Operating Instructions

IPDS Supplement

TABLE OF CONTENTS

Manuals for the IPDS card

Refer to the manuals that are relevant to what you want to do with the IPDS card.

⭐ Important

- Adobe® Acrobat® Reader®/Adobe Reader must be installed in order to view the manuals as PDF files.

IPDS Supplement (IPDS.pdf)

Explains how to configure the IPDS card for the machine. It also explains about items selectable from the Web browser.

IPDS Printing Configuration Guide (IPDS_CONF.pdf) *English Only

Explains about the environment necessary for connecting the mainframe to the machine and performing IPDS printing.

IPDS Technical Reference 1 (IPDS_TEC1.pdf) *English Only

Explains about commands and functions for IPDS printing.

IPDS Technical Reference 2 (IPDS_TEC2.pdf)*English Only

Explains about IPDS commands.

⬇ Note

- For details about the necessary environment and how to install the IPDS card and machine, consult your sales or service representative. For details about the necessary environments and operation of the mainframe, contact IBM.

Notice

Important

Contents of this manual are subject to change without prior notice.

In no event will the company be liable for direct, indirect, special, incidental, or consequential damages as a result of handling or operating the machine.

How to Read This Manual

Symbols

This manual uses the following symbols:

⭐ Important

Indicates points to pay attention to when using the machine, and explanations of likely causes of paper misfeeds, damage to originals, or loss of data. Be sure to read these explanations.

⬇ Note

Indicates supplementary explanations of the machine's functions, and instructions on resolving user errors.

[ ]

Indicates the names of keys on the machine's display or control panels.

1. Getting Started

About IPDS

IPDS (Intelligent Printer Data Stream) is a page printing format for IBM mainframe and client computers. This machine can perform IPDS printing if the IPDS card is installed.

IPDS Configuration

If the IPDS card is installed, items related to IPDS are displayed in the printer function screen or the User Tools menu on the control panel. User Tools menu items related to IPDS are in both [Basic Configuration] and [Administrator Configuration] in [Printer Features].

Selecting an IPDS Tray Form

This section describes how to select an IPDS Tray Form in the control panel's printer function screen.

1. **Press [IPDS Tray Form].**
2. **Select the tray to which you want to allocate an IPDS form.**
3. **Select an IPDS form registered beforehand with the Web Interface.**
4. **Press [OK].**
5. **Press [Exit].**

IPDS Tray Form

For each paper tray, specify an IPDS form.

- Tray 1
- Tray 2
- Tray 3
- Tray 4
- Tray 5
- Tray 6
- Tray 7
- Interposer Upper Tray
- Interposer Lower Tray

🔽 **Note**

- [IPDS Tray Form] appears differently depending on the options installed.
- For details about IPDS form settings, see the Web Interface Help.

Changing Basic Configuration Default Settings

This section describes how to change the Basic Configuration settings in Printer Features. If Menu Protect is set, the printer settings password is required to change these settings.

1. Press the [User Tools] key.

2. Press [Printer Features].

3. Press [Basic Configuration].

4. Select the item you want to change the settings for.

5. If a screen requesting the password is displayed, enter the printer settings password, and then press [OK].

6. Follow the instructions on the display to change the settings, and then press [OK].

7. Press [Exit] to return to the Printer Features screen.

    Press the [User Tools] key to return to the normal screen.

IPDS Menu

This section describes the items in the [IPDS Menu] tab under [Basic Configuration].

- Emulation Mode
- Default Code Page
- Default FGID
- Characters Per Inch
- Valid Printable Area Check
- Page
- Edge to Edge
- Font Substitution
- Caching
- Font Capture
- Reset IPDS Fonts
- Resolution
- Graphic Character String
- Bar Code
- Box Draw
- Color Simulation
- Text Color Simulation
- Suppress Staple Count Nacks
- Suppress Punch Nacks
- Tray Mapping
- Corner Staple Angle

- Offset
- Default Punch Pattern

Note

- For details about each items of IPDS Menu, see p.13 "User Tools Settings".
- When [Menu Protect] is [Active], the Printer Settings password is required to change items on the IPDS Menu.

Test Print

This section describes the items related to the IPDS in the [Test Print] tab under [Basic Configuration].

- IPDS Information List

Note

- For details about IPDS Information List, see p.13 "User Tools Settings".
- When [Menu Protect] is [Active], the Printer Settings password is required to print the IPDS Information List.

Changing Administrator Configuration Default Settings

This section describes how to change the Administrator Configuration settings on Printer Features. Changing these settings requires the password for printer settings.

1. **Press the [User Tools] key.**
2. **Press [Printer Features].**
3. **Press [Administrator Configuration].**
4. **Press [Printer Settings].**
5. **To change the settings under [Printer Settings], enter the printer settings password.**
6. **Select the item you want to change the settings for.**
7. **Follow the instructions on the display to change the settings, and then press [OK].**
8. **Press [Exit] to return to the Printer Features screen.**

   Press the [User Tools] key to return to the normal screen.

Network Security

This section describes the items related to the IPDS in the [Network Security] tab under [Administrator Configuration:Printer Settings].

- IPDS

- IPv4

  The default setting is [Active].

Print Logs

This section describes the items related to the IPDS in the [Print Logs] tab under [Administrator Configuration:Printer Settings].

- IPDS Log

  You can print out the IPDS log.

Enabling and Disabling IPDS Protocol

The IPDS protocol can be set to either enabled or disabled using the Web Interface. If the IPDS protocol is disabled, you cannot print with IPDS. The IPDS port No. is TCP:5001.

Error Message

If an IPDS font error occurs, the following message is displayed in the control panel or printer status window. If this message appears, contact your administrator.

Control Panel

"IPDS font error. Turn the main power switch off then on. Press [Reset IPDS Fonts] in Printer Features."

Printer Status

"Reset IPDS Fonts"

1

2. Using Web Interface

List of the Setting Items

If you install the IPDS card to the machine, following Web Interface items can be viewed or modified depending on the selected mode on the Web browser.

Select one of the following modes to log on Web Interface:

- User mode: logged on as a user
- Administrator mode: logged on as an administrator

↓Note

- For details about Web Interface, see the manual explaining the network functions provided by the supplier or Web Interface Help.

Home - Device Configuration Info.

Device Configuration Info.

Menu	User mode	Administrator mode
IPDS	Read	Read

Configurations/Jobs - Virtual Printer Settings

Virtual Printer List

Menu	User mode	Administrator mode
IPDS	Read	Read/Modify

Configurations/Jobs - Printer Settings

IPDS

Menu	User mode	Administrator mode
Parameter	None	Read/Modify
Tray	None	Read/Modify
Forms	None	Read/Modify
Capture/Trace	None	Read/Modify

Network Security

Menu	User mode	Administrator mode
Network Security	None	Read/Modify

Note

- "IPDS" will be displayed.

Logs

IPDS Data Analysis

Menu	User mode	Administrator mode
IPDS Data Analysis	Read	Read/Modify

3. Accessing User Tools

User Tools Settings

When the IPDS card is installed, IPDS print settings become available and will appear on the control panel.

Test Print

IPDS Information List

> Prints a list of IPDS-information.

IPDS Menu

Emulation Mode

> Specifies the emulation mode.
>
> Default: [**Native**]
>
> - Native
> - 4028

Default Code Page

> Specifies the default code page.
>
> Default: [**037**]
>
> - 037 : US, Canada, Netherlands, Portugal
> - 038 : US English ASCII
> - 260 : Canadian French
> - 273 : Austrian/German
> - 274 : Belgium
> - 276 : Canadian French
> - 277 : Danish/Norwegian
> - 278 : Finnish/Swedish
> - 280 : Italian
> - 281 : Japanese
> - 284 : Spanish
> - 285 : UK English

- 286 : Austrian/German (alternate)

- 287 : Danish/Norwegian (alternate)

- 288 : Finnish/Swedish (alternate)

- 290 : Japanese/Katakana

- 297 : French

- 420 : Arabic

- 423 : Greek

- 424 : Hebrew

- 500 : Belgium, Switzerland/International

- 870 : Latin 2 Multilingual

- 871 : Icelandic

- 875 : Greek

- 880 : Cyrillic

- 892 : OCR - A

- 893 : OCR - B

- 905 : Turkish

- 1025 : Cyrillic

- 1026 : Turkish

The following code pages include the Euro character:

- 1140 : US, Canada, Netherlands, Brazil, Portugal

- 1141 : Austrian/German

- 1142 : Danish/Norwegian

- 1143 : Finnish/Swedish

- 1144 : Italian

- 1145 : Spanish

- 1146 : UK English

- 1147 : French

- 1148 : Belgium, Switzerland/International

- 1149 : Icelandic

Default FGID

Specifies the default FGID (Font Typeface Global Identifier), which identifies the printer's default resident font.

Default: **[416]** (Courier Roman Medium 10).

To display a list of the fonts and FGIDs that the printer supports, print out the list of IPDS resident fonts. For details about printing lists, see the manual explaining how to print lists provided by the supplier.

- 3 : OCR B
- 11 : Courier 10
- 12 : Prestige Pica
- 18 : Courier Italic 10
- 19 : OCR A
- 46 : Courier Bold 10
- 85 : Courier 12
- 86 : Prestige Elite
- 92 : Courier Italic 12
- 111 : Prestige Elite Bold
- 112 : Prestige Elite Italic
- 159 : Boldface
- 164 : Prestige PSM Roman Medium
- 203 : Gothic Text
- 221 : Prestige 15
- 223 : Courier 15
- 254 : Courier.17 ss
- 256 : Prestige 17
- 281 : Letter Gothic
- 283 : Gothic Text
- 290 : Gothic Text
- 304 : Katakana Gothic
- 305 : OCR A
- 306 : OCR B
- 318 : Prestige Bold
- 319 : Prestige Italic
- 400 : Letter Gothic
- 404 : Letter Gothic Bold
- 416 : Courier Roman Medium 10
- 420 : Courier Roman Bold
- 424 : Courier Italic Medium

- 428 : Courier Italic Bold

- 432 : Prestige

- 2304 : Helvetica Roman Medium

- 2305 : Helvetica Roman Bold

- 2306 : Helvetica Italic Medium

- 2307 : Helvetica Italic Bold

- 2308 : Times New Roman Medium

- 2309 : Times New Roman Bold

- 2310 : Times New Roman Italic Medium

- 2311 : Times New Roman Italic Bold

- 5687 : Times Roman

- 5707 : Times Roman Bold

- 5815 : Times Roman Italic

- 5835 : Times Roman Bold Italic

- 20224 : Boldface

Characters Per Inch

Specifies the number of characters per inch (pitch) for the default font. Valid values are 5.0 to 30.0 in units of one tenth of an inch.

Default: **[10.0]**

Valid Printable Area Check

Specifies whether or not to report the Position check error (NACK 08C1..00) to the host, when valid printable area is checked

Default: [**On**]

- On

  The printer checks for pixels that fall outside the intersection of the logical and physical pages. If there are pixels outside the area and error reporting has been set using the "IPDS Exception Handling Control" command, the printer reports an error to the host.

- Off

  The printer does not report pixels outside the valid printable area.

Page

Specifies how data is positioned on the page.

Default: [**Whole**]

- Whole

IPDS whole page. The printer does not move or compress the page. This is the preferred method; all page positioning and formatting is done at the application level on the host. The "Print", "Comp1", and "Comp2" commands may alter the appearance of the page, or may not be compatible with earlier products (for example, 3116, 3916), especially if these options are used in combination with duplex and other IPDS Menu page format adjustments. The "Print", "Comp1", and "Comp2" commands are included to allow line printer jobs to fit onto pages where "Edge to Edge" printing is not possible; we do not recommend you use them to create new applications.

- Comp1

  This command uses the "Print Page" command as its base, and compresses the spacing between text lines generated by the "IPDS Begin Line" command. Its primary purpose is to compress "Begin Line" command text data onto pages that have unprintable borders.

- Comp2

  This command uses the "Print Page" command as its base, and compresses "IPDS Begin Line" command text (see Comp1) and the data of the following vertical text positioning commands: "Absolute Move Baseline", "Relative Move Baseline", "Draw B Axis Rule", and "Draw I Axis Rule".

  ↓Note

  - Alignment problems can occur if you select [Comp1] or [Comp2], and print jobs that mix text with images, graphics, or bar codes. Problems can occur if text positioning commands are used to move across text or into non-text (image, graphic, or bar code) areas. Both [Comp1] and [Comp2] reduce the line spacing of text only and have no effect on non-text data. To minimize alignment problems, select [Comp1], because "Begin Line" commands are not normally used to move across or into non-text areas. If, however, the application you want to compress does not use the "Begin Line" command, select [Comp2].

- Print

  IPDS print page. If the page origin is within the unprintable area, the origin of the page is moved to the inside edge of the nearest unprintable area border. If the origin violates the unprintable area on two edges, it is moved to the nearest inside corner of the unprintable area. If the origin violates only one edge of the unprintable area, the origin is adjusted to avoid that area only.

  If a location adjustment is made, the printed page is shifted in the direction of the adjustment. There is no compression, so data on the opposite edge may be pushed off the page.

  ↓Note

  - For the "Print" command to function, the [Edge to Edge] setting must be set to [Off]. Any data placed in this unprintable area is lost. Also, [Print] will not function on media overlays (overlays that are part of the base page, not the overlays included in the variable print data).

Edge to Edge

Turns "Edge to Edge" printing on or off.

Default: [**Off**]

- On

  The printer allows printing up to the physical page size.

- Off

  The printer maintains a border of 2 mm (0.078 inches) on the leading edge, but prints to all other page borders.

⬇️**Note**

- To prevent toner from accumulating inside the printer, we recommend leaving [Edge to Edge] set to [Off] for IPDS, and setting it to [On] only when necessary.

- The "Edge to Edge" IPDS Menu item affects IPDS data only.

- When using IPDS, the "Edge to Edge" setting on System menu will be invalid.

Font Substitution

Turns font substitution on or off.

Default: [**Off**]

- On

  If a job requests a font that is not loaded on the printer, the printer uses a substitute font.

- Off

  If a job requests a font that is not loaded on the printer, the printer generates an IPDS NACK (Negative Acknowledgement) message and the host holds the job.

Caching

Specifies whether or not to use caching for repeated overlays.

Default: [**Off**]

- On

  The printer uses caching, which provides better performance for jobs with repeated overlays, but uses more memory.

- Off

  The printer does not use caching, which requires less memory but provides less performance for jobs with repeated overlays.

⬇️**Note**

- Overlay caching is recommended for repeated overlays. Overlay caching does not improve performance with non-overlay IPDS data or overlays that are used only once or infrequently.

Font Capture

Sets Font Capture processing.
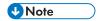
Default: [**On**]

- On

  The printer saves downloaded font resources on its hard disk drive for use beyond the duration of the current power cycle. The IPDS host must provide the "Activate Resource" command with the correct resource identifiers before downloading the font resource to be captured.

- Off

  The printer stores downloaded font resources for the duration of one power cycle only.

Reset IPDS Fonts

Delete all IPDS resources that saved on its hard disk.

⬇️Note

- Only the Machine Administrator can reset IPDS fonts.

Resolution

Specifies the resolution reported to the host in the "IPDS XOA-OPC" command for raster coded fonts and IM1 image support. The [Resolution] menu item also helps determine whether or not a printer-resident raster font is used. For example, 240 dpi raster fonts are activated at the [240 dpi] setting, not at [300 dpi] or [600 dpi]. The [Resolution] setting does not affect outline fonts, nor does it determine which raster fonts can be downloaded to the printer as temporary activation fonts.

Default: [**Auto**]

- Auto

  Reports to the host that the printer supports raster fonts of any dpi value and IM1 images.

  "Resident" or "Captured" raster fonts of other resolutions are not activated unless a matching "Font Resolution" and "Metric Technology Triplet" is provided with the activation request.

- 240 dpi

  Reports to the host that the printer supports 240 dpi raster fonts and IM1 images.

  "Resident" or "Captured" raster fonts of other resolutions are not activated unless a matching "Font Resolution" and "Metric Technology Triplet" is provided with the activation request.

- 300 dpi

  Reports to the host that the printer supports 300 dpi raster fonts and IM1 images.

  "Resident" or "Captured" raster fonts of other resolutions are not activated unless a matching "Font Resolution" and "Metric Technology Triplet" is provided with the activation request.

- 600 dpi

  Reports to the host that the printer supports 600 dpi raster fonts and IM1 images.

"Resident" or "Captured" raster fonts of other resolutions are not activated unless a matching "Font Resolution" and "Metric Technology Triplet" is provided with the activation request.

Note

- If you select [Standard] for the [Print Mode] setting, the resolution changes to [300 dpi].

- To set the IPDS resolution to [240 dpi], [600 dpi], or [Auto], you must first set [Print Mode] to [Enhanced]. Enhanced print mode produces optimal print quality, but can slow down the printing of complex jobs.

Graphic Character String

Specifies the Graphic Character String (Graphic Character Sizing) processing method.

Default: [**Auto**]

- Auto

   Applies the value specified by the [Emulation Mode] item ([Native] or [4028]).

- Character Scale

   Applies 4028 IPDS Emulation. Prints graphics and text characters by scaling the characters in a currently activated font. Character cell size is defined in the GOCA data stream. Not available for DBCS.

- Font Activation

   Applies Native IPDS Emulation. Prints graphics and text characters using a currently activated font at the font's activation size, without scaling. GOCA data stream Character cell size information is ignored.

Bar Code

Specifies the barcode level protocol.

Default: [**Auto**]

- Auto

   Applies the value specified by the [Emulation Mode] item ([Native] or [4028]).

- 4028

   Applies 4028 IPDS Emulation.

- Native

   Applies Native IPDS Emulation.

Box Draw

Specifies the Box Draw processing.

Default: [**Off**]

- On

Uses special outline fonts to draw Symbol Set box characters. Select [On] to fill gaps caused by special raster fonts that contain extended length box characters (as found in older applications, for example).

- Off

Uses Symbol Set outline font characters to draw boxes as the font-defined characters.

Color Simulation

Allows you to select how color specification controls are processed on a monochromatic printer.

Default: [**Fidelity**]

- Fidelity

The printer accepts all color specification controls and simulates unique colors with shades of gray.

- Legacy

The printer accepts all color specification controls, but performs only limited color simulation using black.

Text Color Simulation

Specifies how text color specification controls are processed on a monochrome laser printer.

Default: [**On**]

- On

The printer accepts all text color specification controls and simulates the unique colors with shades of gray.

- Off

The printer accepts all text color specification controls, but performs only limited color simulation using black.

⬇ Note

- This menu item is available only if [Color Simulation] mode is set to [Fidelity].

Suppress Staple Count Nacks

Selects whether or not to notify the user when stapling errors occur.

Default: [**Off**]

- On

- Off

⬇ Note

- This menu appears only when using the machine with finisher.

Suppress Punch Nacks

Selects whether or not to notify the user when punching errors occur.

Default: [Off]

- On
- Off

Tray Mapping

Maps the media source (input tray) to an ID the host uses for the media source.

- Tray 1

    Default: [Auto]

    - Auto
    - IPDS Tray

- Tray 2

    Default: [Auto]

    - Auto
    - IPDS Tray

- Tray 3

    Default: [Auto]

    - Auto
    - IPDS Tray

- Tray 4

    Default: [Auto]

    - Auto
    - IPDS Tray

- Tray 5

    Default: [Auto]

    - Auto
    - IPDS Tray

- Tray 6

    Default: [Auto]

    - Auto
    - IPDS Tray

- Tray 7

    Default: [Auto]

    - Auto
    - IPDS Tray

- Interposer Upper Tray

  Default: [**Auto**]

  - Auto

  - IPDS Tray

- Interposer Lower Tray

  Default: [**Auto**]

  - Auto

  - IPDS Tray

⬇️**Note**

- If [IPDS Tray] is selected, enter the tray parameter replacement value for each paper tray, using up to 254 digits.

Corner Staple Angle

Selects [Vertical] or [Slant] for the angle of stapling.

Default: [**Vertical**]

- Vertical

  Staples vertically.

- Slant

  Staples diagonally.

Offset

Specifies whether or not the output is offset (jogged).

Default: [**On**]

- On

  Output is offset (jogged) when requested by the job.

- Off

  Output is never offset (jogged).

⬇️**Note**

- This menu appears only when using the machine with finisher.

Default Punch Pattern

Specifies the default number of holes to punch if the punch unit provides a selection (for example, two or four holes).

⬇️**Note**

- [Suppress Staple Count Nacks] and [Corner Staple Angle] appears if the optional staple unit is installed.

- [Suppress Punch Nacks] and [Default Punch Pattern] appears if the optional punch unit is installed.

- [Tray Mapping] appears differently depending on the options installed.

- For details about the control panel settings, see the manual explaining how to specify the control panel settings, provided by the supplier.

4. Appendix

Precautions

Limitations

IPDS jobs cannot be stored on the document server.

PCL fonts are not accessible via AFP/IPDS, nor can PCL access AFP/IPDS fonts.

PostScript® fonts are not accessible via AFP/IPDS, nor can PostScript access AFP/IPDS fonts.

The mainframe or host computer will not be notified of errors that happen before this machine establishes connection with them.

About AFP/IPDS Fonts

The AFP/IPDS Single Byte Character Set (SBCS) font is stored on the hard disk drive.

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INDEX

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