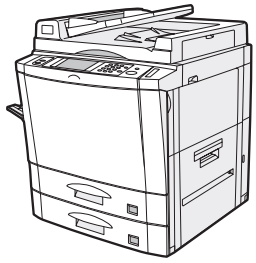
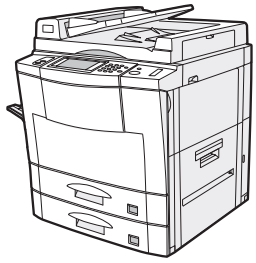
SHARP SERVICE MANUAL

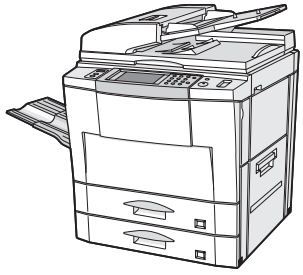
CODE: 00ZAR507//A1E



(AR-287/337)



(AR-407)



(AR-507)

Digital Copier

MODEL AR-287 AR-337 AR-407 AR-507

CONTENTS

[Note]

This Service Manual describes only the differences from 00ZAR-505//A1E. The items which are not described in this Manual are common with the 00ZAR505//A1E.

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

SHARP CORPORATION

The AR-287/337/407/507 is a slightly upgraded model of the AR-286/336/405/505.
The base models and their upgraded models are listed in the table below.

Upgrade list

Base model	Upgraded model
AR-286	AR-287
AR-336	AR-337
AR-405	AR-407
AR-505	AR-507

List of changes AR-286/336/405/505 to AR-287/337/407/507

<table>
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13. Additional functions
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B. Copy function

15. Other specifications

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Communication (E-mail Status/E-mail Alerts)
New functions are added.

The following six new functions are added.:
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22. Confidential print
23. Large volume document mode
24. Security function
25. Network Scanning
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<tr><td>Developing negative bias voltage (Character)</td><td>–500 ±5V</td><td>–500 ±5V</td></tr>
<tr><td>Developing negative bias voltage (Character, Photo)</td><td>–500 ±5V</td><td>–500 ±5V</td></tr>
<tr><td>Developing negative bias voltage (Photo)</td><td>–500 ±5V</td><td>–500 ±5V</td></tr>
<tr><td>Developing bias (Printer)</td><td>–500 ±5V</td><td>–500 ±5V</td></tr>
<tr><td>Developing positive bias voltage</td><td>+150 ±5V</td><td>+150 ±5V</td></tr>
</table>
(4) Main charger grid voltage adjustment
<table>
<tr><th></th><th colspan="3">Adjustment range</th></tr>
<tr><th></th><th>AR-280/ 285/ 335</th><th>AR-250/281/ 286/336/405</th><th>AR-501 /505</th></tr>
<tr><td>Grid voltage (Auto)</td><td>–642 ±5V</td><td>–602 ±5V</td><td>–570 ±5V</td></tr>
<tr><td>Grid voltage (Character)</td><td>–642 ±5V</td><td>–602 ±5V</td><td>–645 ±5V</td></tr>
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<tr><td>Grid voltage (Printer)</td><td>–642 ±5V</td><td>–602 ±5V</td><td>–645 ±5V</td></tr>
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</table></td><td>(3) Developing bias voltage adjustment
<table>
<tr><th></th><th colspan="2">Adjustment range</th></tr>
<tr><th></th><th>AR-287/ 337/407</th><th>AR-507</th></tr>
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<tr><td>Developing positive bias voltage</td><td>+150 ±5V</td><td>+150 ±5V</td></tr>
</table>
(4) Main charger grid voltage adjustment
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<tr><th></th><th colspan="2">Adjustment range</th></tr>
<tr><th></th><th>AR-287/ 337/407</th><th>AR-507</th></tr>
<tr><td>Grid voltage (Auto)</td><td>–602 ±5V</td><td>–570 ±5V</td></tr>
<tr><td>Grid voltage (Character)</td><td>–602 ±5V</td><td>–645 ±5V</td></tr>
<tr><td>Grid voltage (Character, Photo)</td><td>–602 ±5V</td><td>–645 ±5V</td></tr>
<tr><td>Grid voltage (Photo)</td><td>–602 ±5V</td><td>–645 ±5V</td></tr>
<tr><td>Grid voltage (Toner save)</td><td>–552 ±5V</td><td>–645 ±5V</td></tr>
<tr><td>Grid voltage (Printer)</td><td>–602 ±5V</td><td>–645 ±5V</td></tr>
</table></td><td></td></tr>
</table>

<table>
<tr><th colspan="3">AR-286/336/405/505</th><th colspan="2">AR-287/337/407/507</th></tr>
<tr><th>Section</th><th>Page</th><th>Content</th><th>Change</th><th>Remark</th></tr>
<tr><td>[6]</td><td>6-5</td><td>(5) Transfer charger current adjustment
<table>
<tr><th rowspan="2">Transfer charger current</th><th colspan="3">Adjustment spec</th></tr>
<tr><th>AR-250/280 /281/285/286 /335/336</th><th>AR-405</th><th>AR-501 /505</th></tr>
<tr><td>TC drum current (Front surface mode)</td><td>+13.5 +1.5μA</td><td>+15.0 +1.5μA</td><td>+18.0 +1.5μA</td></tr>
<tr><td>TC drum current (Back surface mode)</td><td>+13.5 +1.5μA</td><td>+15.0 +1.5μA</td><td>+18.0 +1.5μA</td></tr>
</table>
(6) Separation charger DC component voltage
<table>
<tr><th rowspan="2"></th><th colspan="3">Adjustment range</th></tr>
<tr><th>AR-250/280 /281/285/286 /335/336</th><th>AR-405</th><th>AR-501 /505</th></tr>
<tr><td>Separation DC component voltage (Front surface mode)</td><td>–140 ±10V</td><td>–150 ±10V</td><td>–200 ±10V</td></tr>
<tr><td>Separation DC component voltage (Back surface mode)</td><td>–140 ±10V</td><td>–150 ±10V</td><td>–200 ±10V</td></tr>
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<tr><th rowspan="2">Transfer charger current</th><th colspan="3">Adjustment spec</th></tr>
<tr><th>AR-287 /337</th><th>AR-407</th><th>AR-507</th></tr>
<tr><td>TC drum current (Front surface mode)</td><td>+13.5 to +15.0μA</td><td>+15.0 to +16.5μA</td><td>+18.0 to +19.5μA</td></tr>
<tr><td>TC drum current (Back surface mode)</td><td>+13.5 to +15.0μA</td><td>+15.0 to +16.5μA</td><td>+18.0 to +19.5μA</td></tr>
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Change (Delete: TONER SAVE)
Change (Default value: AR-287/337/407)
Change (Default value: AR-287/337/407)
Change (Default value: AR-287/337/407)
Change (Delete: Fax item)
Add
Change (Add: ITALIAN/SWEDISH/DUTCH)
Add
Change
Add
Change
Add
Add (AR-507 Europe and U.K. only)
Change (Default value: AR-287/337/407)
Add</td><td>Refer to the attached page 7-51 – 7-57.</td></tr>
<tr><td>[8]</td><td colspan="2">DISASSEMBLY, ASSEMBLY, MAINTENANCE</td><td>No change</td><td></td></tr>
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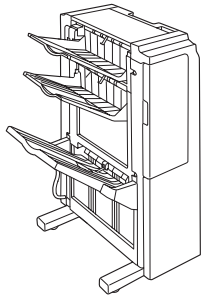
<tr><td></td><td></td><td></td><td>Add (Trouble code: CE)</td><td>Refer to the attached page 9-1</td></tr>
<tr><td>[10]</td><td colspan="2">OPERATIONAL DESCRIPTION</td><td>No change</td><td></td></tr>
</table>

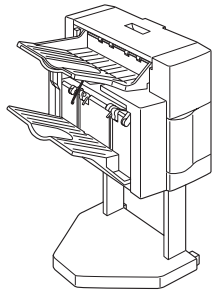
2. System outline (Options) (AR-287/337/AR-407/507)

		Copier model			
Name	Model	AR-287	AR-337	AR-407	AR-507
Automatic document feeder	RSPF	—	—	—	Standard
Reversing automatic document feeder	AR-RF1	Standard	Standard	—	—
	AR-RF2	—	—	Standard	—
Stand/500 sheet paper drawer	AR-DE1N	❍	❍	❍	—
	AR-DE7	—	—	—	❍
Large capacity tray	AR-LC1N	❍	❍	❍	❍
500-sheet paper drawer	AR-CS1	❍	❍	❍	—
	AR-CS3	—	—	—	❍
Desk	AR-DD1	❍	❍	❍	❍
2-tray paper exit unit	AR-DU1	Standard	Standard	Standard	Standard
Exit tray	AR-TE1	❍	❍	❍	❍ (SEC/SECL)
	AR-TE2	—	—	—	❍ (EX destinations other than SEC/SECL)
Dual tray output unit	AR-TR1	❍	❍	❍	—
Finisher	AR-FN1N	❍	❍	❍	—
	AR-FN2	❍	❍	❍	—
	AR-FN3	—	—	—	❍
Printer board	AR-PB2A	❍	❍	❍	❍
	AR-SM1	❍	❍	❍	❍
NIC card (10 base T/2)	AR-NC1D	❍	❍	❍	❍
NIC card (10 base T/100 base TX)	AR-NC3D	❍	❍	❍	❍
Network scanner kit	AR-NS1	❍	❍	❍	❍
Mounting kit	AR-XB3	❍	❍	❍	❍
Tandem connection cable	AR-CA1	—	❍	❍	❍
Sharpdesk 5 license kit	AR-U11M	❍	❍	❍	❍
	AR-U15M	❍	❍	❍	❍
Security ROM	AR-FR1	❍	❍	—	—
	AR-FR2	—	—	❍	—
	AR-FR3	—	—	—	❍

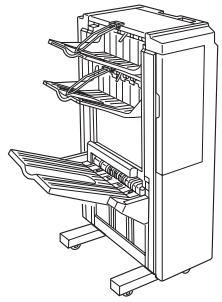
Finisher:
AR-FN1N (AR-287/337/407)



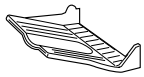
Finisher:
AR-FN2 (AR-287/337/407)

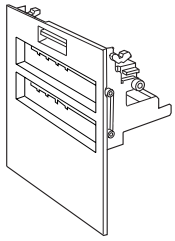


Finisher:
AR-FN3 (AR-507)



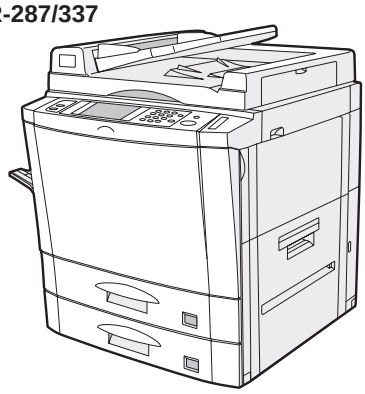
Exit tray:
AR-TE1 (AR-287/337/407/507 (SEC/SECL))
AR-TE2 (AR-507 (Other than SEC/SECL))



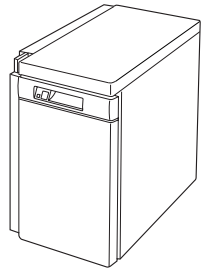


Dual tray output unit:
AR-TR1

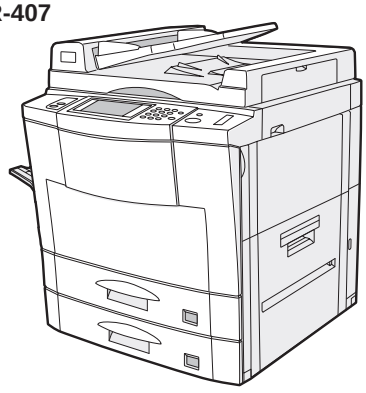
AR-287/337



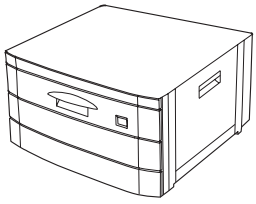
Large capacity:
AR-LC1N (AR-287/337/407/507)



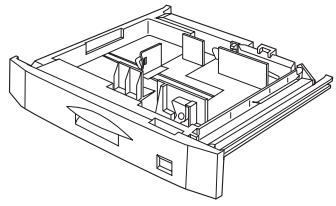
AR-407



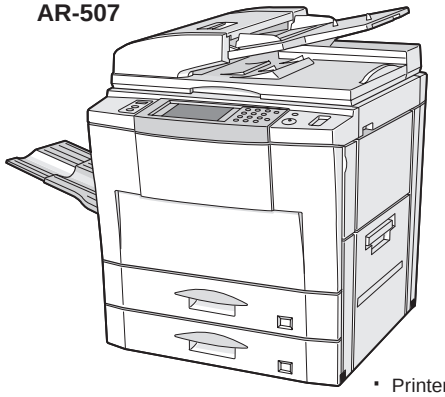
Stand/500 sheet
paper drawer:
AR-DE1N (AR-287/337/407)



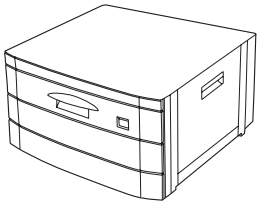
500-sheet paper drawer:
AR-CS1 (AR-287/337/407)



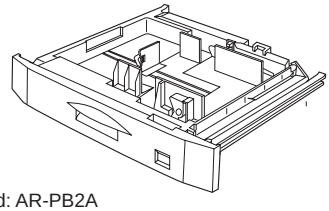
AR-507



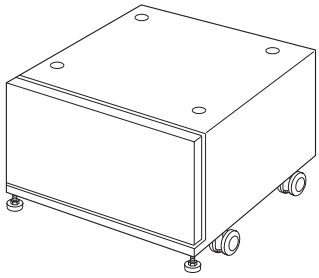
Stand/500-sheet
paper drawer:
AR-DE7 (AR-507)



500-sheet paper drawer:
AR-CS3 (AR-507)



Desk: AR-DD1



- Printer board: AR-PB2A
- NIC card (10baseT/2) (Provided by local distributors): AR-NC1D
- NIC card (10 base T/100 base TX): AR-NC3D
- Printer board (Expansion memory 16MB x2 SIM): AR-SM1 (AR-507)
- Network scanner kit: AR-NS1
- Tandem connection cable AR-CA1
- Mounting kit: AR-XB3 (AR-287/337/407)
- Sharpdesk 5 license kit: AR-U11M/U15M
- Security ROM: AR-FR1 (AR-287/337)
  AR-FR2 (AR-407)
  AR-FR3 (AR-507)

[2] SPECIFICATIONS (AR-287/337/407/507)

1. Machine type

Product Name	CPM	Type		Document Feeder	Paper Exit	Memory	
						RAM	HD
AR-287	28	Duplex	Desk top	RADF	1 tray	32 MB	4.3 GB
AR-337	33	Duplex	Desk top	RADF	1 tray	32 MB	4.3 GB
AR-407	40	Duplex	Desk top	RADF	1 tray	32 MB	4.3 GB
AR-507	50	Duplex	Desk top	RSPF	1 tray	48 MB	4.3 GB

* Standard's spec

13. Additional functions

A. Main body functions

APS	
AMS	AMS by flow scan with DF is not allowed.
Auto tray switching	
1 scan multi copy	
Rotation copy	
Pre-heat	Conditions are set with the key operation.
Auto shut off	Conditions are set with the key operation.
Message display	
Key operator program	
Communication	E-mail Status/E-mail Alerts
Process control	
Coin vendor	Only the connector is provided on the PWB.

B. Copy function

	AR-287/337	AR-407	AR-507
Job call/ registration	9		
Dept. control	Max. 50 dept. (Copy/Print/Tandem)		Max. 500 dept.
Binding margin	Shift width AB series: 10mm, Inch series: 1/2" with adjustment (Binding direction selectable)		
Edge erase	AB series: 10mm, Inch series: 1/2" with adjustment		
Center erase			
1-set, 2-copy			
Independent zooming	25 to 800% for vertical/horizontal	25 to 400% for vertical/horizontal	
White/black reversion	All surface only (only in the manual mode)		
Cover paper	Cover/back cover/cover and back cover		
OHP insert paper	Insert paper copy Yes/No selectable		Only 1 face-up paper exit is possible
Centering			
Multi shot (Nin1)			
Repeat copy	Combination with AMS allowed		
Date print	Time setting by the key operation.		
Stamp function			
Middle binding			
Page print			
Confidential print			
Security function	Security ROM is installed. (AR-FR1/FR2/FR3)		
Tandem print (copy/print)	When the tandem connection cable is connected (AR-287 invalid)		
Network scanner	When the scanner expansion kit is installed		
Document scan mode (Large quantity document mode)	Documents of 120 sheets		

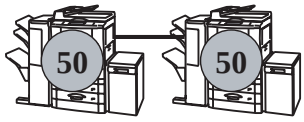
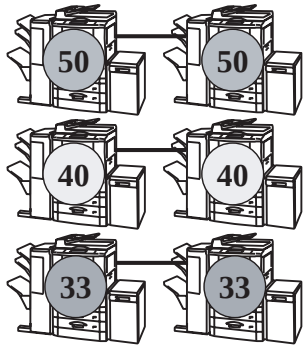
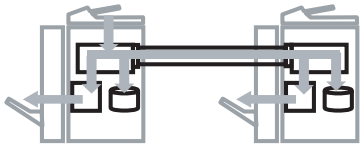
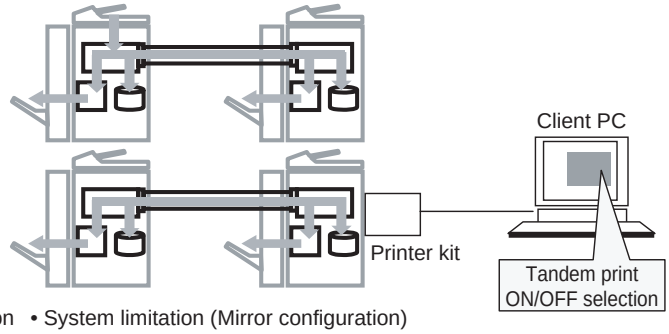
15. Other specifications

Photoconductor kind	OPC drum	
Photoconductor dia.	65 ϕ	
Process cleaning	Blade	
Exposure lamp	No-electrode xenon lamp	
Developing system	Dry, 2-component magnetic brush development	
Charging system	DC negative scorotron (saw tooth electrode)	
Transfer system	DC positive control	
Separation system	AR-287/337/407	AC corotron/DC bias separation pawl
	AR-507	Photo discharge/AC corotron /DC bias separation pawl
Fusing system	Heat roller	
Fusing cleaning	AR-287/337/407	—
	AR-507	Yes

16. Outlook

	W × D × H (mm)	Machine occupying dimensions	Weight
AR-287/337	600 × 695 × 750	1292 × 695	Approx 98 kg
AR-407	600 × 700 × 750	1292 × 700	Approx 98 kg
AR-507	600 × 700 × 773	1292 × 700	Approx 102 kg

21. Tandem function

	AR-505	AR-507/407/337
Model		
Job	Copy 	Copy / Print 
		Limitation • System limitation (Mirror configuration) Two models in tandem connection must be of the same ROM version and the same option composition.

(Outline)

Enhances the process efficiency of large volume copying.

- Shortens the copying time.
- Allows selection between dispersed process and integrated process.

Models with the tandem function:

AR-505, AR-337, AR-407, AR-507 (Connection between different models is inhibited.)

Number of connections: Max. 2

Installation/connection method:

Serviceman installation/Tandem cable connection (Cable length 4m)

Jobs available:

- Copy only (AR-505)
- Copy output/print output (AR-337, AR-407, AR-507)

Tandem copy operation mode:

Sort/Staple mode (Group cannot be selected.)

Job division system:

1/2 auto division (In case of an odd number, the MAIN side is +1.)

Mutual recovery in case of a trouble:

Not available (After dividing a job, each machine finishes its process.)

Basic operation:

After data transmission from MAIN to SUB, operation is performed independently.

Option composition:

- When only one finisher is installed, the finishing process cannot be selected. (AR-505)
- When there is a difference in the option composition, tandem copy/print is not performed. (AR-337, AR-407, AR-507) *1

ROM version:

- The ROM versions of two machines must be identical.

Relationship between MAIN and SUB:

- Main starts a job. SUB receives the job separated from MAIN. (AR-505)
- In tandem copy, MAIN and SUB are set with a simulation. Tandem copy cannot be selected from SUB. (AR-337, AR-407, AR-507)

Tandem copy start conditions:

When the tandem function is set, MAIN goes into the READY state even though SUB is in the following conditions.

State of SUB	SUB display after starting
Paper empty	Paper supply message
Paper size wrong	Paper check message
Cover open	Cover open message
Jam	Jam map display
Pre-heat	After recovery, MAIN and SUB start together.
Toner empty	Toner supply message

Tandem print start condition:

When tandem print data is received, tandem print is performed even though SUB is in the following conditions.

State of SUB	Operation	Message displayed
Paper empty	Tandem operation	Paper supply message
Paper size wrong	Tandem operation	Paper check message
No suitable paper size	Tandem operation	Paper set message
Pre-heat	Tandem operation	After recovery of SUB, the operation is automatically started.

Availability of tandem copy from each condition:

Tandem operation is performed only when MAIN is in stand-by or during printing and SUB is in stand-by.

Start of tandem copy from each condition:

When MAIN is in stand-by and SUB is copying, printing, or scanning, all copies are outputted from MAIN.

*1: "Option" means a finisher, an ADU, a paper feed desk, a large-capacity tray, or a paper feed module.

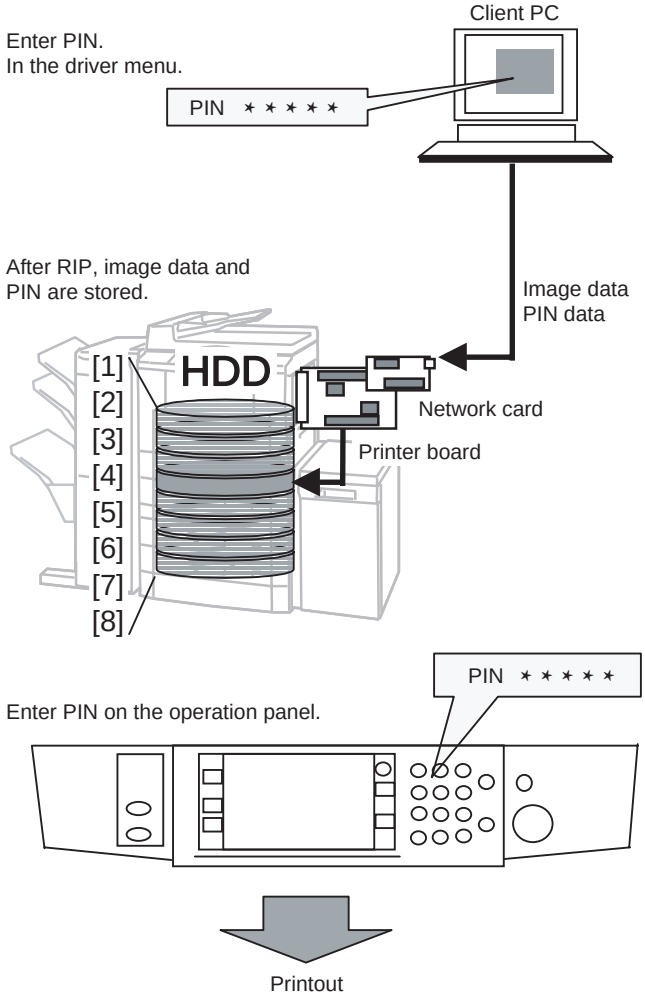
(Operations when there is a difference between the option compositions)

1. Tandem copy: The tandem copy key is displayed, but the conditions to execute the tandem function are not satisfied. Code: XX

Code	Tandem operation condition
00	SCSI communication disable
Code	Tandem mirror condition
10	Model code disagreement
11	ICU-ROM version disagreement
12	PCU-ROM version disagreement
13	OPE-ROM version disagreement
20	After-process unit connection disagreement
21	Paper exit port connection disagreement
22	ADU connection disagreement
23	DESK connection disagreement
24	LCC connection disagreement
30	ADU trouble information disagreement
40	Sim26-6: Destination setup disagreement
41	Sim26-46: Image output direction setup disagreement
50	Security mode setup disagreement
51	Duplex copy inhibition setup disagreement
52	Staple inhibition setup disagreement
53	Manual tray select inhibition disagreement when offset tray is selected

2. Tandem print: All the prints are made by MAIN.

22. Confidential print



(Outline)

To protect confidential documents, print is inhibited unless the user performs the specified operation from the main operation panel after giving a print command from PC.

(1) Accumulated print jobs

Number of jobs	Number of pages of one job (A4, letter)
1	320 pages
2	240 pages
4	120 pages
8	60 pages
16	28 pages

(2) The following operations can be performed during operation of confidential print or during confidential printing.

- Checking all the lists of the accumulated confidential prints.
- Delete of confidential print data (Password entry is required.)
- Cancel of confidential print during printing by means of the "C" key. Invalid during recovery from pre-heat.

(3) The following operations cannot be performed during confidential printing.

- Changing the environment setup by means of the environment setup key.
- Command of continuous output in a different size or from a different tray
- For confidential printing, paper selection is allowed only in AUTO selection.
- For confidential printing, paper insertion, booklet, and OHP index paper insertion are inhibited.

(4) Confidential print output operation is allowed or inhibited as follows

Ready:	Allowed	
Copy reading:	Inhibited	
Copy outputting:	Inhibited	
Scanner document scanning:	Inhibited	
Scanner data transmission:	Inhibited	
Printing:	Inhibited	(Confidential print allowed when interrupted in offline.)
Staple printing:	Inhibited	
Tandem copy reading:	Inhibited	
Tandem copy outputting:	Inhibited	
Tandem print outputting:	Inhibited	

(5) Conditions of password

Number of digits:	5
Characters:	Only numeric figures 0 to 9

(6) Process in the case of HDD overflow

- The job is canceled.
- The status monitor makes the error display to PC.
- Notice Page output is performed.

(7) Troubles during printing

When the machine is stopped by paper empty or a paper jam, remove the trouble, and the job will be automatically continued.

(8) Combination with the security function

- When the security function is ON, confidential print is inhibited.
- When confidential data is received, it is automatically canceled.
- The status monitor makes the error display to PC.
- Notice Page output is performed.

(9) Operations when the printer department management function is set

- When the key operator program (to record the print quantity to each department) is ON, the department management function is valid to confidential print.
- In this case, when an output command is made from the operation panel, entry of the department number is not required.

(10) Combination with tandem print

- Combination between tandem print and confidential print is not allowed.

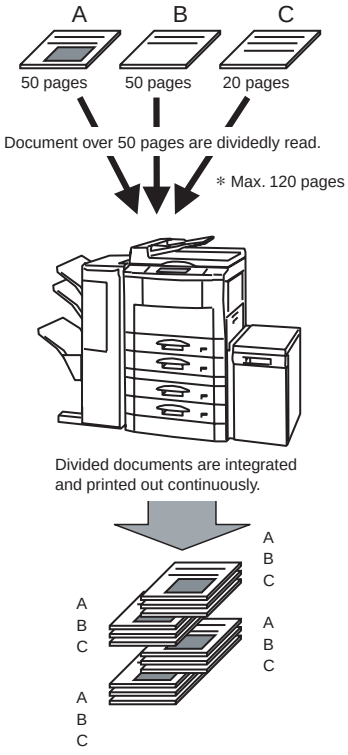
(11) In case of a trouble

- When trouble code F9 occurs, the display cannot shift to the confidential menu.

(12) Data storage

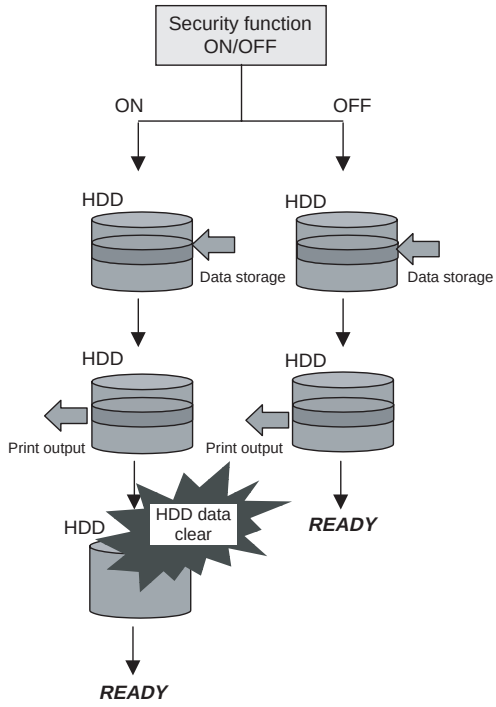
- When an output is completed, data are deleted from the list.
- When the printer power is turned off with the confidential print data remained in the HDD, the confidential print data are deleted completely.
- When the auto power shut off function activates, the confidential print data are deleted completely.

23. Large volume document mode



- A large volume of documents, which cannot be fed by the document feeder at one time, is divided and read and copied. (Max. 120 pages)
- The sequence of reading documents is from the top bundle of documents in the normal sequence for the 1 to N machine, and from the bottom bundle of documents in the reverse sequence for the N to 1 machine.
- When copying is performed in this mode, the copy mode cannot be changed. However, interruption copy is allowed.
- When the large volume mode is set in the SDF mode, the auto feed function of the SDF mode is disabled and the operations are made according to the large volume mode.

24. Security function



(Outline)

In the current model, when the following job is entered after completion of output (copy, print) and before deleting the data in the HDD, the new data is overwritten to the former data.
Therefore, the data can be read by removing the HDD from the machine and the confidentiality is not kept.
Therefore, the data in the HDD is deleted after completion of output.

A. Security mode operation

(1) Process after completion of output

Every time when an output is completed, the data in the HDD is deleted.
During deleting operation, the other operations is disabled.

(2) Addition of HDD data delete function

All document data in the HDD can be deleted by operating the operation panel.
To prevent data from being left in the HDD when the main power is turned off, it is advisable for users who seek a high level of security to perform this operation.
The key operator can perform this operation.
When this key is pressed, all image data in the HDD including confidential print data is deleted.

B. Security mode selection

(1) ON/OFF selection

Key operator program P43 (Selection with the check box)

Initial setup: OFF

Though the security mode is OFF, the "HDD data delete" key is active.

(2) Simulation countermeasures

Simulation allows to select YES/NO of display of the security mode in the key operator program.

Shipment setup: OFF

C. Combination with confidential print

When the security function (the check box of security mode setup) is ON, confidential print is inhibited.
When confidential data is received, it is automatically canceled.
The status monitor makes the error display to PC.
Notice Page output is performed.

D. Note for job interruption

Though the security function is ON, if the machine is stopped due to the following causes, deletion after completion of output and deletion of HDD data is disabled unless the cause is removed and the job is completed.
If the machine is left, data is remained in the HDD for a long time. Be careful of that.

- Paper empty
- Paper jam
- Toner empty
- Interruption copy

E. Combination with tandem copy

- When the security mode check box is ON, tandem copy cannot be set.
- When the security mode check box is ON, if tandem print data is received, all are printed by MAIN.

F. Deletion of HDD data is not performed in the following cases

- During warm-up

  If the "HDD data delete" key of the key operator program is pressed during warm-up, the message below is displayed:

  "Cannot be performed during warm-up.
  Execute after completion of warm-up."

- When a service call occurs with the security mode ON, the user setup key does not work and the HDD data cannot be deleted.

25. Network Scanning

A. Specifications

Item	Scanner expansion kit
Maximum Document Size	A3/WLT
Original Feeding Speed (PPM)	24PPM: AR-287 24PPM: AR-337 27PPM: AR-407 33PPM: AR-507 (8.5" x 11 continuous scanning of same page)
Page order of multipage documents	1 – N
Optical Resolution	400dpi
Output Resolution	200,300,600dpi
Scaling	–
Output Mode	1bit
Halftoning Process (Dithering Method)	– Error Diffusion (200/300/600dpi) – TIFF6.0:CCITT (G.3/G.4 Single/Multipage TIFF Uncompressed TIFF) – PDF (G.3/G.4)
Duplex	Yes
Destinations (Integrations)	– Scan to desktop(FTP) → Desktop distribution scan – Scan to file server(FTP) → File server storage scan – Scan to e-mail(SMTP) → E-mail distribution scan
User Interface (Control Panel)	LCD Touch Panel (400 × 256 dots)
Client PC	Windows95/98/NT Windows2000
Web Browser	– Internet Explorer4.0 or later – Netscape Navigator4.0 or later
Embedded Web Server	Yes (Embedded)
Network Protocols	TCP/IP
Network protocols (Mail system)	SMTP
LAN Connectivity	10Base-T 100Base-TX
Client Software	Sharpdesk
Attached file type	TIFF, PDF
e-mail System	**SMTPcomplying e-mail system** For major mail systems, SLA is under investigation. – MS Exchange – Lotus Notes – Novell GroupWise
Specify the Sender (Setting "From" field)	No
Destination Profile Setting (No. of destinations)	About 100
Scan Profile Setting	Changeable by the operation panel of the machine.
Subject & Text (Mail title and text/Scan to e-Mail)	Initial setting: 7 languages of the same contents **E-MAIL title** Title can be entered.

B. Features and functions

(1) Image file distribution

The network scanner system allows to send files of scanned image data to each destination through the network.

- E-mail distribution scan: As attached TIFF or PDF files
- Desktop distributions can
- File server storage scan: Hyper link is simultaneously transmitted by e-mail.

a. E-mail distribution scan

This system scans documents directly for the SMTP e-mail system. The scanned document is treated as an attached MIME file and distributed to the receiver through the e-mail system.

b. Desktop distribution scan

The network scanner sends back documents directly to the user's desktop. At that time, the desktop application, Sharpdesk is automatically started. Use of Sharpdesk allows view and correction of images, attachment of notes, edition, save of documents, and conversion into the PDF type. Furthermore, it allows scanning, printing, transmission functions (e-mail, FAX), binding of documents, and starting of other application by using the user interface. It also allows setup of image correction options.

c. File server storage scan

Use of this system allows direct scanning of documents for FTP servers.
This system controls transfer by using the user ID, the password, and the directory information. The user may save the scanned files as one file or plural files in the filer server. The user may also assign an e-mail address to receive the hyperlink.

(2) Image file generation

This network scanner generates images in some industrial standard formats. The file type, the resolution, and the mode can be changed. The following file types are supported.

- TIFF (Non-compressed, or compressed G3/G4 type)
- Image PDF (Compressed G3/G4 type)

C. Additional licenses of Sharpdesk and Network Scanner

The user may purchase additional licenses of Sharpdesk in the following units:

- 1 user
- 5 users

D. Requirements for composition of the network system

To use the network scanner, the following components are or configuration is required.

- AR-287/337/407/507
- Network scanner expansion kit: AR-NS1
- Printer controller: AR-PB2A
- NIC: AR-NC3D
- Memory: (AR-SM1 x 2)

26. E-mail Status/E-mail Alerts

A. Basic functions

(1) Event driven type text message transmission by using MIB information of AR-PB2A

(2) Management information which body has is coded and transmitted in a file type according to the schedule or in the event driven type. In this case, the specified mail software is used to receive and develop the data.

The above functions are available as standard provision only when AR-PB2A and the AR-NC3D are installed. For (2), the software key protect is made.

B. Main body specifications

The body provides event information to the controller.
The file generated by the ICU according to setup can be transmitted as an attached file as information for dealers. When a dealer's mail address is set, a file can be attached only to a mail which is transmitted to the mail address.

To read the attached file, the specified mail software is required. That is, the attached file includes numeral information of each main body and event information in coded state. If the other mail software is used to receive, the display contents on the client side cannot be guaranteed.

C. Print controller specifications

The controllers, AR-PB2A, support the following transmission functions:

- Text mail transmission by event driven setup and schedule driven setup
- Mail transmission with an attached file by event driven setup and schedule driven setup.

However, mail transmission with an attached file stated above is enabled only when the main body complies with generation of information of the attached file. That is, transmission of an attached file can be made only when the AR-PB2A is installed to the AR-287/337/407/507.

For E-mail Status / Alerts without an attached file, as follows:

(1) Additional machine information

Information to identify the machine. The user administrator manually enters this information by using a browser. The information is displayed in the text of the mail.

* These items of information are kept on the controller side or on the NIC side.
  - Machine name
  - Machine code
  - Installation place

(2) Alert Message

ID	Event	Message	Condition
1	Paper Jam	!!! MISFEED HAS OCCURRED !!!	When paper/document jam has occurred. If a jam is detected when the power is turned ON or reset, checking is made again.
2	Toner Low	!!! TONER SUPPLY IS LOW !!!	When toner LOW is detected for the first time. If toner LOW is detected when the power is turned ON or reset, checking is made again.
3	Toner Empty	!!! ADD TONER !!!	When toner empty is detected for the first time. If toner empty is detected when the power is turned ON or reset, checking is made again.
4	Paper Empty	!!! LOAD PAPER / XXX !!!	When paper empty is detected for the first time. If paper empty is detected when the power is turned ON or reset, checking is made again. No information on the number of steps of trays. Manual feed is not supported. When a tray empty is detected, information of all the trays that are empty at that time is delivered.
5	Service Required	!!! CALL FOR SERVICE !!!	When the machine enters the self-diagnosis mode. If detected when the power is turned ON or reset, checking is made again.
6	PM Required	!!! MAINTENANCE REQUIRED !!!	When the maintenance counter or the developer counter reaches the specified count. If detected when the power is turned ON or reset, checking is made again.

(3) Status Message

a. Counter information

When schedule driven is set, the total counter, the copy counter, and the printer counter are displayed in a mail address for general. These information items are supplied from the controller MIB. The "total counter" means the "effective paper counter" controlled by the ICU.

b. Timer information

For schedule drive message, the controller controls transmission time by means of the timer of the ICU timer of the machine, and transmits a mail.

Timer setup is made from the Web setup page.

D. Handling of transmission data

In E-mail Alerts and E-mail Status, a transmission task is generated regardless of the job which is under process in the machine. These tasks are processed in the following rules:

- When the machine receives a mail transmission request during a job process (copy scan, copy output, print output, other process) of the machine, it performs transmission process regardless of the job.
- When the machine receives a mail transmission request under other situation, if the job is triggered during transmission process, the job is started.
- When the machine receives a mail transmission request during the simulation mode, the request is accepted and transmission process is started.
- When the machine receives a mail transmission request during the key operator program, it is accepted and transmission process is started.
- When the controller sends two or more requests during a job, only the last request is accepted.

[3] CONSUMABLE PARTS (AR-287/337/407)

1. Consumable Parts List

A. USA

AR-287/337

No.	ITEM	CONTENTS		LIFE	MODEL NAME	REMARKS
5	Lower Heat Roller Kit	Lower Heat Roller Fusing Separation Pawl (lower)	×1 ×2	160K	AR-505LH	Replacement of fusing separation pawl for every 90 K should be done using those supplied separately.
12	Lower Heat Roller	Lower Heat Roller	×1	160K	AR-505HR	

AR-407

No.	ITEM	CONTENTS		LIFE	MODEL NAME	REMARKS
5	Lower Heat Roller Kit	Lower Heat Roller Fusing Separation Pawl (lower)	×1 ×2	180K	AR-505LH	Replacement of fusing separation pawl for every 90 K should be done using those supplied separately.
12	Lower Heat Roller	Lower Heat Roller	×1	180K	AR-505HR	

B. Canada

AR-287/337

No.	ITEM	CONTENTS		LIFE	MODEL NAME	REMARKS
5	160K PM Kit	Upper Heat Roller Lower Heat Roller Toner Receiving Seal DV Seal Heat Roller Gear	×1 ×1 ×1 ×1 ×1	160K	AR-337KB	
12	Lower Heat Roller	Lower Heat Roller	×1	160K	AR-505HR	

AR-407

No.	ITEM	CONTENTS		LIFE	MODEL NAME	REMARKS
5	180K PM Kit	Upper Heat Roller Lower Heat Roller Toner Receiving Seal DV Seal Heat Roller Gear	×1 ×1 ×1 ×1 ×1	180K	AR-337KB	
12	Lower Heat Roller	Lower Heat Roller	×1	180K	AR-505HR	

C. Europe / U.K. / Australia / New Zealand

AR-287/337

No.	ITEM	CONTENTS		LIFE	MODEL NAME	REMARKS
5	160K PM Kit	Upper Heat Roller Lower Heat Roller Toner Receiving Seal DV Seal Heat Roller Gear	×1 ×1 ×1 ×1 ×1	160K	AR-337KB	
12	Lower Heat Roller	Lower Heat Roller	×1	160K	AR-505HR	

AR-407

No.	ITEM	CONTENTS		LIFE	MODEL NAME	REMARKS
5	180K PM Kit	Upper Heat Roller Lower Heat Roller Toner Receiving Seal DV Seal Heat Roller Gear	×1 ×1 ×1 ×1 ×1	180K	AR-407KB	
12	Lower Heat Roller	Lower Heat Roller	×1	180K	AR-505HR	

D. Asia / Middle & South America

AR-287/337

No.	ITEM	CONTENTS		LIFE	MODEL NAME	REMARKS
5	160K PM Kit	Upper Heat Roller Lower Heat Roller Toner Receiving Seal DV Seal Heat Roller Gear	×1 ×1 ×1 ×1 ×1	160K	AR-337KB	
12	Lower Heat Roller	Lower Heat Roller	×1	160K	AR-505HR	

AR-407

No.	ITEM	CONTENTS		LIFE	MODEL NAME	REMARKS
5	180K PM Kit (200V)	Upper Heat Roller Lower Heat Roller Toner Receiving Seal DV Seal Heat Roller Gear	×1 ×1 ×1 ×1 ×1	180K	AR-407KB	
12	Lower Heat Roller	Lower Heat Roller	×1	180K	AR-505HR	

E. Middle East / Africa

AR-287/337

No.	ITEM	CONTENTS	LIFE	MODEL NAME	REMARKS
5	160K PM Kit	Upper Heat Roller ×1 Lower Heat Roller ×1 Toner Receiving Seal ×1 DV Seal ×1 Heat Roller Gear ×1	160K	AR-337KB	
12	Lower Heat Roller	Lower Heat Roller ×1	160K	AR-505HR	

AR-407

No.	ITEM	CONTENTS	LIFE	MODEL NAME	REMARKS
5	180K PM Kit	Upper Heat Roller ×1 Lower Heat Roller ×1 Toner Receiving Seal ×1 DV Seal ×1 Heat Roller Gear ×1	180K	AR-407KB	
12	Lower Heat Roller	Lower Heat Roller ×1	180K	AR-505HR	

[7] SIMULATION (AR-287/337/AR-407/507)

B. List

Code		Function (Purpose)
Main	Sub	
8	1	Used to check and adjust the operation of the developing bias voltage in each print mode and the control circuit. (for OPC drum type B)
	2	Used to check and adjust the operation of the main charger grid voltage in each print mode and the control circuit. (for OPC drum type B)
	6	Used to check and adjust the transfer charger current and the control circuit.
	7	Used to check and adjust the operation of the separation charger voltage and its control circuit.
22	1	Used to check the print out count of each section in each operation mode. (Used to check the maintenance timing.)
	6	Used to output the list of the setting and adjustment data (simulations, counters).
26	10	Used to allow entry of the software key input for the network scanner.
	12	Used to enter the Diagnosis function key input.
	13	After completion of copier job in copier interruption during a printer job, the print job is resumed in synchronization with the auto clear timer (key operation) setup time [10-240]. By making the setup below, the print job is resumed in 0 sec. (However, the auto clear function is enabled with the setup time of key operation. Also, this simulation and auto clear are not synchronized.)
	22	Used to set the specification (language display) for the destination. (Excluding the Japan models.)
	32	When the variable speed fan motor is in the ready state and the process temperature is in the range of 36° – 45°, the PWM duty is set in percentage.
	44	Used to set the model of the unit which is connected to the SCSI I/F of ICU PWB.
	52	Used to set whether white paper discharge count up is performed or not. ("White paper" means insertion paper in the OHP insertion paper mode (without copy), cover paper in the cover paper insertion mode (without copy)/back cover, and white paper in the duplex exit mode (CA etc.).)
50	1	Used to adjust the copy image position and the void area (image loss) on the print paper in the copy mode. (The same adjustment can be made with SIM 50-2 (simple method).)
	2	Used to adjust the copy image position and the void area (image loss) on the print paper in the copy mode. (Simple adjustment) (This simulation allows the same simulation with SIM 50-1 more simply.)
	26	Used to set the folding margin of center binding.
51	3	Used to set the clutch OFF time. (AR-507 Europe and U.K. only)
61	2	Used to adjust the scanner (exposure) laser power (absolute value) in the copy mode.
	4	Used to adjust the scanner (exposure) laser power (absolute value) in the printer mode. (For Photoconductor type B)
67	18	Used to clear the application data area of the Network Scanner of the Flash ROM.

C. Details of simulations

8

8 - 1

Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check the operation of the developing bias voltage in each print mode and its control circuit. (For OPC drum type B)
Section	Process (OPC drum, developing unit, transfer, cleaning) section

Operation/ Procedure (The developing bias output voltage of each print mode can be adjusted and checked.)

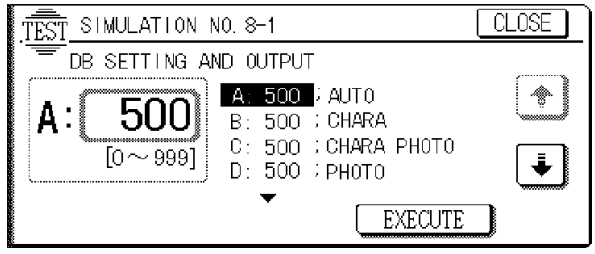
1. Select the print mode with [↑] key and [↓] key.
2. Enter the adjustment value with the 10-key pad.
3. Press the [EXECUTE] key.

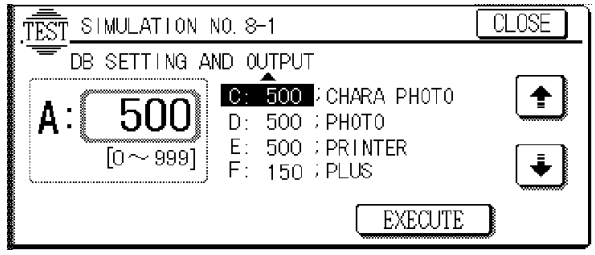
The [EXECUTE] key is highlighted, the adjustment value entered in procedure 2 is set, and the voltage corresponding to the set value is supplied.
After supplying the voltage for 30 sec, the [EXECUTE] key returns to the normal display.
If the [EXECUTE] key is pressed while the voltage is supplied, the voltage output is stopped and the [EXECUTE] key returns to the normal display.

AUTO	: Auto mode	* (500) (–500V ±5V)
CHARA	: Character mode	* (500) (–500V ±5V)
CHARA PHOTO	: Character/Photo mode	* (500) (–500V ±5V)
PHOTO	: Photo mode	* (500) (–500V ±5V)
PRINTER	: Printer mode	* (500) (–500V ±5V)
PLUS	: Cleaning mode Developing bias voltage	* (150) (+150V ±5V)

* ( ): Default

(AR-287/337/407)

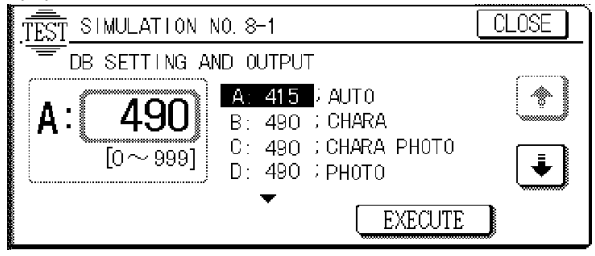


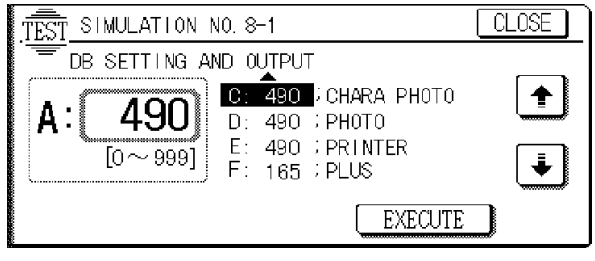


(AR-507)

AUTO	: Auto mode	* (415) (–425V ±5V)
CHARA	: Character mode	* (490) (–500V ±5V)
CHARA PHOTO	: Character/Photo mode	* (490) (–500V ±5V)
PHOTO	: Photo mode	* (490) (–500V ±5V)
PRINTER	: Printer mode	* (490) (–500V ±5V)
PLUS	: Cleaning mode Developing bias voltage	* (165) (+150V ±5V)

* ( ): Default





8 - 2

Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the main charger grid voltage in each print mode and the control circuit. (for OPC drum type B)
Section	Image process (Photoconductor/Developing/Transfer/ Cleaning)
Operation/ Procedure	(The charging/grid output voltage in each print mode can be adjusted and checked.)

1. Select the print mode with [↑] key and [↓]key.
2. Enter the adjustment value with the 10-key pad.
3. Press the [EXECUTE] key.

The [EXECUTE] key is highlighted, the adjustment value entered in procedure 2 is set, and the voltage corresponding to the set value is supplied.

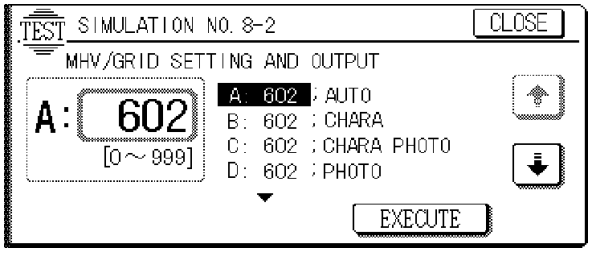
After supplying the voltage for 30 sec, the [EXECUTE] key returns to the normal display.

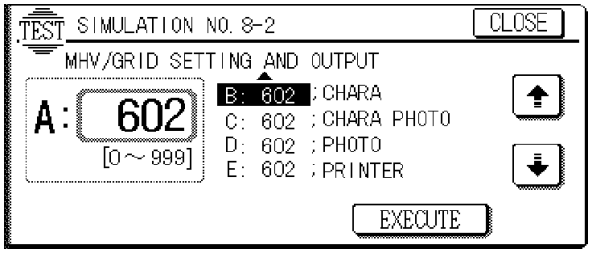
If the [EXECUTE] key is pressed while the voltage is supplied, the voltage output is stopped and the [EXECUTE] key returns to the normal display.

(AR-287/337/407)

AUTO	: Auto mode	* (602) (–603 ±5V)
CHARA	: Character mode	* (602) (–603 ±5V)
CHARA PHOTO	: Character/Photo mode	* (602) (–603 ±5V)
PHOTO	: Photo mode	* (602) (–603 ±5V)
PRINTER	: Printer mode	* (602) (–603 ±5V)

* ( ): Default

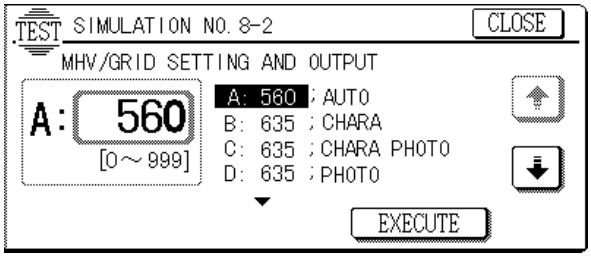


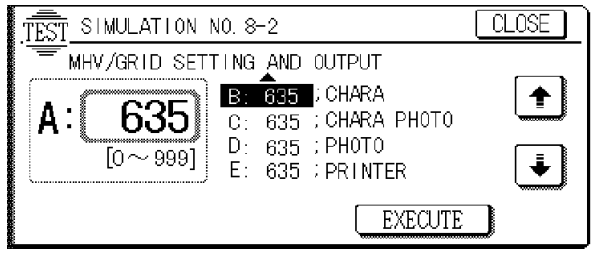


(AR-507)

AUTO	: Auto mode	* (560) (–570 ±5V)
CHARA	: Character mode	* (635) (–645 ±5V)
CHARA PHOTO	: Character/Photo mode	* (635) (–645 ±5V)
PHOTO	: Photo mode	* (635) (–645 ±5V)
PRINTER	: Printer mode	* (635) (–645 ±5V)

* ( ): Default





8 - 6

Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the transfer charger current and the control circuit.
Section	Image process (Photoconductor/ Developing/Transfer/ Cleaning) Copy
Operation/ Procedure	The transfer charger output voltage in printing the front and the back of paper can be adjusted and checked.

1. Select the print mode with [↑] key and [↓] key.
2. Enter the adjustment value with the 10-key pad.
3. Press the [EXECUTE] key.

The [EXECUTE] key is highlighted, the adjustment value entered in procedure 2 is set, and the voltage corresponding to the set value is supplied.

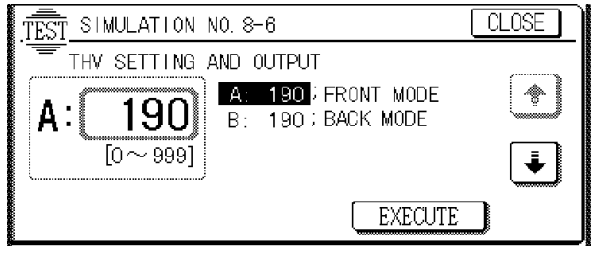
After supplying the voltage for 30 sec, the [EXECUTE] key returns to the normal display.

If the [EXECUTE] key is pressed while the voltage is supplied, the voltage output is stopped and the [EXECUTE] key returns to the normal display.

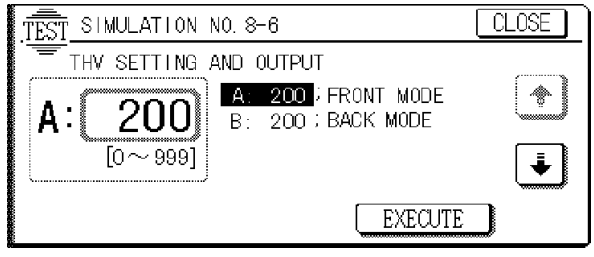
FROMT MODE: Front surface print (with the paper feed tray and manual paper feed tray)

BACK MODE: Back surface print (with duplex paper feed)

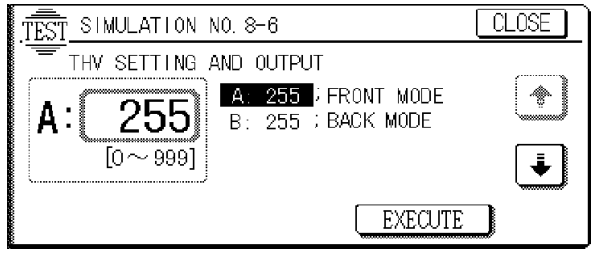
(AR-287/337)



(AR-407)



(AR-507)



8 - 7

Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the separation charger voltage and its control circuit.
Section	Image process (Photoconductor/ Developing/Transfer/ Cleaning) Others
Operation/ Procedure	The separation charger output voltage in printing the front and the back of paper can be adjusted and checked.

1. Select the print mode with [↑] key and [↓] key.
2. Enter the adjustment value with the 10-key pad.
3. Press the [EXECUTE] key.

The [EXECUTE] key is highlighted, the adjustment value entered in procedure 2 is set, and the voltage corresponding to the set value is supplied.

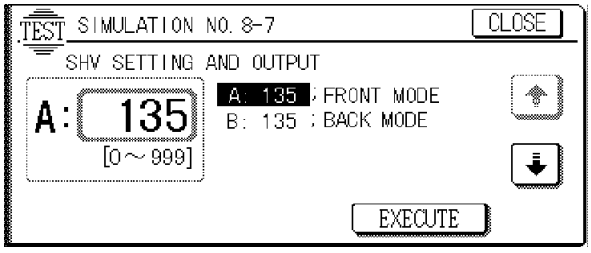
After supplying the voltage for 30 sec, the [EXECUTE] key returns to the normal display.

If the [EXECUTE] key is pressed while the voltage is supplied, the voltage output is stopped and the [EXECUTE] key returns to the normal display.

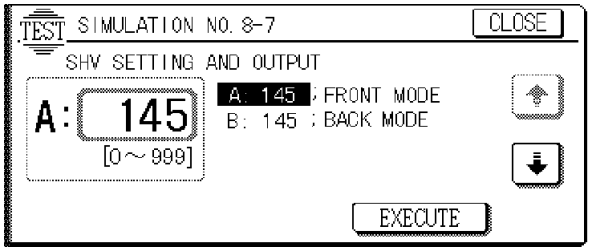
FROMT MODE: Front surface print (with the paper feed tray and manual paper feed tray)

BACK MODE: Back surface print (with duplex paper feed)

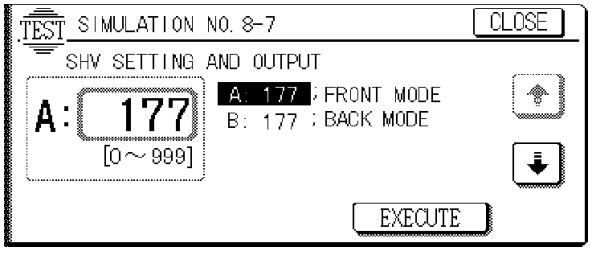
(AR-287/337)



(AR-407)



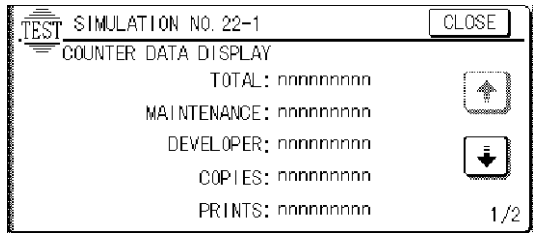
(AR-507)



22

22 - 1

Purpose	Operation data output/Check (Display/Print)
Function (Purpose)	Used to check the print out count of each section in each operation mode. (Used to check the maintenance timing.)
Item	Counter
Operation/ Procedure	

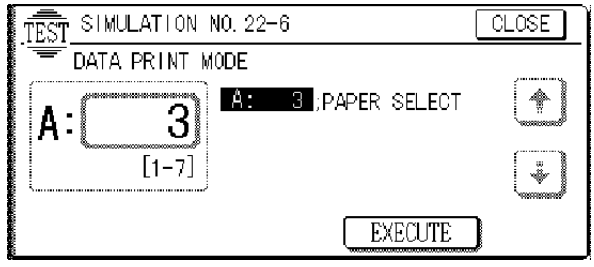


nnnnnnnn : Counter value

22 - 6

Purpose	Operation data output/Check (Display/Print)
Function (Purpose)	Used to output the list of the setting and adjustment data (simulations, counters).
Item	Data Adjust/Setting data
Operation/ Procedure	When installing or servicing, execute this simulation to print and store the adjustment values and setting data for use in the next servicing. (Memory trouble, PWB replacement, etc.) In this case, the print conditions can be set optionally.

1. Select the setup item.
   (The selected item is highlighted.)
2. Set the item and conditions with the 10-key pad.
3. Press the [EXECUTE] key to print various data.
   A: Paper feed mode
   1: Manual paper feed
   2: Upper paper feed tray
   3: Lower paper feed tray
   4: Desk upper paper feed tray
   5: Desk middle paper feed tray
   6: Desk lower paper feed tray
   7: Large capacity paper feed tray



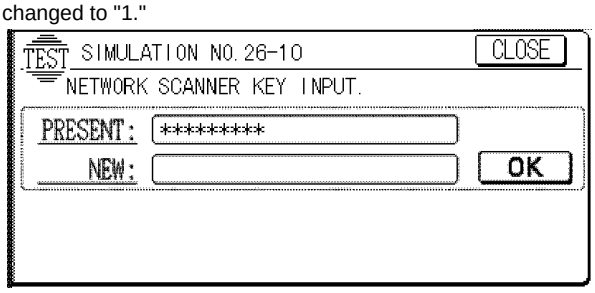
26

26 - 10

Purpose	Setting
Function (Purpose)	Used to allow entry of the software key input for the network scanner.
Item	Operation
Operation/ Procedure	1. After entering the sub code of the simulation, enter the software key in the obtained frame of "NEW."

2. When the obtained number is entered with the 10-key (max. 9 digits), the entered number is displayed in the frame of "NEW." After entering the number, press the [OK] key, and the entered number is stored.
3. Reset with the CA key, and the scanner function is enabled.
   * Only when SCSI (20 channels/NS1) setup is completed.
   If the scanner key input is made without setup, it is rejected.
4. Special note

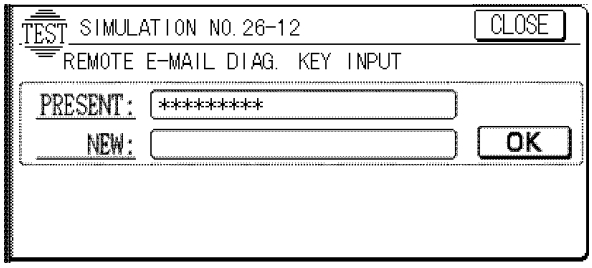
When the SCSI channel is set to "20," if a software key which does not correspond to the setup is entered, the setup of "20" is changed to "1."



26 - 12

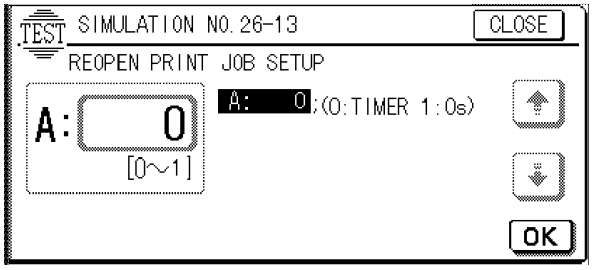
Purpose	Setting
Function (Purpose)	Used to enter the Diagnosis function key input.
Item	Operation
Operation/ Procedure	1. After entering the sub code of the simulation, enter the software key in the obtained frame of "NEW."

2. When the obtained number is entered with the 10-key (max. 9 digits), the entered number is displayed in the frame of "NEW." After entering the number, press the [OK] key, and the entered number is stored.
3. The Alert/Status E-Mail send function with attached data of the Remote E-Mail Diagnosis System is enabled.



26 - 13

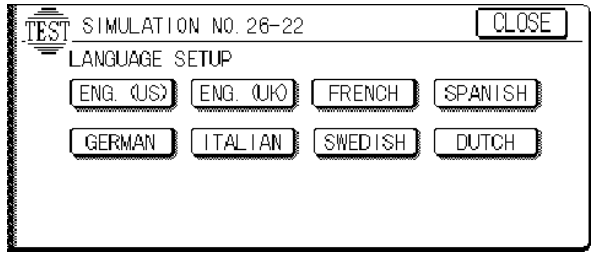
Purpose	Setting
Function (Purpose)	After completion of copier job in copier interruption during a printer job, the print job is resumed in synchronization with the auto clear timer (key operation) setup time [10-240]. By making the setup below, the print job is resumed in 0 sec. (However, the auto clear function is enabled with the setup time of key operation. Also, this simulation and auto clear are not synchronized.)
Item	Operation
Operation/ Procedure	When this simulation is executed, the current set value is displayed. At that time, the set value can be changed with the 10-key. When the [OK] key is pressed, the current set value is stored in the EEPROM.



26 - 22

Purpose	Setting
Function (Purpose)	Used to set the specification (language display) for the destination. (Excluding the Japan models.)
Item	Specifications
Operation/ Procedure	Select the language to be used according to the table below.

Display	Language
ENG.(US)	English(US)
ENG.(UK)	English(UK)
FRENCH	French
SPANISH	Spanish
GERMAN	German
ITALIAN	Italian
SWEDISH	Swedish
DUTCH	Dutch

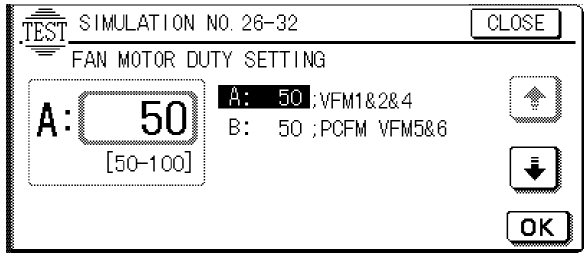


26 - 32

Purpose	Setting
Function (Purpose)	When the variable speed fan motor is in the ready state and the process temperature is in the range of 36° – 45°, the PWM duty is set in percentage.
Item	Operation
Operation/ Procedure	When this simulation is executed, the current set value is displayed. At that time, select the fan motor with [↑] key and [↓] key. Then the set value can be changed with the 10-key.

When [↑] key or [↓] key is pressed, the current set value is stored in the EEPROM.

VFM1&2&4	Adjustment range of 50 – 100% in 1% increment
PCFM VFM5&6	Adjustment range of 50 – 100% in 1% increment



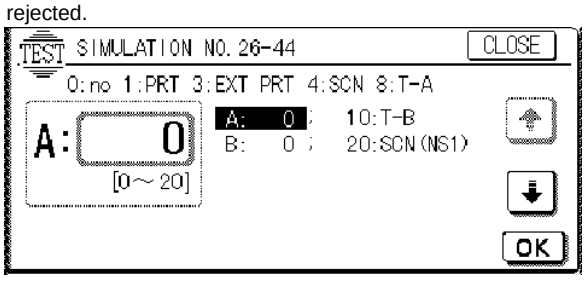
26 - 44

Purpose	Setting
Function (Purpose)	Used to set the model of the unit which is connected to the SCSI I/F of ICU PWB.
Section	ICU
Item	Specifications Interface/Communication
Operation/ Procedure	A is at the left of B when viewed from the rear side. 0: No connection 1: Printer controller 3: External printer controller

4: AXIS controller
8: Tandem connection (Initiator)
10: Tandem connection (Target)
20: Network scanner controller (NS1)

Either of the above values is set.

* AR-287 is not provided with the tandem setting.
However, the display is not changed. When tandem setup is tried, it is rejected.



26 - 52

Purpose	Setting
Function (Purpose)	Used to set whether white paper discharge count up is performed or not. ("White paper" means insertion paper in the OHP insertion paper mode (without copy), cover paper in the cover paper insertion mode (without copy)/back cover, and white paper in the duplex exit mode (CA etc.).)
Item	Operation
Operation/ Procedure	When this simulation is executed, the current set value is displayed.

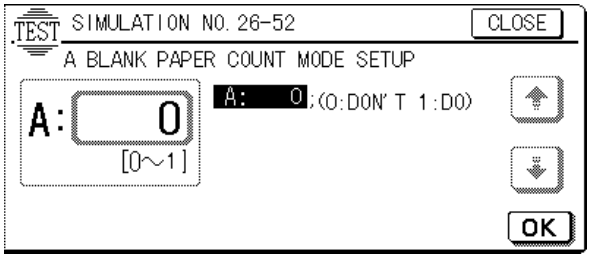
Under this state, the set value can be changed with the 10-key.
When the OK key is pressed, the currently set value is stored in the EEPROM.

	Set value	Content
A	0	White paper count up is not performed.
	1	White paper count up is performed.

Destination	Default
Japan/Australia	0 (Count up is not performed.)
Others	1 (Count up is performed.)

When set to 0 (count up is nor performed), the following counters do not count up.

- COPIES counter
- Total counter
- Maintenance counter
- Developer counter
- Department management counter
- The signal (PNC) for the external auditor (mechanism counter) is not outputted.



50

50 - 1

Purpose	Adjustment
Function (Purpose)	Used to adjust the copy image position and the void area (image loss) on the print paper in the copy mode. (The same adjustment can be made with SIM 50-2 (simple method).)
Item	Picture quality Image position
Operation/ Procedure	1. Select the adjustment item with [↑], [↓] keys. 2. Enter the adjustment value with the 10-key.

3. Press the [OK] key. (The adjustment value entered in procedure 2 is set.)

Descriptions on adjustment items

A. Document scan start position adjustment value (RRC-A)
Used to adjust the timing of outputting the image lead edge signal (SCAN signal) after starting document scanning. (0 – 99: Reference value 50)

B. Resist roller clutch OFF timing adjustment value (RRC-B)
Used to adjust the timing of turning ON the resist roller after reception of the resist signal (LD_START). (0 – 99: Reference value 50)

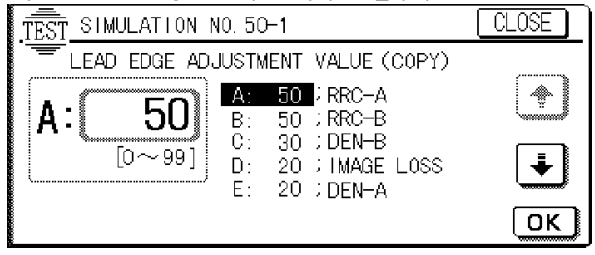
C. Rear edge void quantity adjustment value (DEN-B)
Used to set the void quantity on the rear edge. (0- 99: Reference value 30)

D. Image loss quantity set value (IMAGE LOSS)
Used to set the image loss quantity. (0 – 99: reference value 20)

E. Lead edge void quantity set value (DEN-A)
Used to set the void quantity on the document lead edge. (0 – 99: Reference value 20)

Adjustment procedure

1. Set the image loss quantity (IMAGE LOSS) and the paper lead edge void quantity (DEN-A) to desired values. (0 – 99: 0.1mm/step)
2. Adjust the document scan start position (RRC_A) so that the image loss quantity of an actual copy image becomes the set value of procedure 1. (0 – 99: 0.29mm/step)
3. Adjust the resist roller clutch ON timing (RRC_B) so that the lead edge void quantity of an actual copy image becomes the set value of procedure 1. (0 – 99: 0.24mm/step)
4. Adjust the rear edge void quantity (DEN_B). (0 – 99: 0.1mm/step)



50 - 2

Purpose	Adjustment
Function (Purpose)	Used to adjust the copy image position and the void area (image loss) on the print paper in the copy mode. (Simple adjustment) (This simulation allows the same simulation with SIM 50-1 more simply.)
Item	Picture quality Image position
Operation/ Procedure	1. Select the adjustment item with [↑], [↓] keys. 2. Enter the adjustment value with the 10-key.

3. Press the [OK] key. (The value entered in procedure 2 is set.)

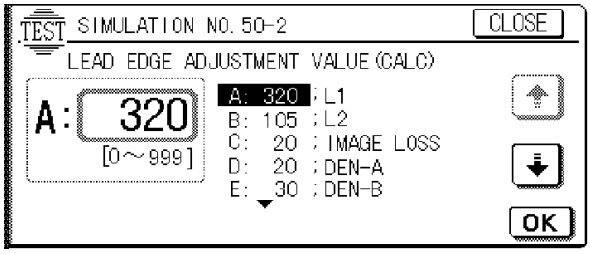
Used to adjust the lead edge by entering the lead edge shift on each lead edge of 400% copy.

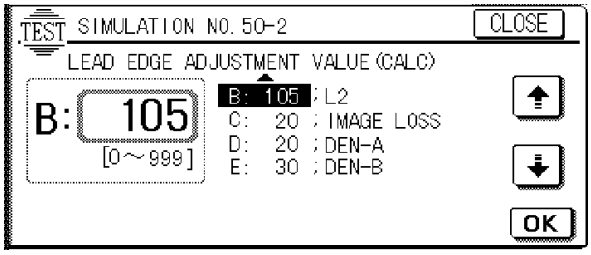
Descriptions on adjustment items

A. Distance from the image lead edge to 10mm of the scale (Platen 400%) (L1)
B. Distance from the paper lead edge to the image lead edge (L2)
C. IMAGE LOSS
D. DEN-A
E. DEN-B

Adjustment procedures

1. Set the image loss quantity (IMAGE LOSS) and the paper lead edge void quantity (DEN-A) to desired values. (0 – 99: 0.1mm/step)
2. Set L1/L2 to 0.
3. Make a 400% copy with OC, and enter the shift quantity to L1/L2. (0 – 999: 0.1mm/step)
4. Repeat procedure 3 so that the paper lead edge void quantity of the actual copy image becomes the set value of procedure 1.
5. Adjust the rear edge void quantity (DEN_B). (0 – 99: 0.1mm/step)





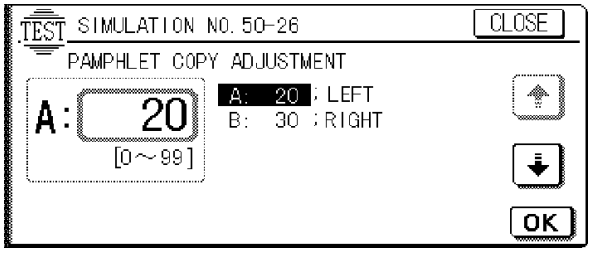
50 - 26

Function (Purpose)	Used to set the folding margin of center binding.
Operation/ Procedure	When this simulation is executed, the current set value is displayed. Under this state, the set value can be changed with the 10-key. When the OK key is pressed, the currently set value is stored in the EEPROM.

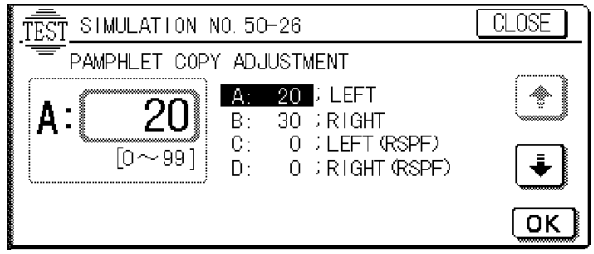
(1 step: 0.1mm)

Item	Content	Range	Default
A	Clear quantity of the folding section of center binding left image (when the OC is used)	0 ~ 99	20
B	Clear quantity of the folding section of center binding right image (when the OC is used)	0 ~ 99	30
C	Clear quantity of the folding section of center binding left image (when the RSPF is used)	0 ~ 99	0
D	Clear quantity of the folding section of center binding right image (when the RSPF is used)	0 ~ 99	0

(AR-287/337/407)



(AR-507)



51

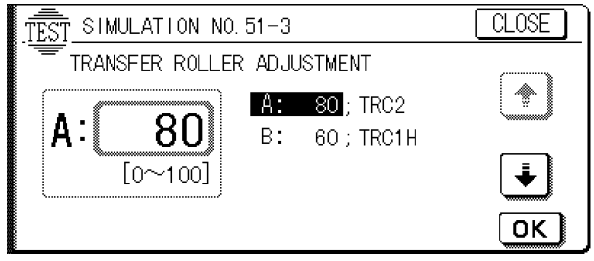
51 - 3

Purpose	Setting
Function (Purpose)	Used to set the clutch OFF time. (AR-507 Europe and U.K. only)
Item	Operation
Operation/ Procedure	When this simulation is executed, the current set value is displayed.

At that time, the set value can be changed with [↑] key and [↓] key.
When [↑], [↓], and [OK] keys are pressed, the current set value is stored in the EEPROM.

	Destination	Default
TRC2	Europe	80
	U.K.	80
TRC1H	Europe	60
	U.K.	60

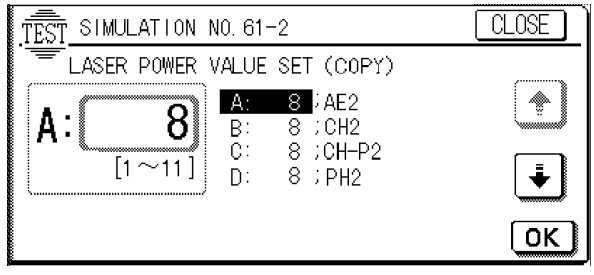
(Europe/U.K.)



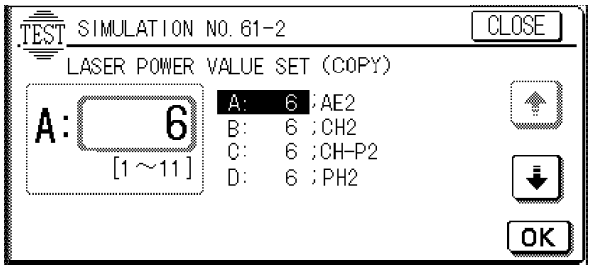
61

61 - 2

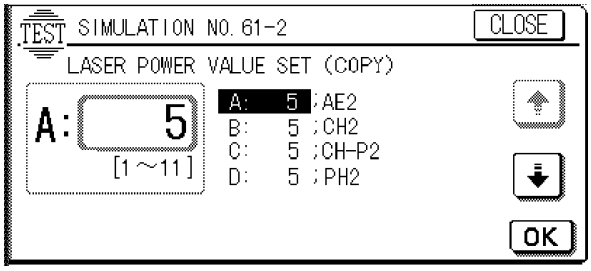
Purpose	Adjustment
Function (Purpose)	Used to adjust the scanner (exposure) laser power (absolute value) in the copy mode.
Section	Laser (Exposure)
Item	Operation
Operation/ Procedure	(AR-287/337) All must be set to "8."



(AR-407)
All must be set to "6".

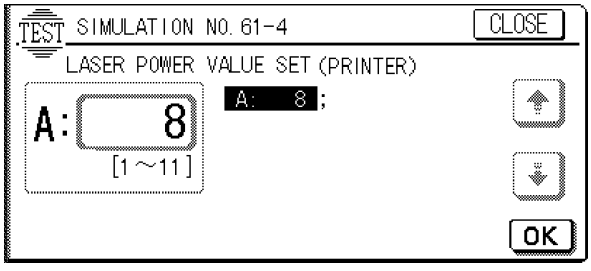


(AR-507)
All must be set to "5."

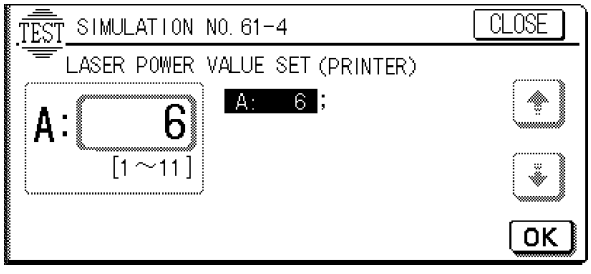


61 - 4

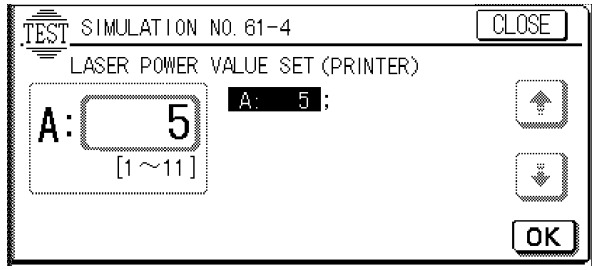
Purpose	Adjustment
Function (Purpose)	Used to adjust the scanner (exposure) laser power (absolute value) in the printer mode. (For Photoconductor type B)
Section	Laser (Exposure)
Item	Operation
Operation/ Procedure	(AR-287/337) Set default value 8.



(AR-407)
Set default value 6.



(AR-507)
Set default value 5.



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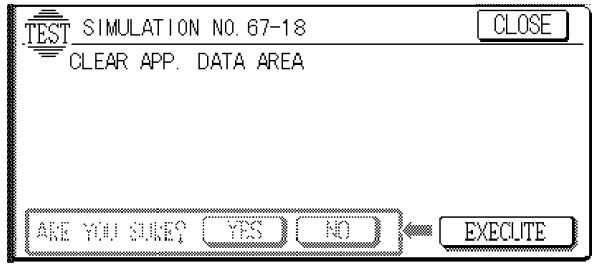
Purpose	Data clear
Function (Purpose)	Used to clear the application data area of the Network Scanner of the Flash ROM.
Item	Memory
Operation/ Procedure	1. To clear data, press the [EXECUTE] key. Clear area: 0x8f060000/0x8f07ffff

2. The confirmation menu is displayed to confirm whether the AR-NS1 area data in the Flash ROM are cleared or not.
   [YES] key: Clear
   [NO] key: Not clear
3. During clearing data, "NOW DOING . . ." is displayed.
   [No key entry is accepted during clearing.]
4. After normal completion, "END" is outputted. In case of any trouble, "NG" is outputted.
   [When the CA key is pressed, reset is performed.]



[9] TROUBLE CODE LIST (AR-287/337/407/507)

1. Trouble code

Trouble code		Content of trouble	Remark	Trouble detection
CE	00	The other communication error has occurred.		Network
	01	The print server card (AR-NC3D) is not installed or defective.		Network
	02	The specified mail server or the FTP server is not found.		Network
	03	The specified server does not correspond during image transmission.		Network
	04	The entered account name of the FTP server or the password is invalid.		Network
	05	The entered directory of the FTP server is invalid.		Network

2. Self diagnostics

Trouble code		Description	
MAIN	SUB		
CE	00	Content	The other communication error has occurred.
		Detail	Communication error
		Cause	Network Cable connection failure
		Check and remedy	1) Check that the Network Cable is properly inserted.
	01	Content	The print server card (AR-NC3D) is not installed or defective.
		Detail	NC3D connection failure
		Cause	NC-3D is not installed to the AR-PB2A board. NC-3D control PWB trouble
		Check and remedy	1) Check that the NC-3D is installed to the AR-PB2A board. 2) Output the NIC Config. Page to check the NIC version. 3) Replace the NIC.
	02	Content	The specified mail server or the FTP server is not found.
		Detail	The specified mail server or the FTP server is not found.
		Cause	Network Cable connection failure Network setup failure SMTP server/FTP server/NST trouble
		Check and remedy	1) Check that the Network Cable is inserted properly. 2) Check that the connected network supports TCP/IP protocol. 3) Check from the Web Page that the Primary/Secondary E-mail Server Address or the Destination FTP server/Desktop PC address are properly set. 4) If the above address is described with Hostname, check that the DNS server is properly set. 5) Check that the SMTP server/FTP server/NST causes a trouble or not.
	03	Content	The specified server does not correspond during image transmission.
		Detail	The specified server does not correspond during image transmission.
		Cause	Network Cable connection failure SMTP server/FTP server/NST trouble
		Check and remedy	1) Check that the Network Cable is inserted properly. 2) Check that the SMTP server/FTP server/NST causes a trouble or not.
	04	Content	The entered account name of the FTP server or the password is invalid.
		Detail	The entered account name of the FTP server or the password is invalid.
		Cause	Network Cable connection failure The account name of the FTP server recorded as the destination or the password for the account name is erroneous.
		Check and remedy	1) Check that the Network Cable is inserted properly. 2) Check that the account name of the FTP server recorded as the destination and the password for the account name are proper.
	05	Content	The entered directory of the FTP server is invalid.
		Detail	The entered directory of the FTP server is invalid.
		Cause	Network Cable connection failure Check that the directory name exists in the FTP server recorded as the destination.
		Check and remedy	1) Check that the Network Cable is inserted properly. 2) Check that the directory name exists in the FTP server recorded as the destination.

CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !
Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.

(Finnish) VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

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

(Swedish) VARNING
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

SHARP

SHARP CORPORATION
Digital Document Systems Group
Quality & Reliability Control Center
Yamatokoriyama, Nara 639-1186, Japan
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