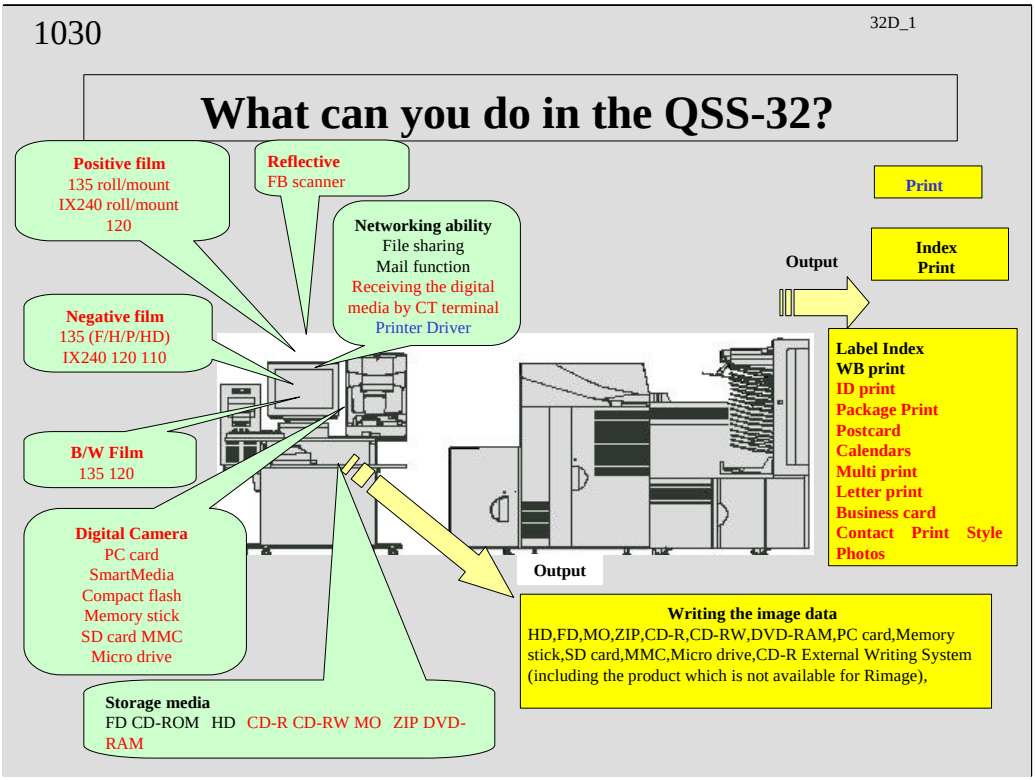
System name	Process Specification	Processing capacity	Combination figure	System software program	Scanner section	Capacity booster A/B	Desk section	Printer section	Processor section	The point of the machine
S-900SA	-	(Film) 4BASE (905 prints/hour) 16BASE (905 prints/hour) (-) (905 prints/hour)			S-2	-	CS-1	-	-	*This consists of the desk section (includes PC) and scanner. Possible to save the image from the film to storage media. *This consists of INITIAL DATA 1/4.
S-1700SA	-	(Film) 4BASE (2070 prints/hour) 16BASE (1740 prints/hour) (-) (1990 prints/hour)			S-2		CS-1	-	-	*This consists of the desk section (includes PC) and scanner. Possible to save the image from the film to storage media. *The processing capacity of the scanner section is high. The processing capacity can be increased by attaching the capacity booster A. *This consists of INITIAL DATA 1/4.
QSS-3202 PRO Digital Printer	Standard SM	(Media) 127 x 89: 1273 prints/hour			-		CS-1	LP-1700	PP-1213	*Combination of the following sections Possible to print and save the data from the storage media. •Printer section •Processor section •Desk section (includes PC) *This consists of INITIAL DATA 2/3.
QSS-3203 PRO Digital Printer	Standard SM	(Media) 127 x 89: 1602 prints/hour			-	®	CS-1	LP-1700	PP-1217	*Combination of the following sections Possible to print and save the data from the storage media. •Printer section •Processor section •Desk section (includes PC) *Capacity booster A,B ・The capacity booster B is a part of the processor section *The processing capacity of the processor section is high. The processing racks are longer than the ones of the PP-1213. *This consists of INITIAL DATA 1/2/3.

Explanation

•In case

•Pr

・As for the QSS-32, S-900SA, S-1700SA, and QSS-32 PRO, the system software program is different depending on the machine.



Explanation

- The image can be stored to one CD until the capacity of media is full.
  (So, the number of negatives to be stored is not decided.)
- DCP cannot be connected.
- EZ-mall cannot be installed.
- As for the card reader, the PC card adapter or Compact flash adapter is necessary for the Memory stick, SD card, MMC, and xD-Picture Card.
- The memory stick, SD card, MMC and Micro drive are available with Five slots card reader.

  As for the xD-Picture Card, the PC card adapter or Compact flash adapter is necessary.
- As for the memory stick Pro, the PC card adapter which is corresponded to the memory stick Pro is necessary.

Note

- Standard: Black letter
  Function of options: Red letter

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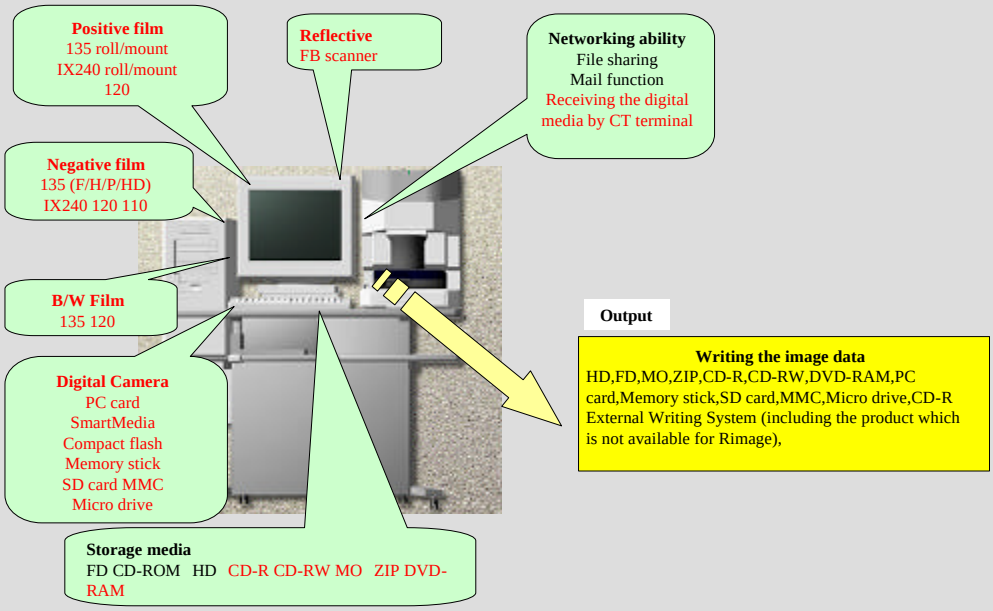
What can you do in the stand alone scanner?



Note

- The explanation of the Note is the same as the QSS-32.

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Usable media 1

Types of media	Input	Output	Additional writing	Note
FD	x	x	x	Standard equipment
CD-ROM	x	-	-	CD-ROM (standard) or CD-R/RW (option) is necessary.
CD-R	x	x	-	The CD-R/RW drive (option) is necessary.
CD-RW	x	x	-	
MO	x	x	x	The MO drive (option) is necessary.
ZIP	x	x	x	The ZIP drive (option) is necessary.
DVD-RAM	x	x	x	The DVD-RAM drive (option) is necessary.
DVD-ROM	x	-	-	
DVD-R	-	-	-	
DVD-RW	-	-	-	
Reflective	x	-	-	FB scanner (procured parts at customer's site) is necessary.

x: possible

***Explain the spec of each drive, etc separately.**

Explanation

- It is possible to process by CT terminal.
- 12cm CD's and 8cm CD's are supported.Business card CD's and other uniquely shaped CD's are also supported.
- It is now possible to write in multiple sessions.(except CD-R/RW)

Note

- The media capacity of CD is different depending on a maker.
- Refer to the [Usable media and file types] in [Getting Started] for details.

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Usable media 2

Types of media	Input	Output	Additional writing	Note
Compact Flash (Type1, TypeII)	x	x	x	The five slots card reader (option) is necessary. x :Ready *1: PC card adapter is necessary.
SmartMedia	x	x	x	
PC card	x	x	x	
Memory stick	x	x	x	
SD card	x	x	x	
MMC(Multi media card)	x	x	x	
Micro drive	x	x	x	
xD-Picture Card	*1	*1	*1	
Memory Stick Pro	*1	*1	*1	

x: possible

*1: PC card adapter is necessary.

***Explain the spec of each drive, etc separately.**

Explanation

- As for the digital camera media, there is the media with security.
  Some of them cannot process the copyright protected data.
- Even if the media is with security, it can process the data except the copyright protected data.
- It is now possible to write in multiple sessions.

Note

- The copyright protected data is the encrypted data, and it cannot be created and edited.
- Follow the attached Operator's Manual for handling the PC card adapter.
- Refer to the [Usable media and file types] in [Getting Started] for details.

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Processable Format

	Image format
Input	**Exif 1.0, 2.1 (Thumb nail can be used in distinction from JPEG.)** **JPEG (includes Progressive JPEG, CMYK Format)** **FlashPix** **Bitmap (non-compressed)** **PSD (includes Photo Shop Document, CMYK Format)** **PCD (Photo CD)** **PCX, DCX** **TGA** **TIFF (RGB non-compressed)**
Output	**JPEG (except Progressive, CMYK Format)** **FlashPix** **Bitmap (non-compressed)** **TIFF (RGB non-compressed)**

Explanation

- JPEG 2000 is not available.
- As for the input image format, in case of RGB, 8-bit gradation only is available. 16-bit gradation or gray scale is not available.
- Media (Windows format) only is available.

Note

- Refer to the [Usable media and file types] in [Getting Started] for details.

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DPOF and Exif

Functions supported by QSS		
Format	Contents of data	Function in the QSS side
DPOF	Date, Title, Image file name, Frame No., Comment, Image title	Front print
	Setting for the number of prints	Number of prints
	Cropping of the image	Print
Exif	Date	Front print
	Name of image input device maker	Distinguish between the data taken by the digital camera and other image data.

Explanation

- If there is a name of image input device maker in the Exif data, it is recognized as the image data from digital camera even if it is not the image data of a storage media except for the digital camera..

  As for the storage media except for the digital camera, if there is no Exif data or no name of image input device maker in the Exif data, it is recognized as the image data from normal media.
- If [Digital image auto correction (Digital camera)] is not used, remove a check for [Digital image auto correction (Digital camera)].

  The [Digital image auto correction (Digital camera)] setting can be carried out on the following displays.

  •Image file selection display

  •[Correction] tab of [Operator Selections] or [Print Channel]
- When saving image data taken by digital camera to normal media in the QSS, the name of image input device maker (Exif data) is overwritten from ‘maker name of camera’ to ‘Noritsu’.This disables [Digital image auto correction (Digital camera)] effective when reprinting.
- Refer to Chapter 3 [Front print] for the date of Exif data.

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Main options (Film carriers)

Types of carriers	Film type	Size	Note
135/240AFC-II	Negative/Positive/Black&White/(Roll) Sepia/Black&White (orange base)	135F, H, P, HD IX240	Minimum number of frames:2-frame
135AFC-II	Negative/Positive/Black&White/(Roll) Sepia/Black&White (orange base)	135F, H, P, HD	Minimum number of frames:2-frame
120AFC-II	Negative/Positive/Black&White Sepia/Black&White (orange base)	6x4.5, 6x6, 6x7, 6x8, 6x9	Minimum advance length:43 mm (6 x 4.5 1 frame)
110AFC-II	Negative	110	Minimum number of frames:3-frame
135/240AMC-II 135/240MMC-II	Negative/Positive/Black&White/Sepia/Black&White (orange base)	135F, 135H, IX240	Length of mount 50 mm x 50 mm Thickness: 1.0 mm – 3.2 mm Glass mount is not available.

Show each AFC.

Explanation

- Refer to the Specification Manual for the part No.
- Explain, showing each AFC.
- 135/240AFC-II became an option because media processing only is available.
- As for the 135/240AFC-II, the R/W type and R type (2 types) are set as options.
- 1-frame (135F) scanning is not available with 135/240AFC-II and 135AFC-II.(Available with 135/240MMC-II/135/240AMC-II.)
- With 135/240 MMC-II/AMC-II, Negative/Positive/Black&White/Sepia/Black&White (orange base) are processable.
- When inserting the film into the 135/240AFC-II or 135AFC-II, insert from the rear end.

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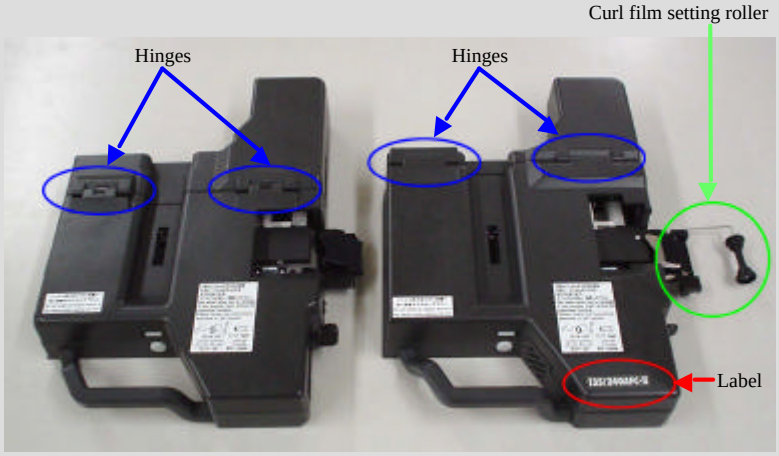
The difference between the 135/240AFC and AFC-II (1)



- The label is put on the AFC-II.
- As for the upper cover, the place where the hinges are attached are different.
- The curl film setting roller is attached to the film catcher unit.

Explanation

- There is no additional information.

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The difference between the 135/240AFC and AFC-II (2)

Description/Explanation
The R type and R/W type are set.
The monitoring interval of the perforation of 135/240 is shortened not to damage the film when a film jam occurs.
As for the 240, the detection plate of the VEI Sensor is changed to detect immediately if the rotation of the spool stops.
The rewind sensor is added to the upper part of the rewind unit to detect a film jam when a film jam occurs in the rewind unit.
The DX sensor of 240 is moved to the insertion side to be able to detect the FID of the film rear end side.
The ready sensor is moved to the insertion side to detect the turn round perforation surely.
The shutter for the panorama film is added to avoid the strong light from the unexposed part of 135P.

Explanation

- To distinguish the R type from R/W type, open the AFC cover and see whether the read head is attached or not.

  Refer to the Service Manual [62150].

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Trouble symptoms of 135/240AFC-II (1)

When the AFC for the conventional machines is attached to the QSS-32

AFC	Machine type	Processing	Description
135/240AFC, 135AFC, 120AFC, 110AFC, 135/240MMC, 135/240AMC	For the QSS-28/29/30/31	Not effective	[1401: Attach the Film Carrier.] appears, and it does not process.

When the 135/240AFC-II for each machine is attached to the QSS-32

AFC	Machine type	Processing	Description
135/240AFC-II	For QSS-28/31	Not effective	The effect of the DIGITAL ICE becomes weak because the lens unit is not attached.
	For QSS-29		
	For QSS-30	Not effective	An error [6309: Scanner change of light error] occurs because the diffuser is attached.

Note

- 135AFC-II is set as an option for the QSS-30/32 only.
- Refer to the [Processable film] in [Getting Started] for details of the processable film with AFC.

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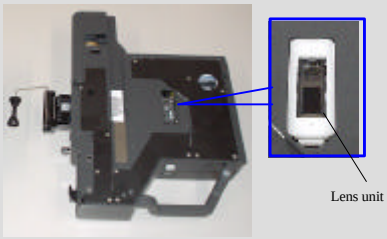
Trouble symptoms for AFC-II (2)

When the AFC-II for each machine is used with the QSS-32

AFC	Machine type	Processing	Description
135AFC-II, 120AFC-II, 110AFC-II, 135/240MMC-II, 135/240AMC-II	For QSS-28/31	Not effective	The effect of the DIGITAL ICE becomes weak because the lens unit is not attached.
	For QSS-29		
	For QSS-30		



Explanation

- The lens unit is not attached to each AFC-II for the QSS-28/29/30/31.

  Also, as for the QSS-30 only, the diffuser for light diffusion is attached to get the image quality.
- The lens unit is attached to each AFC-II for the QSS-32.

Note

- The 135AFC-II is set as an option for the QSS-30/32 only.

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PC options

Name	Description/Explanation
SCSI unit	Necessary when attaching the options such as MO, DVD, FB scanner for the A3 size, etc to the standard PC.
ZIP drive unit	Unit to save/read the image data to a ZIP
MO drive unit	Unit to save/read the image data to a MO
DVD-RAM drive unit	Unit to save/read the image data to a DVD-RAM
Five slots card reader	Unit to save/read the image data from PC card, Compact flash, Smart media, SD card, Memory stick, MMC and Micro drive (USB connection)
CD-R/RW drive unit	Used to save/read the image data to the CD-R/RW

***The spec, etc is mentioned separately.**

Explanation

- You cannot use an option except above items.
- Refer to the Specification Manual for the part No.
- As for the high spec PC, the DVD-RAM drive unit is not set as an option.Also, CD-R/RW drive, five slots card reader, and FDD are standard equipments.
- As for the high spec PC, the SCSI board unit is necessary only when connecting the FB scanner for A3 size. When connecting the MO or DVD, connect to the SCSI port on the mother board.

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PC options (Example of memory combination:standard PC)

Installed RIMM	PC-NRT-RS2
Standard (512MB)	**Available** **RIMM 1 (256MB standard)** **RIMM 2 (256MB standard)** **Install a dummy module to RIMM3 (standard)** **Install a dummy module to RIMM4 (standard)**
Option (1GB) Total: 1GB	**Available** **RIMM 1 (256MB standard)** **RIMM 2 (256MB standard)** **RIMM 3 (256MB option)** **RIMM 4 (256MB option)**

Note

- If you use in the other combination except above list, the movement is not guaranteed.Refer to the PC Service Manual [ATX mother board, RIMM] in [PC-NRT-RS2].
- PC-NRT-RS2 installs RIMM.
- In the PC-NRT-RS2, there is no setting for RIMM with 1GB or more.

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PC options (Example of memory combination:High spec PC)

Installed DIMM	PC-NRT-RD2
Standard (2GB)	**Available** **DIMM 1A (512MB standard)** **DIMM 1B (512MB standard)** **DIMM 2A (512MB standard)** **DIMM 2B (512MB standard)** **DIMM 3A (Not in use)** **DIMM 3B (Not is use)**

Note

- If you use in the other combination except above list, the movement is not guaranteed.Refer to the PC Service Manual [ATX mother board, DIMM] in [PC-NRT-RD2].
- PC-NRT-RS2 installs DIMM.
- The DIMM is not set as an option.

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Main options (Package contents of image edition)

*	Description/Explanation	Name
*	Calendars	Card/Calendar Creation Software (Package-A)
	Post Card Prints	
	Business Cards	
	Card Prints	
*	Frame Prints	
	Letter Printing	
*	Multi-Frame Prints	Multi-Frame Print Creation Software (Package-B)
	Album Prints	
	Package Prints	
	Contact Print Style Photos	
	ID print	
*	Red Eye Removal Function	Red Eye Removal Software
	Automatic Red Eye Removal	

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Optional software list

Explanation

- The image edition software package is installed and protected when shipping a machine from factory.
- Release the protect of the image edition software package with key CD.
- Refer to the Specifications Manual of each machine for the parts No.
- The standard templates are included in the image edition software in the above list.

Note

- You can add the templates separately.
  There are 4 types below as an option.
  - •Templates for Frame (29 types)
  - •Templates for Calendar (21 types)
  - •Templates for Album (21 types)
  - •Template for Business card (67 types, appendix: 14 types of cards, 16 types of Multi)

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Main options (Others 1)

Name	Description/Explanation
Digital Masking Unit	By adding/installing the Digital Masking unit (option), it is possible to delete the scratch on the film more naturally.
Noritsu CD-R Engine (Windows/Mac)	Used for saving the Viewer software for Macintosh to CD-R/RW. Also necessary when saving the images to optional QSS CD.
QSS CD (TYPE A)	CD-R to which the viewer software (Deluxe Viewer) has been written. CD-R label is printed. (100 CD-Rs) (Common among the QSS-28/29/30/31/32)
QSS CD (TYPE B)	CD-R to which the viewer software (Deluxe Viewer) has been written. CD-R label is not printed. (100 CD-Rs) (Common among the QSS-28/29/30/31/32)
Package Print Format Creation Software	Used for making templates for package print as you like.

Explanation

- Refer to the Specification Manual for details.
- The function of the Image Rotation Booster Kit is available as standard.

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Main options (Others 2)

Name	Description/Explanation
CD-R external writing system	Using the CD-R external writing system made by Rimage, write the image data to CD-R at the same time of printing, and make a label print. (Common among the QSS-28/29/31/32)
CD-R external writing system connecting set	Required kit for the connection of CD-R external writing system (Rimage) This consists of PCB, cable and software. (Common among the QSS-28/29/31/32)
CD-R external writing kit for the external PC	Using the CD-R drive of external PC prepared by a customer, write the image data to CD-R at the same time of printing. (Common among the QSS-28/29/30/31/32)
QSS Printer Driver	Used as the driver software to print the image data with QSS,which is saved in the PC connected with QSS. (Install this software in the external PC.)(Common among the QSS-28/29/30/31/32)
ARCNET-HUB extension unit	Necessary when installing the devices which require optical fiber cables such as the PU, CD-R External Writing System, etc.
d-Storage Type1	Type1:The device to save the image data scanned from the film to the hard disk of the external PC which is prepared by a customer.

Refer to the Training Manual [CD-R External Writing System]

Refer to the Training Manual [QSS Printer Driver]

Refer to the Training Manual [d-Storage]

Explanation

- Refer to the Specification Manual for details.
- Each component for [CD-R writing kit for external PC] and [External writing system connecting kit] is different depending on a machine. However, they are common between the QSS-28 and 31.

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32D_1

Main options (Others 3)

Name	Description/Explanation
CVP	Only for QSS-28/29/30/31/32 each
Pricing unit	Used to calculate prices and issue statements automatically.
Monitor hood	Common among QSS-28/29/30/31/32.
Storage cabinet	Used to house the AFC, etc.
Film cleaner kit	Used to remove dust and to eliminate static electricity from the film.
Compact archive unit	Used to storage a certain amount of image data to hard disk drive.
Sorter modification kit (for 82 prints)	Kit for modifying the print sorter unit to that for 82 prints in one order. Number of orders which can be stocked: 14

Explanation

- Refer to the Specification Manual for the part No.
- *

  *

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32D_1

Main options (Others 4)

Name	Description/Explanation
QSS-NET2000	Used to maintenance the machine by using phone line.
QSS-NET (QSS-Remote Service tool)	
Hour meter	Meter which displays the accumulated working time *
Non-resettable counter	*
One-touch dark bag	Used when paper is repacked to paper magazine (Frame type) (Common among the QSS-28/39/31/32)
Flatbed Scanner Mount	Mount to put a FB scanner of A4 or A3 size.
Print Accumulation Tray	Tray to keep many large size prints.
Digital flowmeter	Used to measure the circulation amount of the CD, and the amount is displayed on the monitor.
Cooling water plumbing unit	Cooling plumbing to keep the temperature of the processing solution constant.

Explanation

- Refer to the Specification Manual for the part No.
- As for the Flatbed Scanner Mount, there are 2 kinds. One is for the standard PC and the other is for the high spec PC.
- There are 2 kinds of cooling water plumbing unit. One is for connecting to the chilling unit and the other is for not connecting to the chilling unit.

1180

32D_1

Main options (magazines)

Standard magazine	Compatible between Normal and Kodak specification.
QL magazine	For QL paper. The core unit and the paper guide are different from the standard magazine.

Width Regulation Guide Kit (1)

Name	Components	Paper width
Width Regulation Guide Kit (1) (For standard magazine)	Roller guide (1) Width Regulation Guide (movable length:1 mm)	82.5 to 178 mm
Width Regulation Guide Kit (2) (For standard magazine)	Roller guide (2) Width Regulation Guide (movable length:1 mm)	203 to 254 mm
Width Regulation Guide Kit (3) (For standard magazine)	Roller guide (3) Width Regulation Guide (movable length:2 mm)	279 to 305 mm
Width Regulation Guide Kit (4) (For QL magazine)	Roller guide (1) Width Regulation Guide (movable length:1 mm) For QL paper only	89 to 165 mm
Width Regulation Guide Kit (5) (For QL magazine)	Roller guide (2) Width Regulation Guide (movable length:1 mm) For QL paper only	203 to 254 mm

Explanation

- Refer to the Specification Manual for the part No.

Important

- The old type magazine for the QSS-29/31 can be used with the magazine mount A/B only from the QSS-32 of the mass production shipping or later.
- The old type magazine for the QSS-29/31 cannot be used with the magazine mount C.

Note

- When you order a magazine, each width regulation guide is attached.

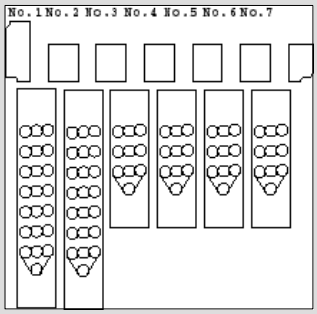
  The Width Regulating Guide Kit is set as an option in case that a customer loses or breaks it.

1190

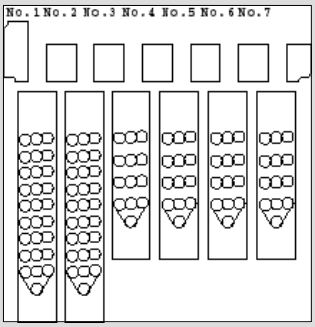
32D_1

Components of processing rack (45 seconds processing)

PP1213 (standard type)



PP1217 (standard type)



Explanation

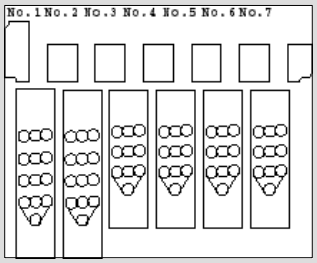
- *
- *
- As for the PP1213/PP1217, the upper guides and the dryer rack are common among the all types.
- As for the all types of the PP1213/PP1217, the grooves are added to the center roller of the processing rack to avoid the printing of CVP to stick around.

1200

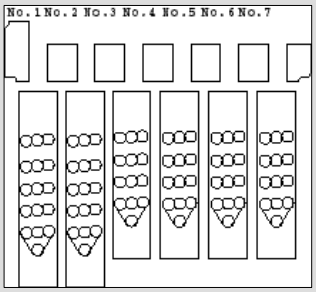
32D_1

Components of processing rack (25 seconds processing)

PP1213 (SM type)



PP1217 (SM type)



Explanation

- *
- *
- As for the PP1213/PP1217, the upper guides and the dryer rack are common among the all types.
- As for the all types of the PP1213/PP1217, the grooves are added to the center roller of the processing rack to avoid the printing of CVP to stick around.

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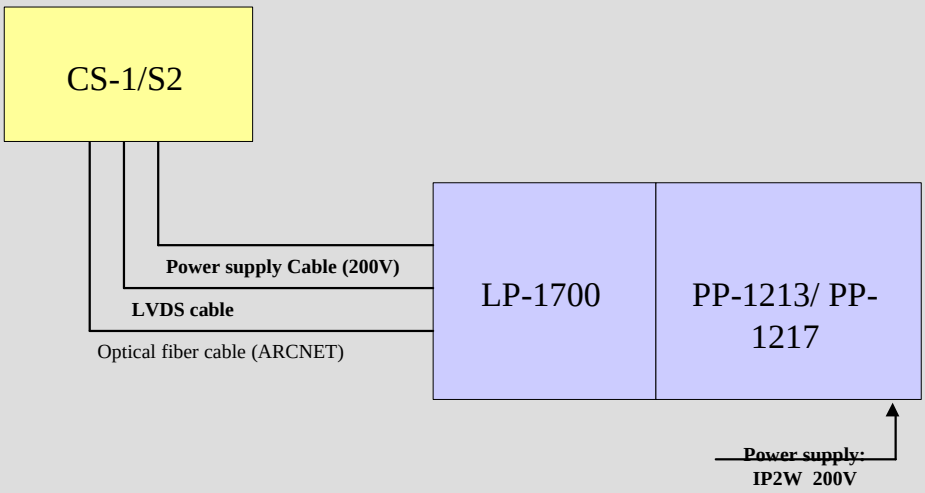
32D_1

Explanation of the system (Connection)



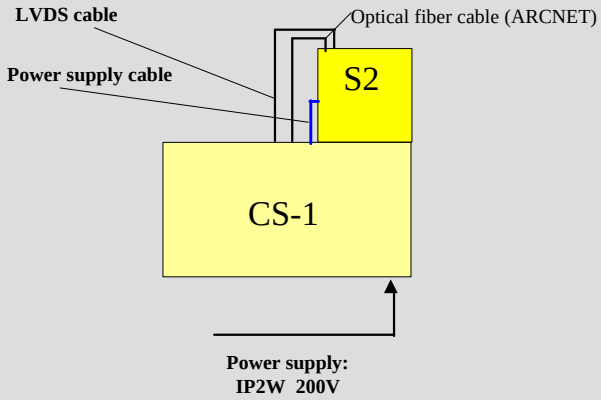
Explanation

- When the standard type cable is used, the interval between CS-1/S2 and LP-1700 & PP-1213/PP-1217 is approx. 5 m (max.).
- Specification: 200-240V

1211

32D_1

Explanation of the system (Connection) (Stand alone scanner)



Explanation

- Specification: 200-240V

1220

32D_1

Print sizes

Processable paper width	82.5 mm to 305.0 mm
Advance length (Paper width: 203 or less)	82.5 mm to 457.0 mm
Advance length (Paper width: 203 or more)	82.5 mm to 914.4 mm
Maximum print size	305.0 mm x 914.4 mm

Usable paper

Maximum diameter of paper	250 mm (180 m length)
Usable paper	Thin paper (0.2 mm) is supported.

Explanation

•There is no additional information.

1230

32D_1

Specifications of personal computers (PC-NRT-RS2):Standard PC

	Product name	Specifications
CPU	Pentium IV	**2.4GHz**
Mother board	**D850EMVRL**	
Memory	**KVR800A16-8/256**	**512MB PC800**
3.5FDD	**FD-235HG-C304**	2 modes
Hard disk	**WD800BB-00DKA0**	**80GB 7200rpm**
CD-ROM drive	**FX-48AOW**	**48x ATAPI**
Video board	**MILL G450 DUALH 32MB**	
Keyboard (Japanese)	**FKB8724-501/10**	
Keyboard (English)	**FKB8725-401/10**	
Mouse	**EMC-S6702**	**Optical**
OS	Windows 2000 professional SP3.	

Explanation

- It is impossible to replace the ATX mother board only itself.
- Replace the mother board unit as a whole set. (ATX mother board, CPU and CPU cooler)

1240

32D_1

Specifications of personal computers (PC-NRT-RD2) :High spec PC

	Product name	Specifications
CPU	**Xeon**	**2.8GHz x 2**
Mother board	**X5DA8**	
Memory	**R0166811**	**2GB PC2100**
3.5FDD	**FD-235HG-C304**	2 modes
Hard disk	**WD800BB-00DKA0**	**80GB 7200rpm** **RAID-0 with 2HD**
CD-ROM drive	**FX-48AOW**	**48x ATAPI**
Video board	**MILL G450 DUALH 32MB**	
Keyboard (Japanese)	**FKB8724-501/10**	
Keyboard (English)	**FKB8725-401/10**	
Mouse	**EMC-S6702**	**Optical**
OS	**Windows 2000 Professional SP4.**	

Explanation

- It is impossible to replace the ATX mother board only itself.
- Replace the mother board unit as a whole set. (ATX mother board, CPU and CPU cooler)

Note

- RAID0:This technology is for improving the accessing speed by dispersing the access to the plural hard disks.

1250

32D_1

Spec table of media drive (PC-NRT-RS2) :Standard PC

Drive	Product name	Maker	Types of media	Media Capacity	Interface	Note
MO	MCM3064SS	FUJITSU		640MB 540MB 230MB 128MB	SCSI-2	
ZIP	Zip250	Iomega	ZIP	250MB 100MB	IDE(ATAPI)	
CD-R/RW	PX-W4824TA	PLEXTOR	CD-ROM CD-R CD-RW	650MB 700MB	IDE(ATAPI)	Read: 48x Write: 48x Overwrite: 24x
DVD	LF-D291NS	Panasonic	DVD-RAM	Single side 4.7, 2.6GB Double-side 9.4, 5.2GB	SCSI-2	TYPE1 (Cartridge-type,Impossible to remove the disk)
						TYPE2 (Cartridge-type,Possible to remove the disk)
			DVD-ROM DVD-R	Single side 4.7GB		TYPE2 (Cartridge-type,Possible to remove the disk)

Explanation

- There is no additional information.

1260

32D_1

Spec table of media drive (PC-NRT-RD2) :High spec PC

Drive	Product name	Maker	Types of media	Media Capacity	Interface	Note
MO	MCM3064SS	FUJITSU		640MB 540MB 230MB 128MB	SCSI-2	
ZIP	Zip250	Iomega	ZIP	250MB 100MB	IDE(ATAPI)	
CD-R/RW	PX-W4824TA	PLEXTOR	CD-ROM CD-R CD-RW	650MB 700MB	IDE(ATAPI)	Read: 48x Write: 48x Overwrite: 24x

Explanation

- There is no additional information.

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32D_1

Spec table of media drives (Five slots card reader)

Drive	Product name	Maker	Types of media	Media Capacity	Interface
Five slots card reader	PCD-50N	Microtek International	SmartMedia	4 to 128MB*1	USB
			Compact flash	*2	
			PC card	*3	
			SD card	8 to 128MB*4	
			Memory stick	8 to 128MB*5	
			MMC	4 to 64MB*6	

*1: Based on SmartMedia Physical Specifications Version 1.2
Drive voltage 3.3V
*2: Compliant with Compact Flash Specification Version 1.4
No limit in the capacity.Both of Type I and II (micro drive) can be set.
*3: Compliant with PC Card Standard Release 8 PC Card ATA Specification No limit in the capacity.
Drive voltage: 5V, 3.3V/5V
*4: Compliant with SD Memory Card Specification Version 1.0
*5: compliant with Memory stick Format specification Version1.2
*6: Based on MMC system Specification Version 2.1

Explanation

- The media with security cannot be accessed.
- The PC card which drive voltage is only for 3.3V cannot be processed.
- As for the xD-Picture Card, the PC card adapter or Compact flash adapter is necessary.
- As for the memory stick Pro, the PC card adapter which is corresponded to the memory stick Pro is necessary.
- As for memory stick and SD card, when using the PC card adapter with write-protected, it may be impossible to read the image data.

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32D_1

Procured parts at customer's site

It is possible to connect the FB scanner (on the market) with the QSS for Print to Print.

It is necessary that a customer prepare the device to be used separately.

The followings are the products specified by Noritsu.

Name	Product name	Maker	Connection	Note
Flatbed scanner	**Perfection2450**	**EPSON**	**USB**	Used for "Print to Print". Up to A4 size
Flatbed scanner	**Perfection3200**	**EPSON**	**USB**	Used for "Print to Print". Up to A4 size
Flatbed scanner	**GT-10000+**	**EPSON**	**SCSI**	Used for "Print to Print". Up to A3 size
Flatbed scanner	**GT-15000**	**EPSON**	**SCSI/USB**	* Up to A3 size
*	* *	*	*	* *

*

Necessary options (part No.: I090199)

Color input target + Floppy	Used for the calibration of flatbed scanner.

Explanation

- Refer to the operating instructions attached to each device for handling the peripherals and connecting method.
- As for some problems concerning the FB scanner, contact each maker.
- The necessary option is not sold on the market, so it is necessary to purchase it as an option.

32D_2

Chapter 2
Outline of the system

Explanation

- There is no additional information.

The point of this chapter

Key points

- Explain the outline of the system for each machine.
  Scanner, Exposure engine, Image size, Paper size, DIGITAL ICE

Upon completion of the lesson, you will be able to:

- Understand the specifications and structure of scanner.
- Understand the number of pixels for scanning and the number of resolution for print.
- Understand the dust and scratches which can be processed with the DIGITAL ICE and its theory.
- Understand the paper advance way.
- Understand the structure of exposure engine and the function of each section.

How to proceed the training

Explain the items referring to the training materials and using the actual machine.

2010

32D_2

Cautions for laser unit and LED light source unit

Before servicing the machine, be sure to follow the following instructions to avoid laser beam or LED beam radiation exposure.

- Do not perform any work other than the work which is specified in the manual.
- Do not perform the following dangerous works.
  - Reflect the light path of the laser unit and LED light source unit by inserting a mirror or the like in the light path of the laser beam or LED beam.
  - Change the light path of the laser unit and LED light source unit.
  - Replace the optical parts while the electricity of the laser unit and LED light source unit is ON.
  - Turn ON the electricity in the removed exposure advance unit.
  - Turn ON the electricity in the removed laser unit, LED light source unit from the machine.

Explanation

- The QSS-32 is IEC Class1 laser unit product, but the laser unit itself is IEC Class4.
- The QSS-32 is IEC Class1M LED light source product, and the LED light source unit itself is IEC Class1M as well.

Note

- The LED beam is considered to be the laser beam in the general meaning.
- IEC=International Electro technical Commission

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32D_2

(Reference) Overview of Laser Safety Classes

Class	Evaluation of danger
Class1	Safe for normal operations, and not hazardous when optical instruments are used.
Class1M	Wavelength of the laser: 302.5nm to 4,000nm Same as Class 1, but potentially hazardous when optical instruments are used.
Class2	Wavelength of the laser: 400nm to 700nm Safe for unintended exposure, but prolonged staring should be avoided. Naked eye is protected by blink reflex.
Class2M	Wavelength of the laser: 400nm to 700nm Same as Class 2, but potentially hazardous when optical instruments are used.
Class3A	Wavelength of the laser: 302.5nm to 10^6nm Potentially hazardous when eye is exposed.
Class3B	Hazardous when eye is exposed, but diffuse reflections are usually safe.
Class4	Diffuse reflection may be hazardous.Hazardous to eye and skin, so protect them. Fire hazard.

Explanation

- As for the [Class1M], it does not cause physical harm unless you do not see LED beam directly using lens or optical instruments.

2030

32D_2

Scanner LED light source

LED light source
The LED light source consists of 5 LED which are B, G, R1, R2, and D. It is different from the halogen lamp. It is suitable for the scanner light source because it is unnecessary to replace, and it can change the light intensity of each color by changing the current value.

Light source parts
The light source parts are not consumable parts, so it is unnecessary to replace them.

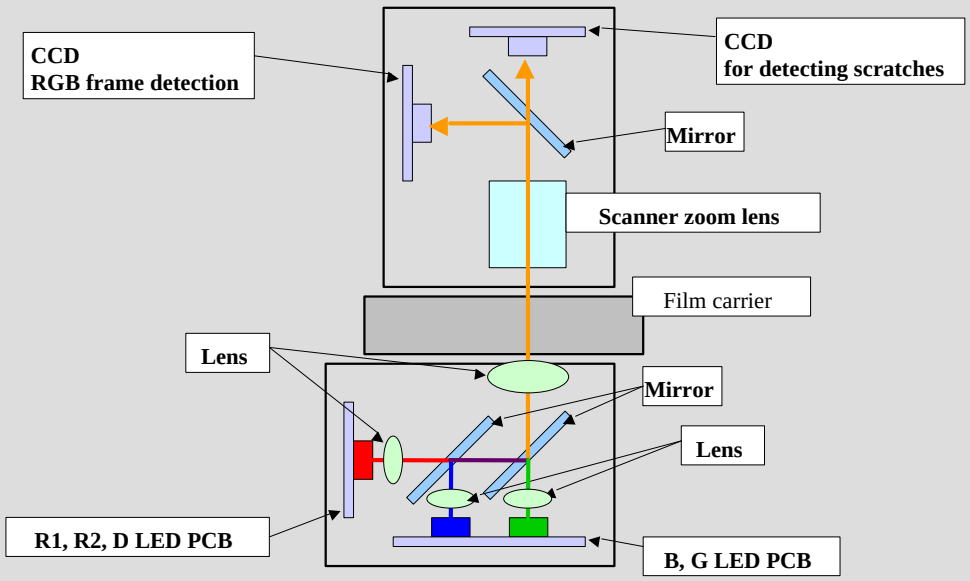
Explanation

- There is no additional information.

2040

32D_2

Exposure route of scanner LED light source



Explanation

- There is no additional information.

2050

32D_2

Scanner

Image capture method	
Optical resolution (Main scanning)	Input one line image with line CCD.
Scan pitch (Sub scanning)	Strip film:Film is moved. Mount:Carrier is moved.
CCD	Scan RGB each with line CCD (5340 pixels).
Others	Automatic dust and scratch removal for films is available. (DIGITAL ICE) *1

Sticker for permission of use*1

Explanation

- DIGITAL ICE is a trademark of Kodak. *1

2060

32D_2

Resolution of the image

- Input resolution (resolution of the image) is different depending on the film size and paper width each.

  Change the resolution of the image by the zoom lens of scanner.

Resolution of the image when scanning 135 film (Unit: pixel)

Explanation

- There is no additional information.

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32D_2

Resolution of the image (film size each)

Film size	Minimum	Maximum
135F	1037 x 1565	4492 x 6774
135H	2075 x 1463	4492 x 3167
135P	1265 x 3583	2226 x 6305
240C	1406 x 2110	3043 x 4567
240H	1406 x 2465	3043 x 5335
240P	1448 x 3489	2214 x 5335
110	1109 x 1459	3573 x 4702
6 x 4.5	4824 x 3533	4824 x 3533
6 x 6 (6 x 6V)	4832 x 4760	4832 x 4760
6 x 6H	4760 x 4832	4760 x 4832
6 x 7	4815 x 5902	4815 x 5902
6 x 8	4903 x 6610	4903 x 6610
6 x 9	4903 x 7139	4903 x 7139

Explanation

- In the 120 film, the resolution of the image is constant, but the width [6] of [6 x #] is slightly different depending on each size on the basis of the 120 size standard. Therefore, even if you scan it at the same magnification, the resolution of image is to be the present size as a result, because the film width with image is different.

Note

- In case of wide scanning for 120 and mount, the number of resolution for scanning is as follows.

6*4.5W ---------- 5078*3859
6*6W (6*6VW) ---------- 5078*5074
6*6HW ---------- 5074*5078
6*7W ---------- 5078*6298
6*8W ---------- 5078*7097
6*9W ---------- 5078*7505

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32D_2

Resolution of the image (film size each)

Film size	Minimum	Maximum
135F mount	1120 x 1718	3894 x 5971
135H mount	2241 x 1467	3894 x 2549
240 mount	1474 x 2590	2561 x 4501

Note

- In case of wide scanning for mount, the number of resolution for scanning is as follows.

  135F mount W--------Minimum: 1275*1913 Maximum: 4432*6648

  135H mount W--------Minimum: 2550*1806 Maximum: 4432*3138

  240 mount W----------Minimum: 1774*3209 Maximum: 3082*5575

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32D_2

Minimum necessary pixels for paper size each

Size (mm)	Pixel	Size (mm)	Pixel
82.5	974	178	2102
89	1051	203	2398
102	1205	254	3000
127	1500	305	3602
152	1795	457	5398

Note

- Calculating formula

  Size (mm) 25.4 x 300 (dpi) (resolution of printer) = Resolution of the image for one side

  The above is just the calculated number. Actually the image is scanned a little larger.

2090

32D_2

Scanning

- The zoom value of scanner is decided on the basis of the largest among the paper sizes, which are registered in the print channel (C/P/H).

  Example)

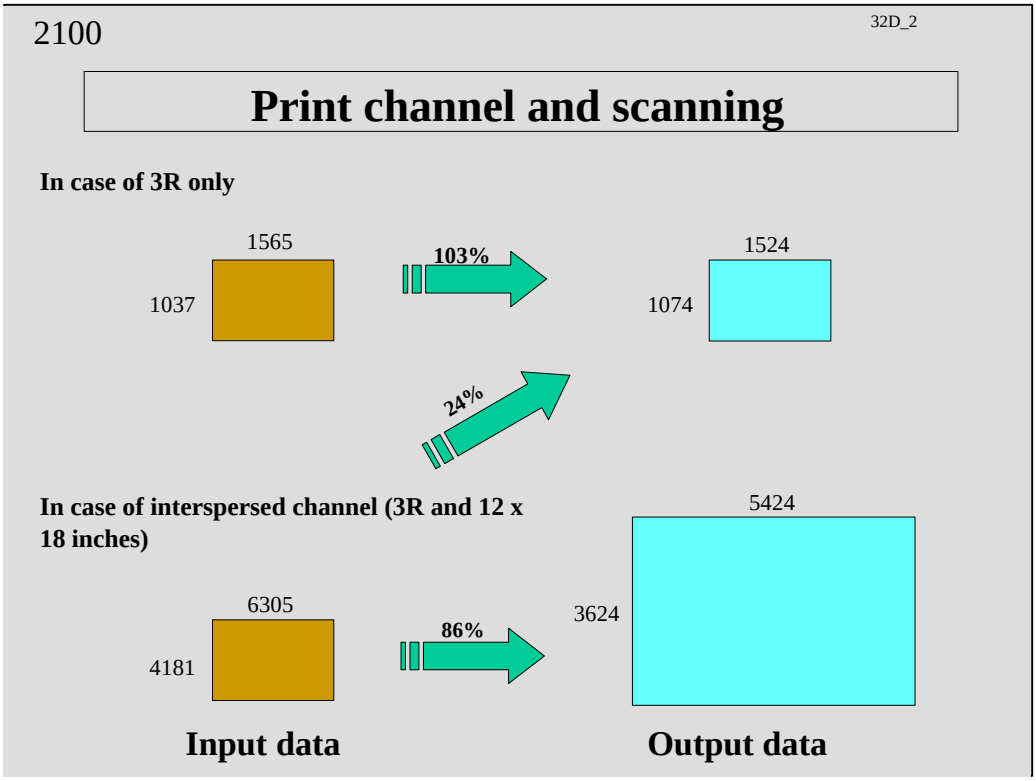
  In the 135F, when setting “89 x 127” and “305 x 457”, the resolution of image is 4181 x 6305.

  The resolution of image for 89 x 127 channel only is 1037 x 1565.

  The quality is different depending on the combination of print channel.

Explanation

- There is no additional information.



Explanation

- There is no additional information.

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32D_2

Pre-scanning

Film size	Resolution	**Film size**	Resolution
135F	259 x 391	6 x 4.5	301 x 220
135H	259 x 182	6 x 6	302 x 297
135P	138 x 391	6 x 7	300 x 368
240C	223 x 391	6 x 8	306 x 413
240H	223 x 391	6 x 9	306 x 446
240P	223 x 391	135 mount F	342 x 524
110	277 x 364	135 mount H	342 x 223
		240 mount	224 x 395

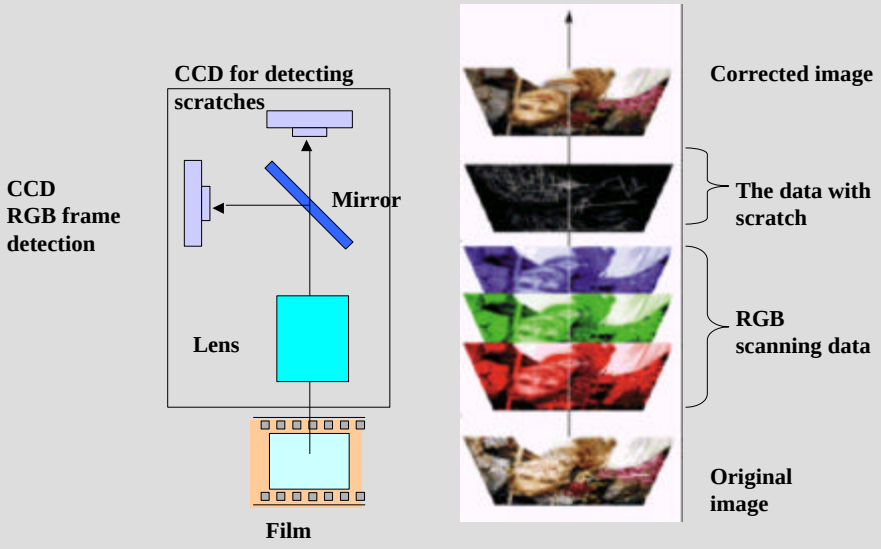
Explanation

- The image data scanned in the Pre-scanning is used for the index prints, label index prints, index prints of contact print style photos and for monitor display.

2120

32D_2

DIGITAL ICE Technology



Explanation

- The technology to make the images without scratch, dust, etc. In addition to the CCD which takes the color information of RGB, the another CCD is added. It detects the dust, scratch, etc on the film. This corrects the scanned image information.

2130

32D_2

Function to remove the scratch and dust on the film

Comparison table with the conventional models

Scratch and dust removal function on the film	Scratch removal function on the base side of the film (DIGITAL ICE:standard)
	Scratch removal function on the base side and the emulsion side of the film (Digital Masking:option)

The conditions for functioning the scratch and dust removal function on the film

	DIGITAL ICE:Standard	Digital Masking :Option
PCB	D-ICE PCB (standard) D-ICE control PCB (standard)	D-ICE PCB (standard) D-ICE control PCB (standard) Scratch mend PCB 1 x 2 (option) Scratch mend PCB 2 (option) Data change over PCB (option) DIMM (option)
Installing the software	Unnecessary	Unnecessary
Registration in the mode	Place a check mark for [DIGITAL ICE Correction] in [Operator Selections].	Place a check mark for [Digital Masking Unit] in [Operator Selections]. You can set the [Digital Masking Unit] ON or OFF in the [Operator Selection].

Important

- As for the scratch and dust removal function on the film, in addition to the conventional DIGITAL ICE, the Digital Masking (the scratch removal function on the base side and the emulsion side of the film) which is developed by the NKC is added.
- When explaining about the scratch removal function on the base side and the emulsion side of the film, please call it Digital Masking which is developed by the NKC.

Note

- The Digital Masking Unit (option) consists of Scratch mend PCB 1 x 2, Scratch mend PCB 2, Data change over PCB, and DIMM.
- If the Digital Masking Unit is attached, a check mark is placed for the option registration automatically.

2140

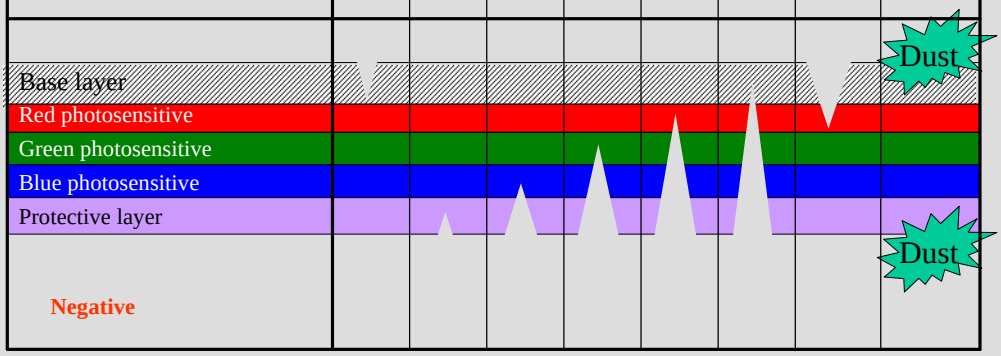
32D_2

Scratches and dust which can be corrected

(e.g.)In case of color negative

Scanner side

	Scratches and dust which can or cannot be corrected							
DIGITAL ICE: Standard	x	x	-	-	-	-	-	x
Digital Masking: Option	x	x	x	x	-	-	-	x



x: possible

LED light source side

Explanation

- The DIGITAL ICE deletes the dust or scratch, which is stuck to the film surface, automatically.
- When the Digital Masking unit is installed, it is possible to delete the scratches such as the scratch reaches photosensitive from the protective coat.
- However, it is impossible to delete the deep scratches such as the scratch reaches the red photosensitive from the protective coat or the scratch reaches the red photosensitive from the base layer.
- The DIGITAL ICE does not function normally when a lot of silver is included in the part where the image is created, like in case of monochrome films and desilvering.
- In the KodakChrome films, the effect of DIGITAL ICE is weak to the high density or low density of a film, and the scanned image will deteriorate.

  Turn OFF the function of DIGITAL ICE before printing.

  You can set the function of DIGITAL ICE ON or OFF in the “Operator Selection”.

  (However, in case of monochrome film, the DIGITAL ICE is turned OFF automatically.)

Note

- The D light cannot detect the oil. Therefore, fingerprints cannot be deleted because they are made from oil.
- The “blurring caused by the roller pressure” cannot be corrected.

2150

32D_2

Colorimeter

Changes from the conventional machines

- It is possible to set the 305 size paper to the colorimeter without cutting it.
- The calibration plate is built into the colorimeter.
- When measuring test prints or calibration plate, they are touched to the colorimeter by using the pressure change solenoid. By doing so, the precision of color measuring is improved because they are less influenced by outside light.

Important

- It is very important to clean the calibration plate because the gradation from white to black changes by the dirt on the plate.
- Clean the calibration plate with a neutral detergent and water.

The Maintenance Manual [Cleaning the Calibration plate]

2160

32D_2

Paper sizes and transportation

Paper transportation

As for the paper advance unit 2, there are 4 kinds of lane select operation, and the conditions are as follows.

Condition of paper advance	Service Manual
Paper width:152.0mm or less Paper advance length:178.0mm or less	55500
Paper width: 152.0 mm or less Paper advance length: 178.1mm to 305.0mm	
Paper width: 152.0 mm or less Paper advance length: 305.1 mm or more	
Paper width: 165.0 mm or more	

*** Refer to the Service Manual Chapter 5 for details.**

Explanation

- There is no additional information.

2170

32D_2

Laser Engine

Laser:
Light Amplification by Stimulated Emission of Radiation

The exposure method by Visible Radiation is employed like the conventional machines.

Note

- Merit

  (1) It is possible to reduce the power consumption in the printer.

  (2) The uniformity calibration is unnecessary.

  (3) The laser is not affected by the magnetism.

2180

32D_2

Printer Exposure Engine

Exposure method	Line exposure method by the Laser engine
Output gradation	4096 gradation
Maximum exposure width	315 mm (12.4-inch)
Print resolution	300 dpi (Main Scanning) x 600 dpi (Sub Scanning)
Exposure speed	58.42 mm/sec
Light source	B laser, G laser, R laser

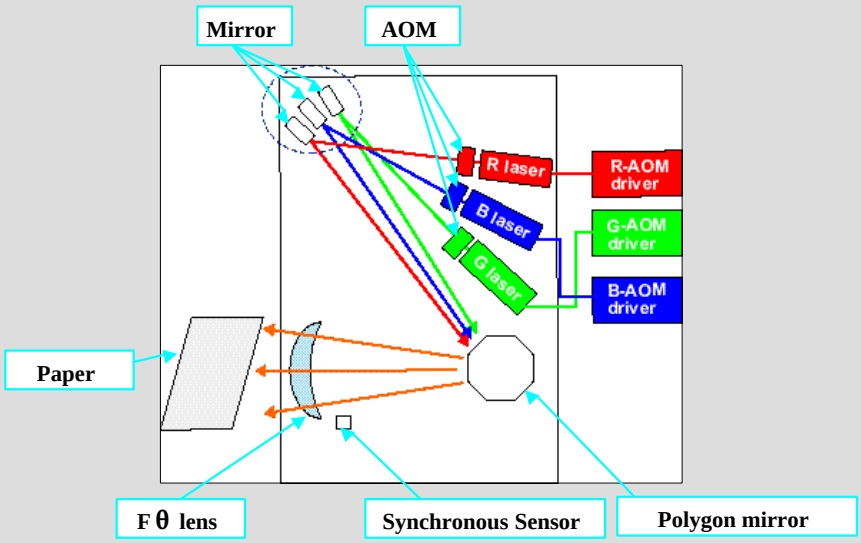
Explanation

- The exposure speed by the laser engine is kept at a constant speed and it does not change.
- The maximum exposure width is the value including the hem for adjusting the exposure center.The maximum exposure width to the paper is 305mm.

2190

32D_2

Structure of Laser Unit



Explanation

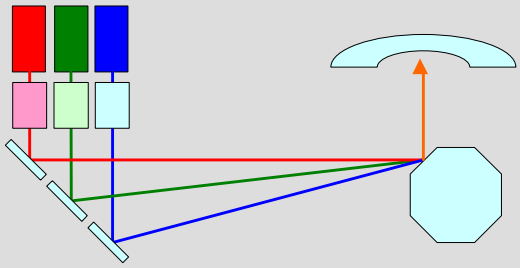
- The prism is disappeared.

2200

32D_2

Explanation of laser unit

Laser	Visible Radiation Laser for R, G, B each
AOM	Acousto-Optic Modulator Adjusts the strength and weakness of laser light.
Mirror	Changes the direction of laser light.
Polygon mirror	Rotates in a certain speed and scans in the Optical resolution (Main line).
F θ lens	Changes the angle of laser light according to the angle of incoming light, and maintains the constant speed.
Synchronous Sensor	Detects the scanning timing of R, G, B



Explanation

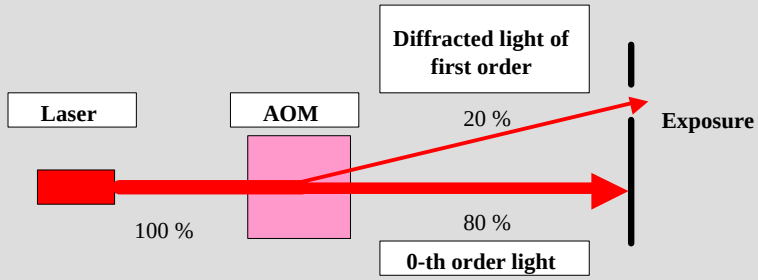
- There is no additional information.

2210

32D_2

Structure of Laser Unit (AOM)

- AOM controls the strength of laser light.
- The diffracted light of first order is used for exposure.



The direct light is called 0-th order light.

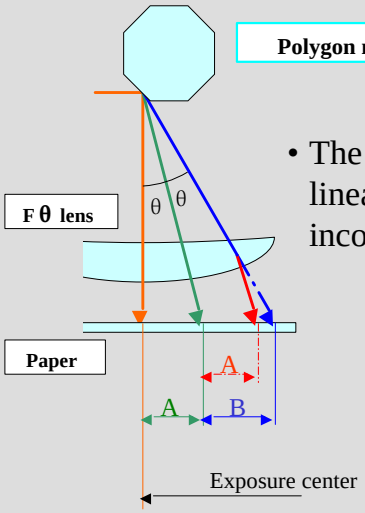
Explanation

- When the voltage is not turned ON to AOM, the incoming laser beam passes through as it is.(0-th order light)
- When turning ON the high frequency voltage, the ultrasonic waves occurs, and the diffracted light which is separated from 0-th order light occurs.(Diffracted light of first order)
- Change the rate of 0-th order light and the diffracted light of first order by changing the high frequency voltage on AOM, and control the strength of light (diffracted light of first order) to be used for exposure.

2220

32D_2

Structure of Laser Unit (F θ lens)



- The F θ lens corrects the dispersion of linear velocity caused by the angle of incoming beam.

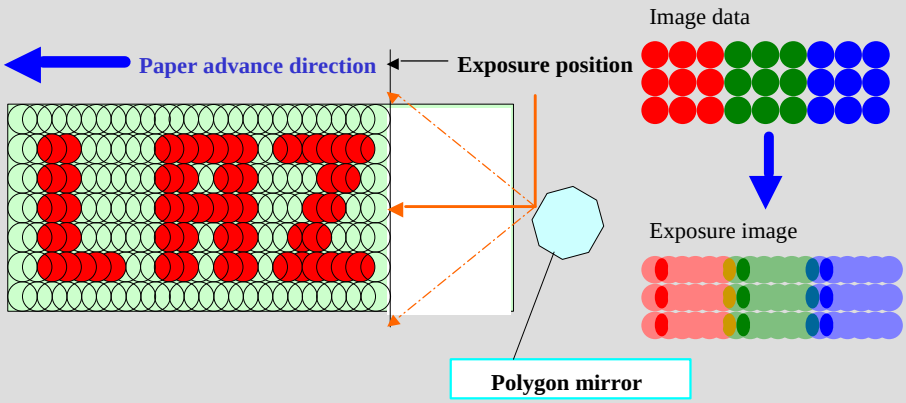
Explanation

- The travel (distance) on the paper is different between “the light outputted from the exposure center at the angle θ” and “further output light at the angle θ” The travel (distance) on the paper is different between “the light outputted from the exposure center at the angle light at the angle θ and “further output light at the angle θ.(As shown in the illustration, length A, B).
- The F θ lens changes the angle of diffracted light according to the angle of incoming beam, and corrects the difference of travel (distance) on the paper.

2230

32D_2

Laser Exposure



Explanation

- Resolution
  Optical resolution (Main or the CCD line): 300 dpi
  Scan pitch (Sub Scanning): 600 dpi
- Reason why the sub scanning is exposed to overlap.
  (1) To get the soft image without the scanning unevenness (density difference of 1 scanning line).
  (2) Not to occur the open caused by the time-lag between the advance and exposure.
  (3) Not to show the unevenness of color when the time-lag of exposure occurs.

32D_3

Chapter 3
Operation

Explanation

- There is no additional information.

The point of this chapter

Key points

- Study the operations

  Printing operations, Start up checks, Close down checks, ON/OFF procedure of power supply

  Status display of LED, CD-Viewer, CVP (Correction Value Print), Index prints

Upon completion of the lesson, you will be able to:

- Explain each printing operation to users.
- Explain the image storing to media to users.
- Explain printing operations in the EDIT mode to users.
- Explain the input from Flatbed scanner to users.
- Explain the start up checks and close down checks.
- Explain ON/OFF procedure of power supply to users.
- Explain the status display of LED, details of CVP and index prints.
- Understand about the CD-Viewer.

How to proceed the training

Carry out the practical training, or explain the items using the sample prints.

3010

32D_3

Setup during the start-up checks

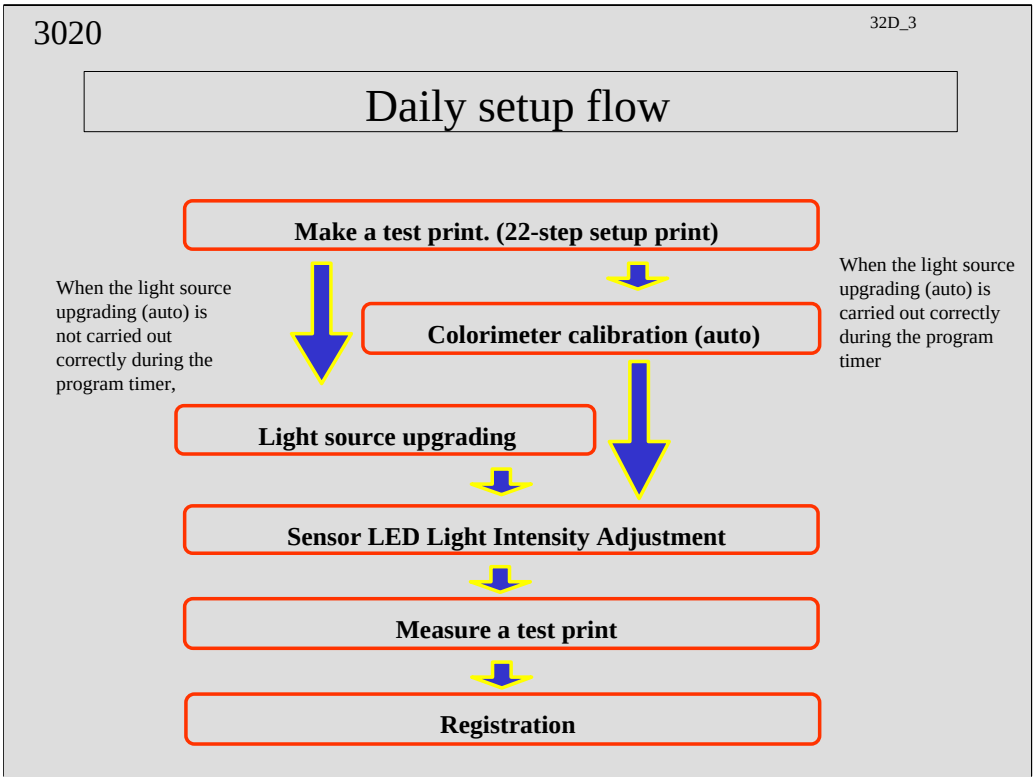
Daily setup	Execute once a day for each paper type to be used.
	Correct the temporary aging of exposure engine, light source and processing solution.
	Make a 22-step test print.

Explanation

- The laser engine causes the temporary aging by the fall of maximum output, change of output wavelength and dirt of optical parts.

Note

- The weekly setup and the monthly setup are unnecessary from the QSS-32.



Explanation

- After exposing the test print, the calorimeter calibration will be executed automatically.
- The light source update is executed automatically for the carrier to be set during the program timer.

  e.g.) When 240 lane is set: 240 light source update is executed.

  When 120 AFC is set, 120 light source update is executed.
- When the light source update is not completed correctly during the program timer, it is executed again automatically for the carrier to be set during the daily setup.

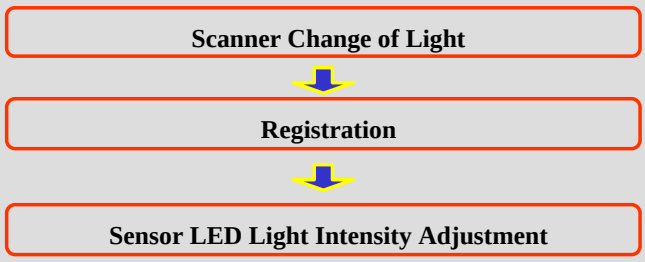
Note

- As for the other carriers except the one to be set during the program timer, update the light source when replacing the carrier or switching the lane.
  However, update the light source when 24 hours have passed from the last update.

3021

32D_3

Daily setup flow (Stand alone scanner)



Explanation

- As for the stand alone scanner, there is no program timer function, so make sure to execute the light source upgrading during the daily setup.

  Refer to the S-900SA/S-1700SA Maintenance Manual [Daily Setup].

3030

32D_3

Explanation of operations

- Explain with the actual machine.

Explanation

- As for AMC, up to 40 mounts can be set.
- Use the dummy mounts of AMC when switching the order.
- AMC is available for PJP.
- Components of AMC

  Main body

  Insertion stocker

  Ejection stocker

  Dummy mount (for switching the orders) Quantity: 5

  Single adapter

  Packing unit
- When the media output destination is MO, FD, DVD, ZIP, or CD-R/RW, it is possible to specify [number of media] and [number of label index prints].However, make sure that [Additional Writing] is set to [No] on the [Option Registration] display. When [Additional Writing] is set to [Yes], it is impossible to set [Label Counts].

  [Number of media]:Can be set on the message [No.1527 Write the Data. Set the media].

  [Number of label index prints]:Can be set on the Order display.
- The following contents can be specified on the [Print operation] tab of Operator selection screen.

  [Color selection of print blank of positive]:Possible to select White or Black for the unexposed part.

  [Paper remaining count display]:Possible to select [Count distinct paper magazine A and B] or [Count mix paper magazine A and B].

3040

32D_3

Explanation of modes

- Explain the modes, checking the actual machine.

Explanation

- Paper temperature change correction

  R light changes by the temperature change of inside of laser unit and surrounded temperature. The color development of paper may be different.

  In this case, input the correction value in the “Paper temperature change correction”.

  Corrections:Refer to the Operator's Manual -Additional Operations & Setup Manual - [Correcting the paper coloration due to the temperature variations [Paper Temperature Correction]].
- CCD noise suppression strength: Correction which is effective only for Under/Over part of films.Noise is likely to occur in parts where there is not much light, so the correction is done only for the part.

Note

- As for the setup and mechanical adjustment, carry out the practical training, so skip the explanation here.

3041

32D_3

Explanation of modes (Stand alone scanner)

- The modes which are related to printer and paper processor are not displayed.Or, if they are displayed, they are not available.

  Refer to the Service Manual[Mode structure chart [Stand alone scanner]] in [3. Mode]
- [1 Frame Magnification display] is not available.
- [Monitor Setup] is not available.

- Explain the modes, checking the actual machine.

Explanation

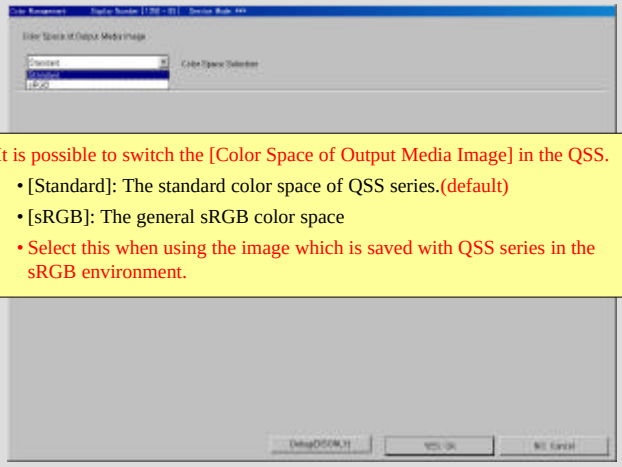
- There is no additional information.

3042

32D_3

Color Management (Stand alone scanner)

Menu
↓
Extension
↓
Setup
↓
Master Data
↓
Color management



- It is possible to switch the [Color Space of Output Media Image] in the QSS.
  - [Standard]: The standard color space of QSS series.(default)
  - [sRGB]: The general sRGB color space
  - Select this when using the image which is saved with QSS series in the sRGB environment.

Explanation

- When changed the setting of [Color Space of Output Media Image], it takes about 3 minutes to register it.
  Because a profile will be made when changing the [Color Space].

3050

32D_3

Shortcut key

- Explain, checking an actual machine.

Shortcut key		Mode
PASS (F11)	REP (F2)	Setup
	Y (F5)	Maintenance
	M (F6)	Version check
	C (F7)	History of movement
	D (F8)	Machine specification
	-1 (F9)	Operator selection
	N (F4)	List of Print channel
	+1 (F10)	Option registration

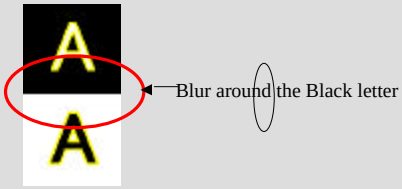
( ) : Shortcut key in the Full keyboard

Explanation

- The above Shortcut key is used very often.

Black balance adjustment

[Black balance adjustment] is the mode to adjust the blur around Black letter (the defective of color balance) on the print.



Explanation

- The [Black Balance Adjustment] is included in the initial setup and the Setup of the Paper Specification Registration/Setup.

  Also, there are [Black Balance Adjustment] and [Black Balance Adjustment (Manual)] in the [Functions] of the Paper Specification Registration/Setup.
- Refer to the Operator's Manual -Additional Operations & Setup Manual - [Adjusting the blur of letters (color balance) [Black Balance Adjustment]].
- Refer to the Service Manual [32510].

Note

- This is not effective for the dark part of 22-step print, etc.

3070

32D_3

What is the compact archive unit?

- **Image storing to compact archive unit**
- **Print from compact archive unit (Image storing to media)**

Films and the storage media Compact Archive Unit Compact Archive Unit **Storage media**

- Image data: Scanning data which the scratch has been removed, and the data with the magnification when scanning
- Correction data: Stored in the HDD for CAU which is same as the image data

Explanation

- The compact archive unit is an option to save the image data or storage media of scanned film to the HDD for CAU.Also, the image data which is stored to the HDD for CAU can be printed and written to the each storage media.
- In the compact archive unit, the image data is stored with 'the color correction data, etc.' memorized. Therefore, it is no need to scan the negative again in case of reprint, etc.
- The image data which is stored to the HDD for CAU is not the universal data but the raw data of scanner.This cannot be used as the image data except when processing with the QSS.
- The correction data is stored in the HDD for CAU.

  Image correction data: Key correction data, 1 Frame Magnification correction data, DSA correction data, Number of prints

  Inner data: Negative size/Types, Frame No., Information, Magnetic data information (240 only)
- The stored image data and correction data cannot be backed up.

  It is impossible to make a back up in the "Backup the data (Close down checks mode)" and "Reading and Writing the data (Maintenance mode)".

Note

- [CAU] is the abbreviation of Compact Archive Unit.

3080

32D_3

Specification of compact archive unit 1

- Available image: Only the image scanned from film
- Storage capacity:

Film (negative)	Storage capacity	Condition (80GB x 1 HDDs)
135F-24EX	approx. 160 films	HC of 3R only (89 x 127mm) 1037 x 1565 pixels/1 frame

- Storage speed: It is different from the CAU of the QSS-30. It processes with the HDD of the QSS, so the processing capacity decrease a little when saving the image data from the film to CAU.
- Reading speed: Same with the normal scanning speed
- Available print mode: Normal Print/package/Album (Edit is out of guarantee)
  AUTO/PJP/PPI (4/6 frames)

Explanation

- There is no additional information.

3081

32D_3

Specification of compact archive unit 2

- Prohibition of automatic deletion

  When the capacity of HDD is full, the data is deleted automatically from the oldest data.

  Possible to store 'the data you don't want to delete' if "Hold on Save Mode" is selected in the "Archive mode".

- Reading the image data

  Possible to read the image data by selecting the archive code from the list of stored image.

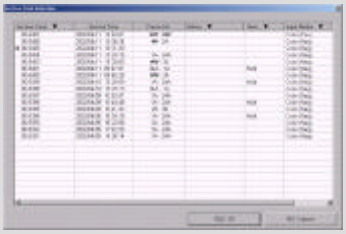
  Possible to read by the number input of archive code.

  Possible to print by selecting plural orders in bulk.

- Magnification

  The rate of enlargement/reduction, as compared to the time that the image was archived.

- Index prints
- CVP



Explanation

- The specific No. for order each (archive code) is imprinted on the index print and back print (CVP). Reprint is possible without negative by checking the archive code.

  Index print: The archive code is displayed on the upper part of print.

  Back print (CVP): When storing the image to compact archive, the printing of CVP is different.(Explain the details in the "Details of back print".)(Explain the details in the "Details of back print".)

- Magnification

  If you make a print with bigger size than the stored one in the Archive, the magnification becomes bigger and the quality may become lower.

- When making a print from the Archive, the image data stored in the Archive is not overwritten.

  However, the correction data only is overwritten.

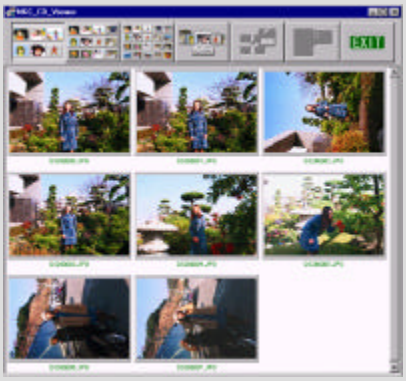
  [Example]

Archive	Correction	Print size	Magnification (%)
1st time	+1D	89 x 127	100
2nd time	+1D, +1Y	127 x 178	114
3rd time	+1D, +1Y	89 x 127	100

3090

32D_3

CD Viewer (Simple Viewer Software)



In the QSS-27 or later, the Viewer Software is standard.

Up to 5 orders can be displayed.

If you install the CD viewer utility software, you can set the customer's shop information and logo data on the viewer software.

Explanation

[Explanation of Main function]

- Select the image data of film.

  The images are put in order for each film(Maximum: 5 orders)
- Set the image size for display.

  You can select the display from 3 patterns.
  Big size/ Middle size/ Small size
- Slide show

  You can select various slide display patterns.
- Store the image to each media.

  You can specify the image form and store it to the media.
- Mail attachment

  You can attach your favorite photos in the mail automatically.
- Pint order form

  You can make a print order sheet. This enables to make a print from the images in the CD.
- Set the display screen

  You can select the image quality for image display.

3100

32D_3

CD Viewer (Deluxe viewer software)

Up to 5 orders can be displayed.

If you install the CD viewer utility software, you can set the customer's shop information and logo data on the viewer software.

- The deluxe viewer software is not sold as the software.So, you can not write the deluxe viewer software from a machine to generic CD-R and R/W.
- The QSS CD is supplied from NORITSU.
  The Deluxe Viewer software is contained in the QSS CD in advance.

Explanation

[Explanation of function]

- Image display

  1 frame, 3 frames, 6 frames, 15 frames, Index display

  Slide show

  Store in my photo
- Corrections

  Red-eye Correction, Brightness, Noise Removal, Contrast,

  Sharpness, Unsharp, Saturation
- Special effects

  Puzzle, Solarize, Monotone, Sepia, Mosaic, Blur,

  Pointillize, Emboss
- *

  **
- Make the post cards.

3110

32D_3

QSS CD

- The QSS CD is supplied from NORITSU as an option.
  The Deluxe Viewer software is contained in the QSS CD in advance.

<Kinds>

Name		Contents		Source of supply	Attachment
		Record	Label		
QSS CD (TYPE A)	*	*	*	NORITSU	Nonwoven fabric Manual
QSS CD (TYPE B)	*	*	*		
QSS CD (TYPE A)	*	Deluxe Viewer	QSS CD		
QSS CD (TYPE B)	*	Deluxe Viewer	Printable		

•Each CD has part number.

•The attachment is stored in the CD-R case.

Explanation

- The deluxe viewer software is not sold as the software.So, you cannot write the deluxe viewer software from a machine to CD-R and R/W.

3120

32D_3

CD-R Engine

- In the QSS-27 or later, the CD-R Engine is the software to write the image to QSS-CD that contains the Deluxe viewer software.
- In the QSS-27 or later, this software is required to see the Simple viewer software in the Mac.

Noritsu CD-R Engine (Windows/Mac)

Software version which is compatible or will be compatible with Noritsu CD-R Engine (Windows/Mac)	
QSS-2701D	Not supported
QSS-2801D	Ver.G001 or later
QSS-2901D	Ver.E001 or later
QSS-3001D	Ver.E001 or later
QSS-3101D	Ver.C001 or later
QSS-32	The limited shipment Ver. or later

Explanation

- As for the QSS-32, it is unnecessary to install the Mac CD because the CD-R Engine (Windows/Mac) is not available.
- As for the QSS-32, Noritsu CD-R Engine (Windows/Mac) only is available.
- Refer to the PC Manual [Procedure for installing the CD-R Engine] for the Noritsu CD-R Engine (Windows/Mac) installation.

3130

32D_3

CD Viewer Utilities

This is the software to edit the display contents of CD Viewer.

You can set the customer's shop information and logo data.

Simple viewer software and Deluxe viewer software are common.

Install the software from "CD_Viewer_Utility" folder in the system program CD of each machine.

Explanation

- There is no additional information.

3140

32D_3

Setting of the CD-R/RW writing

- When writing to the QSS CD

  Set in the “Image Save” of “Operator Selections”.

  Mark the check box for “Switch for Deluxe Viewer”.

  Set the “Shop data” folder.

- When writing the generic CD-R/RW

  Set in the “Image Save” of “Operator Selections”.

  Remove the check box “Switch for Deluxe Viewer”.

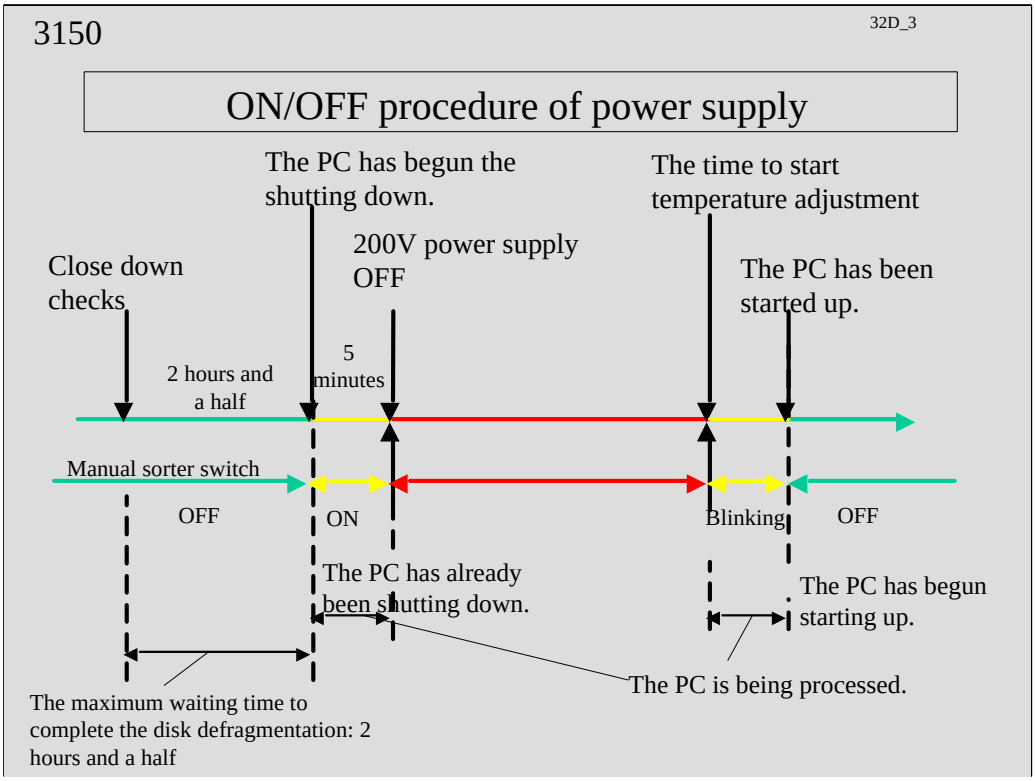
  Mark the check box “Writing Viewer Software”.

  Set the “viewer software” folder.

  (The simple viewer software which is standard of this product is set in the initial setting.)

Explanation

- If you install “CD-R Engine (Windows/Mac) software, you can set the “Switch for Deluxe Viewer”.
- As for the registration of “shop data”, refer to the “CD Viewer Utility software” Operator’s Manual.



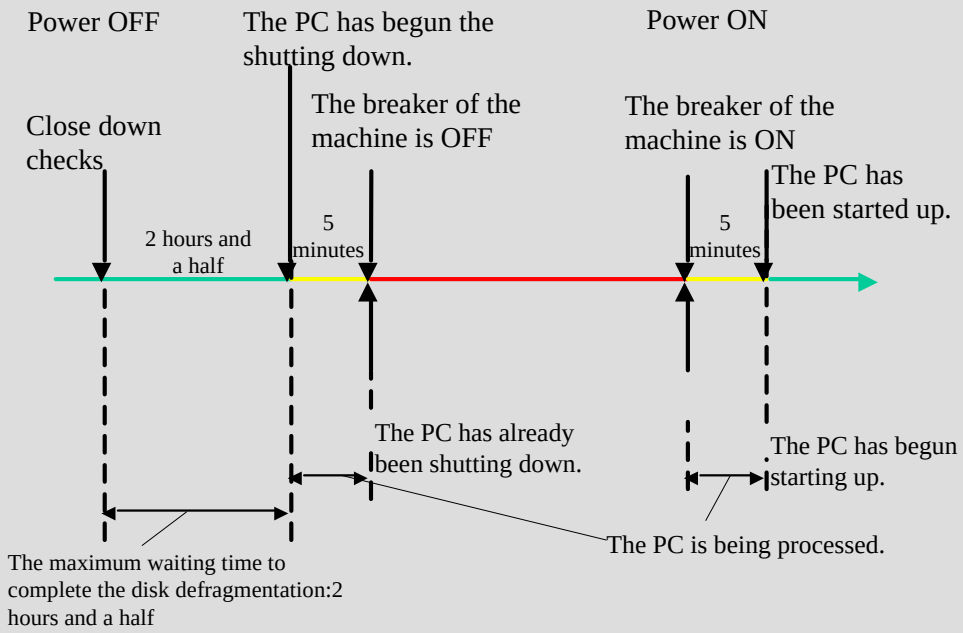
Explanation

- Refer to the Getting Started [Closing down the machine with the program timer], [Closing down the machine without using the program timer] for details of the normal shutdown movement.
- Refer to the Getting Started [Stating the machine when the temperature adjustment has been done], [Starting the machine when nothing is shown on the display] for details of the normal start up movement (When the program timer is activated.).
- Refer to the Troubleshooting Manual [Turning off the power supply for troubleshooting], [Turning on the power supply after troubleshooting] for details of when turning the breaker OFF in the case of troubleshooting, etc.
- Refer to the Troubleshooting Manual [Restarting the machine when it freezes up] for details of how to turn OFF the breaker when the PC has been freezing.
- Refer to the Troubleshooting Manual [Turning off the power supply in an emergency] for details of how to turn OFF the breaker in an emergency.
- Refer to the Service Manual [68550] for details of when the PC does not start up (error).

3151

32D_3

ON/OFF procedure of power supply (Stand alone scanner)



Explanation

- Refer to the Getting Started of S-900SA/S-1700SA [Starting up the machine], [Closing down the machine] for details of the normal shutdown movement.
- Refer to the Troubleshooting Manual of S-900SA/S-1700SA [Turning off the power supply for troubleshooting], [Turning on the power supply after troubleshooting] for details of when turning the breaker OFF in the case of troubleshooting, etc.
- Refer to the Troubleshooting Manual of S-900SA/S-1700SA [Restarting the machine when it freezes up] for details of how to turn OFF the breaker when the PC has been freezing.
- Refer to the Troubleshooting Manual of S-900SA/S-1700SA [Turning off the power supply in an emergency] for details of how to turn OFF the breaker in an emergency.

3320

32D_3

Status display of the processor

Status lamp of processor	Condition of display	Note
Lighting Green 	The temperature adjustment is completed.	
Blinking Green 	During the Program timer (From “After the close down checks is completed.” to “The time to start the temperature adjustment”)	**Slow blinking**
Blinking Red 	When it is impossible to activate the temperature adjustment (When the error occurs or the interlock switch is activated.)	**Slow blinking**
Dark 	The processor section does not start-up. During the temperature adjustment	

Sorter switch	**Condition of display**	**Note**
Dark 	The PC is being functioned.	
Blinking 	While the PC is being started-up.	**Slow blinking**
Lighting 	During the program timer or the power supply of PC is turned OFF.	

Explanation

- There is no additional information.

3330

32D_3

Status display of the scanner

Ready lamp	Condition of display
Lighting Green 	Films can be processed. (You can insert a film.)
Blinking Green 	Film is being processed. (You cannot inset a film).
Blinking Red 	Films cannot be processed.(You cannot process a film.) • The error occurs. (You cannot process a film.)
Dark 	Films cannot be processed.(You cannot process a film.) • When the “Film” is not selected for “Image input” in the print channel setting. • During the start-up checks and close-down checks • During the Program timer • When the message “Insert a film.” does not appear on the adjustment mode. • During the initial movement

Explanation

- There is no additional information.

3340

29D_3

Details of the back print

- When making prints from except the IX240 film
- When making prints from the IX240 film
- Back print of the print from the storage media
- Back print of the combined print
- Back print when using the CAU

Explain, checking the Operator's Manual - Basic Operations - [Checking back prints].

Explanation

- There is no additional information.

3370

32D_3

Types of index prints

Normal index prints	Make normal index prints. The data for displaying on the PJP mode is used.
Label Index	Index print for the media case size of storage media The digital camera media such as the Smart Media, Compact Flash, etc are not available.
Contact Print Style Photos	Make Contact Print Style Photos.

Explanation

- The pre-scanning data is used for the output of index print.
- The pre-scan data is enlarged and prints are made.
- Index logo data size

  When you make the original logo data;
  Image size: 164 x 494 pixels
  Saving format: bitmap (bmp)

Note

- When processing the contact print, the negatives and positives of 120/110 are printed in the same format as the 135F.

3380

32D_3

Index print sizes (135/240 films)

- Normal index prints 135/240 films

x: Available

-: Not available

***1:** Printing is possible, but a whole of the image does not appear on the print.

Format	Paper size (mm)	135 films		240 films		
		28-frame	40-frame	15-frame	25-frame	40-frame
3HS	82.5 x 158	-	x	-	-	-
3R	89 x 127	x	x	x	x	x
3HD	89 x 158	x	x	x	x	x
3W	89 x 178	-	-	x	x	x
3WS	89 x 178	x	x	x	x	x
4R	102 x 152	x	x	x	x	x
4HD	102 x 178	x	x	x	x	x
5R	127 x 178	x	x	x	x	x
6R	152 x 203	x	x	x	x	x
6HD	152 x 254	x	x	x	x	x
6W	152 x 305	x	x	x	x	x
8RS	203 x 254	x	x	x	x	x
8R	203 x 305	x	x	x	x	x
8HD	203 x 356	x	x	x	x	x
CD_40	120 x 120	-	x	-	-	*1
CD_40A	89 x 120	-	x	-	-	*1
CD_40B	102 x 120	-	x	-	-	*1
3WL	89 x 254	x	x	x	x	x

Explanation

- There are 3 types of Index print sizes for CD.
- 135 film restrictions

  When selecting 3HS, CD_40/40A/40B, it is printed in 40-frame format.
- 240 film restrictions

  When selecting CD_40/40A/40B, it is printed in 40-frame format.

  But, a whole of the image does not appear on the print because the aspect ratio is not constant.

Note

- 110 film restrictions

  Same with the restrictions of 135 films. But, a whole of the image does not appear on the print because it is printed in 135 format.
- Media

  Same with the restrictions of 135 films. But, a whole of the image does not appear on the print because the aspect ratio is not constant.

3390

32D_3

Index print sizes (120 films)

Normal index prints
120 films

-: Not available

***1:** Printing is possible, but a whole of the image does not appear on the print.

***2:** Printing is possible, but the logo data is not printed.

6*4.5, 6*6 :18-frame format

6*7, 6*8, 6*9 : 12-frame format

Format	Paper size (mm)	Index	
		12-frame	18-frame
3HS	82.5 x 158	*1	*1
3R	89 x 127	*1	*1
3HD	89 x 158	*1	*1
3W	89 x 178	-	-
3WS	89 x 178	*1	*1
4R	102 x 152	*2	*2
4HD	102 x 178	*1	*1
5R	127 x 178	*1	*1
6R	152 x 203	*1	*1
6HD	152 x 254	*1	*1
6W	152 x 305	*1	*1
8RS	203 x 254	*1	*1
8R	203 x 305	*2	*2
8HD	203 x 356	*1	*1
CD_40	120 x 120	*1	*1
CD_40A	89 x 120	*1	*1
CD_40B	102 x 120	*1	*1
3WL	89 x 254	*1	*1

Explanation

- There are 3 types of Index print sizes for CD.
- 120 film restrictions
  - When selecting [4R], [8R], the logo data is not printed.
  - When selecting 4R, 8R, the number of frames to be printed is different.

    Film size 6 x 4.5, 6 x 6: 18-frame format

    Film size 6 x 7, 6 x 8, 6 x 9: 12-frame format
  - When selecting the size except [4R] and [8R], it will be printed in 28-frame and 40-frame format and a whole of the image does not appear on the print.
  - When selecting CD_40/40A/40B, it is printed in 40-frame format, and a whole of the image does not appear on the print.

3400

32D_3

Background color for index prints

- **The color can be selected as a background color of an index print.**

1. Gray
2. White
3. Pink
4. Yellow
5. Orange
6. Green
7. Light blue
8. Purple

Black is for the Contact print style photos.

9. Black

Explanation

- Select the background color for [135/120/110/Media], [IX240] and [Contact print style photos] each.

3410

32D_3

Label index prints

Types of media	FD	MO	ZIP	CD/DVD/HD
Size	89 x 114	89 x 117	97 x 120	120 x 120 (12 cm CD's) 80 x 85 (8 cm CD's) 89 x 120* 102 x 120*
Format (number of frames)	6, 20, 35	6, 20, 35	6, 20, 35	40
Index logo	Used	Used	Used	Used
Note	The number of frames are switched automatically.	The number of frames are switched automatically.	The number of frames are switched automatically.	The number of frames are fixed.

*:
[89 x 120] or [102 x 120] is selected automatically.
When the magazine with 102 paper width is not set: [89 x 120]
When the magazine with 89 paper width is not set: [102 x 120]

Explanation

- The label index is made automatically at the same time of storing the images to media.
  However, you can set "None" for the label index print.
- When the paper width is larger than the print size, the image is centered, so the unexposed part appears on both sides of the print.
- The size of Label index prints for CD are switched automatically according to [CD type] setting which is selected in [Option registration] → [Media] → [CD-ROM (CD-R/RW)].
  And, the size of Label index prints for Business card CD's and other uniquely shaped CD's are also the same.

3420

32D_3

Index print sizes for Contact Print Style Photos

Paper sizes for 6-frame

Name	CP6_1	CP6_2	CP6_3	CP6_4	CP6_5	CP6_6	CP6_7
Paper width (mm)	82.5 or more	82.5 or more	120 or more	165 or more	203 or more	240 or more	240 or more
Paper advance length (mm)	228.6	228.6	228.6	228.6	228.6	228.6	263

Paper sizes for 4-frame

Name	CP4_1	CP4_2	CP4_3	CP4_4	CP4_5	CP4_6	CP4_7	CP4_8
Paper width (mm)	82.5 or more	82.5 or more	120 or more	152 or more	152 or more	152 or more	152 or more	152 or more
Paper advance length (mm)	152	152	152	152	191	227	263	300

Name	CP4_9	CP4_10	CP4_11
Paper width (mm)	152 or more	152 or more	152 or more
Paper advance length (mm)	336	372	407

Paper advance length: Size when printing with minimum paper width

135/110/120 only are available.

Explanation

- The frame (format) of contact print style photos can be selected in the Index setting of print channel.
- When making contact print style photos with 120/110 films, the print is made with 135F format.
- It is possible to read the frame data of contact print style photos.(Bitmap, 3632 x 549 pixels)

Note

- CP of CP4_1 stands for Contact Print Style Photos.

3430

32D_3

Index prints for Contact Print Style Photos

Index prints for Contact Print Style Photos

Explanation

- As for the Contact Print Style Photos, the following types are available for each machine.

  Contact Print Style Photos with 4-frame:

  QSS-28: (1-line to 8-line)

  QSS-30: (1-line to 11-line)

  QSS-30: (1-line to 9-line)

  Contact Print Style Photos with 6-frame:

  QSS-28: (1-line to 3-line)

  QSS-30: (1-line to 7-line)

  QSS-30: (1-line to 5-line)

- The Contact Print Style Photos are not available for IX240.
- In the Contact Print Style Photos, the printing direction (horizontal or vertical) is changed, depending on the paper width.

3440

32D_3

Practical training

- Carry out the close down checks.
  - How to exit from the close down checks mode
  - How to finish the application
  - When executing the close down checks, make sure to finish after setting to the lane of the 135/240AFC-II to the 135 lane.

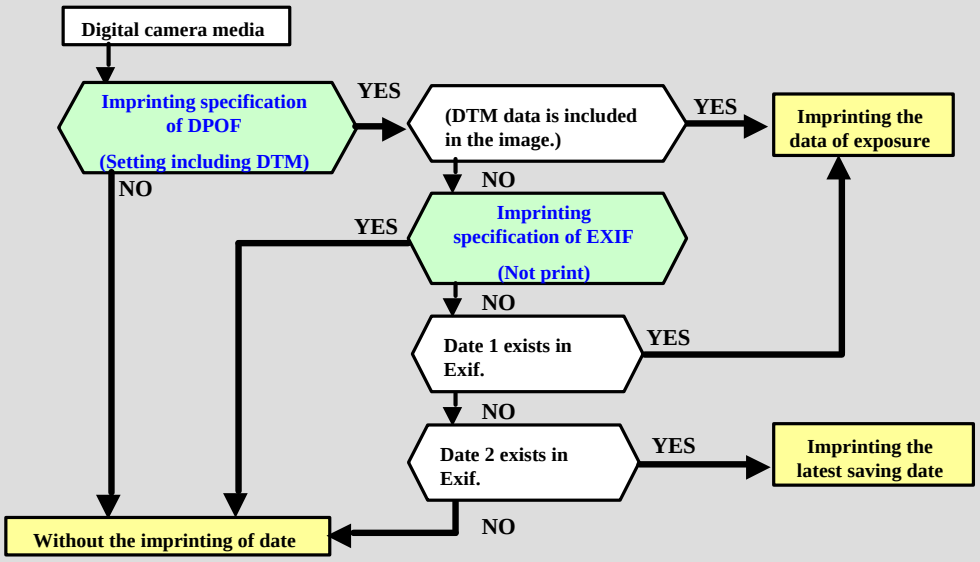
Explanation

- The disk defragmentation is completed in approx. 20 to 150 minutes.
- If you execute the disk defragmentation regularly, the required time to defrag can be shortened.

3450

32D_3

Front print from Media



Explanation

- Refer to the Operator's Manual –Additional operations- for the Front print setting.
- Even when the front print setting is ON, the front print is not imprinted if there is no applicable DPOF data.However, date of Exif data for the image is imprinted if [Print] is selected for Exif imprinting setting.
- [DTM] : {DATA TIME}, data of date of exposure
- Date 1 (Exif) : {Data Time Original}, data of date of exposure
- Date 2 (Exif) : {Data Time Digitized}, date of edit by Photoshop, etc.

32D_4

Chapter 4
Installation

Explanation

- There is no additional information.

The point of this chapter

Key points

- Study the installation of the machine.

  Width for carrying a machine, Space for installation, Packing items, PC peripherals, Allocation of drives, Setting the language specification

Upon completion of the lesson, you will be able to:

- Understand the width for carrying a machine and space for installation and judge whether it is possible to bring a machine to a customer's shop.
- Understand the packing parts and judge whether all parts are prepared in the installation.
- Understand the angle brackets to be removed in the installation and the parts to be attached, and work smoothly.
- Execute the following things.
  - Setting of language specifications, Each setting after attaching each drive, Allocation of drives -

How to proceed the training

- The trainer will provide an oral explanation of the cautions, referring to "Installation Manual" and a machine.
- Carry out the mechanical adjustment or installation of options in the other chapter.

  You do not carry out the practical training here.

4010

32D_4

The width to carry a machine

Unit : mm

System name	Minimum height	Minimum width
CS-1 (standard PC)	1065	750
CS-1 (High spec PC)	1225	
LP-1700	1222	770
PP-1213/17	1375	770

Explanation

- As for the S-900SA/S-1700SA, CS-1 (standard PC) only is available.

4020

32D_4

Packing items (S-2)

Packing parts	
S-2 main body	Film cleaner mount
Film cleaner kit (option)	

Packing items (135/240AFC-II)

Packing parts	
135/240AFC-II main body	Cleaning leaders
IX240 film adaptor	135 film loading guide
Curl film setting roller	

Explanation

- There is no additional information.

4030

32D_4

Packing items (CS-1)

Packing parts	
CS-1 main body	Monitor
Film receiving box (option)	Mouse pad
Air filters	Monitor hood (option)
Capacity booster A	Calibration plate

Explanation

- The operation keyboard, keyboard for inputting the letters, mouse are shipped together with a machine main body.
- The capacity booster A may not be included in the packing parts depending on the model.
- Refer to the Training Material [1020 Name of the system and the processing capacity of the QSS-32] for details.
- As for the S-900SA/S-1700SA, the connector for connecting to the power supply is attached.

4040

32D_4

Packing items (LP-1700)

Packing parts	
LP-1700 main body	Magazine lock lever
Ribbon cassette (option)	Pressure guide
Sample print	Standard accessories

Explanation

- The Magazine is shipped with the machine main body.

4050

32D_4

Parts for installation (PP-1213/1217)

Packing parts	
Standard accessories (chemical filters, control strip holder, etc.)	*
Print conveyor unit	Print classification unit
Print receiving tray (large)	Long Length Print Tray
Anti-contamination cover (option)	Hinge 1, hinge 2, connector cover
Print Accumulation Tray (option)	Conveyor guide
Rollers for attaching to the dryer door	Capacity booster B

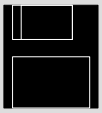
Explanation

- When the Print Accumulation Tray (option) is ordered, the stay to attach to the print receiving trays (large) is not included in the machine because it is not used.
- The hinge1, hinge2, and connector cover are the parts to attach the print sorter unit.
- The capacity booster B may not be included in the packing parts depending on the model.
- Refer to the Training Material [1020 Name of the system and the processing capacity of the QSS-32] for details.

4060

32D_4

Packing items (accessories) (1)

Types	Name		Description
	INITIAL DATA1	Input related data	Contains the adjustment data for each machine
	INITIAL DATA 2	Printer/exposure related data	
	INITIAL DATA 3	Processor related data	
	INITIAL DATA4	Scanner/film carrier related data	

Explanation

- INITIAL DATA 1/2/3/4 may not be included in the packing parts depending on the model.
- Refer to the Service manual [Reading and Writing Data] for details.

4061

32D_4

Packing items (accessories) (2)

Types	**Name**	Description
	SYSTEM PROGRAM	Contains the necessary system files to activate the system
	PROFILE DATA	Contains the profile data
	PC attachments	Recovery CD for OS, Operators Manual, driver software, etc. Necessary for the maintenance of the PC attachments

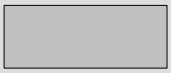
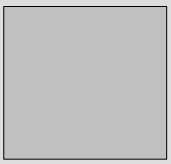
Explanation

- There is no additional information.

4070

32D_4

Packing items (Sample prints)

Adjustment mode	Exposure zoom rate correction Exposure Position Adjustment Exposure zoom rate fine adjustment	Arm Unit Zigzagging Correction	Paper Pressure Operation Correction	Gray test print
Attached print				
Note	305 x 457: 1	4 (89 x 457: 2, 305 x 457: 2) for each lane, A, B, C = 12 (total)	Test print (305 x 152 to 164) whose number is set: 1	305 x 305: 1

Explanation

- The gray test print
  [Paper Specification Registration/Setup] → [Function :Print Check] → [Sample 5]

4080

32D_4

Practical training

- Install a machine, referring to the Installation Manual.

Explanation

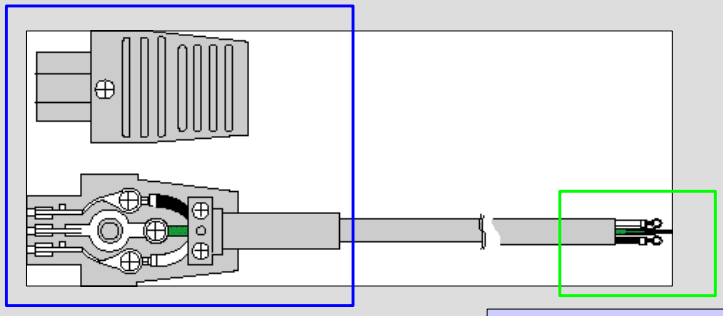
- There is no additional information.

4085

32D_4

Connecting power supply (Stand alone scanner)

- Install a machine, referring to the Installation Manual.



A part (Connect to the machine)

B part (Connect to the electrical unit)

Explanation

- As for the stand alone scanner, it is necessary to connect the power supply cable to the connector which is attached to the machine when connecting the power supply to the machine main body. Also, it is necessary to prepare the cable and battery cable lug that fulfill certain conditions in advance.

  Refer to the Installation Manual of S-900SA/S-1700SA S-900SA/S-1700SA[Connecting the power supply].

Note

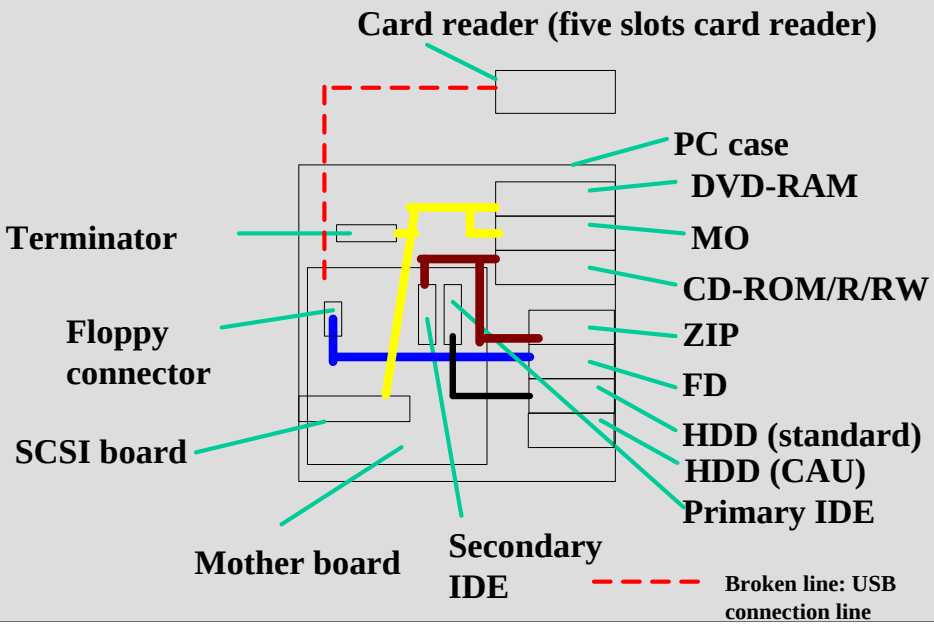
If the following cables are prepared in advance, it is unnecessary to connect the power supply cable to the A part.

- The QSS-32 power supply cable (5M) is used: W409077-01
- The QSS-27 power supply cable (10M) is used: W490391-02

4090

32D_4

Layout drawing of PC peripherals (PC-NRT-RS2)



Explanation

- If you order an option in advance, it is assembled before shipment.
- If you install options on site, set the drive letters in ”Media setting” of “Option registration”.

4100

32D_4

SCSI ID No. (PC-NRT-RS2)

Drive	PC-NRT-RS2
	ID No.
MO	0
Flatbed scanner A3 type by EPSON	5
DVD-RAM	6
SCSI board	7
CD-ROM, CD-R/RW	-
ZIP	-
HD	-
FD	-
Flatbed scanner A4 type by EPSON	-

Explanation

- When making SCSI connection of Flatbed scanner A3 type (item to be prepared by a customer) by EPSON, set SCSI ID No. to [5].
- The followings are the drives that the SCSI connection is not used.

  CD-ROM, CD-R/RW: IDE (Secondary/Master)

  ZIP: IDE (Secondary/Slave)

  HD (standard): IDE (Primary/Master)

  HD (CAU): IDE (Primary/Slave)

  FD: FD connector

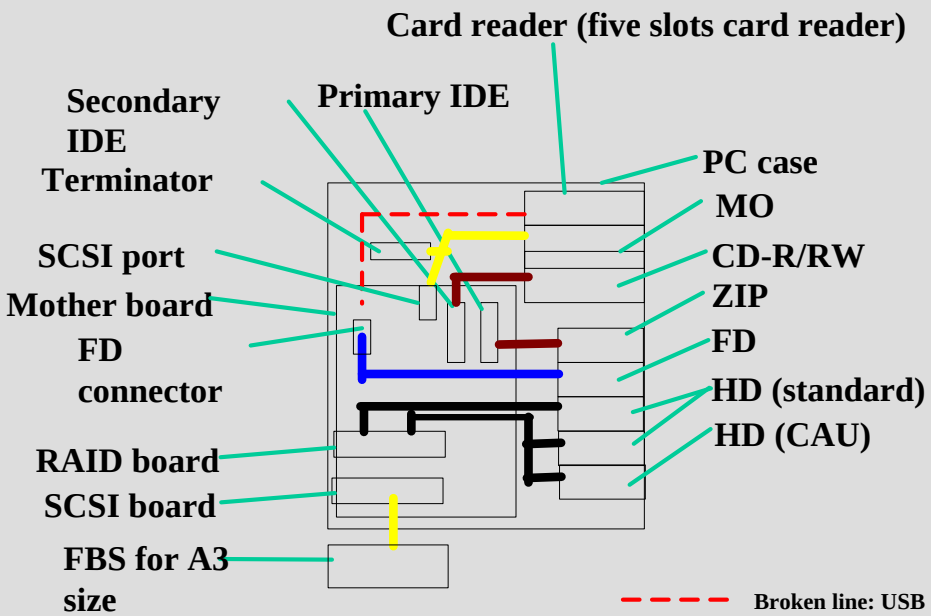
  Five slots card reader: USB

  Flatbed scanner: USB

4110

32D_4

Layout drawing of PC peripherals (PC-NRT-RD2)



Explanation

- If you order an option in advance, it is assembled before shipment.
- If you install options on site, set the drive letters in ”Media setting” of “Option registration”.

4120

32D_4

SCSI ID No. (PC-NRT-RD2)

Drive	PC-NRT-RS2
	ID No.
MO	0
Flatbed scanner A3 type by EPSON	5
DVD-RAM	6
SCSI board	7
RAID board	-
CD-R/RW	-
ZIP	-
HD	-
FD	-
Flatbed scanner A4 type by EPSON	-

Explanation

- When making SCSI connection of Flatbed scanner A3 type (item to be prepared by a customer) by EPSON, set SCSI ID No. to [5].
- The followings are the drives that the SCSI connection is not used.

  CD-R/RW: IDE (Secondary/Master)

  ZIP: IDE (Primary/Master)

  HD (standard): IDE (CH1/Master)

  HD (standard): IDE (CH2/Master)

  HD (CAU): IDE (CH1/Slave)

  FD: FD connector

  Five slots card reader: USB

  Flatbed scanner: USB

4130

32D_4

Cautions when attaching the PC peripherals on site

Drive	Installing the driver	Setting and Check of the SCSI ID and IDE jumper switch
ZIP	Necessary	Necessary
MO	Unnecessary	Necessary
CD-ROM, CD-R/RW	Unnecessary	Necessary
DVD-RAM	Necessary	Necessary
Five slots card reader	Necessary	Unnecessary
Flatbed scanner	Necessary	Necessary (A3 type by EPSON)
		Unnecessary (A4 type by EPSON)

As for the CD-R External Writing System, the details are mentioned in the CD-R External Writing System Training Material.

Explanation

- As for the flatbed scanner and five slots card reader, install the driver with removing USB code.
    - If connecting USB code when the driver is not installed, the OS installs general driver. Therefore, be sure to install the driver with removing the USB code.
- When installing the drive of flatbed scanner by EPSON (item to be prepared by a customer), do not install the other application software except the driver.It may cause the malfunction of QSS.

4140

32D_4

Allocation of drives

- The drive letter differs depending on the installing turn of the drive.
- Set the drive allocation in the “Media setting” of “Option registration” by the drive letter of OS.

  If you set the wrong drive letter, the malfunction occurs. (e.g. it accesses to the wrong drive.)

  Be sure to set the drives correctly. Set the same drive with the drive letter of OS.
- The drive letters below are fixed.
  A: FD C: Hard disk Z: CD-R External Writing System
- Refer to the PC Service Manual for the allocation of drives.

Explanation

- After executing the Recovery, confirm the allocation of drives.
- ‘How to check the allocation of Five slots card reader drive’ is different from the case of other drives.

  Select [Explore] of [My Computer].Click an icon of each drive.Check that the lamp of each loading slot is blinking.

4150

32D_4

Setting the language specifications

- When you use in the other languages except English, it is necessary to set the dictionary of language which is to be used. And install the translated QSS message data.
- *
- When the various kinds of functions (e.g. postal code dictionary) are necessary, carry out the setting again.

Explanation

- There is no additional information.

32D_5

Chapter 5
Setup

Explanation

- There is no additional information.

The point of this chapter

Key points

- Study about the setup.

  Setup in the installation, Data configuration, Setup flow, Print channel setting, Monitor setup, CMS, Profile

Upon completion of the lesson, you will be able to:

- Prepare for the setup.
- Execute the Scanner light source registration/Focus adjustment.
- Execute the Monitor setup.
- Understand the initial setup flow and its theory.
- Execute the Paper specification registration/Magazine registration.
- Set Print channels.
- Input the appropriate correction (color, DSA).

How to proceed the training

Carry out the practical training, or explain the items using the sample prints.

5010

32D_5

Setup when installing a machine

- There are two patterns of setup procedure when installing a machine to shorten the installing time.
  There are two procedures for the conditions below.
  During the temperature adjustment
  After the temperature adjustment is completed.
- As for the setup except when installing a machine, it is not always necessarily to follow the procedure.

  Refer to the Service Manual [70010], [70020].

Explanation

- There is no additional information.

5011

32D_5

Setup when installing a machine (Stand alone scanner)

- As for the setup except when installing a machine, it is not always necessarily to follow the procedure.
  Refer to the Service Manual [70011].

Explanation

- There is no additional information.

5040

32D_5

Details of initial setup

1. Setting the exposure amount (completed in 1 time)

   The difference of color characteristics (paper + solution + light amount) for each machine is corrected, and set the parameter to get the target density.

2. Paper gamma setup (maximum: 3 times)

   Using the data which was estimated in step 1, make a 18-step test print and set the parameter to get the target density.

3. Black balance adjustment (completed in 1 time)

   Adjust the color balance around the black letter on the white background (hypochromic background) or the color balance of the white letter on the black background automatically with the images inputted a letter.

Explanation

- When starting the setup without reading the initial data, the initial data which has already been registered is used.
- The initial setup time will take within 1 hour (approx. 35 to 40 minutes).

5040

32D_5

4. Printer profile calibration (complete in 1 time)

Carry out the printer color matching for each paper type.This is carried out based on the profile data which has already been registered.

NOTE

•The 1st test print: 22-step setup print
The 2nd test print: 22-step setup print
The 3rd test print: 20-step setup print

Explanation

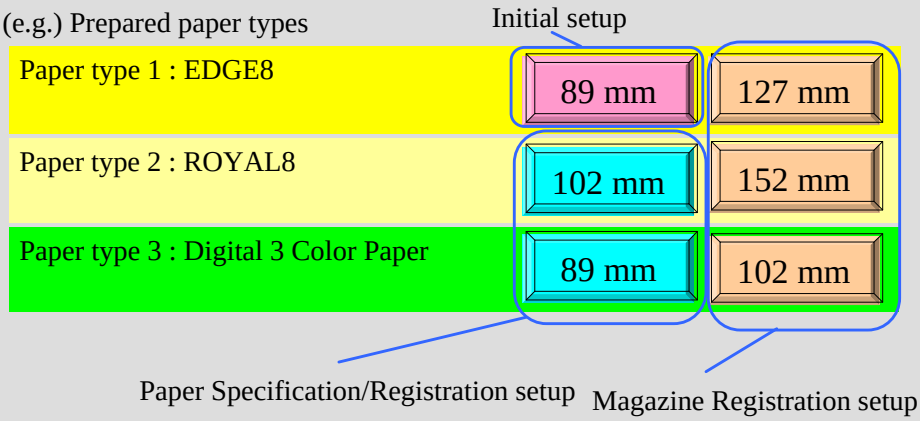
- The printer profile is not set for chemical specification each.
- When the new paper type is released, the profile on CD will be released.

5050

32D_5

Setup flow

The setup flow at the installation is explained here.



Explanation

- The paper type for the initial setup or Paper Specification Registration will also be used for the daily setup.

5060

32D_5

Monitor setup

1. Monitor brightness adjustment
   - Color and temperature setting 6500K (D65)
   - Contrast adjustment
   - Brightness adjustment

Adjust it, referring to the Operators Manual of the display monitor.

Adjust the color of monitor here.

Make sure that the Text is selected by clicking the AUTO button.

Explanation

- When adjusting the monitor, carry out the monitor brightness adjustment and check the color matching between the monitor and the test print from the viewpoint of actual operation.
- When installing the machine or carry out the monitor adjustment from the first step, carry out the monitor adjustment by selecting [All].Also, when you want to adjust the color of the monitor a little, adjust it by selecting [Only Color Adjustment Pattern].
- As for the paper type selection, you can choose any paper type if the setup is completed.
- Monitor color adjustment procedure
  Checking the color of the whole monitor comparing with the test print → Contrast → Brightness → Color adjustment after adjusting the contrast and brightness → Color adjustment of highlight area → Color adjustment of shadow area
- After finishing the monitor color adjustment, make a print from media and check the color matching between the print and the PJP screen.If the adjustment is necessary, readjust the color of the whole monitor.

Note

- When outputting the test print for the monitor adjustment, the DSA correction is not effective, but the temperature change correction and correction of the balance value of paper setup are effective.
- When the monitor setup is completed, the file of the gamma data is updated. Also the file of the gamma data is held in the HDD and the file is sent to the video board.
- The display monitor is compatible with the QSS-29/30/31.
- Refer to the Operator's Manual - Additional Operations & Setup Manual - [Adjusting the color of the image on the display monitor [Monitor Setup]]for details of the monitor setup.

5060

32D_5

2. Monitor setup

The difference occurs between the color of print and that of monitor, depending on the light source of the place where you work.

Improve the precision of color matching by setting the color difference freely.

Make a test print, and compare the color chart with the monitor and adjust it.

Note

- When installing the profile CD, the monitor adjustment and printer profile adjustment are necessary in some cases.

5061

32D_5

Monitor setup (Stand alone scanner)

1. Monitor brightness adjustment
   - Color and temperature setting 6500K (D65)
   - Contrast adjustment
   - Brightness adjustment

Adjust it, referring to the Operators Manual of the display monitor.

Adjust the color of monitor here.

Make sure that the Text is selected by clicking the AUTO button.

Explanation

- In the stand alone scanner, it is impossible to match the color of the monitor and prints because it is impossible to make sample prints.Adjust the color of the sample image to match with the standard color.
- As for the stand alone scanner, [Make a test print.] display of [Monitor Setup] does not function, so click [PASS: Next].
- Monitor color adjustment procedure
  Checking the color of the whole monitor → Contrast → Brightness → Color adjustment after adjusting the contrast and brightness → Color adjustment of highlight area → Color adjustment of shadow area

Note

- When outputting the test print for the monitor adjustment, the DSA correction is not effective.
- When the monitor setup is completed, the file of the gamma data is updated. Also the file of the gamma data is held in the HDD and the file is sent to the video board.
- The display monitor is compatible with the QSS-29/30/31.
- Refer to the Operator's Manual -Additional Operations & Setup Manual- of S-900SA/S-1700SA [Adjusting the color of the image on the display monitor [Monitor Setup]] for details of the monitor setup.

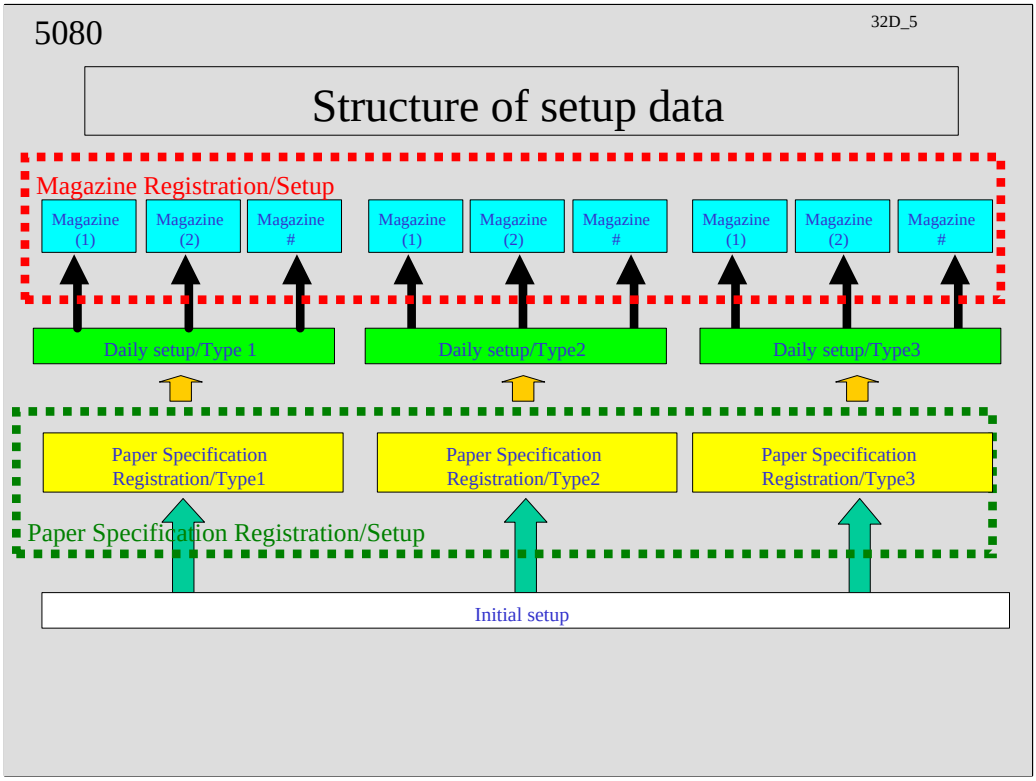
Initial setup (Practical training)

- Carry out the initial setup.
  Initial setup
  Paper Specification/Registration Setup
  Magazine Registration Setup
- Monitor setup
- Making print channels

Making print channels

Explanation

- There is no additional information.



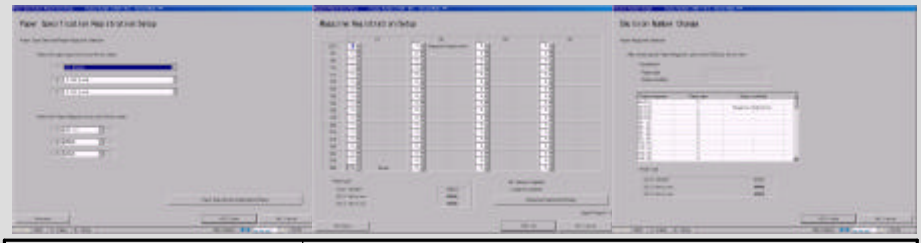
Explanation

- Execute the initial setup with the paper which a customer mostly uses.
- Execute the Paper Specification/Registration setup for all paper types which has been registered in the “Paper Specification/Registration”.(Except the paper type which the Initial setup is executed)
- When registering plural paper types, it is necessary to execute the daily setup for all paper types registered in the Paper specification registration setup.

5090

32D_5

Paper registration and setup



Kinds of registration	Contents
Paper Specification Registration/Setup	Register the paper type and the magazine which are to be used.Up to 3 types can be set.
Magazine Registration Setup	When newly adding the paper with different paper width and different paper surface, register a new magazine and carry out the correction.
Emulsion number change	Correct this when the paper specification and the emulsion number is changed.
Paper setup	Carry out the color correction for magazine each.

Explanation

- The paper specification registration/setup is the setup when installing a machine. Carry out this also when adding a new paper with different specification.
- Make sure to turn [ON] the [High Density Setup Switch] ([Paper Specification Registration/Setup] → [Functions] → [Setup Switch] → [High Density Setup Switch]) when installing the machine
- You can check the setup status (“OK” or “-”) for each magazine in the following modes. Paper Specification, Magazine Registration, Emulsion number change
- You cannot carry out the “Emulsion number change” if the “Paper Specification/Setup”, “Magazine Registration/Setup” has not been completed yet.
- As for the magazine registration/setup and daily setup, it was impossible to setup the 2nd paper type until the setup for the 1st paper type has been completed with the conventional machines. However, it is possible to make test prints continuously (up to 3) in the beginning of the setup, and then measure them when using several paper types or magazines with the QSS-32. Therefore, the time to complete the setup is shorter than the conventional machines.
- Refer to the Service Manual 32510 for details of the paper specification registration/setup.
- Refer to the Service Manual 32520 for details of the magazine registration/setup.

Note

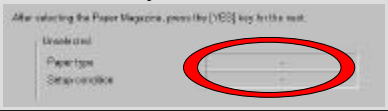
- Explain the meaning of the sign for setup status in the “Emulsion number change”.

5100

32D_5

Emulsion number change

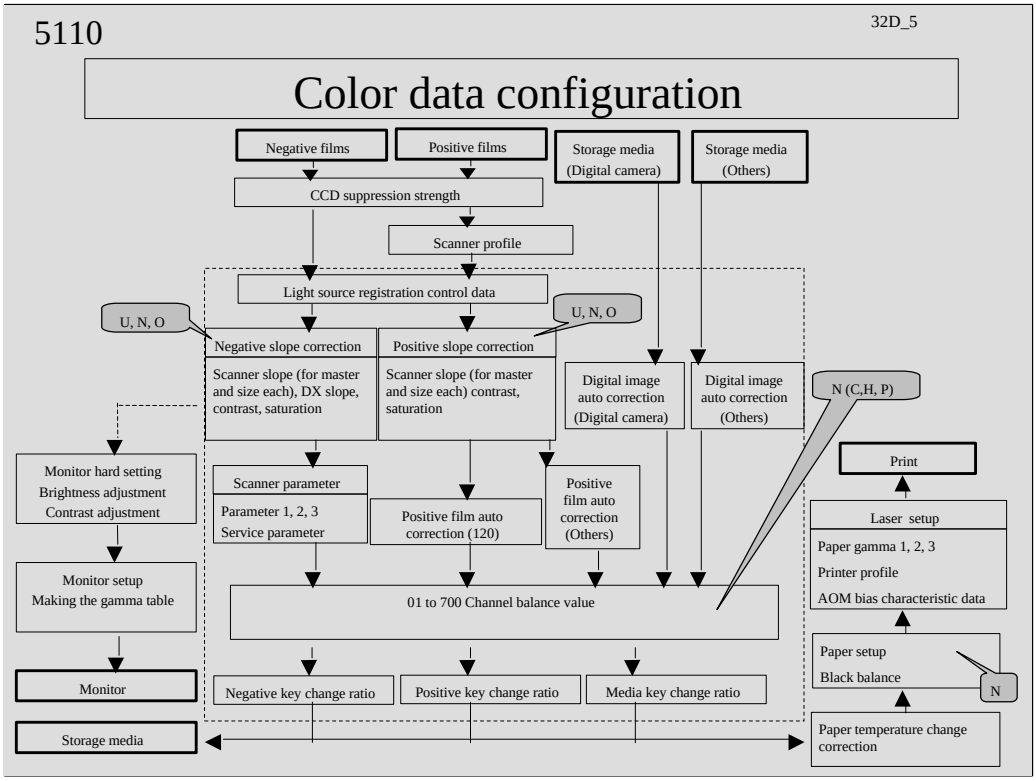
You can check the setup status which is used for emulsion number change. "OK" or "-" is displayed.
The emulsion number change is possible when “OK” is displayed for the paper setup or magazine registration.
In the other cases, set it so that “OK” is displayed. After that, carry out the emulsion number change.



Sign	
Setup -	[Paper Specification Registration Setup] has never been carried out or has not been completed yet.
Setup OK	[Paper Specification Registration Setup] has been completed successfully.
Magazine Registration -	Not to be registered in the [Magazine which is to be used for the setup]. Only [Magazine Registration] is carried out. But, [Magazine Registration Setup] has never been carried out or has not been completed yet.
Magazine Registration OK	Not to be registered in the [Magazine which is to be used for the setup]. Only [Magazine Registration] is carried out. And, [Magazine Registration Setup] has been completed successfully.
-	Both of [Magazine which is to be used for the setup] and [Magazine Registration] are not be carried out.

Note

- The setup status is controlled by each magazine.



Explanation

- Color data correction

  Film: Make a correction for the scanner slope.

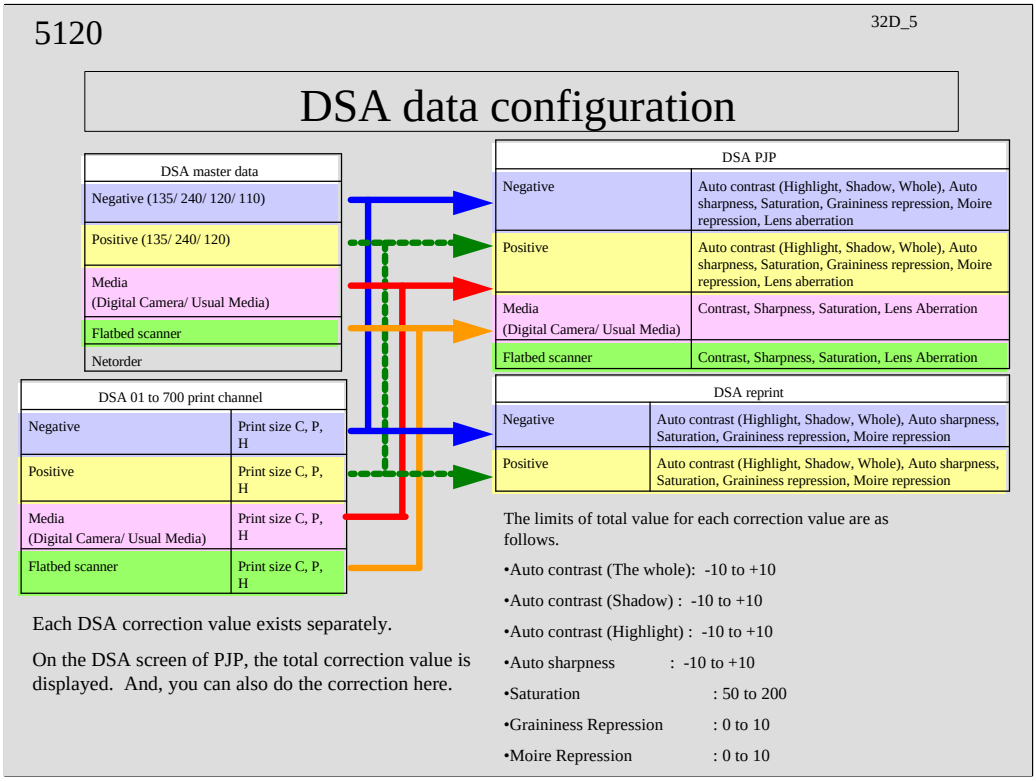
  Media: Make a correction for CH balance and set the channel only for media if necessary.

- Explain the contents of Parameter 1 and service parameter.

  Refer to the Service Manual [32590], [32500].

- The storage media is classified into following types.
  When the data is Exif : [Digital camera]
  When the data is other than Exif : [Others]

- As for the images scanned from FB scanner, [Digital Image Auto Correction] is not effective.



Explanation

- You can input the DSA master data for each kind of film for negative or positive.
- DSA master data for Media is roughly divided into "Digital camera" and "Normal media", and each has own DSA correction data.

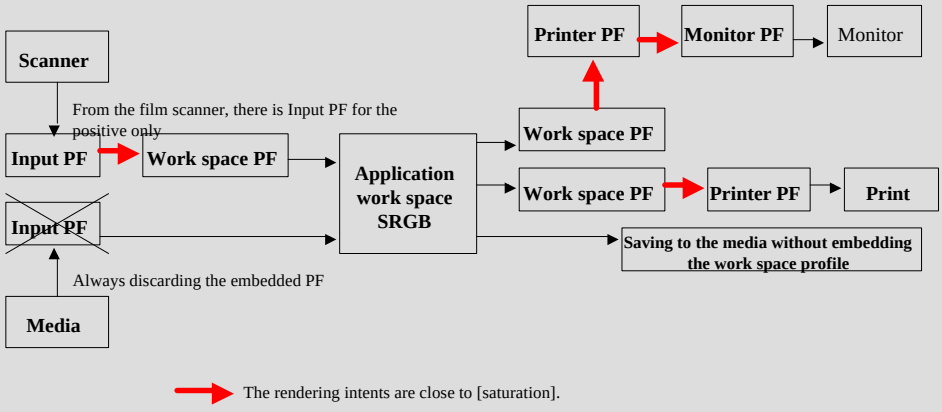
  "Digital camera" indicates the input image of Exif format.

  “Usual media” indicates the input image of format except Exif.
- In case of Net order, the correction of Master data DSA only (e.g. contrast, sharpness, saturation) is effective.“Print channel DSA”, “DSA PJP”, “DSA reprint” are not effective.

5130

32D_5

Profile work flow



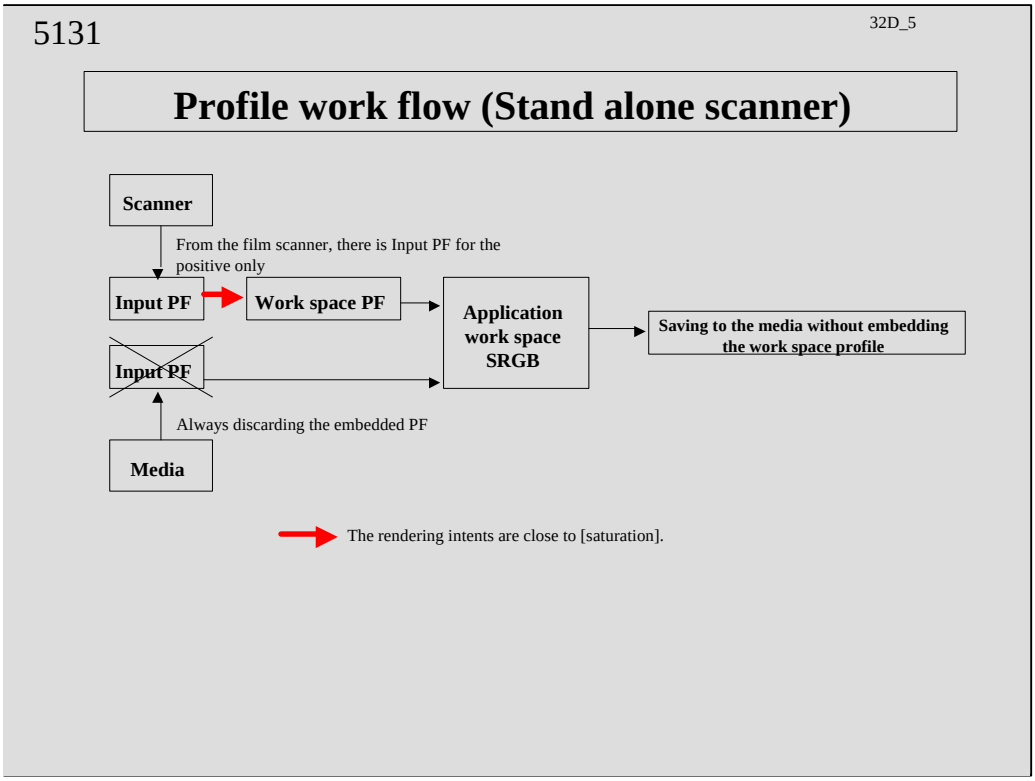
Explanation

- The platform which executes the CMS is the NKC original product.

  The conversion is carried out with the hard (Image processing PCB) to improve the processing capacity.
- When using the printer driver, the platform is processed with the driver.

5131

32D_5



Explanation

- The platform which executes the CMS is the NKC original product.

  The conversion is carried out with the hard (Image processing PCB) to improve the processing capacity.
- When using the printer driver, the platform is processed with the driver.

5140

32D_5

Feature of the profile

- As for the work space profile, the NKC original color space is used.
- The top of the gammut R,B use a little larger space than the sRGB.
  The top of the gammut G uses the same space as the sRGB.
- The following profile update is executed when the following operation or adjustment is executed.

Monitor PF → Changed the profile with the monitor setup
Printer PF → (1) Printer profile calibration
(2) Black balance adjustment/Black balance adjustment (manual)
(3) Initial setup (Black balance adjustment)

Explanation

- The reason why using the same work space as the sRGB is to make close to the gammut of monitor.
- The place where each profile is stored and the file name

  Flatbed scanner profile (SCN_DIR)

  Profile data for the positive film:S0990100.nkp

  Flatbed scanner:S1020000.nkp

  Printer profile (PRN_DIR):p112##00.nkp

  ## is different depending on paper types.

  Monitor profile (MONN_DIR):m0020000.nkp

  Working space profile/Input profile (MON_DIR):m0990000.nkp

5141

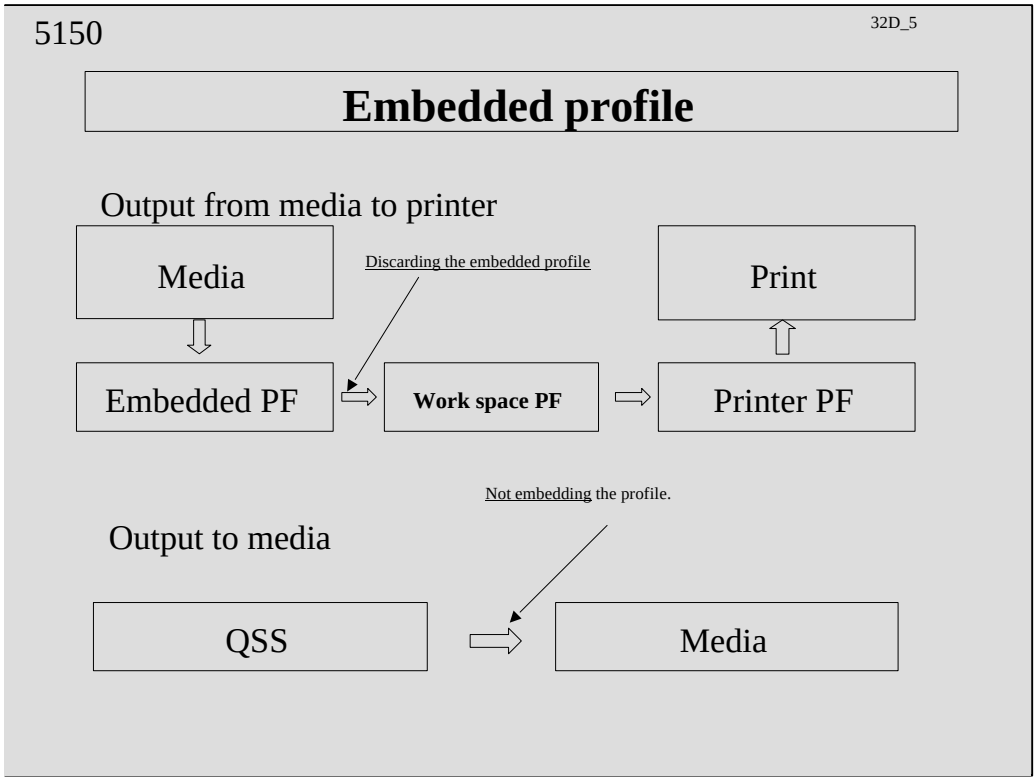
32D_5

Feature of the profile (Stand alone scanner)

- As for the work space profile, the sRGB or NKC original color space is used.
- The top of the gammut R,B use a little larger space than the sRGB.
  The top of the gammut G uses the same space as the sRGB.
- The following profile update is executed when the following operation or adjustment is executed.
  Monitor PF → Changed the profile with the monitor setup

Explanation

- The place where each profile is stored and the file name
  Flatbed scanner profile (SCN_DIR)
  Profile data for the positive film:S0990100.nkp
  Flatbed scanner:S1020000.nkp
  Monitor profile (MONN_DIR):m0020000.nkp
  Working space profile/Input profile (MON_DIR):m0990000.nkp



Explanation

- Send the RGB data only to the work space of the printer to discard the embedded profile even if the profile is embedded to any kind of media.
- Save the profile without embedding, the work space when the data is saved is the same as the sRGB.Therefore, it is recommended to select the sRGB when opening this data with the application of the external PC.
- As for the stand alone scanner, when processing the image with sRGB environment, set to [sRGB] of [Master Data] → [Color Management] → [Color Space of Output Media Image].

  Refer to the Operator's Manual - Additional Operations & Setup Manual - of S-900SA/ S-1700SA [Changing the Color Space [Color Management]].

Chapter 6
Mechanical adjustment

Explanation

- There is no additional information.

The point of this chapter

Key points

- Study the disassembly and adjustment of machine.

  Removing/reattaching each unit, Adjustment of each unit, Screws which should not be loosened.

  Maintenance and adjustment, Recovery

Upon completion of the lesson, you will be able to:

- Remove each unit of printer.
- Adjust after replacing the unit.
- Understand the place where should not be adjusted and screws which should not be loosened at site.
- Understand the adjustment method for each section of printer.

How to proceed the training

- Carry out the practical training mainly and explain the cautions, referring to the materials.

6010

32D_6

Mechanical adjustment (Scanner section)

Items	Reference
Removing the scanner unit	20610
Removing the LED light source unit	20620
Adjustment after replacing the scanner section	20650

- (1) Scanner unit
  - Impossible to disassemble (If you disassemble it, it is out of warranty.)
  - Not compatible with the scanner unit of QSS-28/29/30
- (2) LED light source unit
  - Impossible to disassemble (If you disassemble it, it is out of warranty.)
  - The LED light source unit can be damaged easily by static electricity, so make sure to use static-dissipative tools when replacing it like PCBs.

Explain, checking the Service Manual.

Explanation

- The allowable range of Swing and Tilt Adjustment and Light Axis Adjustment in the installation is mentioned in the Service Manual [70010].

Mechanical adjustment (Desk section)

Items	Reference
Replacing the colorimeter and the calibration plate	21110
Adjusting the height of the colorimeter	21120

- (1) Colorimeter unit
  - The calibration plate is built into the colorimeter unit.
  - It is possible to measure the test print without cutting it.
  - When measuring the test print, the test print is pressured with the pressure change solenoid.
  - Not compatible with the colorimeter unit, calibration plate, colorimeter for the QSS-28/29/30/31.

Explain, checking the Service Manual.

Note

- As for the S-900SA/S-1700SA, the colorimeter unit is not installed in the machine.

6030

32D_6

Mechanical adjustment (Film carrier section)

Items	Reference
Emission lamp and detection sensor position adjustment (135/240MMC)	35030
Emission lamp and detection sensor position adjustment (135/240AMC)	35040
MMC auto focus section adjustment	20850
Focus adjustment	37020

Explain, checking the Service Manual.

Explanation

- There is no additional information.

6030

32D_6

Mechanical adjustment (Film carrier section)

(1) AFC

- In some of the sensors, only connector section itself can be replaced. The other sensor should be replaced as a whole of sensor PCB.
- After replacing the 135/240AMC-II, MMC-II, the focus adjustment for each magnification is necessary for each 135/240AMC-II or MMC-II to be used.

(2) 135/240AMC-II, MMC-II

- Explain the position adjustment of AF sensor.
- Explain the adjustment of MMC auto focus section.
- After replacing the AFC, the AFC focus adjustment for each magnification is necessary for each 135/240AFC and MMC to be used.

Explanation

- There are 2 types of “mount for adjusting the scanner” and “head height adjustment tool” to be used for MMC-II/AMC-II adjustment. (currently used type and initial type)
- The scanner adjustment mount (currently used type) is available for AMC-II/MMC-II.
- The scanner adjustment mount (initial type) is not available for AMC.

  Show both of scanner adjustment mounts.
- The auto focus section of 135/240AMC-II cannot be adjusted.

6040

32D_1

Mechanical adjustment (Magazine section)

Items	Reference
Checking procedure of magazines	22000
Adjusting the zigzagging of the paper magazine mount	22100

Explain, checking the Service Manual.

Explanation

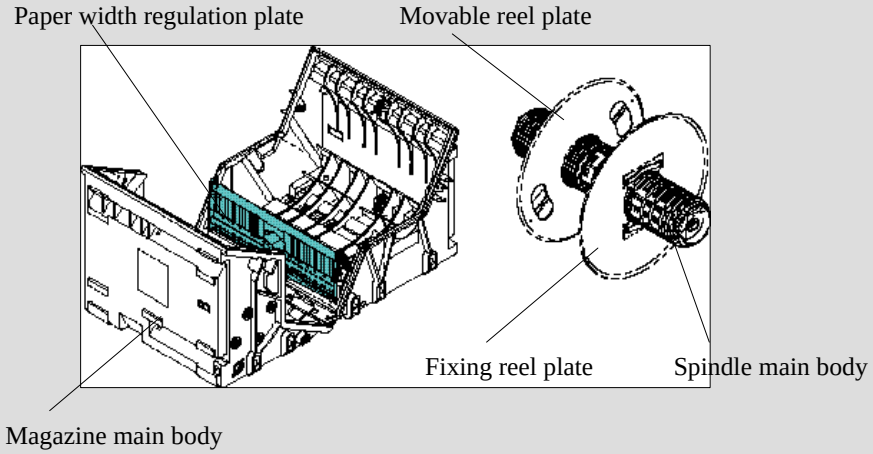
- There is no additional information.

6040

32D_1

Mechanical adjustment (Magazine section)

Standard magazine	Compatible between Normal and Kodak specification.
QL magazine	For QL paper. The core unit is different from the standard magazine.



Explanation

- Refer to the Specification Manual for the parts No.
- The magazine for the QSS-32 can be used with the QSS-29/31.(However, it may be necessary to change the shape of the magazine mount depending on the machine when using it with the QSS-29/31.)
- The magazine for the QSS-29/31 cannot be used with the QSS-32.
- Replace the magazine assembly (magazine main body + paper regulating plate) as a whole unit.

  It is impossible to adjust on site because it is assembled with special tools in the factories.
- Replace the Spindle assembly (spindle main body + fixing reel plate) as a whole unit.

  It is impossible to adjust on site because it is assembled with special tools in the factories.
- As for the movable reel plate, the reel plate only or the part only itself can be replaced.

6050

32D_6

Mechanical adjustment (Paper supply unit)

Items	Reference
Removing the paper supply unit	25610
Removal and the right angle adjustment of the cutter unit	25620
Adjusting the timing of the paper supply pressure change sensor	25630
Paper hold timing adjustment of paper hold motor	25640
Adjusting the imprint pressure of the CVP	25650
Remove paper supply unit A.	25660

Explain, checking the Service Manual.

Explanation

- There is no additional information.

6050

32D_6

Mechanical adjustment (Paper supply unit)

(1) Paper supply unit

- Be careful when removing the paper supply unit A from the paper supply unit because the paper supply unit may fall.

(2) Adjusting the timing of the paper supply pressure change sensor

- It is almost the same as the [Adjusting the timing of the paper advance pressure sensor] for the QSS-29.

(3) Paper hold timing adjustment of paper hold motor

- It is almost the same as the [Adjusting the paper hold timing of the arm] for the QSS-29.

(4) Paper cutter unit

- It is compatible with the cutter unit for the QSS-29/31.

(5) CVP (Correction Value Print) unit

- The ink ribbon cassette is the same with the QSS-28/29/30/31.

Explanation

- There is no additional information.

6060

32D_6

Mechanical adjustment (Exposure advance unit)

Items	Reference
Removing the Exposure advance unit	25810

(1) Exposure advance unit

- The exposure advance motor belt 2 of the exposure advance unit is changed from metallic belt to rubber belt.
- The pressure guide of the exposure advance unit is changed from a machined part to a metal part.
- The zigzag adjustment of the exposure advance unit using the pressure guide is the almost the same as the adjustment for the QSS-29/31, however, after finishing the zigzag adjustment, it is necessary to carry out the banding adjustment.
- The banding adjustment of the exposure advance unit is almost the same as the [Paper pressure operation correction] for the QSS-30.

Explain, checking the Service Manual.

Note

- Refer to the Service Manual 36090 [Paper Pressure Operation Correction].

6070

32D_6

Mechanical adjustment (Paper advance unit 1, 2)

Items	Reference
Removing Paper advance unit 1	26510
Removing Paper advance unit 2	26550
Removing the paper advance pressure change motor (right) (left) and adjusting the pressure timing of the arm.	26560
Arm position adjustment	26570

(1) Paper advance unit 1

– Be careful to process paper when the paper advance unit 1 is not attached correctly (When the paper advance unit 1 is set, there is a gap in the back of the unit.) because it may meander.

Explain, checking the Service Manual.

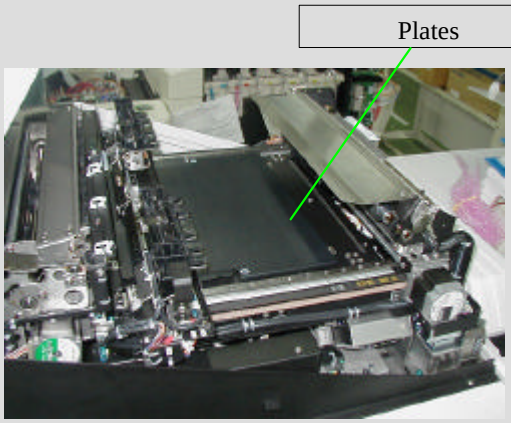
Explanation

• There is no additional information.

Mechanical adjustment (Paper advance unit 2)

(1) Paper advance unit 2

– The plate of the paper advance unit contacts with the paper emulsion side, so be careful not to scratch the paper emulsion side when carrying out the maintenance.



Explanation

• There is no additional information.

Mechanical adjustment (Paper advance unit 2)

(2) Removing the paper advance pressure change motor (right) (left) and adjusting the pressure timing of the arm.

– It is almost the same as the [Adjusting the paper hold timing of the arm] for the QSS-29.

Explanation

• There is no additional information.

6080

32D_6

Mechanical adjustment (Processor loading unit)

Items	Reference
Remove the processor insertion unit.	26610

(1) Processor insertion unit

– When replacing the laser unit, B/G/R-AOM driver, it is necessary to remove the paper advance unit 2 and the processor insertion unit.

Explain, checking the Service Manual.

Explanation

• There is no additional information.

6090

32D_6

Mechanical adjustment (Laser unit)

Items	Reference
Removing the laser unit.	26710

(1) Laser unit

- Replace the laser unit as a whole unit.
- Impossible to disassemble/adjust the laser unit
- The laser unit is smaller than the one for the QSS-30/31.

Explain, checking the Service Manual.

Explanation

- Refer to the Service Manual 66080 [Removing the AOM driver].

6100

32D_6

Mechanical adjustment (Banding/Zigzag adjustment)

Items	Reference
Adjusting the zigzagging of the paper advance section	26810
Banding shooting	25910

Explain, checking the Service Manual.

Explanation

- There is no additional information.

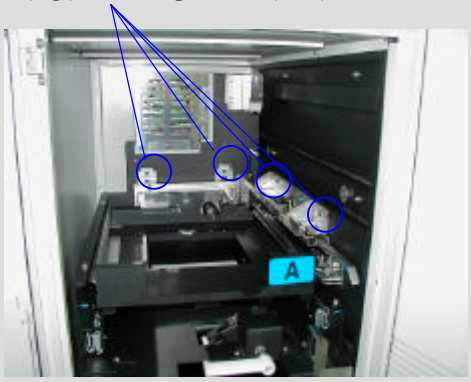
6110

32D_6

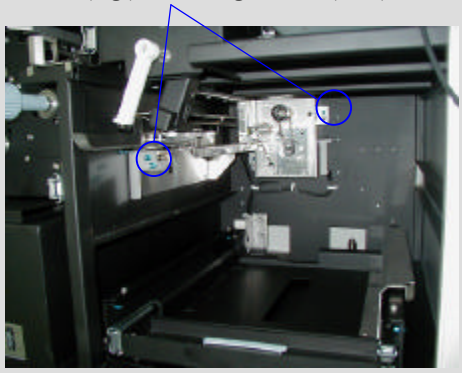
Screws which should not be loosened

- It is impossible to adjust the attaching screws which are marked with blue on site because it is adjusted with special tools in the factories.Do not loosen the attaching screws which are marked with blue.

(e.g.) Attaching screws (blue)



(e.g.) Attaching screws (blue)



Explanation

- There is no additional information.

6120

32D_6

Printer mechanical adjustment

Items	Reference
Paper Sensor Adjustment	36000
Paper Advance Unit Correction	36010
Exposure zoom rate correction	36020
Exposure Position Adjustment	36030
Exposure zoom rate fine adjustment	36040
Paper Advance length Correction	36050
Arm Unit 1 Zigzagging Correction	36060
Exposure center correction	36070
Exposure advance adjustment	36080
Paper Pressure Operation Correction	36090
WB width correction	36100

Explain, checking the Service Manual.

Explanation

- There is no additional information.

6130

32D_6

Practical training

- Recovery
- Installing the QSS software
- Installing the profile data
- Installing the driver
- Software upgrading

Explain, checking the PC Service Manual.

Explanation

- The recovery procedure is different depending on the types of PC to be used.
- When the USB-adopted devices (FB scanner, Five slots card reader, etc.) are attached, remove the USB cable to be connected with the PC before executing the recovery.

Chapter 7
Service items

Explanation

- There is no additional information.

The point of this chapter

Key points

- Study the service items.
  Cautions when replacing PCBs, Image data flow, Outline of advance section and Operation, Errors and countermeasures, Maintenance

Upon completion of the lesson, you will be able to:

- Understand each data flow when printing.
- Understand the cautions when replacing PCBs.
- Understand the paper advance in the paper advance section.
- Understand the maintenance and explain to a customer.
- Understand the parts to be replaced regularly.

How to proceed the training

Explain the items, referring to the training materials and a machine.

Explain the PCBs which are necessary to be replaced with care.

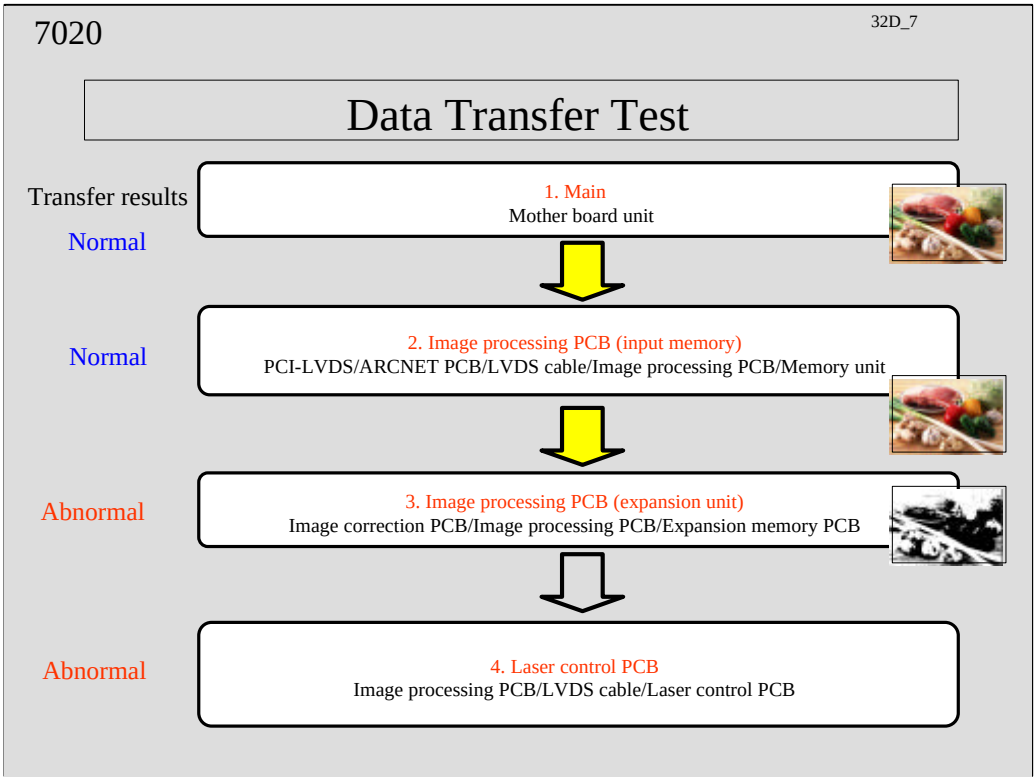
Data flow

Items	Reference
Data flow when printing (Negative/Positive)	50600
Data flow when printing (Media)	50610
Data flow when storing the images	50620
Data flow to the CD-R External Writing System	50630
Data flow to the CAU	50640
Data flow in the image processing PCB	50650
Data flow in the D-ICE PCB	50660

Explain, checking the Service Manual.

Explanation

- There is no additional information.



Explanation

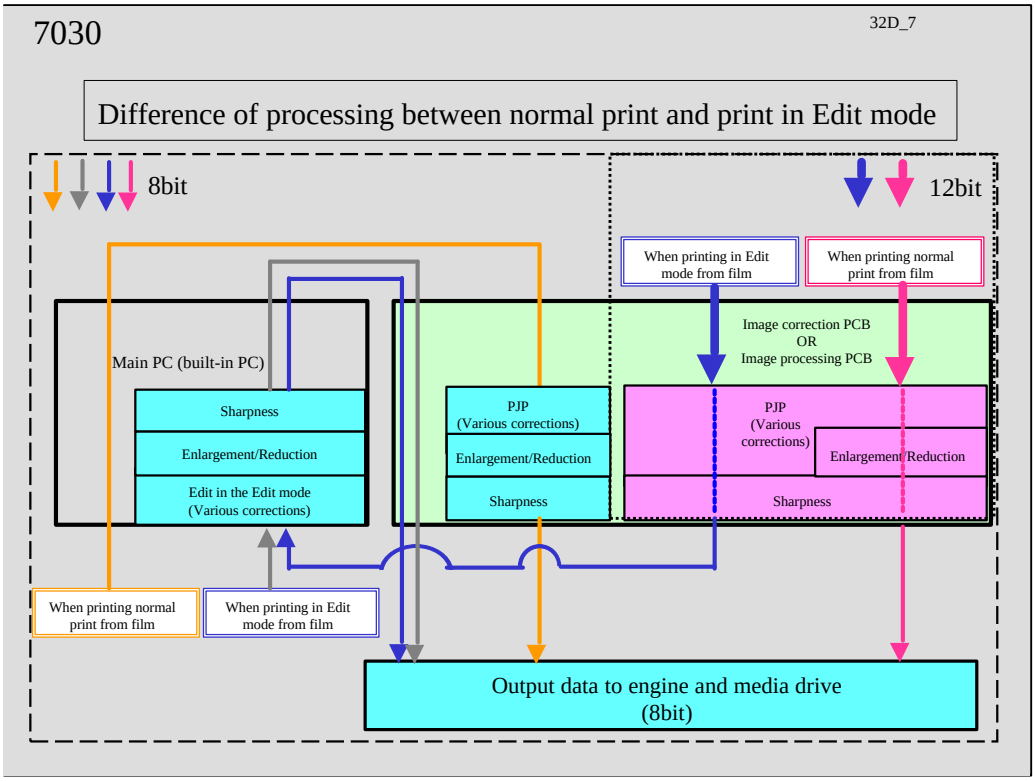
- When an abnormal print appears, place around problem part can be defined to some extent by transferring the image data.
- Transfer the data from “1. Main” to “4. Laser control PCB”, check transferred image data in each section, and [Abnormal] is displayed at the place where the problem occurs.

  Refer to the Service Manual 35900.
- When an abnormal print appears even if all transfer results are [Normal], check around the laser unit.

Note

- This mode is effective only when an abnormal print appears in spite of an error having not occurred.
- As for the stand alone scanner, it differs from the explanation above.

  Refer to the Service Manual 35910.



Explanation

Color and density, DSA

- [Normal print from film]
  Each correction in PJP is processed in 12 bit data. After PJP processing, 8 bit data is made as an output data.
- [Print in the Edit mode from film]
  Each correction is processed in 12 bit when selecting an image, but it is processed in 8 bit after it is taken in the Edit screen.
- When making each correction in 12 bit data and making each correction in 8 bit data, the data will be different even if same correction is done.
- When making each correction in 12 bit data, it is possible to get more great data as compared to 8 bit data. In Edit mode, it is recommended to make a correction when selecting an image.

  As for sharpness, however, refer to the following one.

Sharpness

- [Normal print from film]
  The data is enlarged and reduced for print sizes and the sharpness is corrected optimally.
- [Print in the Edit mode from film]
  The data is not enlarged and reduced, and the data which the sharpness correction is done is outputted to the built-in PC.

  The data which is taken in PC is enlarged and reduced for print sizes and the sharpness correction is done again. So, there is a slight difference between the output data of [Normal print from film] and [Print in the Edit mode from film] even if various corrections are not done.
- Output data of [Normal print from film] and [Print in the Edit mode from film] is adjusted as a default so that they look like same on a print. But, there are differences among individuals depending on a person who looks a print. To reduce the difference, adjust with Sharpness in Edit screen.

  This is why the data will be more great if sharpness correction is done after the data is enlarged and reduced.

Note

- Each correction is processed with the image correction PCB in the QSS-28,29,31 and with the image processing PCB in the QSS-30.

7040

32D_7

Cautions when replacing PCBs (Desk section)

PCB	D	J	S	B	V	Others
Image processing PCB	1	-	1	-	-	
Image correction PCB	1	-	1	-	-	
D-ICE control PCB	1	-	1	1	-	
D-ICE PCB	1	-	1	-	-	
Colorimeter control PCB	1	-	1	1	-	“Paper front end advance length correction” and “paper feed error correction” in the “Colorimeter unit adjustment”.

D:DIP switch setting (Set it as same as before replacing.)
J:Confirming the connector for the jumper (Set it as same as before replacing).
S:Reading the System program.
B: Reading the backup data
V:Necessary to adjust the potentiometer

1:Execute
- :Not execute

Note

- The PCBs mentioned in the Slide are the PCBs which are necessary to pay attention when replacing.

7050

32D_7

Cautions when replacing PCBs (Scanner section)

PCB	D	J	S	B	V	Others
AFC/scanner control PCB	1	-	1	1	-	The sensor standard adjustment of each AFC, MMC, and AMC

D:DIP switch setting (Set it as same as before replacing.)
J:Confirming the connector for the jumper (Set it as same as before replacing).
S:Reading the System program.
B: Reading the backup data
V:Necessary to adjust the potentiometer

1:Execute
- :Not execute

Note

- The PCBs mentioned in the Slide are the PCBs which are necessary to pay attention when replacing.

7060

32D_7

Cautions when replacing PCBs (Printer section)

PCB	D	J	S	B	V	Others
Printer control PCB	1	-	1	1	-	Paper Sensor Adjustment
Laser control PCB	1	-	1	-	-	
B, G, R-AOM driver	-	-	-	-	-	Initial setup

D:DIP switch setting

J:Confirming the connector for the jumper (Set it as same as before replacing).

S:Reading the System program.

B: Reading the backup data

V:Necessary to adjust the potentiometer

1:Execute

- :Not execute

Note

- The PCBs mentioned in the Slide are the PCBs which are necessary to pay attention when replacing.

7070

32D_7

Cautions when replacing PCBs (Processor section)

PCB	D	J	S	B	V	Others
Processor control PCB	1	1	1	1	-	
SM I/O PCB	-	-	-	-	1	Sensor sensitivity adjustment for replenisher solution sensor

D:DIP switch setting
J:Confirming the connector for the jumper (Set it as same as before replacing).
S:Reading the System program.
B: Reading the backup data
V:Necessary to adjust the potentiometer

1:Execute
- :Not execute

Note

- The PCBs mentioned in the Slide are the PCBs which are necessary to pay attention when replacing.

7080

32D_7

Cautions when replacing PCBs (Options)

PCB	D	J	S	B	V	Others
PU control PCB	1	-	1	1	-	

D:DIP switch setting
J:Confirming the connector for the jumper (Set it as same as before replacing).
S:Reading the System program.
B: Reading the backup data
V:Necessary to adjust the potentiometer

1:Execute
- :Not execute

Note

- The PCBs mentioned in the Slide are the PCBs which are necessary to pay attention when replacing.

7090

32D_7

Cautions when replacing PCBs (Personal computers)

PCB	D	J	S	B	V	Others
ATX mother board	1	1	-	-	-	BIOS setting
Hard disk drive	-	1	1	1	-	

For details, refer to the PC Manual.

D:DIP switch setting
J:Confirming the connector for the jumper (Set it as same as before replacing).
S:Reading the System program.
B: Reading the backup data
V:Necessary to adjust the potentiometer

1:Execute
- :Not execute

Note

- The PCBs mentioned in the Slide are the PCBs which are necessary to pay attention when replacing.

7100

32D_7

Errors and countermeasures

- Film jam
- Paper jam

Explanation

- There is no additional information.

7110

32D_7

Maintenance

Service Manual 80110

- Time to replace
- Cleaning the drives

  Regular cleaning with MO head cleaner (dirt of lens)

  When using an optional MO, recommend to purchase the MO head cleaner (option: I090374) and clean regularly (every three months).

Explanation

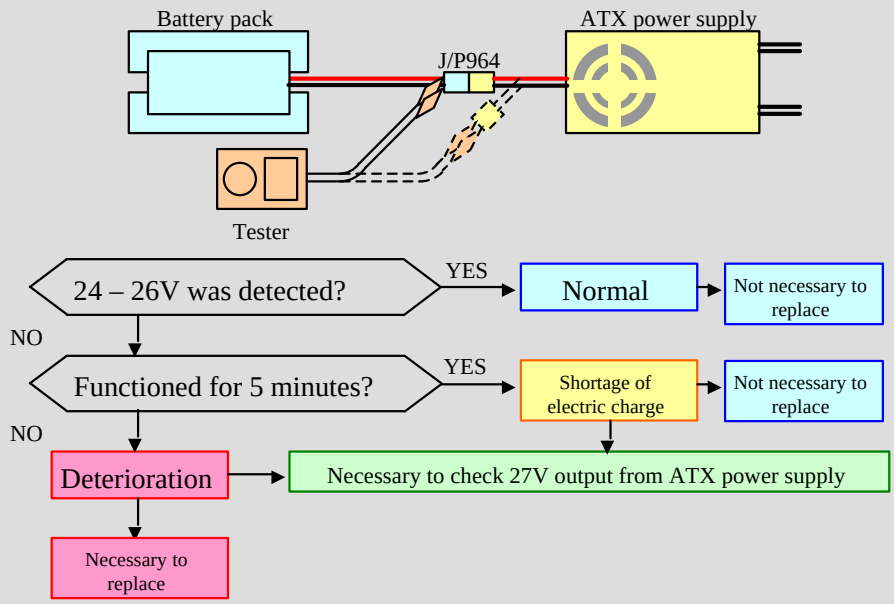
- Cleaning of MO drive by MO head cleaner prevents writing/reading error caused by the dirt of lens.

  Perform the cleaning except when processing in the QSS system.

7120

29D_7

How to check the voltage of battery pack (Standard PC)

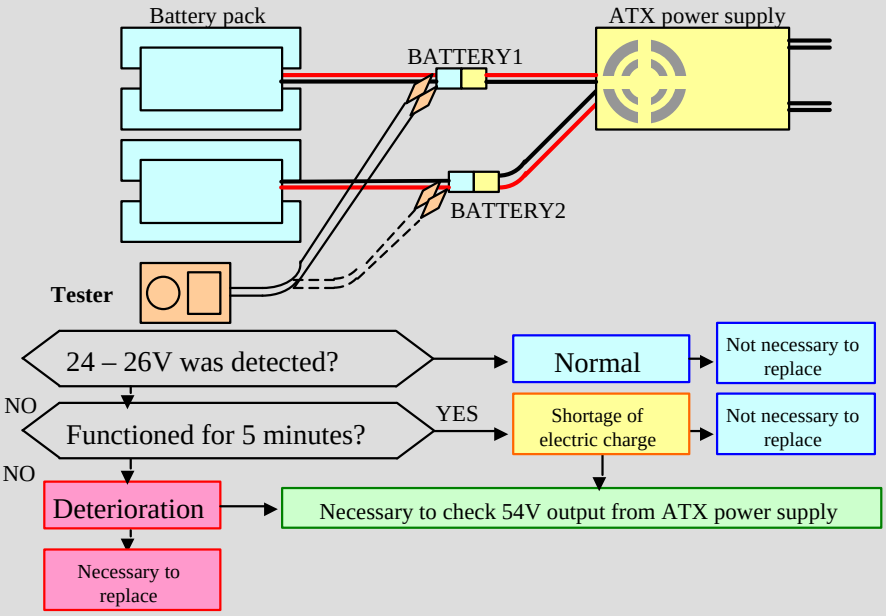


Note

- Refer to the PC Service Manual [ATX power supply, battery pack] in [PC-NRT-RS2] for details of the procedure.

7130

How to check the voltage of battery pack (High spec PC)



Note

- Refer to the PC Service Manual [ATX power supply, battery pack] in [PC-NRT-RD2] for details of the procedure.
- There are 2 battery packs. Check the connectors of the both ones.

7140

32D_7

Paper loading operation of the printer section

Items	Reference
Paper advance route	55000
Paper supply operation (Loading operation)	55100
Paper supply operation (Arm unit 1 operation)	55200
Exposure advance operation	55300
Paper loading operation (Paper advance unit 2 operation)	55400
Paper loading operation (Paper advance unit 2 operation)	55500
Paper rewind operation	55600
Paper splicing operation	55700
Paper end operation	55800
Fogged paper operation	55900

Explain, checking the Service Manual.

Explanation

- There is no additional information.

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