5

ISW

WHAT'S ISW?

ISW (In-System Writer) is a process of updating the control programs stored in flash ROM mounted on various control boards in a Minolta digital copier without isolating the boards from the copier. Running ISW enables you to upgrade control programs without replacing the boards and maintain the boards during their replacement.

Tool available for running ISW include ISW Trns (PC software), which connects a personal computer (PC) to the digital copier.

This tool can be plugged into the ISW connector of the digital copier to directly update the control programs in flash ROM assembled in the machine.

This chapter focuses on instructions to set up this machine to run ISW.

Note: Only ISW Trans is enabled with ISW for this machine.

SETUP

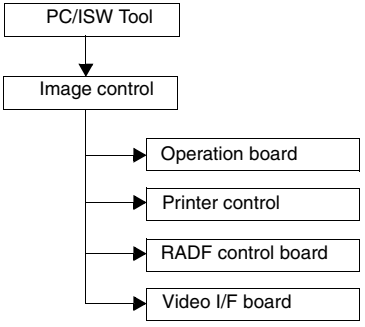
[1] ISW-compatible boards

This machine allows ROM data residing on the following boards to be updated via ISW Tool:

- Image control board
- Printer control board
- Operation board
- RADF control board
- Video I/F board

The ROMs of other boards than the above need to be replaced.

[2] Data flow



Important Note:
The availability of the Graphics control board is prerequisite to updating ROM data on other boards.

[3] Prepare the copier to start an ISW transfer

1. Transfer modes
The copier supports three transfer modes as described below.

(1) Power-on mode
If the copier does not have the image control program installed, its writing to the copier is enabled when the main switch is turned on. Because the image control board controls the power supply to the operation board, nothing will appear on the operation LCD and timer LED will blink even though the operation control program has been installed on the copier.

(2) HELP + CHECK mode

Turning ON the copier with HELP and CHECK puts it into the HELP + CHECK mode. If the copier has the image control program installed, but not the operation control program, the 25 mode would not launch. This mode is specifically maintained to enable ISW in this situation.

2. 25 mode
The 25 mode works only where the copier has both the image control and operation control programs installed.
(Some part of HELP+CHECK mode is used to update the operation control program in 25 mode.)

3. Instances of ISW transfer

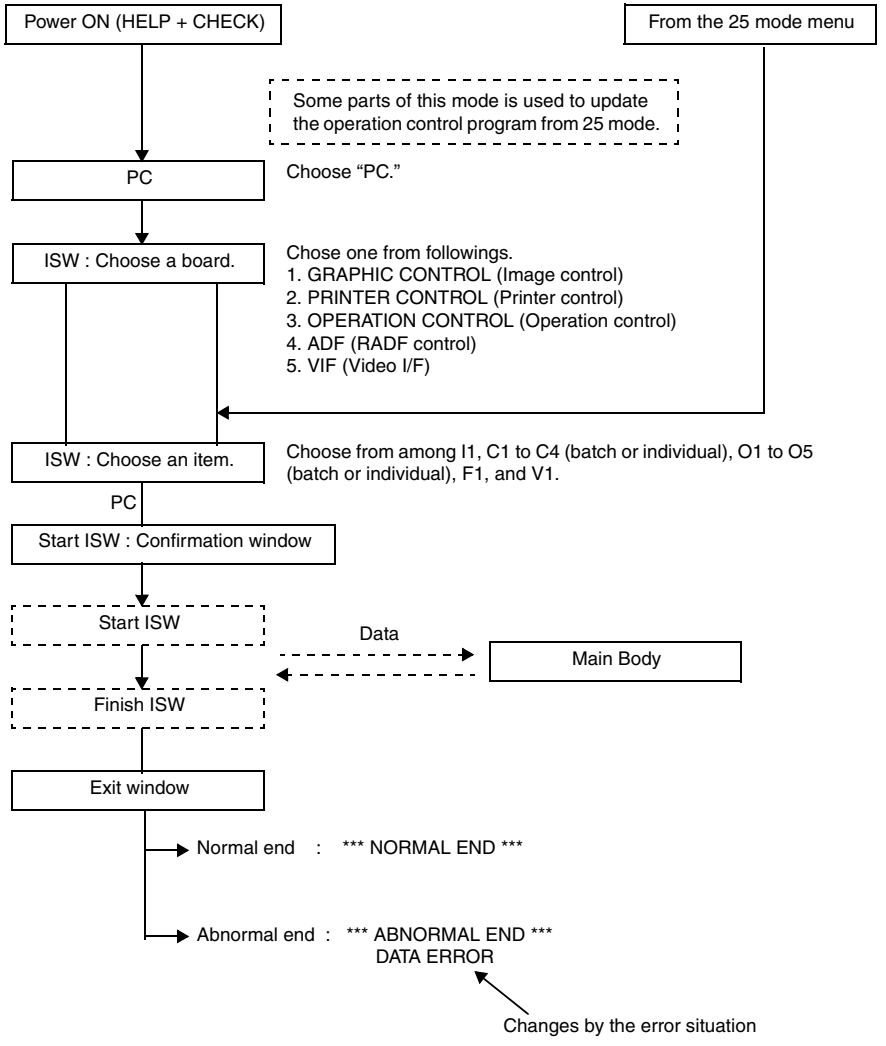
(1) Writing ROM data newly (Ex. after replacing boards)

	Normal startup display	Writing method	Condition
Image control	Flashing timer LED No display on the operation LCD	Writing is enabled with power turned ON.	The copier does not have the image control program installed.
Operation control	Error code display	Writing is enabled by launching the HELP + CHECK mode	The copier has the image control program installed.
Others	Error code display	25 mode or HELP + CHECK mode	The copier has the image control program installed.

(2) Upgrading

	Normal startup display	Writing method	Condition
Image control	Normal	25 mode or HELP + CHECK mode	The copier has all the programs installed.
Operation control	Normal		
Others	Normal		

[4] HELP + CHECK mode operation flow



[5] HELP + CHECK mode operating procedure

1. Prerequisite
   Turn the main SW ON while pressing "HELP" and "CHECK" button.

2. ISW write mode select menu
   Function: This window lets you select a mode in which to update ISW.

```
ISW WRITE MODE SELECT MENU

    1. PC

PLEASE PUSH TEN-KEY                    9. EXIT
```

a. Operating instructions

(1) Choose ISW WRITE MODE
Choose "PC" for both using personal computer and ISW Tool.

(2) To exit writing
Press 9 (EXIT) to open the power-off window.

3. ISW device select menu
   Function: This window lets you select the control board on which to update ROM data. You can choose from among graphics control, printer control, operation control, ADF, and VIF.

```
ISW WRITE MODE SELECT MENU                    [MODE:PC]

    1. GRAPHIC CONTROL
    2. PRINTER CONTROL
    3. OPERATION CONTROL
    4. ADF
    5. VIF

PLEASE PUSH TEN-KEY              0. PREVIOUS  9. EXIT
```

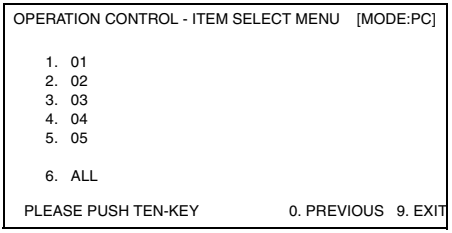
a. Operating instructions

(1) Select the control board on which to update ROM data. Choose from among 1 to 5. When you select a number, the associated item select menu appears.

(2) To return to the previous window
Press 0 (PREVIOUS) to return to the ISW write mode select menu.

(3) To exit writing
Press 9 (EXIT) to open the power-off window.

4. Item select menu
Function: This window lets you select write items.



a. Operating instructions

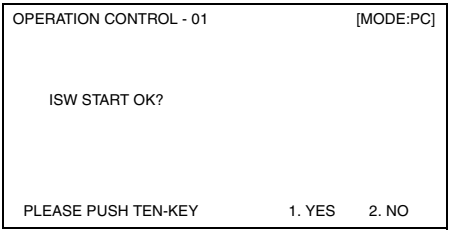
(1) Individual write
Choose from among 1 to 5. When you select a number, the start confirmation window opens.

(2) Batch write
To write all items in a batch, select “ALL.” When you select “ALL,” the start confirmation window opens.

(3) To return to the previous window
Press 0 (PREVIOUS) to return to the ISW device select menu.

(4) To exit writing
Press 9 (EXIT) to open the power-off window.

5. Start confirmation window
Function: This window prompts you to confirm whether to start running ISW or not.



a. Operating instructions

(1) Choose YES to start running ISW.

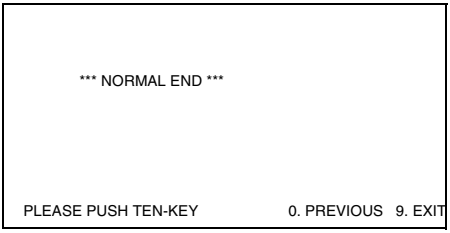
(2) Choose NO to cancel.
When you cancel, the item select menu appears again.

6. Executing window
Function: This window displays the status of execution in progress.

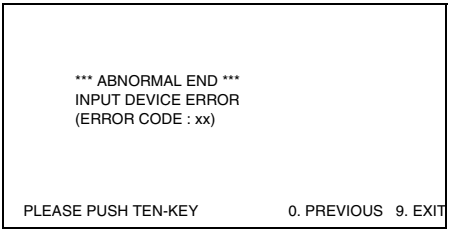
a. Operating instructions

(1) The executing indicator flashes. When the execution ends, the ending result window opens.

7. Ending result window
Function: This window displays the status of ISW ending.



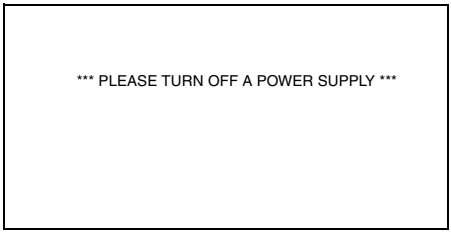
Abnormal end



a. Operating instructions
(1) Choose 0 (CONTINUE) to return to the item select menu.

(2) To exit writing
Press 9 (EXIT) to open the power-off window.

8. Power-off window



a. Operating instructions
(1) Individual write
Choose from among 1 to 5. When you select a number, the start confirmation window opens.

[6] Error code table for ISW Setup

Error Code	Description	Action No.
01	There is an error in the command to ISW processing unit.	a
1F	A program error is detected.	a
41	Input data format error. (during ISW to operation board)	b
42	Invalid machine name input data. (during ISW to operation board)	b
43	Invalid board name input data. (during ISW to operation board)	b
81	Input device error such as input time-out. (during ISW to operation board)	c
C1	Failed to erase flash ROM. (during ISW to image control board)	e
C2	Write to flash ROM has failed. (during ISW to image control board)	e
C3	ROM checksum error. (during ISW to image control board)	h
C4	Output device error such as output time-out.	f
E9	Communication parameter error at image control unit to operation unit I/F. (during ISW to operation board)	d
EA	Command sequence error at image control unit to operation unit I/F. (during ISW to operation board)	d
EB	Communication time-out error at image control unit to operation unit I/F. (during ISW to operation board)	d
F0	Flash ROM error (during ISW to operation board)	g
F1	Flash verify error (during ISW to operation board)	g
F2	Flash write error (during ISW to operation board)	g
F3	Flash erase error (during ISW to operation board)	g
F8	Receive checksum error at image control unit to operation unit I/F. (during ISW to operation board)	d
F9	Receive header code error at image control unit to operation unit I/F. (during ISW to operation board)	d
FA	Receive parity error at image control unit to operation unit I/F. (during ISW to operation board)	d
FB	Receive framing error at image control unit to operation unit I/F. (during ISW to operation board)	d
FC	Receive overflow error at image control unit to operation unit I/F. (during ISW to operation board)	d

<Error code table action classification>

Action No.	Action
a	Program is not executing normally. Restart from power ON and re-execute the ISW.
b	Check the ISW transfer data file.
c	Check that the communication cable between input devices (PC or ISW tool) is properly connected.
d	Check the image control unit to operation unit I/F.
e	There is an error in the flash ROM on the image control board. Restart from ISW. If the error persists, the life of the image control board flash ROM may have expired. Replace the image control board.
f	An error was detected in the ISW target board. Check the ISW target board.
g	There is an error in the flash ROM on the operation board. Restart from ISW. If the error persists, the life of the operation board flash ROM may have expired. Replace the operation board. * The system may fail to restart.
h	The checksum result after program write does not match the ROM checksum data of the ISW transfer data file. Restart from ISW. If the error persists, the ISW transfer data file may not be created correctly.

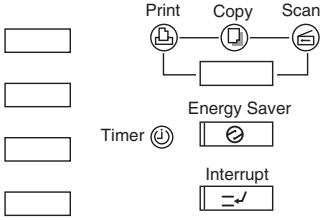
[7] Preparing the copier to transfer

Start the copier with 25 mode enabled to put the copier into ISW transfer wait state.

Step	Procedure
1	Enter 25 mode.
2	**[Memory setting mode menu Screen]** Press " 11 ISW".
3	**[ISW mode menu Screen]** Select the control board on which to update ROM data.
4	**[ISW mode Screen]** The Start key appears, indicating the copiers readiness to launch an ISW transfer.
5	Follow operating instructions in Minolta ISW (In-System Writer) Service Hand book.

[8] Relationships between processing states and operational LEDs

Note: This is displayed only when installing the program to graphics control for the first time.



No.	Processing	Timer LED (orange)	Energy Saver LED (green)
1	Initializing CPU now	● OFF	● OFF
2	Checking memory	● OFF	● OFF
3	Memory check error (waiting for data from PC)	◎ Flashing	● OFF
4	ISW processing (receiving data)	● OFF	◎ Flashing
5	ISW processing (writing to flash ROM)	● OFF	◎ Flashing
6	Transfer data error	◎ Flashing	◎ Flashing
7	Flash ROM write error	◎ Flashing	○ Steady lit
8	Memory check successful and reboot	● OFF	● OFF

[9] Rewriting procedure after an error interruption

If errors occur while writing ROM data, it is written the same way as explained in “Writing ROM data newly” in "[3]-3. Instances of ISW transfer".

- **Image control program**

The timer LED (orange) flashes. (Nothing will appear on the operation LCD because communication with the operating unit is disabled.)
Retry ISW after turning the main switch OFF, then ON.

- **Operation control program**

Since the 25 mode is disabled, launch the HELP + CHECK mode to retry ISW.

- **Other control programs**

Relaunch the 25 mode to retry ISW. (It is assumed that the copier has both the image control and operation control programs successfully installed.)

[10] Connecting the ISW connector

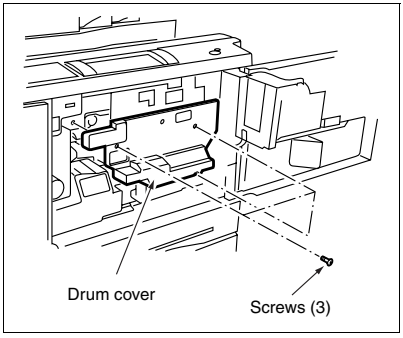
The ISW connector is hidden under the drum cover. Detach this cover to run ISW.

a. Procedure

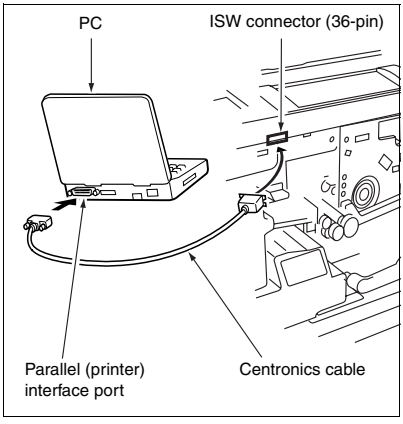
(1) Open the left and right front doors.

(2) Open the toner supply unit.

(3) Loosen three screws to detach the drum cover.



(4) Connect the PC parallel port and the copier ISW connector with parallel interface cable.



UPDATING WITH ISW Trns

[1] Setting Up ISW Trns

Note: The explanation screen here is used based on another model. Therefore, there is a thing different from an actual screen.

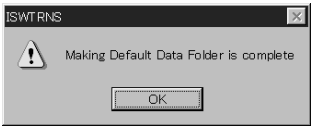
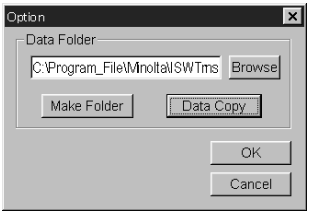
1. Installing the application program

Install the ISW Trns on the PC.

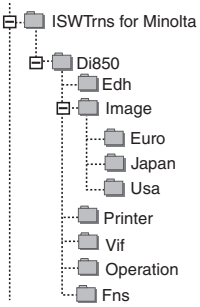
Step	Procedure
1	Boot the PC.
2	Mount setup disk 1 on the PC and double-click the [Setup.exe] icon to start the installer. **Note:** If an old version ISW Trns program is present, uninstall it first, then start the setup operation.
3	[ISW Trns setup window] Confirm the installation folder as instructed by on-screen guidance and click Next. **Note1:** By default, the program installs in [C:\Program_File\Minolta\ISWTrns for Minolta]. **Note2:** To change the installation folder, click Browse and type a new folder name.
4	[Program folder confirmation window] Confirm the ISW Trns program installation folder as instructed by on-screen guidance and click Next. **Note1:** By default, the ISW Trns program installs in [ISWTrns for Minolta]. **Note2:** To change the installation folder, either type a new folder name or select one from the list of existing folders on display.
5	[Next disk insertion request window] Mount setup disk 2 as instructed by on-screen guidance and click OK.
6	[Information dialog box] Click OK as instructed by on-screen guidance. **Note:** This procedure will add an ISW Trns icon to the Start menu.
7	[Setup completion window] Click Complete as instructed by on-screen guidance.
8	The ISW Trns install exits automatically.

2. Setting up ISW Trns

When the ISW Trns program has been installed on the PC, run it to set up a folder in which the transfer file (update data) is stored. When this setting completes, the ISW Trns program is ready to run.

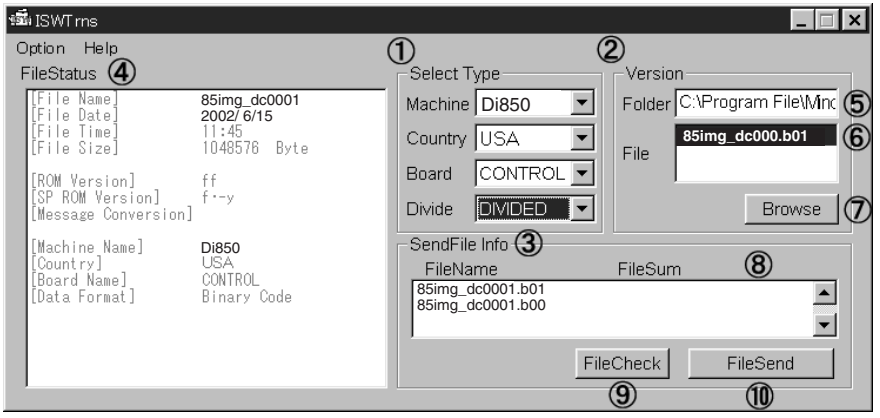
Step	Procedure
1	Boot the PC.
2	[Select [ISW Trns] from the start menu to run the ISW Trns program.
3	[ISW Trns dialog box]  Click OK to set up a folder in which the transfer file (update data) is stored. **Note:** This dialog box will not appear when ISW Trns is run next time.
4	[Option window]  Set up a folder in which the transfer file (update data) is stored and click Make Folder. **Note1:** By default, the folder in which the ISW Trns program has installed (C:\Program_File\Minolta\ISWTrns for Minolta) has been set up as a storage folder (data folder). **Note2:** To change the storage folder, click Browse and select a new folder or type its full-path name in directly the edit box.

Step	Procedure

	Note3: Clicking Make Folder will create the following hierarchy of folders branching off from the new storage folder:  **Note:** Pctrl and Vit Indications can not be function.
5	[Option window] Click OK. **Note:** This procedure will save the data folders created in Step 4 to the INI file for the ISW Trns program.
6	[ISW Trns main window] The ISW Trns main window opens.

3. ISW Trns Main Window Overview

The ISW Trns program, when run, comes up with the ISW Trns main window. The ISW Trns main window lets you select, verify, and transfer a transfer file (update data) and display information in it. A detailed description of its functions follows:



* Sample display : Display information may be different from what you actually will see on your machine.

① A Select Type frame

Select conditions for a transfer file (update data). When you select all the four combo boxes, folder ⑤ is set up on the basis of the information set in the INI file.
The settings of the combo boxes selected are saved to the ISW Trns.INI file when you click File Send. The ISW Trns program comes up with the ISW Trns main window prefilled with these combo box settings when runs next time.

② Version selection frame

This frame lets you select which version of a transfer file you want transmitted when more than one version is stored in a single folder.

③ Send file information frame

List the files that are transferred actually on the basis of the information specified in frames ① and ②. Click File Check to view a checksum of each file and its consistency (OK, NG or ??).

④ File Status frame

View detailed information about the version file as it is selected in ⑥.
The table below presents differences in the ways transfer files are displayed according to their data distribution types.

Data sources appearing in the detailed file information list

Display title	ORIGINAL (Batch data)	DIVIDE (Divided data)
File Name	File name of the version selection file	File name of the version selection file
File Date	Date of the version selection file	Date of the version selection file
File Time	Time of the version selection file	Time of the version selection file
File size	File size of the version selection file	File size of the version selection file
ROM Version	Footer information	Footer information (last file)
SP ROM Version	Footer information	Footer information (last file)
Message Conversion	For development use	For development use
Machine Name	Header information + INI file	Header information + INI file
Country	Combo box display	Combo box display
Board Name	Header information + INI file	Header information + INI file
Data Format	Header information (Binary)	Header information (Binary)

⑤ Version Folder edit box

When Select Type frame ① is established, the full-path folder name is displayed to reflect the data folder and the INI file information set up in the option window. If the transfer file exists in a folder different from the data folder, change the folder name to that folder by using Browse ⑦ or rewriting the folder name directly.

Those transfer files in the folder that meet the INI file conditions are listed in File list box ⑥.

⑥ Version File selection list box

Lists those display files existing in the folder set in ⑤.

Display Files are marked by a wildcard name (such as 85img*.b01) in the ISWTrns.INI file. If multiple versions of a file exist in the folder, therefore, multiple versions would appear in this list box accordingly.
Example: 85img_dc0001AAA.bol
85img_dc002AAA.bol

The files in this list are sorted by name. When the list opens, the last display item in the list is preselected. Change the choice to establish the version of transfer files to transmit.

⑦ Browse Version File button

Click Browse button to open the folder selection window and select a folder for ⑤.

⑧ Send file information display list

List the names of files that are actually transmitted when a version file is selected in ⑥. A count of the number of files that are actually transmitted is indicated in a checksum file attached to each transfer file (write data). If not all the transfer files are stored in folder ⑤ or if extra files are included in it, the error message “Send files not found or invalid file name in the folder” is displayed. This check is not made.

Clicking the File Check button in ⑨ calculates a checksum of the display files as a whole and compares it with the checksum stored in the checksum file (*.SUM) attached to the transfer file (write data), displaying the result of that comparison.

⑨ File Check button

Click this button when send files are listed in the Send File Info list in ⑧, and a file checksum of the transfer files displayed (file checksum) is calculated and attached to each file. Further, the calculated checksum is compared with the checksum storage file (*.SUM) attached to the transfer file (write data) to display the result of the comparison in the following format:

[OK] = Matched
[NG] = Unmatched
[??] = Checksum file (*.SUM) not found

⑩ File Send Button

Perform transmission of transfer files

4. Parallel port setup

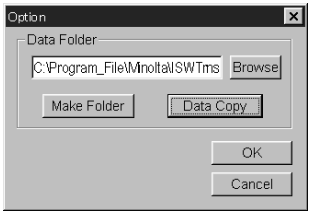
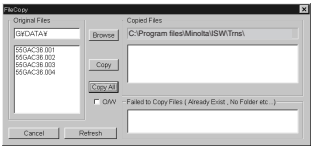
If a parallel data transfer is to be executed with the ISW Trns program, the ECP mode setting of the PC parallel port should be cleared. ISW Trns does not support parallel data transfers. If a parallel data transfer is launched with the PC set in ECP mode, the transfer could be aborted by an error occurring in between. It would be necessary, therefore, to disable ECP mode before run ISW Trns on a PC with the ECP setting.

Instructions on how to disable ECP mode are given below.

Step	Procedure
1	Boot the PC.
2	Open the System icon in the Control Panel and click the Device Manager tab. Then, search for LPT1 in Ports (COM/LPT1). **Note1:** If LPT1 appears as ”ECP Printer Port (LPT1),” then it is an ECP port. **Note2:** If LPT1 appears as “Printer Port (LPT1),” then it is a regular parallel port.
3	With an ECP printer port, change the BIOS setting of the PC to disable the ECP port. **Note:** Because the BIOS setting depends on the PC, check with your system administrator on how to disable ECP mode.
4	When the BIOS change is complete, open the System icon in the Control panel and change the parallel port driver.
5	Run a send test to verify the successful operation. **Note:** If a transfer succeeds on one copier model, then transfers would be successful on all models.

[2] Copying Transfer Data (Update Data)

Run the ISW Trns program to copy transfer data (update data) to the PC.

Step	Procedure
1	Boot the PC.
2	Select ISW Trns from the Start menu to run the ISW Trns program.
3	Click the Option menu.
4	[Option window]  Click Data Copy.
5	[File Copy window]  Mount an update disk on the PC and click Browse.
6	Select the folder on drive A that contains the transfer file (update data) as a source file. **Note1:** The selected folder is displayed in the upper section in the Original Files field. **Note2:** The transfer files (update data) that are stored in the selected folder are displayed in the lower section in the Original Files field.
7	Select the transfer files (update data) you want copied from the lower section in the Original Files field. **Note1:** You can select multiple transfer files (update data). **Note2:** To copy all the files (update data) displayed, skip this step to go to Step 8 directly.
8	Click Copy to copy the selected transfer files (update data) to the folder created at ISW Trns setup. **Note1:** To copy all the files (update data) displayed in the Original Files field, click Copy All, instead of Copy. **Note2:** The folder name created at ISW Trns setup is displayed above the Copied File field. **Note3:** The transfer files that have been copied successfully so far are listed in full-path name in the lower part of the Copied File list view. The transfer files that have not been copied successfully are listed in the Failed to Copy Files list view. Causes of copy errors: 1. A file with the same name existed and the O/W (overwrite) check box was not checked. 2. The storage destination folder could not be found. 3. Attempted to overwrite an overwrite protected file. **Note4:** To update existing transfer files (update data), check the O/W (overwrite) check box.
9	When the copying completes, click Refresh.
10	If more update disks are involved, repeat Steps 5 to 9.
11	Click Cancel to return to the option window.
12	[Option window] Click OK.

[3] Connecting the Di850

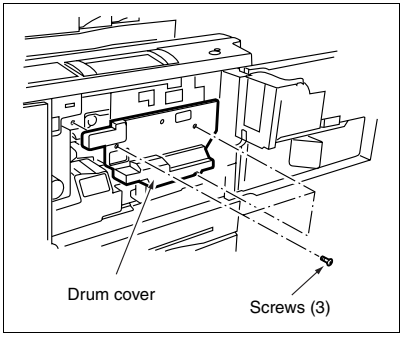
The ISW connector is hidden under the drum cover. Detach this cover to run ISW.

a. Procedure

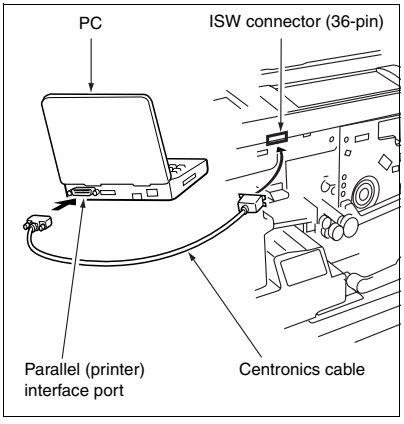
(1) Open the left and right front doors.

(2) Open the toner supply unit.

(3) Loosen three screws to detach the drum cover.



(4) Connect the PC parallel port and the copier ISW connector with parallel interface cable.



[4] Updating

1. Update operation overview

Follow the steps below to update the ROM data on each control board using ISW Trns. For more operational details, see the relevant parts of this section.

Step	Procedure
1	Check the ROM version of the copier before proceeding with updating. (See 2. “Checking the ROM version of the copier (before updating).”)
2	Run the ISW Trns program. (See 4.”Running ISW Trns.”).
3	Set the copier in ISW receive mode. (See 3. “Preparing the copier to transfer.”)
4	Select conditions for transfer files (update data) with IWS Trns. (See 5. “Selecting transfer file (update data) conditions.”)
5	Select a version of transfer files (update data) with IWS Trns. (See 6.“Selecting a version of transfer files (update data).”)
6	Verify the transfer files (update data) selected with IWS Trns. (See 7.“Verifying transfer files (update data).”
7	Transmit the transfer files (update data) with IWS Trns. (See 8.“Transmitting transfer files (update data).”)
8	To update ROM data on more control boards, repeat Steps 3 to 7.
9	Exit the ISW Trns program. (See 9.“Exiting ISW Trns.”)
10	Verify the ROM version of the copier after updating. (See 10.“Verifying the ROM version of the copier (after updating).”)

2. Checking the ROM version of the copier (before updating)

Before updating ROM data, check the ROM version of the existing control program in the 25 mode.

Step	Procedure
1	Turn OFF the copier main switch.
2	Turn ON the copier main switch while holding down the copy count setup buttons 2 and 5, to enable 25 mode.
3	[25 mode menu window] Check the ROM version by following the copier-specific procedure. **Note:** For operating instructions, refer to the Adjustment section of the service manual supplied for the copier.

3. Preparing the copier to transfer.

Start the copier with 25 mode enabled to put the copier into ISW transfer wait state.

Step	Procedure
1	Turn OFF the copier main switch.
2	Turn ON the copier main switch while holding down the copy count setup buttons 2 and 5, to enable 25 mode.
3	[25 mode menu window] Put the copier into ISW transfer wait state by following the copier-specific procedure. **Note1:** "ISW transfer wait state" is the state of the copier with the "START" key being shown in the display area. **Note2:** For operating instructions, refer to the Adjustment section of the service manual supplied for the copier.

4. Running ISW Trns.

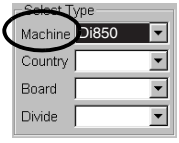
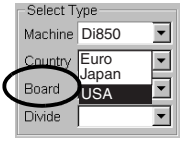
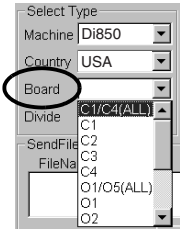
Run the ISW Trns program.

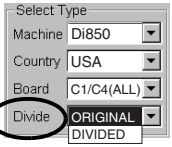
Step	Procedure
1	Boot the PC.
2	Select ISW Trns from the Start menu and run the ISW Trns program.

5. Selecting transfer file (update data) conditions

Select various conditions for selecting the transfer files (update data) in the ISW Trns main window. Conditions to select are:

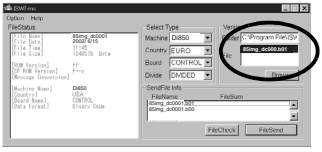
- (Machine) The name of the model on which ROM data is updated.
- (Country) The destination of the transfer files (update data)
- (Board) The name of the board on which ROM data is updated
- (Divide) The type of the transfer files (update data)

Step	Procedure
1	[ISW Trns main window] In the ISW Trns main window, click ▼ in the [Machine] field in [Select Type] and select the name of the model on which to update ROM data from the pull-down menu. 
2	In the ISW Trns main window, click ▼ in the [Country] field in [Select Type] and select the destination of the transfer files (update data) from the pull-down menu. 
3	In the ISW Trns main window, click ▼ in the [Board] field in [Select Type] and select the name of the board on which to update ROM from the pull-down menu. 

Step	Procedure
4	In the ISW Trns main window, click ▼ in the [Divide] field in [Select Type] and select a method of dividing the transfer files (update data) from the pull-down menu.  **Note1:** Normally, select ORIGINAL as the method of division. **Note2:** Select DIVIDED for large ROM data (e.g. for Main Control Unit), that is divided into several files (extension.001.b01, etc.) to be stored to several floppy disks for distribution.

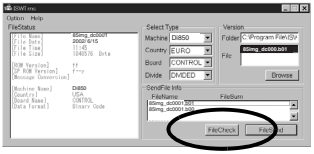
6. Selecting a version of transfer files (update data)

When a transfer file (update data) has been chosen to meet a given set of conditions, it may be available in multiple versions. Here, select a particular version of a transfer file (update data) for use in the actual data transfer.

Step	Procedure
1	[ISW Trns main window] In the ISW Trns main window, select a transfer file (update data) of the version that is used in the actual data transfer from among the files listed in the [File] field in [Version].  **Note:** The version of a transfer file (update data) can be determined from its file name. Example: 85img_DC001AAA.b01 .. Version 1 85img_DC002AAA.b01 .. Version 2
2	The target file (update data) may not be shown in the [File] field in [Version], if it exists in a folder different from the data folders set in the Option screen. Click Browse and find the appropriate file to select.  **Note:** Clicking Browse will open the Select File window.

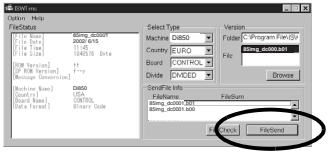
7. Verifying transfer files (update data)

Once a particular version of a transfer file (update data) is selected, the transfer files (update data) that are transmitted actually are listed in [Send File Infor] in the ISW Trns main window. Verify the validity of the transfer files (data) for transfer.

Step	Procedure
1	[ISW Trns main window] In the ISW Trns main window, click File Check in [Send File Infor]. 
2	Check to see if OK appears in the [File Sum] field in [Send File Infor] in the ISW Trns main window. **Note1:** A file that is labeled NG is inappropriate as a transfer file (update data). Try to copy the file again. If you can not succeed to copy it again, the original file may be corrupted. **Note2:** Transfer files (update data) may be marked ?? when enough information is not available to verify their validity. When a transfer file is labeled, check if the checksum file (*.sum) was copied correctly.

8. Transmitting transfer files (update data)

When transfer files (update data) are established, run a data transfer to the copier.

Step	Procedure
1	Press the “START” key on the copier while it is in ISW transfer wait state. **Note:** The “START” key is displayed in the display area on the copier.
2	[ISW Trns main window] Click File Send in [Send File Infor] in the ISW Trns main window. 
3	Transfer files (update data) are transmitted to the copier. **Note1:** While data is being transferred to a copier, an LED or indicator flashes to indicate a data transfer in progress. The mode of such indication varies from one copier to another. **Note2:** ISW Trns produces an indication to designate a data transfer in progress. **Note3:** If a data transfer is aborted due to any trouble occurring with the copier or ISW Trns, turn the copier main switch OFF, then ON to retry the data transfer by ISW Trns. In this case, a condition indication and necessary operation vary depending on each model. Please refer to service manual for the copier.
4	To update ROM data on more control boards, repeat the step in 5, “Selecting transfer file (update data) conditions,” to 8, “Transmitting transfer files (update data).”

9. Exiting ISW Trns.

When the update of the ROM data on the control boards completes, exit the ISW Trns program.

Step	Procedure
1	Exit the ISW Trns program.
2	Turn OFF the PC.
3	Turn OFF the copier main switch.
4	Disconnect the parallel interface cable from the PC and the copier. **Note:** Turn OFF the PC and copier before disconnecting the parallel interface cable from them.

10. Verifying the ROM version of the copier (after updating)

When the update of the ROM data completes, verify the ROM version of the control program in the 25 mode.

Step	Procedure
1	Turn OFF the copier main switch.
2	Turn ON the copier main switch while holding down the copy count setup buttons 2 and 5, to enable 25 mode.
3	[25 mode menu window] Check the ROM version by following the copier-specific procedure. **Note:** For operating instructions, refer to the Adjustment section of the service manual supplied for the copier.

[5] ISW Trns Messages

The ISW Trns program displays dialog messages when errors occur and when processing ends. Definitions of these messages are listed below, along with the associated display status.

Message	Display status
Cannot open a checksum file	Opening of a checksum file failed. Possible causes include a corrupted file and a file in use.
Cannot read a checksum file	Loading of a checksum file into memory failed. Possible causes include a shortage of memory and an OS problem.
Cannot open a file	Opening of a send file failed. Possible causes include a corrupted file and a file in use.
File transmission complete	File transfer completed.
Cannot open the LPT port	Opening of the LPT port failed.
Communications port setup acquisition error	A call to GetCommSate failed.
Communications port setup error	A call to GetCommSate failed.
Cannot open a send file	Opening of a send file failed. Possible causes include a corrupted file and a file in use.
Cannot send a Term Test file	Transmission of a communications test block failed. 1. The copier is not ready to receive. 2. The cable is out of position. 3. Transmission of the wrong send file was attempted.
Unsuccessful file transmission	The transmission of a send file failed. Possible causes include a cable out of position.
Unsuccessful transmission to the LPT port	Output to the LPT port failed. Possible causes include a cable out of position.
Starting file transmission. OK?	A message seeking confirmation at the start of file transmission.
Send file not selected	No files exist on the send file list.
Canceled	Transmission of a file in progress was canceled. CANCEL is normally hidden. Its setting can be altered with the INI file.
Default data folder created	A data folder was created by clicking Create Folder.
Invalid folder name	An invalid folder name was entered. Start a folder name with a drive name, such as C:\.
Default data folder not set. Set a folder.	A data folder is not set in ISWTrns.INI. This message is displayed when ISW Trns launches for the fist time.
Unsuccessful thread creation	The creation of a thread failed.
Copying the selected file. OK?	File copy start message
Copying all files to the default data folder. OK?	File copy start message
No send file available	No file to copy file is selected or exists in the folder.
Unable to copy several files	1. The destination folder does not exist. 2. When the Overwrite check box is not checked, an attempt is made to copy to a file having the same file name. 3. An attempt is made to overwrite a protected file 4. Any other cause (such as a file being used by another application or OS problem)

Message	Display status
File copying end	File copying completed.
Send file not found, or invalid file name in the folder. Check.	The number of divisions of a send file recorded in the folder. Check. checksum file and the number of files actually existing do not match. 1. A file having an invalid file name exists in the data folder. Delete possibly invalid file names from the folder list. 2. The number of files in a divided file is wanting. Identify the wanting files in the folder list and recopy them.

[6] Troubleshooting ISW Trns

If errors occur while running the ISW Trns program, take the actions suggested below to correct them.

1. Unable to run ISW Trns

- Corrupted ISWTrns.EXE file

→ Set up again.

- The setup disk is corrupted.

→ Verify the setup disk and then set up again.

2. Send file is not displayed when a combo box item is selected

- The send file is not stored in the folder.

→ Check to see if the send file is stored in the folder appearing in the [Folder] text box in [Versions]. Use the [File Copy] function if the file storage location is unknown.

- Check to see if the base data folder setting in the option window is not wrong.

→ Verify the base folder setting. Use the [File Copy] function if the file storage location is unknown.

- Invalid file name (altered)

→ The file name of a file must be used exactly as it is delivered. If a file is renamed, it cannot be displayed or selected. If a file name has been altered, return it to its original file name.

- Invalid folder name (altered)

→If a folder as created with [Make Folder] in the option window is renamed, it cannot be located. Restore the original folder name and check.

3. NG produced by a file check

- Corrupted send file

→ Copy the file again and recheck. If NG re-curs, check with the vendor of that file.

4. "??" produced by a file check

- With any other model, the checksum file (*.SUM) had not been copied when the send file was copied to the PC.

→ Copy the checksum to the same folder as the file is copied. It would be copied auto magically if the [File Copy] function is used.

5. Unsuccessful file transfer

a. "Cannot open a file" error

- The file is used by any other program or by the system.

→ Close that other program. If the file transfer. still fails, reboot Windows.

b. "Cannot send a Term Test file" error

- The cable is not in firm position.

→ Check to see if the cable is inserted in firm position or if the cable is not impaired.

- The copier is not ready to receive.

→ Check to see if the copier is ready to receive.

c. "Unsuccessful transmission to the LPT port" error

- The cable is not in firm position.

→ Check to see if the cable is inserted in firm. position or if the cable is not impaired.

- Invalid data has been transmitted.

→ Check from the file information window to see if the receive mode (receiving board type) of the copier and the send file on the PC match.

→ If the file is transmitted for the first time, check with its vendor.

- The PC parallel port is set in ECP mode.

→ Consulting the manual, free the parallel port from ECP mode.

- Compatibility between the PC parallel port and the copier port.

→ Verify by testing on a PC with proven transmission performance.

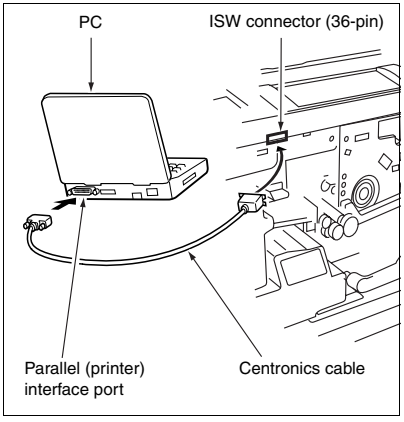
- Use a cable shorter than 2 meters in length.

[7] Connecting to the ISW connector

The ISW connector is at the right side of the copier.

a. Procedure

(1) Connect the PC parallel port and the copier ISW connector with a Centronics cable.



Use of this manual should be strictly supervised to avoid disclosure of confidential information.

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