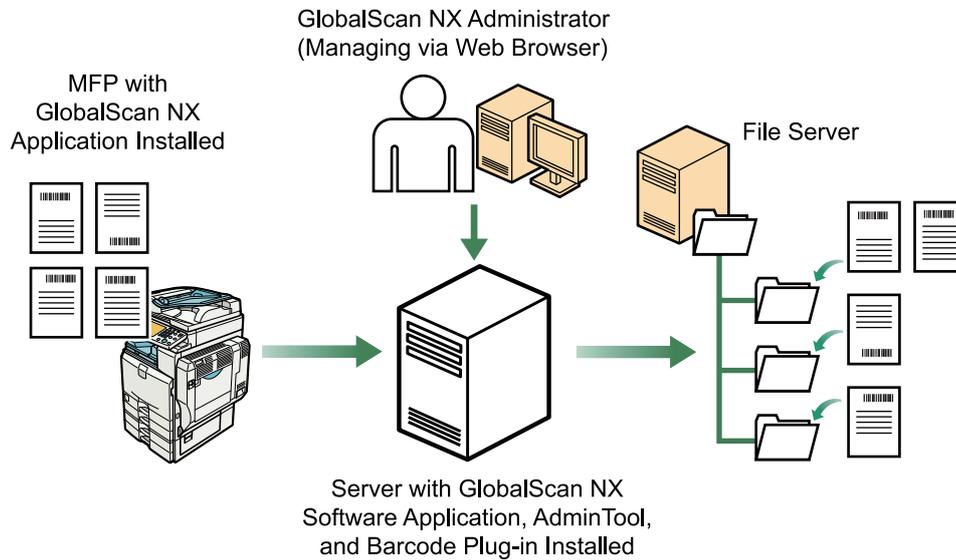# RICOH

GlobalScan NX Barcode Plug-in

Administrator's Guide

The GlobalScan NX Barcode Plug-in is GlobalScan NX (GSNX) plug-in filter that reads barcodes in documents scanned by a multifunction device (MFP) and save the data obtained from the barcodes as the bibliographical information of a document.

Use of this plug-in in conjunction with each GSNX distribution service allows you to identify and distribute documents efficiently, managing them according to their barcodes.

Fig. 1: GlobalScan NX Barcode Plug-in Workflow

Note

- This plug-in is displayed as "Barcode Separator/Index" on the GSNX server, in AdminTool, and on the MFP control panel.
- This manual explains the configuration procedures for the Barcode Plug-in. For details about Administrator Settings and Service/ Filter Settings, see *GSNX Administrator's Guide*.

Introduction

This manual contains detailed instructions and notes on the operation and use of this product. For your safety and benefit, read this manual carefully before using the product. Keep this manual in a handy place for quick reference.

Important

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- No part of this document may be duplicated, replicated, reproduced in any form, modified or quoted without prior consent of the supplier.
- It is possible that any document or data stored in the computer will be damaged or lost by user error during operation or software error. Be sure to back up of all important data beforehand. Important documents and data should always be copied or backed up. Documents and data can be lost because of malfunction or human error. Furthermore, the customer is responsible for protection measures against computer viruses, worms, and other harmful software.
- Do not remove or insert any disk while operating this software.

Before You Begin

Abbreviations

The following abbreviations are used in this guide.

Product / Name	Abbreviation
GlobalScan NX	GSNX
Multifunctional Device	MFP, Device
GlobalScan NX Barcode Plug-in for Business Server GlobalScan NX Barcode Plug-in for Enterprise Server	Barcode Plug-in

System Requirements

To install the Barcode Plug-in, the following GlobalScan NX edition must be installed:
- GlobalScan NX Business Server Edition (Ver. 2.0.0.0 or later)
- GlobalScan NX Enterprise Server Edition (Ver. 2.0.0.0 or later)

To install the Barcode Plug-in (Ver.2.3.0.0), the following GlobalScan NX edition must be installed:
- GlobalScan NX Business Server Edition (Ver. 2.1.3.0 or later)
- GlobalScan NX Enterprise Server Edition (Ver. 2.1.3.0 or later)

Supported File Formats

The Barcode Plug-in supports the following file formats.

File Formats
TIFF
TIFF-F
DCX
BMP
JPEG
PNG
GIF
PDF

🔽 Note

- Barcodes contained in data scanned using other applications cannot be recognized. If data that cannot be recognized is input, an error occurs and the job stops regardless of the Error Handling setting (See P.11).
- PDF files can be recognized only when the FineReader barcode engine is used. To check whether the barcode engine installed on your system is the FineReader barcode engine or not, look in System Log, under AdminTool. For details about System Log, see *GSNX Administrator's Guide*.
- PDF files that have opening restrictions, including password-protected or encrypted PDFs, are not supported.
- If you newly install the Barcode Plug-in (Ver.2.3.0.0), some formats of TIFF-F and BMP which are input by HotFolder Plug-in are not supported.

Supported Barcodes

The following table shows the barcode formats that the Barcode Plug-in can read.

Linear Barcodes	2D Barcodes
Code39 Standard ASCII	PDF417
Code39 Extended ASCII	DataMatrix
Code128	QR
EAN 8	
EAN 13	
Interleaved 2 of 5	
Code 2 of 5	
Codabar(NW7)	
GS1(EAN)-128	

Cautions on Orientation of Originals

- The Barcode Plug-in does not adapt to variation in original orientation. For this reason, be sure to set the original in the correct orientation. For details about setting originals, see *Operating Instructions* supplied with the MFP.
- Depending on the setting made for the orientation of originals, the position of the barcode on the actual original might not correspond to the barcode position or the coordinates of the scan area.

Features of the Barcode Plug-in

If you scan a multiple-page document using multiple-page settings, all pages of the scan job will be saved together as a single file.

If you scan a multiple-page document using single-page settings, each page of the scan job will be saved as a separate file.
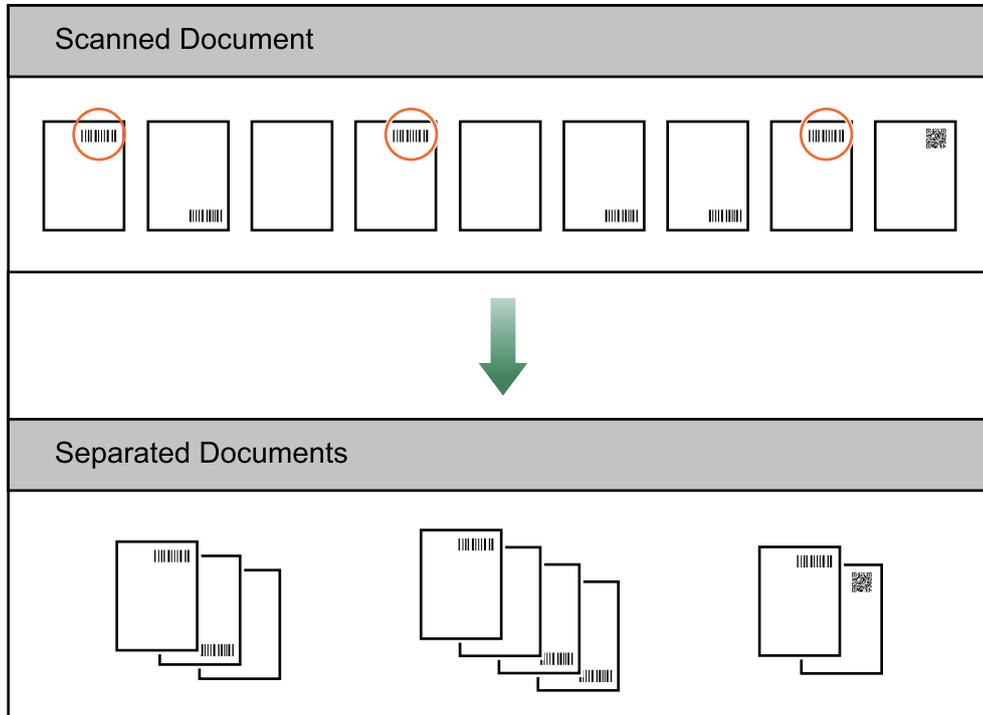
- Only the barcode on the first page of the first section of a document is read. The barcodes on the following pages or in other sections are not read. However, if [**Continue Recognition Even When 1st Page Has No Barcode**] or [**Also make a barcode on the second and later pages of multi-page files as metadata**] is enabled in the General Settings tab, the barcodes on the following pages or in other sections can also be read.
- By selecting a preset format, you can specify (delimit) what data is obtained from barcodes.
- Data obtained from barcodes by delimiting can be saved as custom GSNX bibliographical information.
- Saved bibliographical information can be utilized by other GSNX services.
- Tag names required for saving data as bibliographical information can be specified.
- The job-splitting function allows you to use barcodes to save large, multiple-page documents as separate files.

Splitting Multiple-Page Documents into Separate Files

Normally, when you scan a multiple-page document, it is saved as a large, single file containing multiple pages. However, using the job-splitting function of the Barcode Plug-in, you can save a multiple-page document as separate files containing fewer pages. When you apply the job-splitting function, the document is split into separate files each time a common barcode is read.

Example

In this example, a nine-page document features a common barcode printed in the upper right corner of three of the nine pages. When scanned, the document is split each time the common barcode is read, so the document is saved as three separate files.

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Installing the Barcode Plug-in

Step 1: Pre-Installation Procedure

To log in to AdminTool, you must use either a Built-in Administrator account (specified during the installation of AdminTool) or an Administrator account (specified beforehand using AdminTool).

1. Open your Web browser.

2. Enter the AdminTool URL.
   http://IP address:8080/gsnx/

3. Press [**ENTER**] or click [**Go**].
   The AdminTool Login Page appears.

Fig. 2: AdminTool Login Page

4. Select an authentication profile and enter the corresponding password.

5. Select a language from the drop-down list.

6. Click [**Login**].
   The AdminTool Home Page appears.
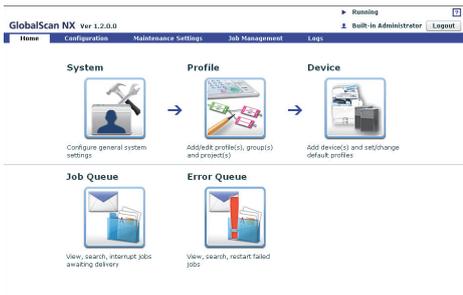
7. Click [**Maintenance Settings**].

Fig. 3: AdminTool Home Page

8. Click [**System Control**].

9. Click [**Switch Delivery Service Status**] to switch the GSNX server status from [**Running**] to [**Suspended**].

   ⬇ Note
   • To update the "Delivery Service Status", click [**Refresh**], next to "Delivery Service Status"

10. Click [**OK**].

11. Click [**Logout**] to log out of AdminTool.

Step 2: Installation

1. Close all applications currently running on the GSNX server.

2. Double-click **GSLaunch.exe**.
   The "GlobalScan NX Barcode Plug-in Setup" screen appears.

3. Click [**GlobalScan NX Barcode Plug-in**].
   The "Welcome" window appears.

4. Click [**Next**].

5. Read the licensing agreement, and then select "I accept…".

6. Click [**Next**].

   ⬇ Note
   • The folder where GSNX is installed is automatically selected as the location for the plug-in's installation files.

7. Click [**Next**].
   Installation starts.

8. Click [**Finish**].
   If a message prompting you to restart the computer appears, click [**OK**]. This will complete the installation.

9. Activate the Barcode Plug-in.

   ⬇ Note
   • To activate the plug-in, select its name under [License Name] in the GlobalScan NX Activation Tool. For details about how to activate the Barcode Plug-in, see *GSNX Installation Guide*.

Uninstalling the Barcode Plug-in

To uninstall the plug-in, in Windows [Control Panel], click [Uninstall a Program] or [Programs and Features].

⭐ Important
• Before uninstalling the plug-in, be sure to deactivate it. Note that deactivating the plug-in will also deactivate the licenses of GlobalScan NX, its optional software, and other plug-ins. For details about uninstalling and deactivation, see GSNX Installation Guide.

Step 3: Start the Service

1. Login to the AdminTool.

   📑 Reference
   • For details about how to log in to the AdminTool, see P.5 "Step 1: Pre-Installation Procedure".

2. Click [**Maintenance Settings**].

3. Click [**System Control**].

4. Click [**Switch Delivery Service Status**] to switch GSNX server status from [**Suspended**] to [**Running**].

⬇**Note**

• To update the "Delivery Service Status", click [**Refresh**], next to "Delivery Service Status"

5. Click [**Logout**] to log out of the AdminTool. To continue setting up the Barcode plug-in without logging out of AdminTool, click [**Home**] and proceed to P.6 "Step 2: Add a Profile".

Adding the Barcode Plug-in

Step 1: Login to AdminTool

To log in to AdminTool, you must use either a Built-in Administrator account (specified during the installation of AdminTool) or an Administrator account (specified beforehand using AdminTool).

1. Open your Web browser.

2. Enter the AdminTool URL.

   http://***IP address*:8080/gsnx/**

3. Press [**ENTER**] or click [**Go**].
   The AdminTool Login Page appears.

Fig. 4: AdminTool Login Page

4. Select an authentication profile and enter the corresponding password.

5. Select a language from the drop-down list.

6. Click [**Login**].
   The AdminTool Home Page appears.

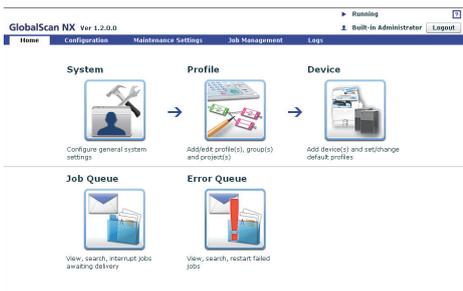### Step 2: Add a Profile

1. Click [**Profile**].

Fig. 5: AdminTool Home Page

2. Click [**Create**].
   The Profile Properties screen appears.
   If you are adding the Barcode Plug-in to an existing profile, proceed to P.6 "Step 3: Add a Group".

3. Enter the profile name and screen title.

⬇**Note**

• The profile name can contain up to 128 characters.
• The screen title can contain up to 50 characters.
• For details about profile settings, see *GSNX Administrator's Guide*.

4. Click [**OK**].

Step 3: Add a Group

1. In the Profile List, double-click the profile name you want to add the Barcode Plug-in to.
   The Group/Project screen appears.

Fig. 6: Group/Project screen

⬇**Note**

• If you are adding the Barcode Plug-in to an existing group, click the group you require, and then proceed to P.7 "Step 4: Add a Project".

2. Click [🖻] (top left).
   The Group Properties screen appears.

3. Enter the group name.

⬇**Note**

• The group name can contain up to 128 characters.

4. Make sure the status of "Display" is [**On**].

5. Click [**OK**] to save the settings.
   The group appears as a tab on the Group/Project screen when the Standard Operation Pane is used, and in a list when the Smart Operation Panel is used.
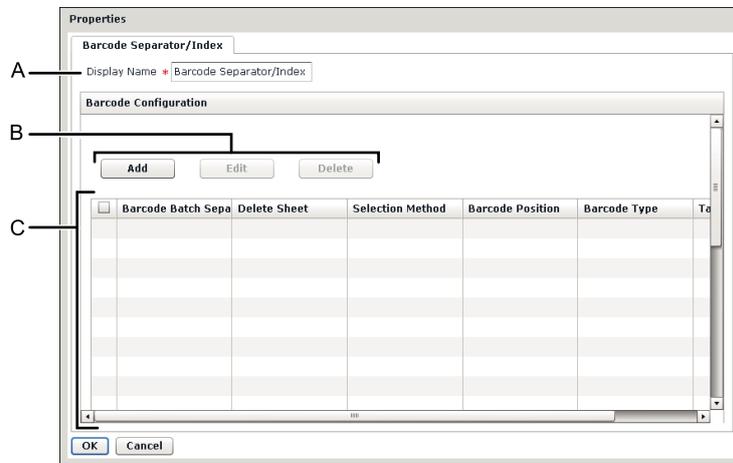
⬇**Note**

• For details about group settings, see *GSNX Administrator's Guide*.

Step 4: Add a Project

1. Drag the [ ] button (below the [ ] button) to the Group/ Project screen.

   The Project Properties screen appears.

2. Enter the project name.

   ⬇ Note
   - For details about project settings, see *GSNX Administrator's Guide.*

3. Click [**OK**].

   A new project button appears.

Step 5: Add a Service and Filter/Create a Delivery Flow

1. Double-click the project button.

   The Project Configuration screen appears.

2. Under "New Filter(s)", drag "Barcode Separator/Index" to the Delivery Flow Editor screen.

Fig. 7: Delivery Flow Editor screen

⬇ Note
- To automatically align Service(s) and Filter(s), click the [ ] button (below the [ ] button).
- For details about creating a delivery flow, see *GSNX Administrator's Guide.*

3. Under "New Service(s)", drag the service you require to the Delivery Flow Editor screen.

4. Double-click the lower half of the Service/Filter icon added to the Flow.

   The Properties screen appears.

   ⬇ Note
   - There are three levels at which you can configure the properties for services: the System Level, Profile Level, and Project Level. This example procedure explains how to configure the properties at the Project Level. For details about how to specify the properties in other levels, see *GSNX Administrator's Guide.*
   - For details about how to specify the properties of the Barcode Plug-in, see P.8 "Configuring the Barcode Plug-in".

- The contents of each setting vary depending on the Service/Filters. For details, see *GSNX Administrator's Guide.* If you are using the optional Service/Filter plug-in, see the Administrator's Guide of each plug-in.

5. Change the settings as necessary.

6. Click [**Apply**], and then [**OK**] to return to the Group/Project screen.

Step 6: Configure the MFP(s)

Finally, identify the MFP(s) that you want to use with GSNX operations by adding them manually or discovering them on the network. (In the following procedure, you will also assign a profile to the device.)

1. On the Home Page, click the [**Device**] shortcut.

   The Device List appears.

Fig. 8: Device List

2. Select one of the following methods:

   ### Manually Add MFP(s)

   a. Click [**Add**].
   The Add Device screen appears.

   b. Select [**Specify Manually**], enter the IP address or host name of the MFP that you want to add, and then click [**Next**].

   c. Proceed to step 3.

   ### Search for Connected MFPs

   a. Click [**Add**].
   The Add Device screen appears.

   b. Select [**Select from list**].

   c. Click [**Search**].
   Any GSNX-enabled MFPs that are discovered on the network will be displayed.

   d. Select the check boxes of the MFPs you want to add, and then click [**Next**].

   e. Proceed to step 3.

3. Configure the device properties: [**Device Name**], [**Profile Name**], and [**Use Scanner > Yes**]. Then click [**OK**].

Configuring the Barcode Plug-in

Use Barcode Plug-in properties to configure the plug-in's barcode read settings. The values of each setting are registered for each barcode. The Barcode Configuration screen contains details of the read settings registered for each barcode.

Barcode Configuration Screen

You can use this screen to register barcode read settings, and to change or delete previously registered barcode read settings.

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Fig. 9: Barcode Configuration screen

⬇ Note

• Settings on the screen that are marked with an asterisk (*) must be specified.

A. Display Name

Enter a display name for this filter.

⬇ Note

• The display name can contain up to 30 characters.

B. Add/Edit/Delete

Add: Register new items of barcode data to be read.

Edit: Change previously registered barcode read settings.

Delete: Remove previously registered barcode read settings.

C. Barcode Configuration Table

Lists registered settings for each barcode. To change or delete a setting, select its check box and then click [**Edit**] or [**Delete**].

The table shows the following barcode read settings:

• Barcode Batch Separation
• Delete Sheet
• Selection Method
• Barcode Position
• Barcode Type
• Tag Name

General Settings Tab

This tab contains the settings for registering new barcode information or changing the information of previously registered barcodes.
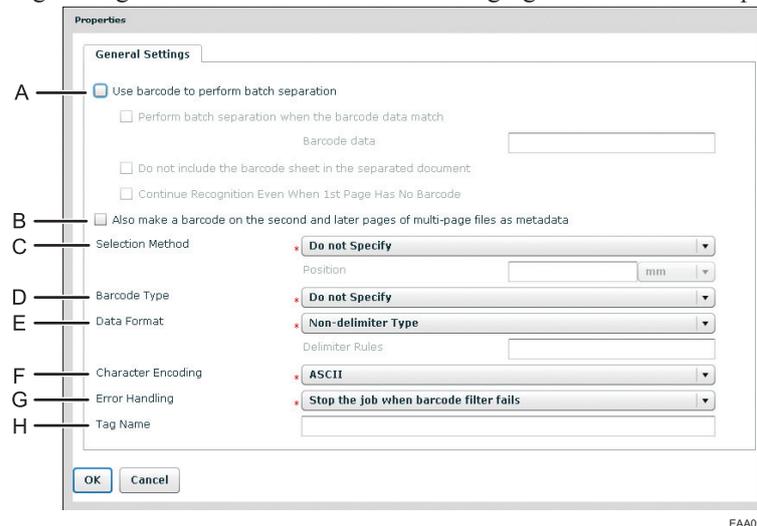

Fig. 10: General Settings screen

- Settings on the screen that are marked with an asterisk (*) must be specified.
- When the job-splitting function is applied, the settings specified on the General Settings screen are reflected in the job-splitting barcode.

A. Use barcode to perform batch separation

Select this check box to perform batch separation (job-splitting) by barcode marker. The following three check boxes are available when this check box is selected:

- Perform batch separation when the barcode data match
- Do not include the barcode sheet in the separated document
- Continue Recognition Even When 1st Page Has No Barcode

Perform batch separation when the barcode data match
Select this check box to read matching barcodes as a job-splitting markers. When this box is selected, the "Barcode data" box becomes available. When reading a barcode, the machine will attempt to match the value (character string) you enter in the "Barcode data" text box with the string registered for the barcode. If a match occurs, the job will be split at the place of the barcode.

Do not include the barcode sheet in the separated document
Select this check box to omit pages that feature a job-splitting marker barcode from the saved scan file.

Continue Recognition Even When 1st Page Has No Barcode
- If the check box is selected:

  If a barcode is successfully recognized on the second or succeeding section, the document will be split, even if there is no barcode or if no barcode is recognized on the first page of the first section.

- If the check box is not selected:

  If there is no barcode or if no barcode is recognized on the first page of the first section, the document will not be split.

The LastResult_Barcode values recorded in the metadata are as follows, depending on the [**Continue Recognition Even When 1st Page Has No Barcode**] setting:

	Barcode on the first page	No barcode on the first page
If the check box is selected	Success	Success
If the check box is not selected	Success	Error

B. Also make a barcode on the second and later pages of multi-page files as metadata

- If the check box is selected:

  The barcodes on the pages after the first page will be recognized, even if there is no barcode on the first page of a multiple-page file.

- If the check box is not selected:

  The barcodes on the pages after the first page will not be recognized.

⬇ **Note**

- If the Barcode Plug-in is updated from a version earlier than Ver. 2.3.0.0, this check box cannot be selected.
- If the check box is selected, the following image formats are supported for multiple-page files:
  - PDF
  - TIFF
  - DCX
- If a page contains multiple barcodes, the left-most barcode on the page will be recognized as valid for bibliographical information.

C. Selection Method

Barcodes can be recognized according to a specified uniqueness criterion (Selection Method). Select one of the following three settings for the Selection Method:

- Do not Specify
- Barcode Number
- Coordinates

Do not Specify
Select this if you do not want barcodes to be recognized by a specified uniqueness criterion.

Barcode Number
Select this method if you want barcodes to be recognized according to their numbers. When you select this method, if multiple barcodes appear on the same page, they will be numbered according to the numbering rule.

⬇ **Note**

- If you select "Barcode Number" as the Selection Method, you must then specify the relevant barcode number. Enter single-byte digits between 1 and 99 in the "Position" box to specify the barcode number.

🔖 **Reference**

- For details about the barcode numbering rule, see P.12 "Rules of Barcode Numbering".

Coordinates
Select this method if you want barcodes to be recognized according to their position (expressed as X, Y coordinates).

⬇ **Note**

- If you select "Coordinates" as the Selection Method, you must then specify the relevant coordinates. Determine the coordinates as follows: using the upper-left corner of the image as the base point, measure the horizontal (X) and vertical (Y) distance from the base point to the approximate center of the barcode you want recognized. These distances are the coordinates of your barcode. Enter the coordinates in the order of X, Y in the "Position" box. You can select "mm" or "inch" as the units for the coordinates.

🔖 **Reference**

- For details about the coordinates of barcode, see P.13 "Rules of Coordinate Measuring".

D. Barcode Type

Specify one of the following as the barcode type:

- Do not Specify
- Code39 Standard ASCII
- Code39 Extended ASCII
- Code128
- EAN 8
- EAN 13
- Interleaved 2 of 5
- Code 2 of 5
- Codabar(NW7)
- GS1(EAN)-128
- PDF417
- DataMatrix
- QR

E. Data Format

Specify one of the following as the barcode data format:

- Non-delimiter Type
- Delimiter Type
- Digit Type

Delimiter Type

Select this option if the barcode's data format uses arbitrary delimiters to split the data into files. If you select this format, the "Delimiter Rules" field will appear highlighted. Data obtained from barcodes is split into multiple files based on the delimiter entered in the Plug-in "Delimiter Rules" field.

Digit Type

Select this option if the barcode's data format uses the number of characters the data is to be split into as delimiters. If you select this format, the "Delimiter Rules" field will appear highlighted. Data obtained from barcodes is split into multiple files based on the number of digits entered in the "Delimiter Rules" field. Use commas without spaces to separate the digits you enter in this field. For example, if the barcode data is "123xx789yyy", specify "3,2,3,3" to split the data into units of "123", "xx", "789", and "yyy". Asterisk "*" can also be used when entering the number of digits. An asterisk means "all subsequent character strings".

🔽 Note

- Select "Non-delimiter Type" if the barcode data is not delimited.

F. Character Encoding

Specify one of the following as the character code of the barcode data:

- UTF-8
- Windows Shift_JIS
- JIS
- Latin 1
- ASCII

🔽 Note

- Be sure to specify the character code that is used in the barcode.

G. Error Handling

Specify one of the following as the plug-in's response in the event of a processing error.

- Stop the job when barcode filter fails
- Ignore error and continue the job

Stop the job when barcode filter fails

If a barcode cannot be read or if its data cannot be decoded or split, an error will be reported and the job will be cancelled.

Ignore error and continue the job

If a barcode cannot be read or if its data cannot be decoded or split, the error will be ignored and the job will continue. However, the data decoded from the barcode is not added as bibliographical information. All barcode reading errors and data decoding/splitting failures are recorded in a warning log.

H. **Tag Name**

Specify a tag name to be used for new bibliographical information.

If the tag name is for custom bibliographical information added to GSNX, the prefix "P0001_" is added to the string entered in this box, and a single underscore "_" followed by a number is added after the string. (Suffixes are determined according to order and range between 1 and 99.)

Example

Bibliographical information names added to documents for which the "Tag name" is "DOC" are as follows:

• P0001_DOC_01
• P0001_DOC_02
• P0001_DOC_03
    :

⬇ Note

• If a tag name is not specified, the default character string "bcData" is used.
• Curly brackets ({ }) cannot be used for tag names.
• Do not use any tag name more than once.

Procedure

1. Click [**Home**], and then click the [**Profile**] shortcut.
   The Profile screen appears.

2. Select the group you require, and then double-click the project you require.
   The Delivery Flow screen appears.

3. Double-click the lower half of the "Barcode Separator/Index" icon in the Delivery Flow.
   The Properties screen appears.

4. Change the settings as necessary.

5. Click [**Apply**], and then [**OK**] to return to the Group/Project screen.
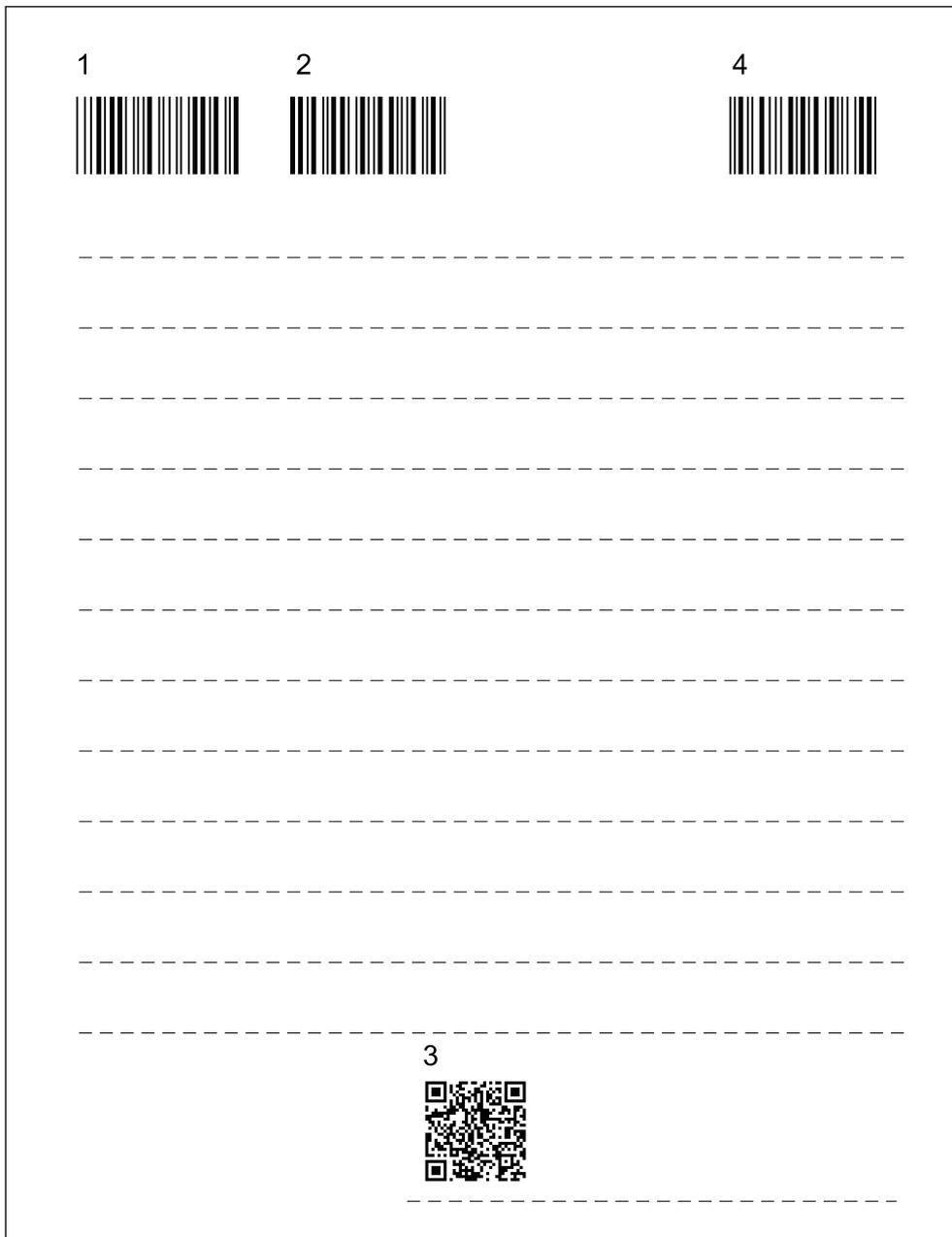
Rules of Barcode Numbering

When the Selection Method in General Settings is set to "Barcode Number," the following barcode numbering rules are applied:

- The upper-left corner of the scanned image becomes the base (0, 0) coordinate.
- Sequence is determined based on the coordinates of the upper-left corner of each barcode.
- X-coordinates are compared and sequenced in order from the lowest value X-coordinate.
- If the values of two X-coordinates are equal, the data with the lower Y-coordinate value is sequenced first.
- Depending on the number of specified barcode types, the barcodes are numbered as follows:
    - When specifying only one barcode type
      Only the specified barcode type is numbered.
    - When specifying multiple barcode types
      All of the specified barcode types are numbered.
    - When you do not specify any type of barcode
      All barcodes are numbered.

Example of Barcode Numbering
The following illustration shows how barcodes are numbered when there are four barcodes on one page.

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Rules of Coordinate Measuring

If the Selection Method in General Settings is set to "Coordinate," the following coordinate measurement rules are applied:
- The upper-left corner of the original becomes the base (0, 0) coordinate.
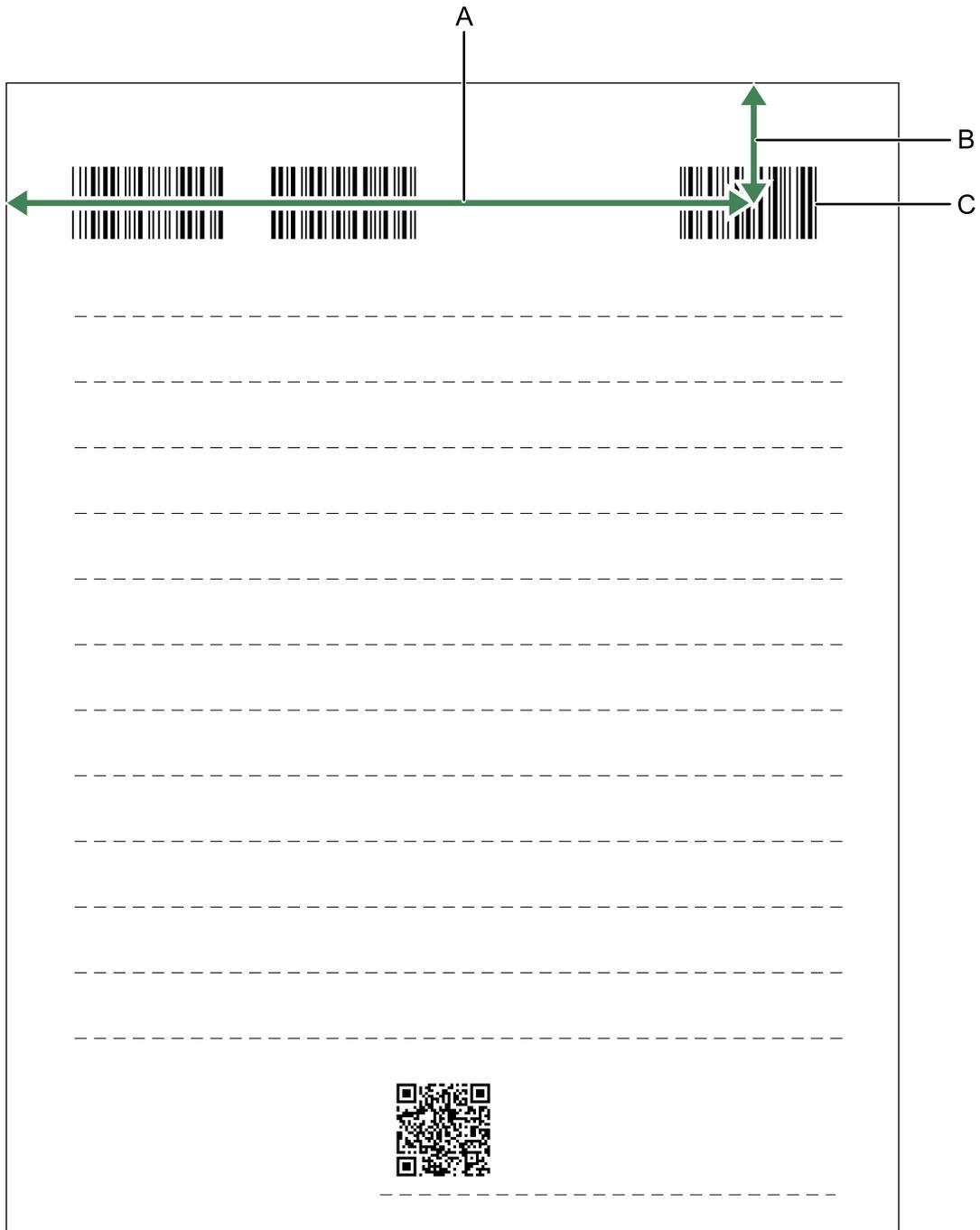- The X/Y-direction length through the approximate center of the barcode is measured.

Example of Coordinate Measuring

The following illustration shows how the coordinates of the upper-right barcode are measured when there are four barcodes on one page.

A = Measure as the x-coordinate
B = Measure as the y-coordinate
C = Target barcode

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