

# Setting Guide

## ● Overview

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About NExD feature

## ● How to Use, Reference

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About a simple method of use of NExD, property & tool

## ● Restriction

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About restriction of NExD

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# About Signage

Following signage are used in this guide. Please understand the meaning of each signage before the product.

 <b>Note</b>	Vital observance in use is described. In correct handling against this indication may cause breakdown or operation failure of the product.
 <b>Reference</b>	Supplemental remarks and related matters are described.

## Restrictions in use

Please use the product with attention to safety design of whole system by fail safety design Or redundant design to sustain reliability and safety of whole system in case of being used Applications which require for high reliability and safety in function and accuracy such as Equipments, disaster prevention and security device directly related to operation of airplane, train, vessel, auto-mobile etc.

This product is not designed for use of aerospace hardware, main communication equipment, atomic control device, medical instrument etc which require extremely higher Reliability and safety. Please make your decision upon user's enough acknowledgement To adequateness of this product in such applications.

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## Introduction

NPI Ex Driver (hereinafter referred as to NExD) is Windows driver for printer product made by Nippon Primex Inc.

NExD can control printer with NExD API for POS·KIOSK applications.



This manual explains with screen of Windows XP.  
Please read this manual as for other OS when  
different OS used.

Display content of property and tool change  
depending on each printer to be used.

## Contact us

Please refer to our home page.

<http://www.primex.jp/>

## Feature of NExD

### Simple

- enable printing from commercially available application.
- can simply select a general driver setting with simple setting.
- enable printing logo and graphics
- enable sending paper cut command to printer. (please refer to [paper feed and paper cut, margin saving] on page 26.)
- enable sending open command to cash drawer.(please refer to [drawer control] on page 28.
- able to send various printer command at each timing to printer.
- able to print bar-code and 2dimensional bar-code regarded as device font.

### Faster

- enable high speed printing by either printer's device font or full image.
- enable printing image file at high speed by registering logo into printer. (please refer to [Logo Printing] on page 23)

### Convenience

- rotated printing enables landscape printing for a bill of receipt. In case printer deployed vertically (wall mount), printing from rear is available for customer's easy viewing. (please refer to [Rotated Printing] on page 19)
- able to layout character and image behind and to print it. (please refer to [Water mark printing] on page 21)
- Reduced printing of documents is available at arbitrary reduction ratio.

### Expandability

- Printer command enables control. (please refer to [How to Use NII Control A font] on page 16)

### Programming

- Corresponding to Win32/.Net environment. Please refer to [SDK Guide] for supporting development language.
- enable to acquire printer status by API of SDK.

### Deployment

- able to reflect preset NExD and Printer environment to different computer. (Printer Setting Control)

This guide shows how to use function and tool integrated with NExD.

**Note** Property Setting of Printer Driver must be done by user of Windows administrative right.

## Printer Setting of Application

Explains setting to print to printer from application of Windows.

Set printer and form from a currently using application.

Here directed to Word Pad.

Reboot from [Start] menu to [All the programs] – [Accessory]- [WordPad]

### 1. Selecting of printer driver.

Select [file] – [print], show print dialogue.

Select target printer to be used.

**reference** This procedure is not required if target printer is set as a usual use.

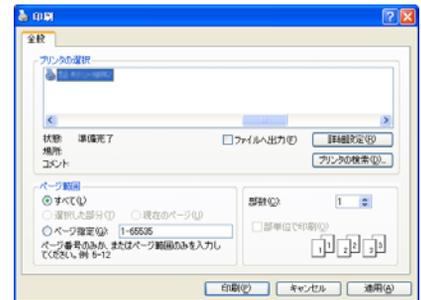


Fig 1:[Print] dialogue

### 2. Page Setting

Select [file] – [page setting], show dialogue of page setting. Select paper to be used.

Set margin, click [OK] button.

→paper width of word pad become the width selected in page setting.



Fig 2:[page setting] dialogue

### 3. End of Setting



Selected paper width

Fig 3:word pad after change in paper

## Printing of Character (True Type font)

Print by True Type font such as MS P Gothic, MS PMincho, Arial etc. integrated in Windows. Freely enable character modification like oblique type, font size. Additional, enable printing nearly to screen image.

### reference

True Type font is printed as image data.

Printing will slow for a long time communication with printer due to a large quantity of printing data when serial interface in use.

## Printing of Character ( Device font)

Device font means a built-in font set with printer. Enable acquiring print quality as per printer's printing performance. When serial interface used, it is printed at higher speed than that of True Type font. It is required for output from method with NExD API in case of printing device font under .NET environment. Please refer to [Print Device Font under .NET environment] on page 80 for more details.

### reference

USB interface enables the equally high printing speed both in device font and True Type font. Considering expressive power of font and freedom degree of layout, it is recommended to use True Type font.

### Note

- Selecting bold/oblique to character is not reflected.
- Under line is printed but position moves over.
- Printing combination of device font and bar-code, 2dimensional bar-code font in 1 line is not available.
- Bar-code, 2dimensional bar-code font are not expressed as image in preview and edit screen.
- Device font is effective only when printing direction is vertical and at FALSE for ALL Image property.

### Note

Device font is not effective at TRUE for [Property] – [Printing Setting] – [All Image] items within [Details Setting].  
When All Image is set to FALSE, water mark printing, rotated printing, reduced printing are not effective.

## Variety and size, style of Device Font

NII Font A (8.5point) = Standard Font  
 NII Font A Wide(8.5point) =Double width Font  
 NII Font B (6point) = Standard Font  
 NII Font B Wide (6 point) =Double width Font  
 NII Font C (5.5point) = Standard Font  
 NII Font C Wide(5.5 point) = Double width Font  
 NII GB(8.5 point) = Standard Font  
 NII GB Wide(8.5 pont) = Double Width Font  
 NII KSK(8.5point) = Standard Font  
 NII KSK Wide(8.5 point) = Double width Font

NII Font A (17point) =Double Height Font  
 NII Font A Wide(17point) =Quadruple Font  
 NII Font B (12 point) =Double Height Font  
 NII Font B Wide (12point) = Quadruple Font  
 NII Font C(11.5point) = Double Height Font  
 NII Font C Wide(11.5 point) = Quadruple Font  
 NII GB(17point) = Double Height Font  
 NII GB Wide(17 point) = Quadruple Font  
 NII KSK(17 point) = Double Height Font  
 NII KSK Wide(17 point) = Quadruple Font

Font name	5.5 point	6 point	8.5 point	11.5 point	12 point	17 point
NII Font A	X	X	European	X	X	European
NII Font A Wide	X	X	European	X	X	European
NII Font B	X	European	X	X	European	X
NII Font B Wide	X	European	X	X	European	X
NII Font C	European	X	X	European	X	X
NII Font C Wide	European	X	X	European	X	X
NII Barcode1	X	X	European	X	X	X
NII Barcode2	X	X	European	X	X	X
NII Barcode3	X	X	European	X	X	X
NII Barcode4	X	X	European	X	X	X
NII Barcode5	X	X	European	X	X	X
NII Barcode6	X	X	European	X	X	X
NII Barcode7	X	X	European	X	X	X
NII Barcode8	X	X	European	X	X	X
NII Barcode9	X	X	European	X	X	X
NII Barcode10	X	X	European	X	X	X
NII 2D-Barcode1	X	X	European	X	X	X
NII 2D-Barcode2	X	X	European	X	X	X
NII 2D-Barcode3	X	X	European	X	X	X
NII 2D-Barcode4	X	X	European	X	X	X
NII 2D-Barcode5	X	X	European	X	X	X

# How to use NExD, Reference

Font name	5.5 point	6 point	8.5 point	11.5 point	12 point	17 point
NII Control	X	X	European	X	X	X
NII ControlA	X	X	European	X	X	X
NII SJIS A	X	X	Japanese	X	X	Japanese
NII SJIS A Wide	X	X	Japanese	X	X	Japanese
NII SJIS B	X	Japanese	X	X	Japanese	X
NII SJIS B Wide	X	Japanese	X	X	Japanese	X
NII SJIS C	Japanese	X	X	Japanese	X	X
NII SJIS C Wide	Japanese	X	X	Japanese	X	X
NII GB	X	X	CHINESE_GB2312	X	X	CHINESE_GB2312
NII GB Wide	X	X	CHINESE_GB2312	X	X	CHINESE_GB2312
NII KSX	X	X	Korean	X	X	Korean
NII KSX Wide	X	X	Korean	X	X	Korean
NII RAW	X	X	European	X	X	X
NII SJIS RAW	X	X	Japanese	X	X	X
NII GB RAW	X	X	CHINESE_GB2312	X	X	X
NII KSX RAW	X	X	Korean	X	X	X

## Printing of Device Font

### Programming

Please refer to a following programming example.

#### <European>

```
' Character set
Printer.Font.Charset = 0
' Font
Printer.Font.Name = "NII ANK A"
' number of point
Printer.Font.Size = 8.5
'Input string
Printer.Print "Device Font"
```

#### <Japanese>

```
' Character set
Printer.Font.Charset = 128
'Font
Printer.Font.Name = "NII SJIS A"
' number of point
Printer.Font.Size = 8.5
'Input string
Printer.Print "Device Font"
```

#### <Simplified Chinese Character>

```
'Character set
Printer.Font.Charset =134
'Font
Printer.Font.Name = "NII GB"
'Number of Point
Printer.Font.Size = 8.5
'Input string
Printer.Print "Device Font"
```

**reference**

Please refer to previous item [Device font variety and size ,style of device font] for Printer.Font.Name, Printer.Font.Size.

## How to use bar-code font

NExD incorporates bar-code font in it.

For that reason, it enables bar-code printing without producing bar-code in application side. Bar-code font is used after registering bar-code variety and size in property.

NExD is capable of registering 10 kinds (NII Barcode 1~10).

### Note

Device font is not effective at TRUE for item [All Image] in [Detail Setting] [property] – [Printing setting]  
Water mark printing, rotated printing, reduced printing are not effective if All Image is set to FALSE.

### reference

Please set printing speed to quality priority if rotation of bar-code selected. If printing speed is set to speed priority, there may be difficult to recognize barcode.

1. Please open [property] – [printer setting] – [setting of printer] – [Font option] tab – [Barcode font setting]
2. Please select font name for use [NII Barcode 1 ~ 10].
3. please select barcode for use from variety and select each setting.
4. Please click on setting button to store set contents.
5. Select a set barcode font (one of NII Barcode 1 ~ 10) from application to write data by selecting size(8.5) , Style ( European).

### Reference

Please input data in conformity with a data condition of each barcode.

Printing setting example

Font name :NII Barode1

Type:CODE39

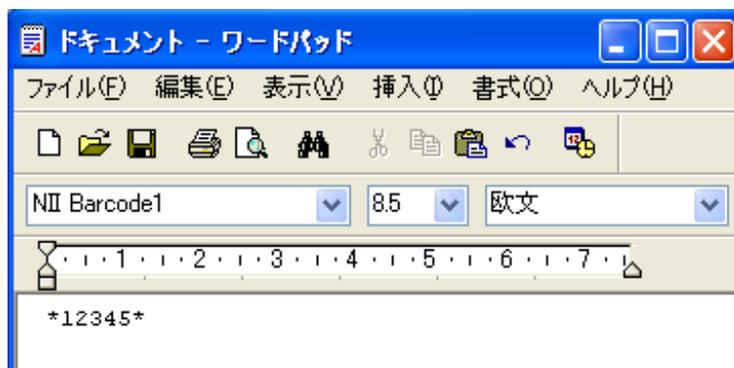


Fig 4: Printing Setting example – barcode font

Please refer [Printing of Device Font] on page 11 for programming.

## How to use 2Dimensional barcode font

NExD implements 2 dimensional barcode font.

For that reason, enables 2dimensional barcode printing without making it in application side. Please use 2dimensional barcode font with registering type and size of 2dimensional barcode. NExD enables registering setting of 5 types(NII 2D-Barcode 1~5)

### Note

When [printer property] – [printing setting] – [All image] items within [detail setting] is set as TRUE, device font is not effective. when All Image is set as FALSE, water mark printing, rotated printing, reduced printing are not effective.

### reference

In case rotation of barcode is selected, please set printing speed to quality priority . If printing speed is set to speed priority, it may cause hard recognition of barcode.

1. Please open [Property] – [Printer setting] – [Setting of Printer] – [Front Option] tab – [2dimensional Barcode font setting] .
2. Please select font name [NII 2D-Barcode 1~5] to use.
3. Please select 2D Barcode to use from type and select each setting.
4. Please click on setting button and restore set contents.
5. Please select a selected 2D barcode(one of NII 2D-Barcode 1 ~ 5) from application and select size(8.5) ,style (European), and write data.

### Reference

Please input data based on each barcode's condition.

Printing setting example

Font name:NII 2D-Barode1

Type: QR model 2

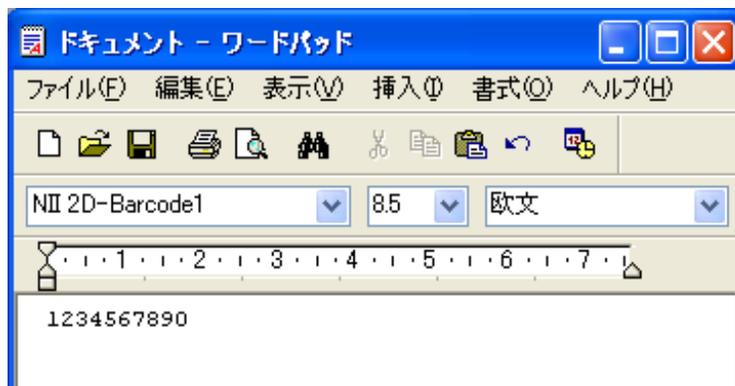


Fig 5:Printing setting example – 2D Barcode font

Please refer to [printing of device font] on page 11 for programming.

## How to use control font

Control font is a special font execute printer command allocated to fixed character from Document.

### Note

[Printer Property] – [Printing Setting] – if [All Image] item in [Detail Setting] is TRUE, device font is not effective.

If All Image set to FALSE, disable water mark printing, rotated print, reduced printing.

### Allocation character, its behavior

Allocation character	Behavior
5	HT
6	LF
7	CR
a	Drawer open 5 pin 50ms
b	Drawer open 5 pin 100ms
c	Drawer open 5 pin 150ms
d	Drawer open 5 pin 200ms
e	Drawer open 5 pin 250ms
f	No paper feed + Full cut
g	No paper feed + partial cut
h	NV image 0 printing
i	NV image 1 printing
j	NV image 2 printing
m	Inverted character selecting
n	release inverted character selecting
o	Black& white reverse selecting
p	Release Black& white reverse selecting
q	Under line selecting
r	Release under line selecting

Allocation character	Behavior
s	Highlighted printing selection
t	Release highlighted printing selection
u	90° clockwise rotated character selection
v	Release 90° clockwise rotated character selection
w	Position alignment Left
x	Position alignment Center
y	Position alignment Right
A	Drawer open 2 pin 50ms
B	Drawer open 2 pin 100ms
C	Drawer open 2pin 150ms
D	Drawer open 2pin 200ms
E	Drawer open 2pin 250ms
P	With paper feed + partial cut
Q	With paper feed + Full cut

# How to use NExD, Reference

1. please select control font (NII Control) from application, size(8.5),style(European)  
write data (please refer to allocation character and its behavior in previous item).

Printing setting example

Font name: NII Control

Allocation character: x (position alignment Center)

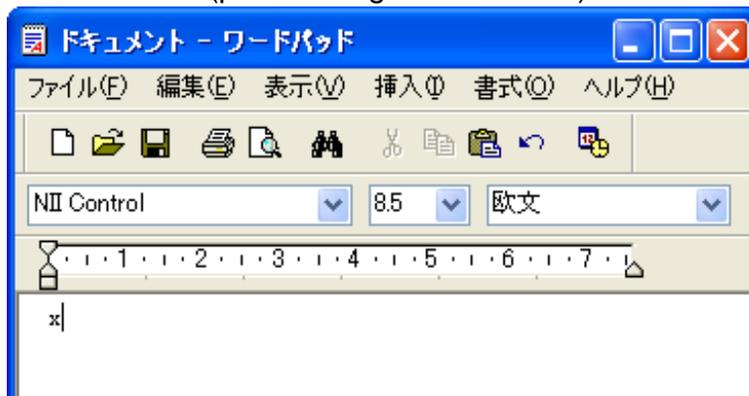


Fig 6 : Printing Setting example – control font

## How to use control A font

Control A font is a specific font to execute printer command pre-allocated to arbitrary Character from document.

### Note

[Printer Property] – [Printing Setting] – if [All Image] item in [Detail Setting] is TRUE, device font is not effective.

If All Image is set to FALSE, water mark printing, rotated printing, reduced printing are not effective.

### reference

Please refer to product specifications of printer for printer command.

1. Please open [Property] – [Printer setting] – [Setting of Printer] – [Font Option] tab – [NII Control A font setting]

2. Please select character to allocate

3. Please click on [Edit] button to write target printer command in Command field.

Please describe input content as character string for hexadecimal code.

\*it is not necessary to display 0 x etc at this time.

Example

ESC → 1B

0x303132 → 303132

·Direct selection of character data become effective by surrounding target character data with “(double quotation).

Example

ESC @ (Printer initialization command) → 1B"@"

12345LF → "12345"0A

when “ (double quotation) output, select “ (double quotation) twice in a row

4. Please determine edit content by [Enter key] or changing cell during selection.

5. please store setting content by clicking on setting button.

6. please select control A font (NII Control A) from application, size (8.5), style (European) and describe data.

# How to use NExD, Reference

printing setting example

Font name: NII ControlA

allocation character: ! (arbitrary selection content: partial cut)

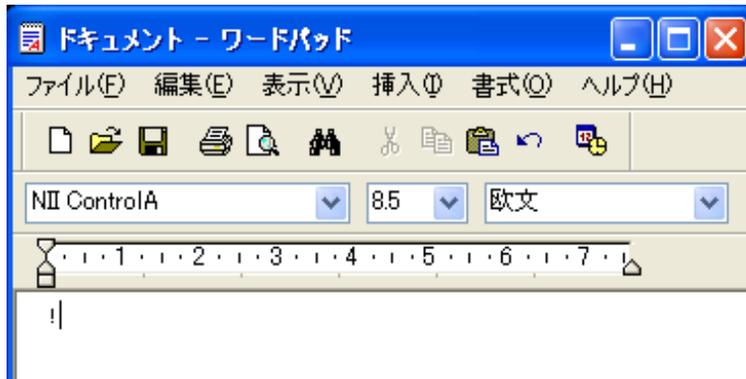


Fig 7: example for printing setting – control A font

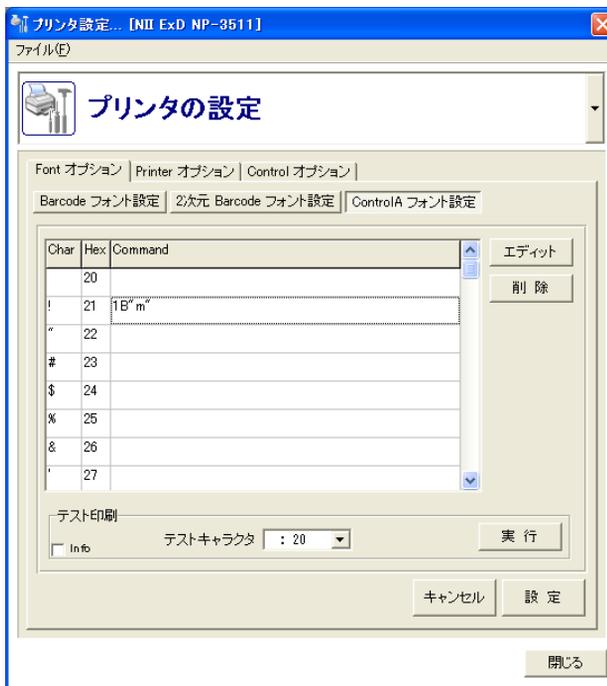


Fig 8: example for command setting – control A font

## Density Adjustment

NExD supports 2 types of density adjustment.

1<sup>st</sup> one to select a standard, dark, or light from density selection of formatting window.

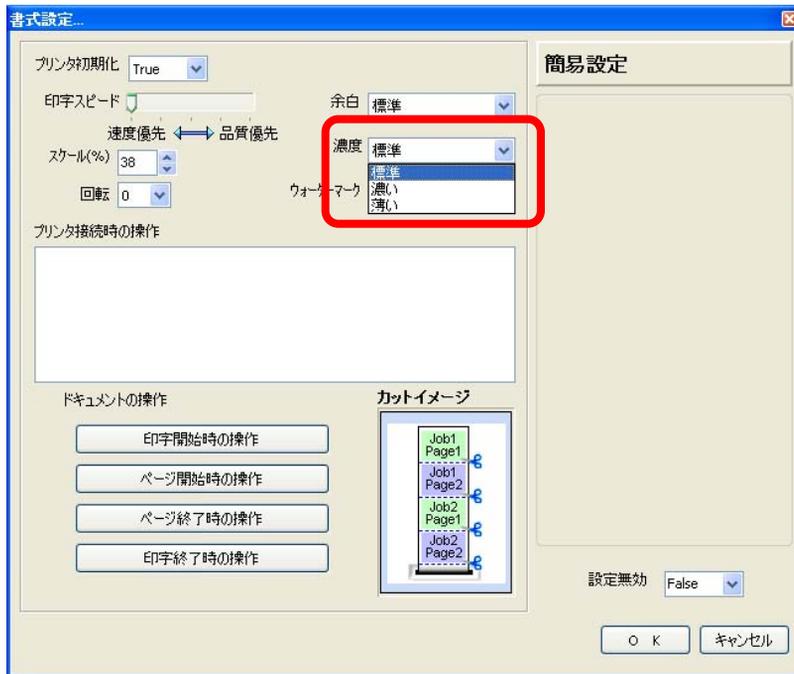


Fig 9: Simple Density Setting

The 2<sup>nd</sup> one enable selection from Custom dialogue opened by click on [formatting] – [operation at starting print] – [command transmitting (...)] button.



please refer to product specification of printer for effective value of density.

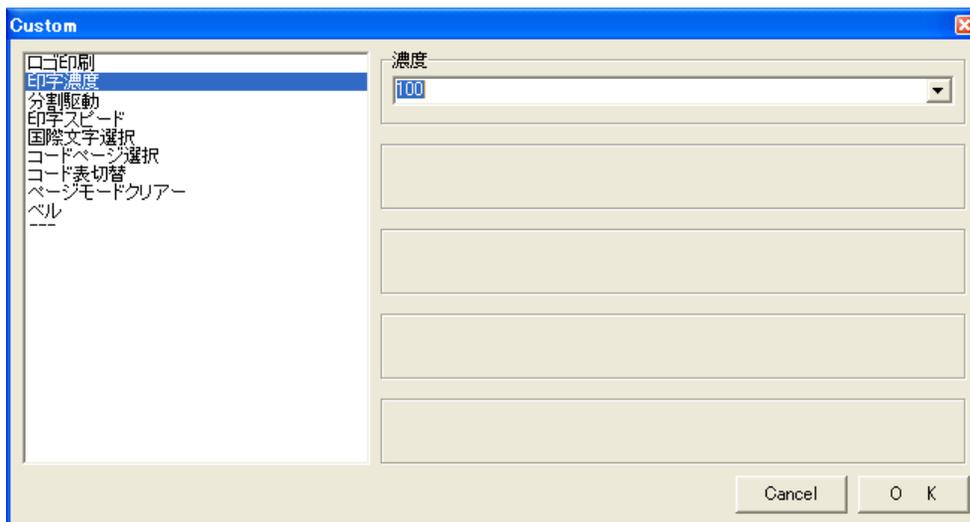


Fig 10: Custom Density Setting

## Rotating Printing

Able to rotate data to print. If 180° clockwise rotating (inverted printing) in vertical use of printer, it will be printed in easy viewing direction for customer.

Additional, printer driver enable setting of rotated printing when a bill of receipt needed for Horizontal direction (landscape).

### Note

Designating rotation automatically change to TRUE for [Printer Property] - [Printing Setting] – [All Image] item in [Detail Setting].  
Accordingly device font is disabled.



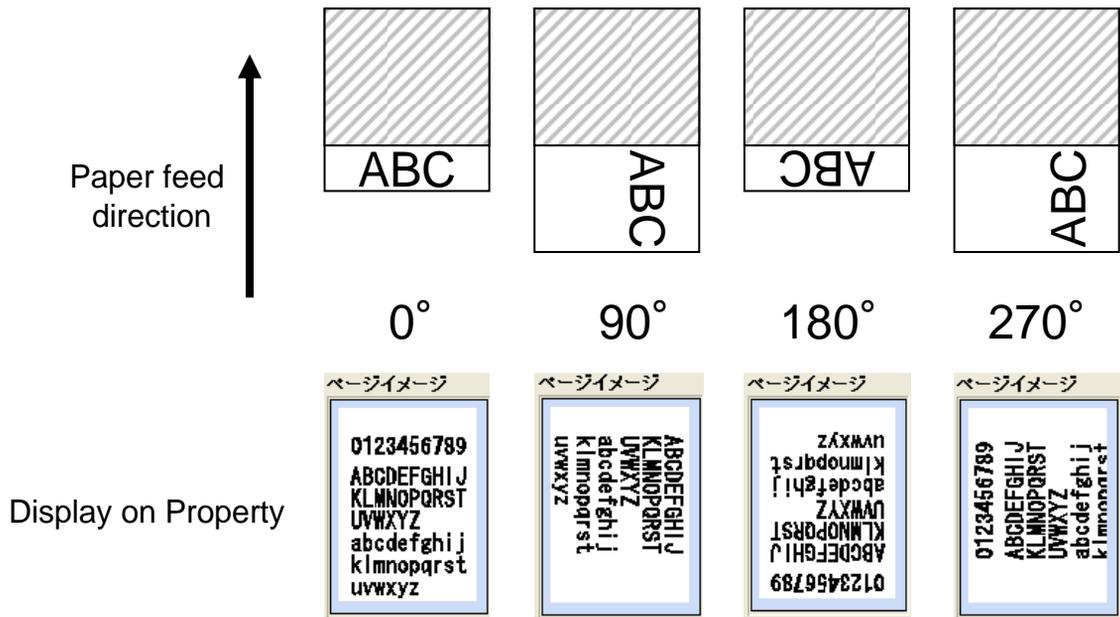
Fig 11: designating rotation

### Note

Exceeding part from paper after 90° ,270° rotation, is discarded.

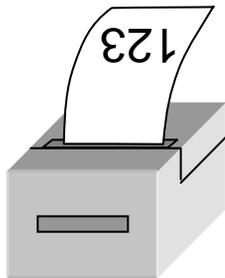
# How to use NExD, Reference

## Rotated Printing Direction

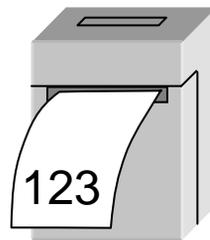


means margin. In order to save paper of this part, designating [Saving] in setting [Margin] in property leads to smaller margin.

Printing example  
Rotated: 180°



Horizontal



Vertical

## Water mark printing

Water mark printing equals to superimpose printing image (page) and pre-registered image (NV image: Water Mark).

### Note

Designating Water Mark automatically change to TRUE for [Printer Property] – [Printing Setting] – [All Image] item in [Detail Setting]. Accordingly, Device Font is disabled.

1. Register image to superimpose from [Printer Property] – [Printer Setting] – [NV Image Registration]

### reference

Please refer to [Printer Setting – NV Image Registration] for registration of Image to print by superimposing.

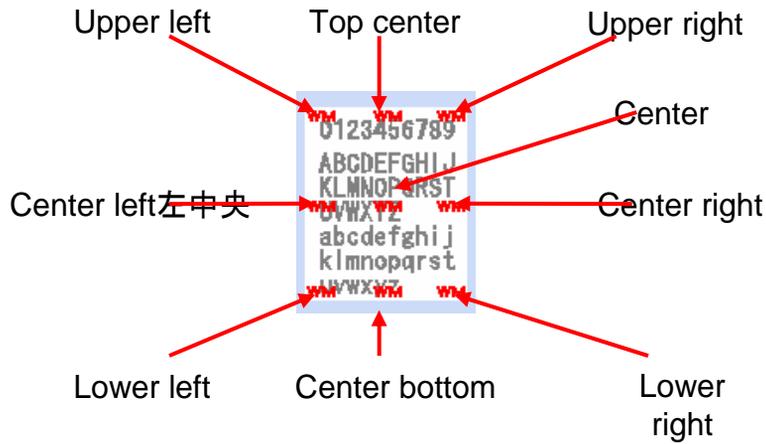
2. Please designate Water Mark of Formatting window.



Fig 12: Water Mark designation

3. Water Mark is printed when printing activated from application.

## WaterMarkDisplayPosition



printing example

WaterMark: Center

NV image Pattern0:

SAMPLE



Fig 13:Example for Water Mark printing

## Logo Printing

It is adequate way to print NV image such as a shop's logo.

Please register image data NV memory (nonvolatile memory) in printer with NV image registration tool for a registration of bitmap data.

This memory keeps data even if printer power turned off.

Please refer to [Printer Setting – NV image registration] on page 71 for more details.

There are following various ways to print bitmap registered in printer.

- setting with printer property: print image before/after document or page.
- designating with control font: use control font at position to print bitmap to print.

### Setting with Printer Property

1. open formatting window, click on operation button of desired timing to print logo.

- operation at starting printing.
- operation at page start.
- operation at end of page.
- operation at end of printing.



Fig 14: Formatting ... Window

# How to use NExD, Reference

1. Click on [Command Transmission(...)] to open Custom dialogue.

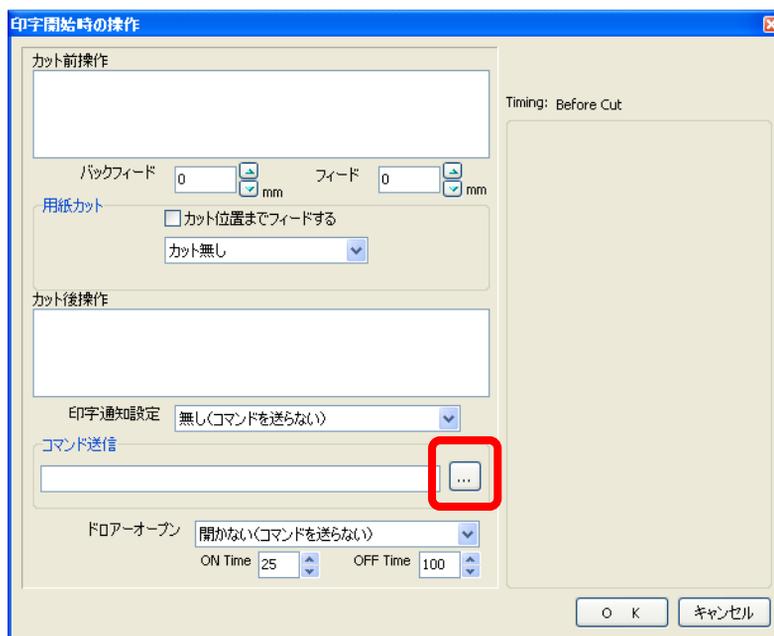


Fig 15: Operation dialogue at end of page

2. Click on logo printing from list, designate pattern No.(0~2), click on OK.

**Reference**

Pattern No 0 ~ 2 designate pattern 0 ~ 2 logo registered in NV image Registration.

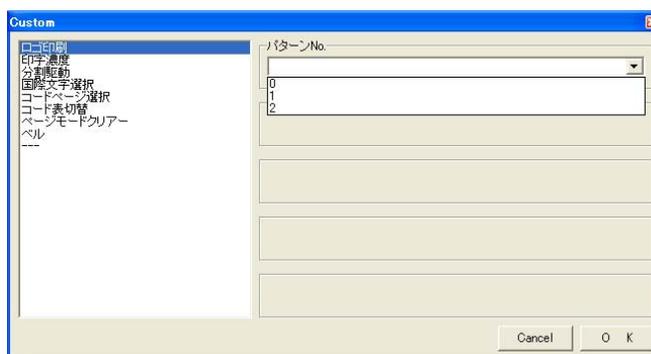


Fig 16: Custom Dialogue

3. Logo is printed at a designated timing if executing printing from application.

## Print by control font designation.

1. select Control Font (NII Control) application, size(8.5), Style (European), and describe data (please refer to [allocation character and its movement] on page 14.)

Printing Setting example

Font name: NII Control

allocation character: h (NV image 0 printing)

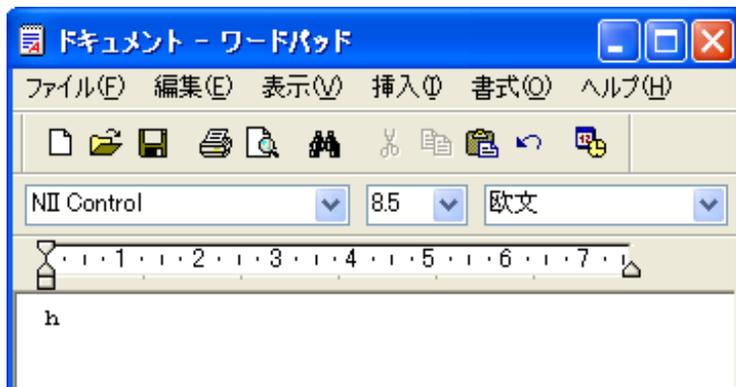


Fig 17: Example of Printing Setting – Control Font ( logo printing)

please refer to [Printing of Device Font] on page 11 as to programming.

## Paper feeding and cut, margin saving

Paper feeding and cutting are designated by each timing in [Formatting...]

3 kinds of designation as a means of paper feeding are prepared.

- fixed value by backfeed/feed.
- paper feeding of paper dependence by black mark sensing (it is precondition that black mark option must be added to printer)
- Feed print termination to cut position.

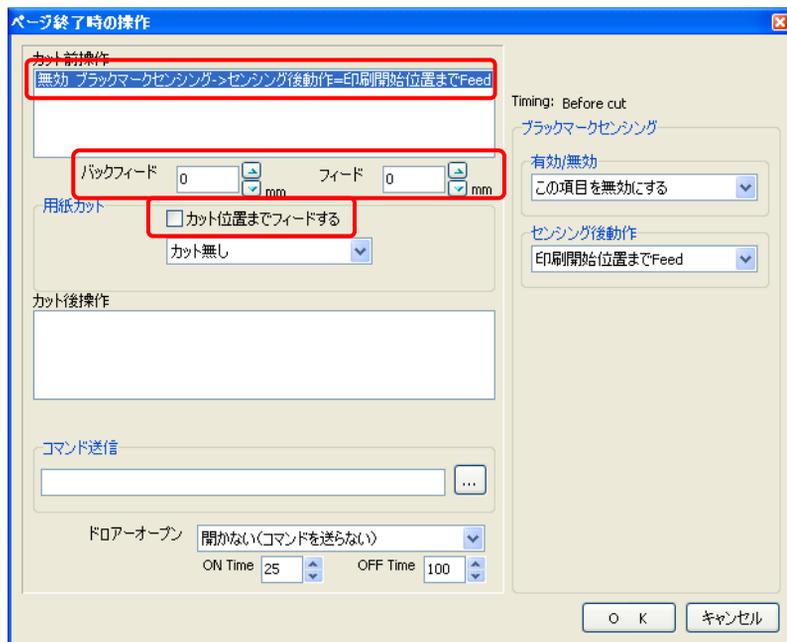


Fig 18: Designation of Paper feeding

Following conditions disable designation as to paper cut.

Conditions of designating paper cut.

if cut designated by operation at printing start:cut designation is disabled by operation at end of printing.

If cut designated by operation at page start:cut designation is disabled by operation at page end.

if cut designated by operation at page end : cut designation is disabled by operation at page start.

if cut designated by operation at print end: cut designation is disabled by operation at print start.



Designation is effective by releasing each condition.

# How to use NExD, Reference

Margin length for margin saving at paper top will be short by selecting saving for margin item in [Formatting...]



Fig 19: Designation of Margin

**reference** As back feed activated before printing, if margin saving is designated , Printing time will be longer.

## Drawer Control

Drawer is controlled as follows:

- Setting by Printer Property: control drawer before/after document or page.
- Selecting by control font: control drawer with control font.

### Setting by Printer Property

1. open formatting window, click on operation button of desired timing to control drawer.

- Operation at Printing start
- Operation at Page start
- Operation at Page end
- Operation at Printing end



Fig 20: Formatting... Window

# How to use NExD, Reference

2. Select drawer open 1(2pin)/drawer open 2(5pin) from drawer open dialogue, designate ON Time, OFF Time.

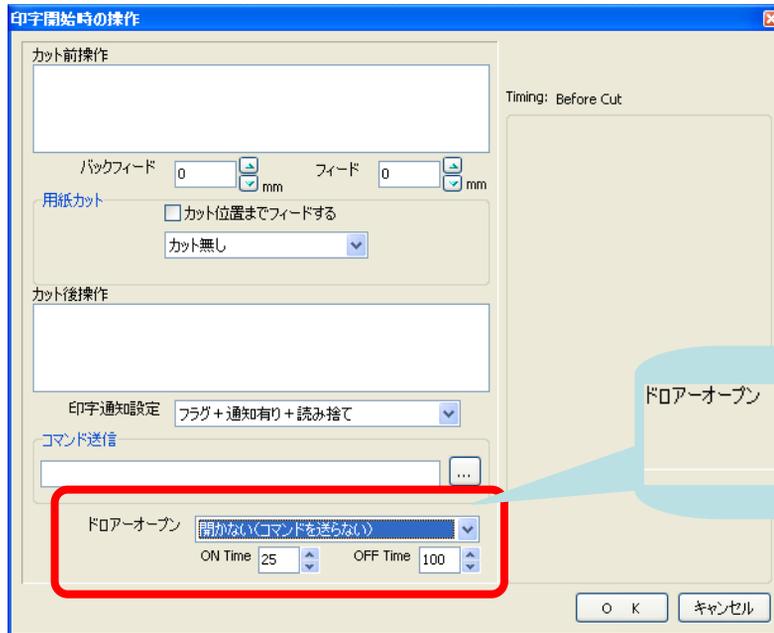


Fig 21: Dialogue for operation at printing start

3. To activate printing from application enable drawer control at designated timing.

## Print by designating control font

1. Selecting Control Font (NII Control) from application, size(8.5), style (European) describe data (please refer to [allocation character and its movement] on page 14.)

Example for Printing setting

Font name: NII Control

Allocation character: A (drawer open 2pin 50ms)

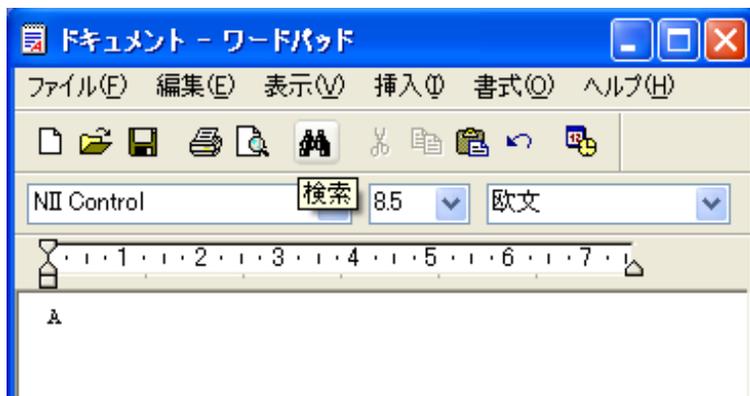
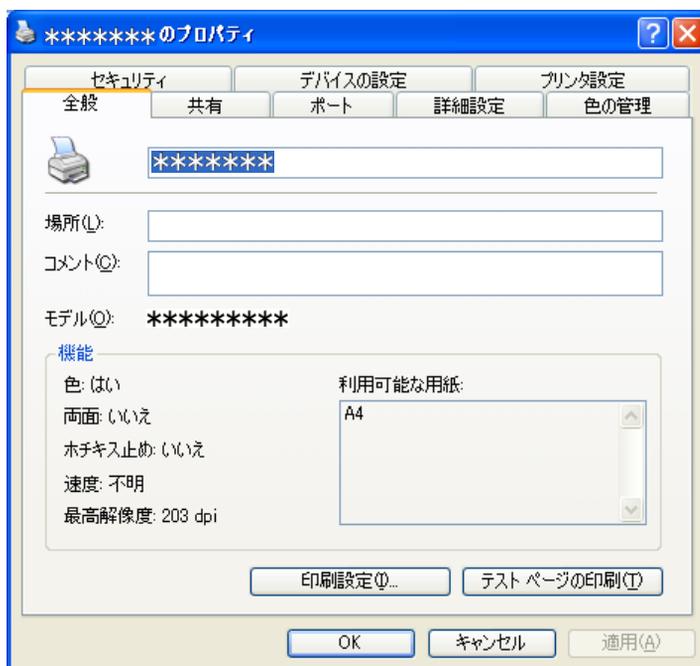


Fig 22: example for printing setting – control font ( drawer control)

Please refer to [Printing of Device Font] on page 11 for programming.

## Property

Please set as follows in Property.



Tab	Brief overview
General	Printer name, printing setting, Test printing
Common	Common Setting of printer
Port	Set Port
Detail setting	Designate details at printing
Color control	Designate color to display . (not in use for NExD)
Security	Set security of Windows
Device setting	Designate paper feed method of device and paper allocation. (not in use for NExD)
Printer setting	Display of driver's version, display printer setting window.

## Property General

Enable display/change of printer name, display of print setting screen, test page printing.

The screenshot shows the 'Printer Properties' dialog box for a printer named '\*\*\*\*\*'. The 'General' tab is selected. Annotations with arrows point to various fields and buttons:

- Printer name:** Points to the printer name field containing '\*\*\*\*\*'.
- Enable input location of printer installation:** Points to the '場所(L):' (Location) field.
- Enable comment of printer driver:** Points to the 'コメント(C):' (Comment) field.
- Driver name of printer:** Points to the 'モデル(M):' (Model) field containing '\*\*\*\*\*'.
- Print setting screen is displayed:** Points to the '印刷設定(O)...' (Print Settings...) button.
- Activate test printing of Windows:** Points to the 'テストページの印刷(T)' (Print Test Page) button.

Other visible elements include the '機能' (Features) section with options like '色: はい' (Color: Yes), '両面: いいえ' (Duplex: No), and '速度: 不明' (Speed: Unknown). The '利用可能な用紙' (Available Paper) section shows 'A4'. At the bottom are 'OK', 'キャンセル' (Cancel), and '適用(A)' (Apply) buttons.

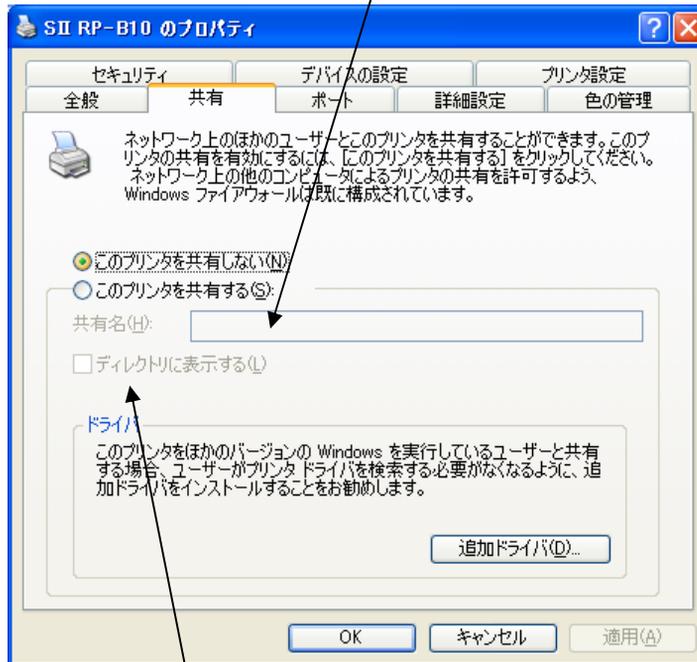
### Note

When you change printer name, please reboot machine or print spooler (Service name :Spooler) from [Control panel]→[Management tool]→[Service].

## Property Common

Set printer common

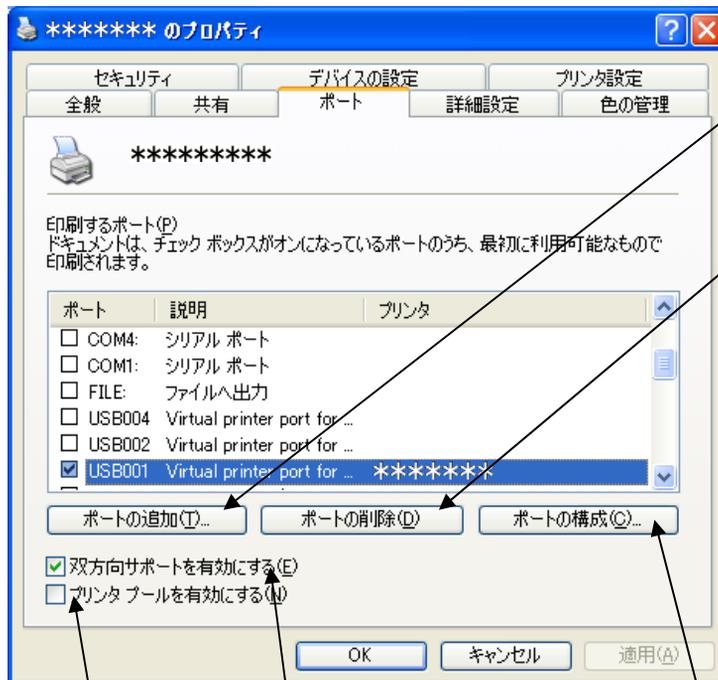
Designate common name of printer.



Determine if displayed on Active Directory.

## Property Port

Set port to use.



Add a new port

Delete port

Set port

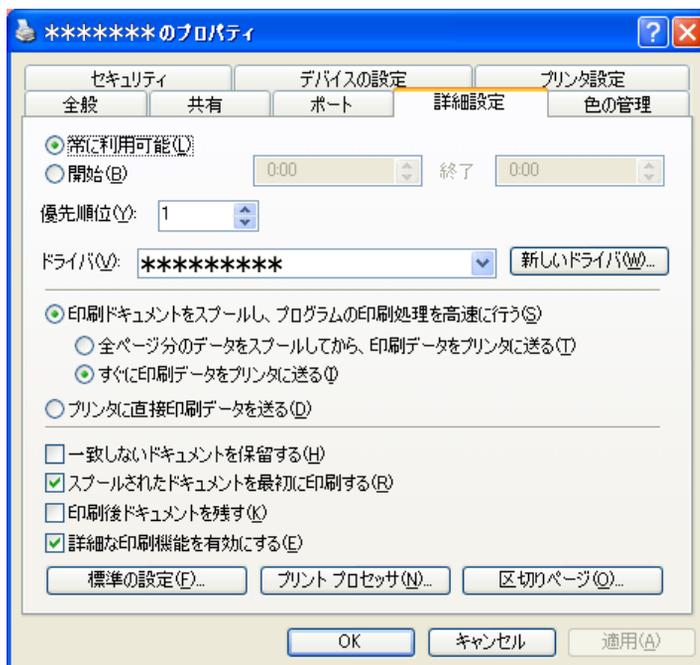
Please do not uncheck the checkbox. It disable use of NExD.

This enables check the checkbox of multiple ports.

⇒enable printing the same content with printer connected to Multiple ports.

## Property – Detailed Setting

Set details at printing. Please use by default.



Item	Description
Always available (L)	Keep printer available at any time.
Start (B)/End	Restrict available time of printer. Stay in spooler during restricting period.
Priority sequence (Y)	Display current priority setting. Higher priority document is printed faster than that of lower priority.
Driver (V)	List installed printer drivers.
Spool printing document, printing of program is processed at high speed. (S)	Set spooling before printing document.
After spooling data for all pages, transmit printing data to printer (T)	Set printing start after spooling final page of document.

# How to use NExD, Reference

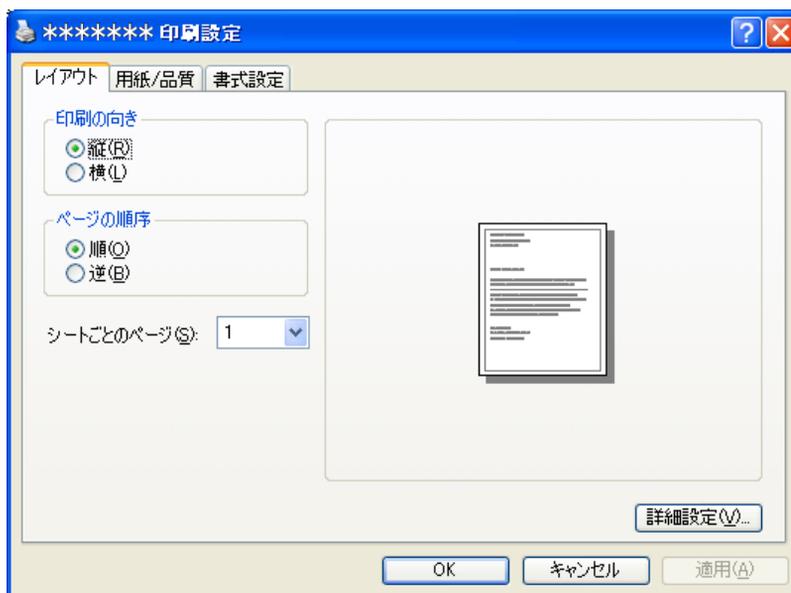
Item	Description
Transmit printing data to printer promptly. ( <u>I</u> )	Designate printing start after spooling top page of document.
Transmit printing data to printer directly. ( <u>D</u> )	Transmit to printer without spooling document.
Hold unmatched document ( <u>H</u> )	Before transmitting document to printer, confirm printer setting by spooler, check against document setting, in case information is unmatched, document is held in spooler.
Print spooled document at first. ( <u>R</u> )	If [Print spooled document at first] is ON, when spooler judges a next order to print, even if spooled document at time of spool completion is lower order against document during spool, the spooled document is printed on a priority basis. Additionally, in case there is no document completely spooled, spooler prints the largest one among documents during spool on a priority basis. If [Print Spooled Document at first] is OFF, since spooler prints document based on priority basis, even if there is a spooled document, if the other document during spool is set higher priority than the spooled document, the document during spool is printed on priority basis.
Leave document after printing. ( <u>K</u> )	Since the document after printing is left in printing spooler, a prompt reprint is enabled.
Activate detailed print function ( <u>E</u> )	Document is transmitted with MetaFileData type(EMF), detailed function such as page order, booklet printing, number of page per sheet etc is enabled. When problem with compatibility occurred, please disable this function.
Standard Setting	Click in case of making print setting as standard.
Print Processor	Click when designating variety of data. Normally it is not necessary to change predetermined print processor and variety of data.
Partition page	Not available.

## Property – Printer Setting

Reboot window of printer setting, display each file version of driver

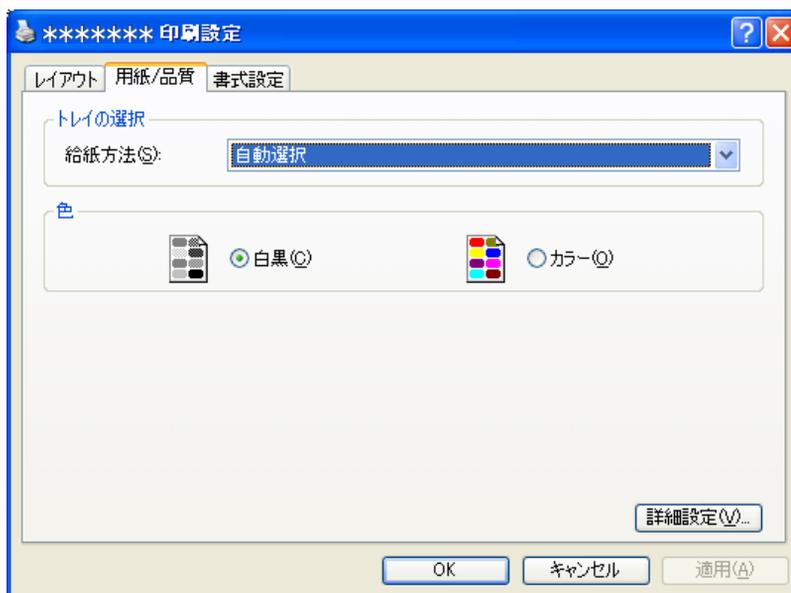


## Print Setting - Layout



Item name	Value
Print direction	Vertical (print vertically against paper)
	Horizontal (print horizontally against paper) Text font is disabled to use. Please use Windows font.
Order of page	Order (The first page is printed at first)
	Reverse (the first page is printed at the end.)
Page per sheet	1 ( please select this one normally)
	2,4,6,9,16, (not supported )

## Print Setting – Paper/Quality

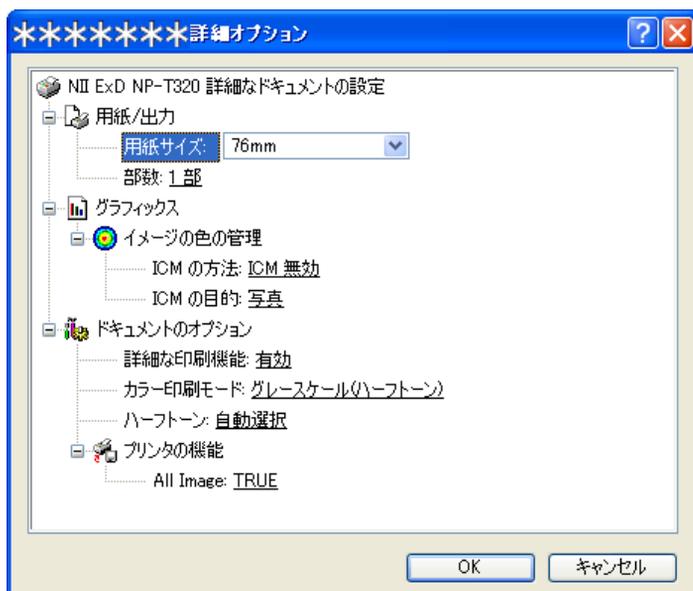


Item name	Value
Paper feed method	Automatic selection (please select this one normally.)
	Roll Paper Holder (Print from roll paper holder)
Color	Color will be grey scale (halftone).

### Note

Please set All Image of detail setting to TRUE when color set. Automatic setting from spooler may not be activated normally.

## Print Setting – Detailed Setting



Item name	Value
Paper size	Please select the paper set with printer.
Copy	Please set number of copy when copied.
Method of ICM	ICM disable
	ICM handling by host system
	ICM handling by printer
Purpose of ICM	Graphic
	Picture
	Proofreading
	Chord
Detailed print function	Enable (please select this one normally)
	Disable (print direction, order, page per sheet, number of copy are reset.)
Color print mode	Monochrome
	Grey scale ( Halftone)

**Note**

please set All Image of detailed setting to TRUE when color print mode set to Grey Scale (halftone). Automatic setting from spooler may not activate normally.

# How to use NExD, Reference

Item name	Value
Halftone	Automatic selection (please select this one normally)
	SuperCell (unidriver activate halftone processing.)
	Dithering 2x2 (unidriver activate halftone processing.)
	Dithering 4x4 (unidriver activate halftone processing.)
	Dithering 6x6 (unidriver activate halftone processing.)
	Dithering 8x8 (unidriver activate halftone processing.)
All Image	FALSE (bit image output: device font is available to use)
	TRUE ( Raster output: device font is available to use)

## Print Setting - Formatting

Display formatting...rebooting window and each file version of driver



## Print Setting - Formatting...



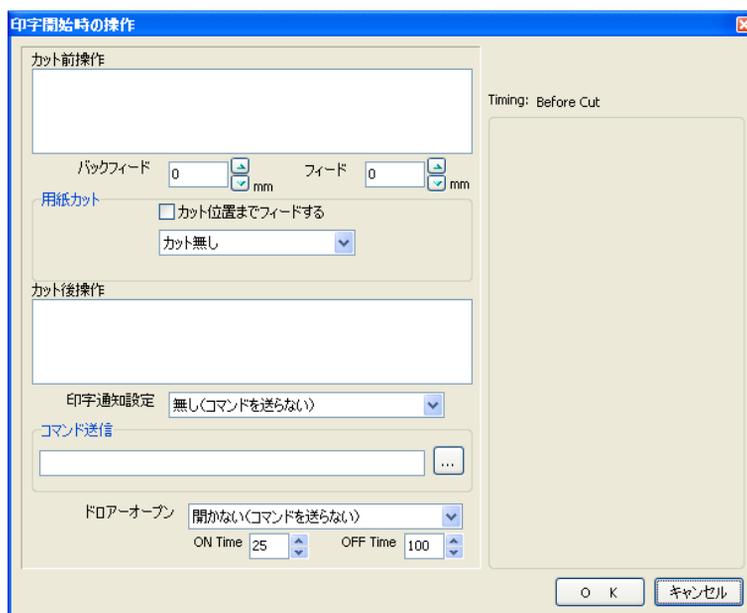
Item name	Value
Easy Setting	Enable batch change to designated setting.
<p><b>58mm POS setting</b> Clicking on easy setting display button.</p>	<p>Paper : 58mm Scale : 100% Rotation : 0° Movement at print start⇒drawer open : drawer open 1 ON Time : 25(50msec) OFF Time : 100(200msec) Print notice setting : flag+ notice +discard after read. Action at end of printing⇒feed to cut position : ON Partial cut Print notice setting : flag+notice+ discard after reading.</p>
<p><b>80mm POS setting</b> Button is displayed by clicking easy setting</p>	<p>Paper : 80mm Scale : 100% Rotation : 0° Action at print start⇒drawer open : drawer open1 ON Time : 25(50msec) OFF Time : 100 (200msec) print notice setting : flag +Notice +discard after reading. Action at end of print⇒feed to cut position : ON Partial cut Print notice setting : flag + notice + discard after reading.</p>



# How to use NExD, Reference

Item name	Value
Printer initialization	True (please select this one normally.)
	False (when initialization not preferred)
Printing speed	Print speed setting ( speed priority↔print quality priority) 5 steps.
Margin	Standard
	Saving
Density adjustment	Standard (please select this one normally )
	Dark (please select for thick paper and color-dulling paper)
	Light (please select for thin paper and non color-dulling paper)
Water mark	Select position to print superimposed image registered in Pattern 0 of NV image. Please refer to [water mark print] on page 21 for detail.
Scale	25%~100%
Rotation	0° /90° /180° /270° Please refer to [rotation print] on page 19 for detail.
Setting disable	Selecting TRUE disable all the content of formatting (except for scale, rotation )

## Print Setting - Formatting... - operation at starting print



Item name	Value
Drawer open	Not open (not to send command) Drawer open1 Drawer open2 Please refer to [drawer control] on page 28 for detail.
Back feed	0-31.875mm
Feed	0-31.875mm
Feed to cut position	ON/OFF
Paper cut	No cut
	Partial cut
	Full cut

# How to use NExD, Reference

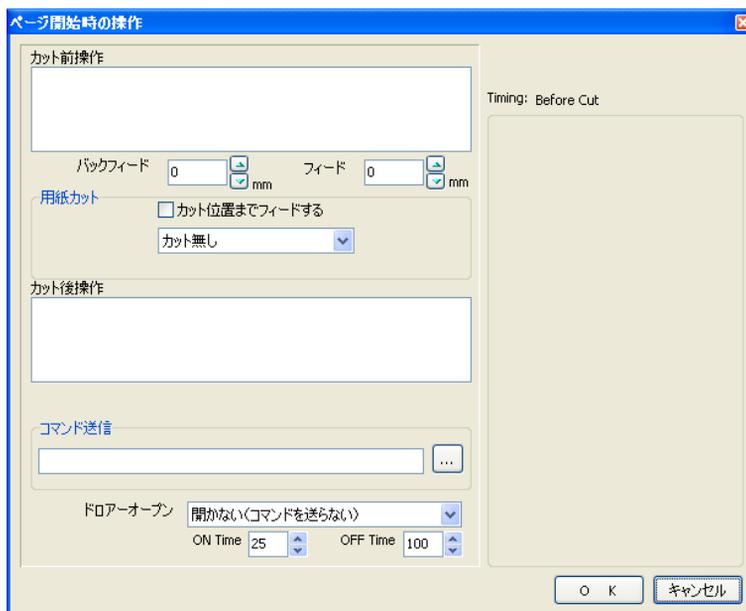
Item name	Value
Print notice setting *please make the same setting even for operation at end of printing if designated except for [without].	Without (not to transmit command )
	Flag + discard after reading
	Flag + not to discard after reading
	Flag + with notice + discard after reading
	Flag + with notice + not to discard after reading
	Flag + buffering + discard after reading
	Flag + buffering + not to discard after reading
	Flag + buffering + notice + discard after reading
	Flag + buffering + notice + not to discard after reading
Command transmitting	Direct input/edit printer command, or display Custom dialogue from [...] button to make simple input.

**note**

Due to exclusive condition as to paper cut, status incapable of setting may take place.

Please refer to [paper feed and paper cut, margin saving] on page 26 for details.

## Print Setting - Formatting... - Operation at page start

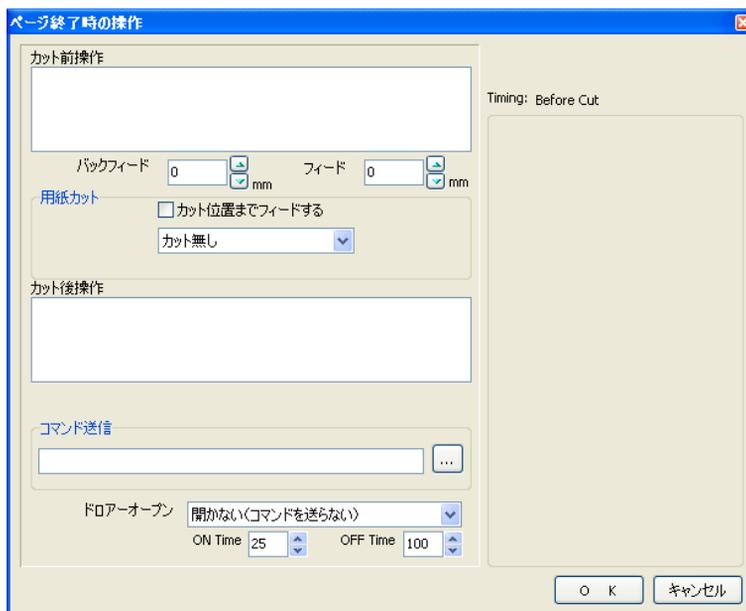


Item name	Value
Drawer Open	Not open (not to transmit command) Drawer open1/drawer open2 Please refer to [drawer control] on page 28 for detail.
Back feed	0-31.875mm
Feed	0-31.875mm
Feed to cut position	ON/OFF
Paper cut	No cut
	Partial cut
	Full cut
Command transmitting	Directly input/edit printer command, or display Custom dialogue from [...] button to make simple input.

### Note

Due to exclusive condition as to paper cut, status incapable of setting may take place.  
Please refer to [paper feed and paper cut, margin saving] on page 26 for more detail.

## Print Setting - Formatting... - Operation at end of page

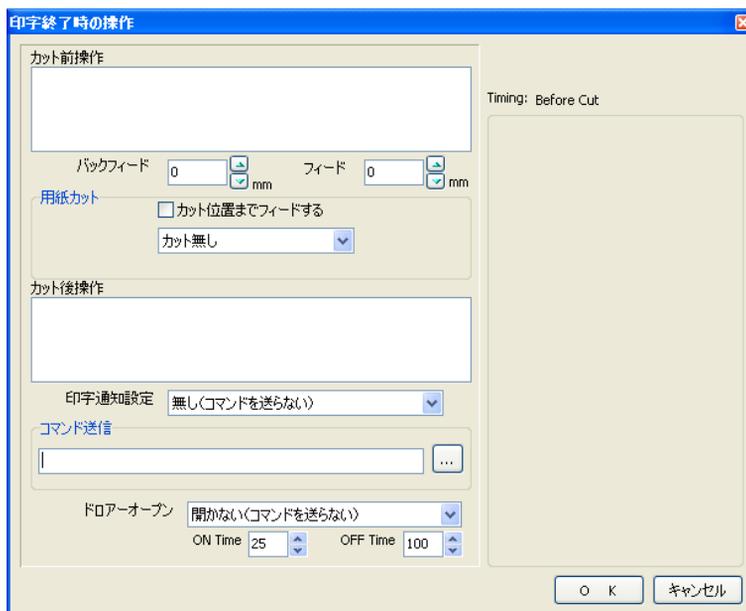


Item name	Value
Drawer open	Not open (not to send command) Drawer open 1/drawer open 2 Please refer to [drawer control] on page 28 for detail.
Back feed	0-31.875mm
Feed	0-31.875mm
Feed to cut position	ON/OFF
Paper cut	No cut
	Partial cut
	Full cut
Command transmitting	Directly input/edit printer command, or display Custom dialogue from [...] button to make simple input.

### Note

Due to exclusive condition as to paper cut, status incapable of setting may take place.  
Please refer to [paper feed and paper cut, margin saving] on page 26 for detail.

## Print Setting – Formatting... - Operation at end of printing



Item name	Value
Drawer Open	Not open (not to send command)/ Drawer open1/drawer open2 Please refer to [drawer control] on page 28 for detail.
Back feed	0-31.875mm
Feed	0-31.875mm
Feed to cut position	ON/OFF
Paper cut	No cut
	Partial cut
	Full cut

# How to use NExD, Reference

Item name	Value
Print notice setting *please make the same setting even for operation at print start if designated except for [without]	No ( not to send command)
	Flag + to discard after reading
	Flag + not to discard after reading
	Flag + notice + to discard after reading
	Flag + notice + not to discard after reading
	Flag + buffering + to discard after reading
	Flag + buffering + not to discard after reading
	Flag + buffering + notice + to discard after reading
	Flag + buffering + notice + not t discard after reading
Command transmitting	Directly input/edit printer command, or display Custom dialogue from [...] button to make simple input.

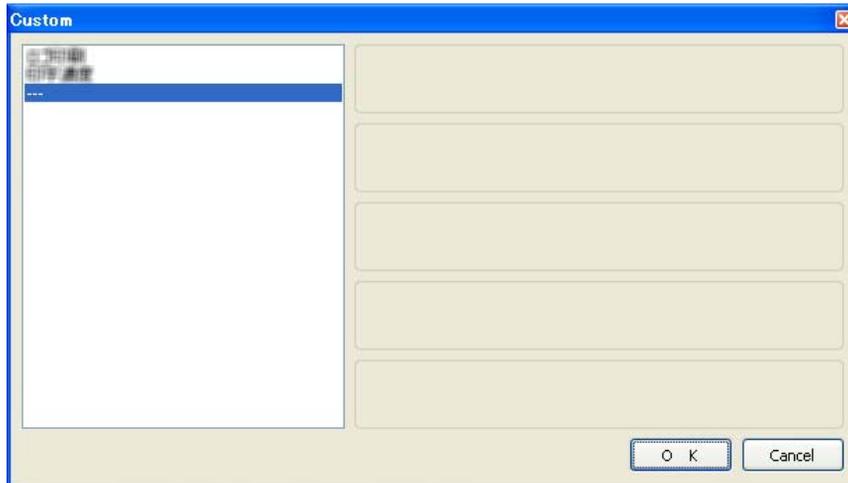
**Note**

Due to exclusive condition as to paper cut, status incapable of setting may take place.

Please refer to [paper feed and paper cut, margin saving] on page 26 for detail.

## Print Setting - Formatting... - Operation at\*\*\* - Custom dialogue

Please click command desired to issue from list at left side, addition of command is enabled by Clicking on [OK] button after setting parameter setting.

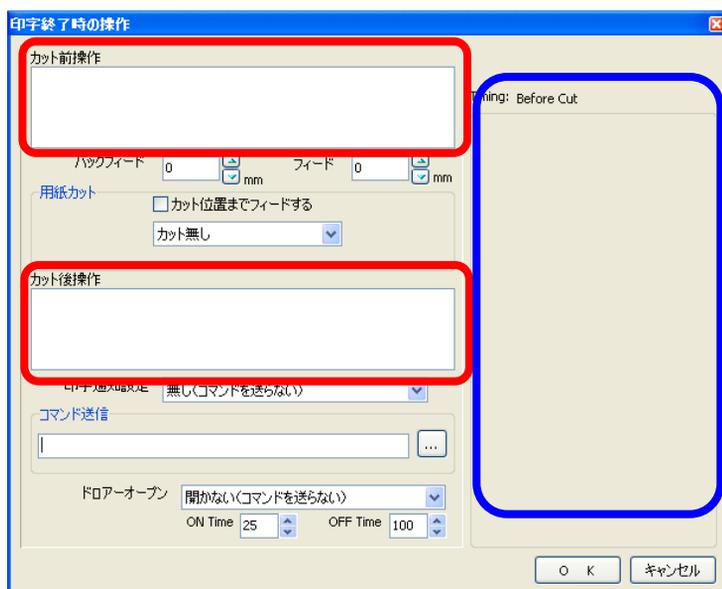
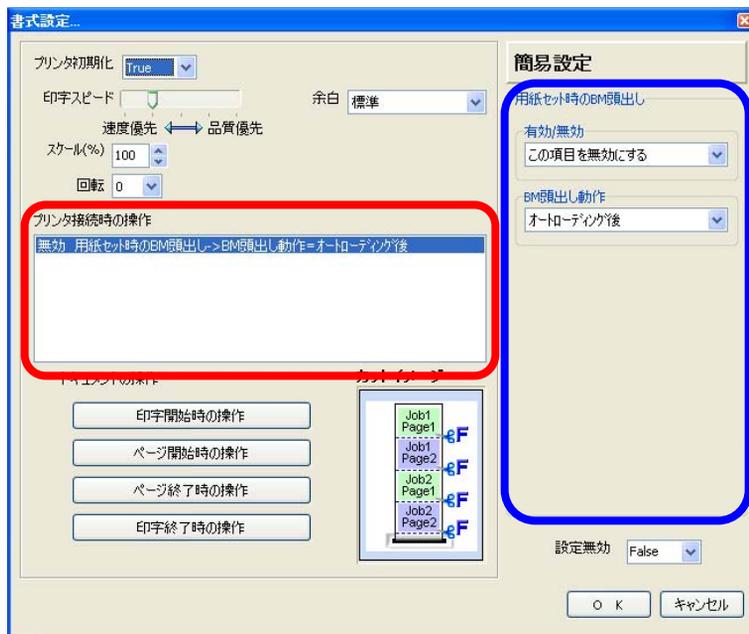


## Print Setting – Formatting... Extended Property

As extended property, operation at connecting printer, operation of each document, Operation before and after cutting are accommodated.

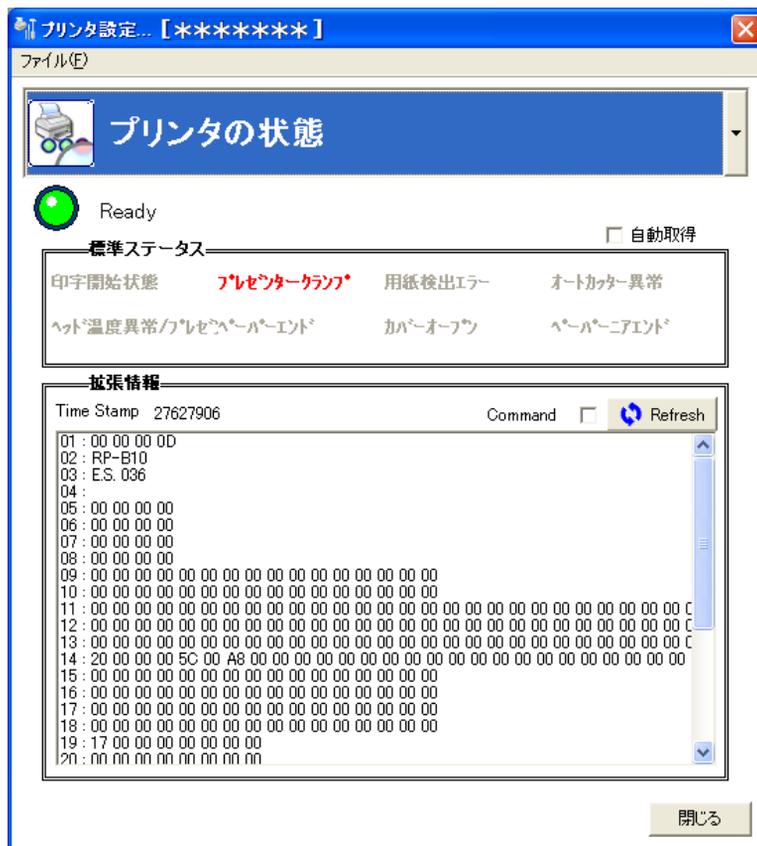
As to the setting method, each item is displayed in setting area (part surrounded with a blue frame) at right side by clicking on a target property in extended property (part surrounded with a red frame).

\*As to operation at connecting printer, the content set from standard setting of detailed setting.



## Printer Setting – Status Viewer

Shows status of printer and information of printer.



Item name	Value
Auto acquisition	Renew standard status at every 50msec.
Time Stamp	Acquisition time of selected extended-information is shown by elapsed time after Windows rebooted.
Command	Issue request command in re-acquisition of extended information.
Refresh	Activate re-acquisition of extended information.

# How to use NExD, Reference

**Extended information: please refer to product specifications of printer for detailed content.**

Type ID	Data size	Content
Type 1	4 byte (fixed)	Extended status 1st byte: undefined 2nd byte: undefined 3rd byte: undefined 4th byte: (least significant 4 bit): printer receipt buffer remainder [KBYTE]
Type 2	32 byte (delimiter)	Model name
Type 3	8byte (fixed)	F/W (Firmware) version
Type 4	8 byte (fixed)	Boot version
Type 5	4byte (fixed)	Reserved
Type 6	4byte (fixed)	Head current-carrying dot line number
Type 7	4byte (fixed)	Running dot line number
Type 8	4byte (fixed)	Cutting number
Type 9	16byte (fixed)	<user maintenance counter>:head conducting dot line number, running dot line number, cutting number, reserved>
Type10	16byte (fixed)	Reserved
type11	64byte(delimiter)	Undefined
type12	32byte(delimiter)	Undefined
type13	32byte(delimiter)	Undefined
Type14	32byte (fixed)	Reserved
Type15	16byte (fixed)	Undefined
Type16	16byte (fixed)	Undefined
type17	16byte (fixed)	Undefined
type18	16byte (fixed)	Undefined
type19	8byte (fixed)	Print End Notice :describe job ID, end status at end of document by designation of print notice setting. High4byte=job ID, low4byte end status
Type20	8byte (fixed)	Reserved
type21	8byte (fixed)	Undefined

# How to use NExD, Reference

Type ID	Data size	Content
Type22	8byte (fixed)	Undefined
Type23	8byte (fixed)	Undefined
Type24	4byte (fixed)	Undefined
Type25	4byte (fixed)	Transmit complete notice:describe job ID completed transmitting.
Type26	4byte (fixed)	Reserved
Type27	4byte (fixed)	Undefined
Type28	2byte (fixed)	Reserved
Type29	2byte (fixed)	Undefined
Typ30	2byte (fixed)	Undefined
Type31	2byte (fixed)	Communication status information:USB:0x0000fixed. COM:1st byte CTS 2nd byte DSR *stamp acquisition time of final signal status to renew flag.

## Printer Setting – setting of printer

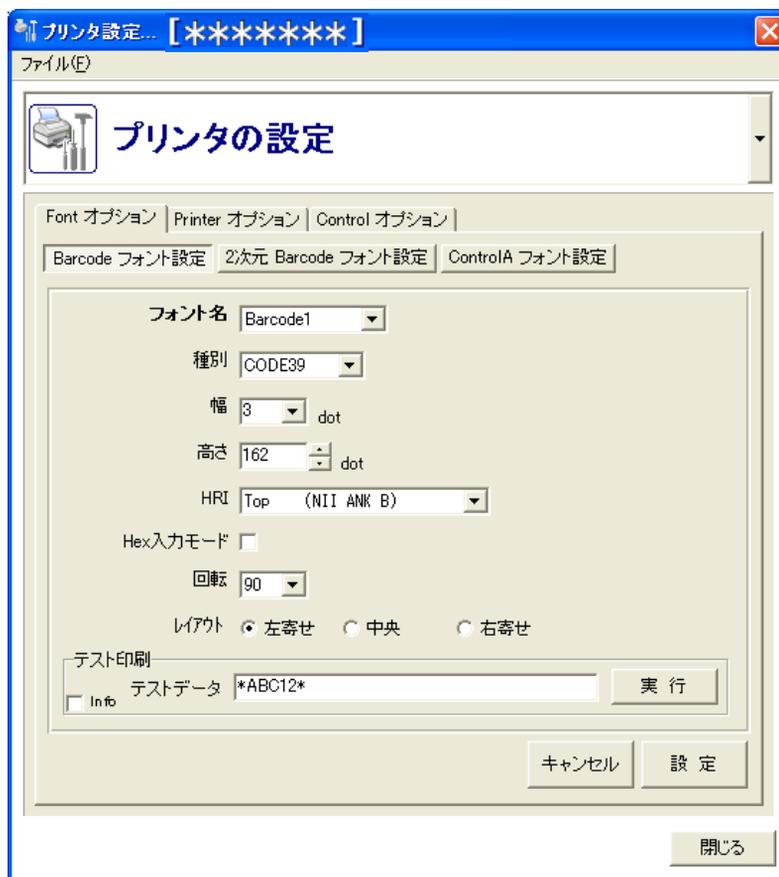
make each setting as Font option, Printer option, Control option.

### Font Option (Barcode font setting)

#### Set barcode font.

Barcode font is used after registering barcode type and size in property beforehand.

NExD enable a registration of setting for 10 kinds(NII Barcode1~10).



Item name	value
Font name	Select barcode font (NII Barcode1~10) to configure
Type	Select barcode type (UPC-A/UPC-E/EAN13/EAN8/CODE39ITF/CODABAR/CODE128/CODE 93) . Default setting is UPC-A
Width	Set element width Show barcode's fine element width by dot. Configurable range is 2 ~ 4, Default value is 3

# How to use NExD, Reference

Item name	Value
CODABAR — Start Bit	Designate start bit character of CODABAR. Configurable range is A~D, default setting is A.
CODABAR — Stop Bit	Designate stop bit character of CODABAR. Configurable range is A~D, Default setting is A.
Height	Designate height of element by dot. Configurable range is 1~255(dot), default value is 162.
HRI	Select position and type of HRI character (data of barcode) added to barcode. Default setting is Non.
Hex Input mode	Check in case describing data by hexadecimal code string Default setting is unchecked
Rotation	Enable to designate printing direction of barcode. Configurable range is 0° /90° /180° /270° ,default is 0°
Layout	Select layout position of barcode Default is left-justify *since this selection is reflected other than barcode, please declare layout position again by control font after changing.
Test printing – test data	Input data to make a test printing.
Test printing - execution	Activate barcode printing by data input into test data.
Info	Printed including setting content in test printing by check.
Setting	Store current status.
Cancel	Return to status before edit

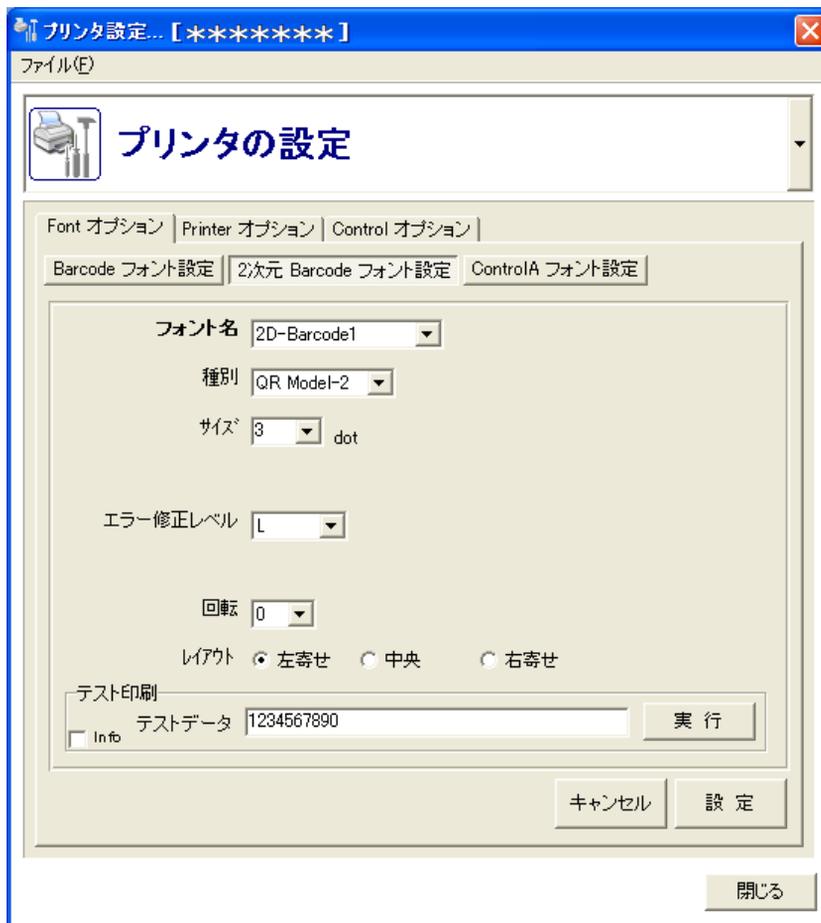
# How to use NExD, Reference

## Font Option (2dimensional Barcode Font Setting)

set 2D barcode font.

2D barcode font is used after registering type and size of 2D barcode in property beforehand.

NExD is capable of registering a setting of 5 kinds(NII 2D-Barcode 1~5)



Item name	Value
Font name	Select 2D-barcode font (NII 2D-Barcode1~5) to configure.
Type	Select type (QR model-2/PDF417) of 2D-Barcode. Default setting is QR Model-2
Size	Set size of 1 module. Configurable range is : PDF417 selected: 2~4, default setting is 3 QR Model-2 selected: 2~8, default setting is 3.

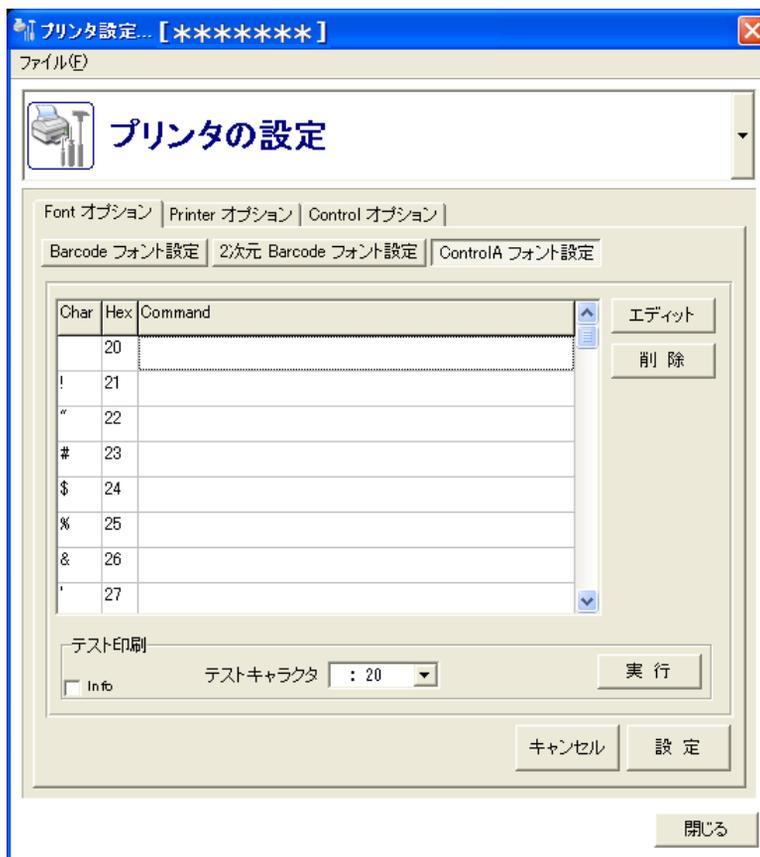
# How to use NExD, Reference

Item name	Value
PDF417-height ratio (X=1:Y)	Designate height ratio of PDF417. Configurable range is 1~6, default setting is 6.
PDF417 – error correction level	Designate error correction level of PDF417. Configurable range is Auto/0~8, default setting is Auto.
QR Model2 – error correction level	Designate error correction level of QR Model 2. Configurable range is L/M/Q/H, default setting is L.
PDF417 – ECC percent	Designate ECC percent of PDF417. Configurable range is 0~200, default setting is 0
Rotation	Enable designating print direction of barcode. Configurable range is 0° /90° /180° /270° ,default setting is 0°
Layout	Select layout position of barcode Default setting is Left-justify *since this designation is reflected other than 2D-barcode, please declare layout position again by control font after changing.
Test printing – test data	Input data to conduct a test printing.
Test printing - execution	Print 2D-barcode by data input into test data.
Info	Print is conducted including setting content in test printing by checking.
Configuration	Store a current status.
Cancel	Return to status before edit

# How to use NExD, Reference

## Font Option (NII Control A font setting)

configure control font A



Item name	Value
Command	Input printer command by hexadecimal string.
Edit	Enable input of Command list of list under selection. *change Enter key or selecting cell to determine input.
Delete	Clear Command list of list under selection.
Test printing – test character	Select character to conduct test printing.
Test printing - execution	Print command designated by test character.
Info	Print is activated including setting content in test printing by checking.
Configuration	Store current status
Cancel	Return to status before edit

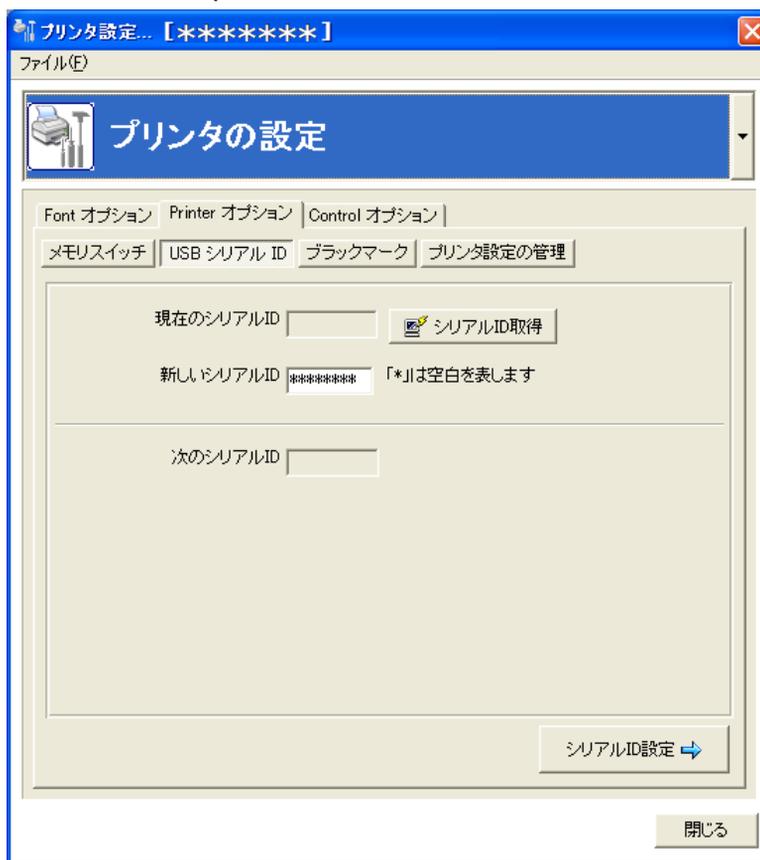
## Printer Option (Memory Switch ) configure memory switch of printer



Item name	Value
Target printer	Show model name and version of printer currently connected.
Reading from printer	Read current setting content of printer
Printing set content	Print current setting content of printer
Ex-factory status	Set to ex-factory status
Interface	Set interface to selected content.
Bit/sec	Set to selected baud rate
Write to printer	Send configured content to printer, change configuration of printer.

# How to use NExD, Reference

## Printer Option (USB Serial ID) configure USB Serial ID of printer



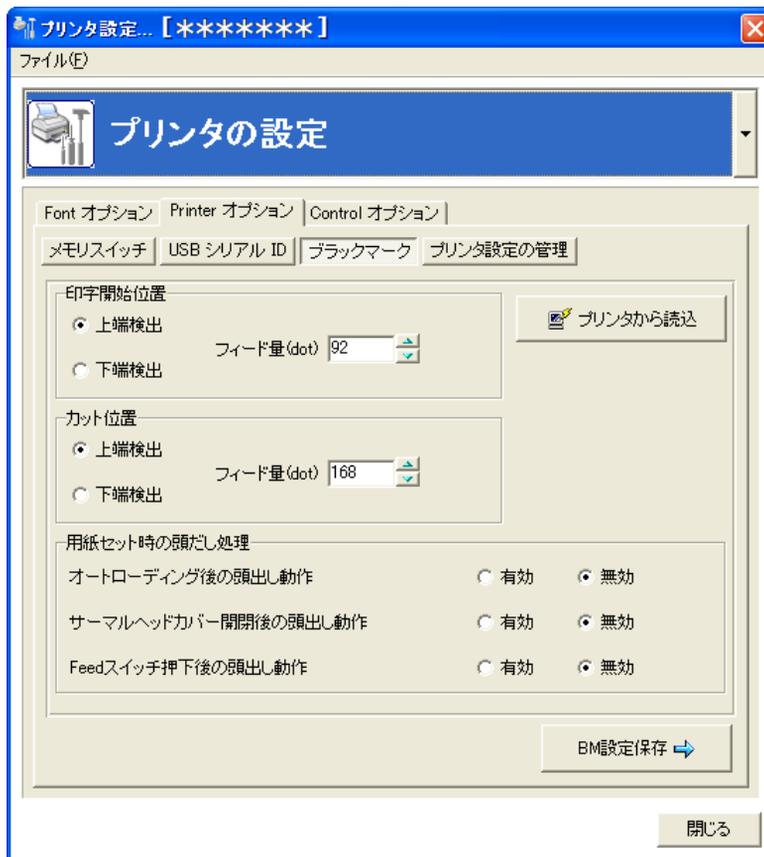
Item name	Value
Serial ID acquisition	Acquire USB serial ID of printer connected currently
Current serial ID	Show USB serial ID of currently connected printer
New serial ID	Designate a new USB serial ID *blank is shown with [*] *blank designation enable USB serial ID clear *character capable of being input is only alphanumeric.
Next serial ID	Show USB serial ID at next rebooting.
Serial ID configuration	Send designated USB serial ID to printer to change printer setting.

# How to use NExD, Reference

## Printer Option (Black Mark)

Set a black mark of printer.

\*black mark sensor is an option parts of printer.



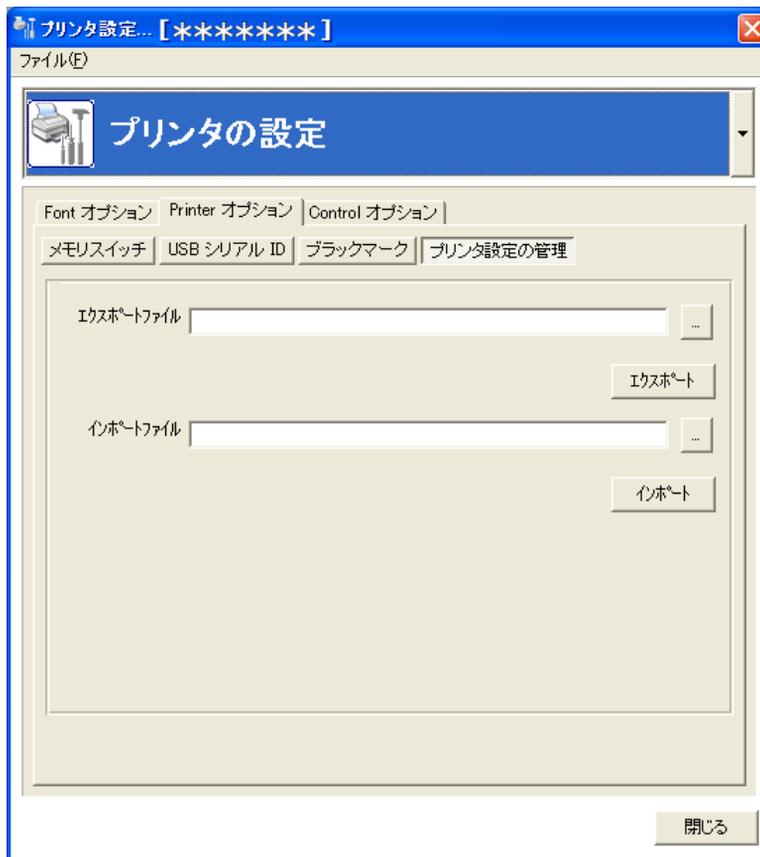
Item name	Value
Reading from printer	Acquire black mark setting of currently connected printer.
Print start position	Effective when position alignment after sensing black mark is designated to print start position. *this value is used for black mark sensing of driver.
	Upper edge detection Activate mark detection at upper edge of black mark.
	lower edge detection Activate mark detection at lower edge of black mark.
Feed quantity	Designate position correction after sensing black mark. Configurable range is -32767 ~ 32767 *available range varies on each printer.

# How to use NExD, Reference

Item name	Value						
Cutting position <table border="1" data-bbox="254 285 482 627"> <tr> <td data-bbox="254 285 482 382">Upper edge detection</td> <td data-bbox="482 285 1356 382">Activate mark detection at upper edge of black mark.</td> </tr> <tr> <td data-bbox="254 382 482 479">Lower edge detection</td> <td data-bbox="482 382 1356 479">Activate mark detection at lower edge of black mark.</td> </tr> <tr> <td data-bbox="254 479 482 627">Feed quantity</td> <td data-bbox="482 479 1356 627">               Designate position correction after black mark sensing.                Configurable range -32767 ~ 32767                *available range varies on each printer.             </td> </tr> </table>	Upper edge detection	Activate mark detection at upper edge of black mark.	Lower edge detection	Activate mark detection at lower edge of black mark.	Feed quantity	Designate position correction after black mark sensing. Configurable range -32767 ~ 32767 *available range varies on each printer.	Effective when position alignment after black mark sensing is designated to cutting position.
Upper edge detection	Activate mark detection at upper edge of black mark.						
Lower edge detection	Activate mark detection at lower edge of black mark.						
Feed quantity	Designate position correction after black mark sensing. Configurable range -32767 ~ 32767 *available range varies on each printer.						
Cue handling at setting paper. <table border="1" data-bbox="188 730 482 1132"> <tr> <td data-bbox="188 730 482 826">Cue action after auto-loading.</td> <td data-bbox="482 730 1356 826">Determine whether or not to detect black mark when paper is auto-loaded.</td> </tr> <tr> <td data-bbox="188 826 482 1000">Cue movement after thermal head cover open/close</td> <td data-bbox="482 826 1356 1000">Designate whether or not to conduct black mark sensing when opening/closing the cover.</td> </tr> <tr> <td data-bbox="188 1000 482 1132">Cue movement after holding down Feed switch.</td> <td data-bbox="482 1000 1356 1132">Designate whether or not to conduct black mark sensing after holding down Feed button of printer.</td> </tr> </table>	Cue action after auto-loading.	Determine whether or not to detect black mark when paper is auto-loaded.	Cue movement after thermal head cover open/close	Designate whether or not to conduct black mark sensing when opening/closing the cover.	Cue movement after holding down Feed switch.	Designate whether or not to conduct black mark sensing after holding down Feed button of printer.	Designate action of printer when paper set.
Cue action after auto-loading.	Determine whether or not to detect black mark when paper is auto-loaded.						
Cue movement after thermal head cover open/close	Designate whether or not to conduct black mark sensing when opening/closing the cover.						
Cue movement after holding down Feed switch.	Designate whether or not to conduct black mark sensing after holding down Feed button of printer.						
BM (Black Mark) setup saving	Transmit a designated black mark setup to printer to change setup of printer.						

## Printer Option (management of printer setup)

as printer management, content of driver and printer setup is exported to file/  
imported from file.

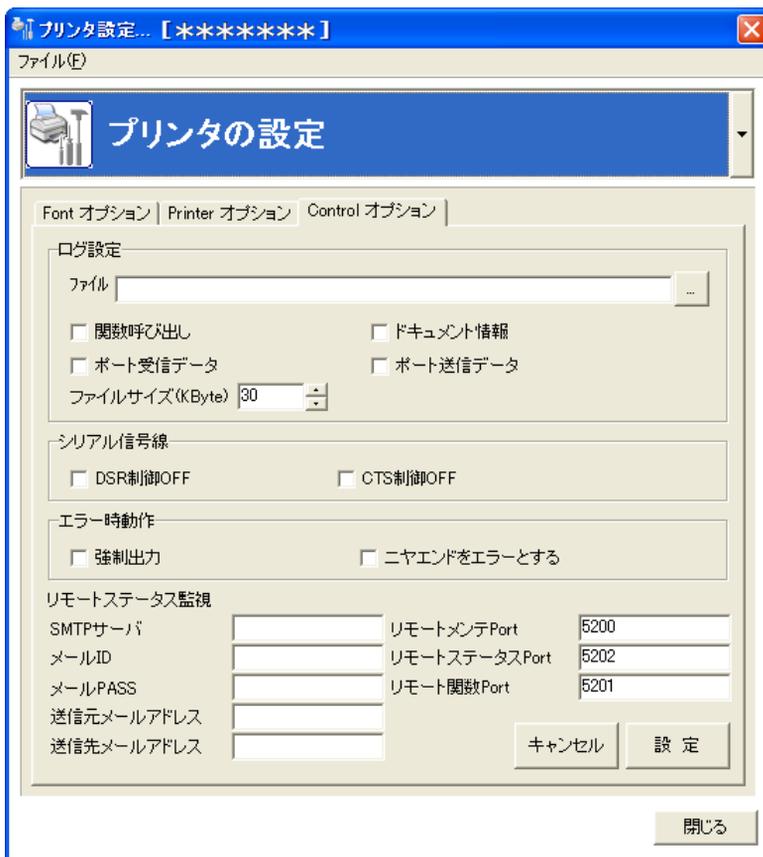


Item name	Value
Export file	Designate file name saving a setup of current printer and driver by absolute path. Clicking on [...] button enable designation from saving dialogue.
Export	Export a printer setup information and driver setup information to file name designated in export file.
Import file	Designate file name of printer and driver setup file (file generated by export) by absolute path. Clicking on [...] button enable designation from read dialogue.
Import	Import printer setup information and driver setup information from file designated in import file.

# How to use NExD, Reference

## Control Option

Log setup, designate movement at error.



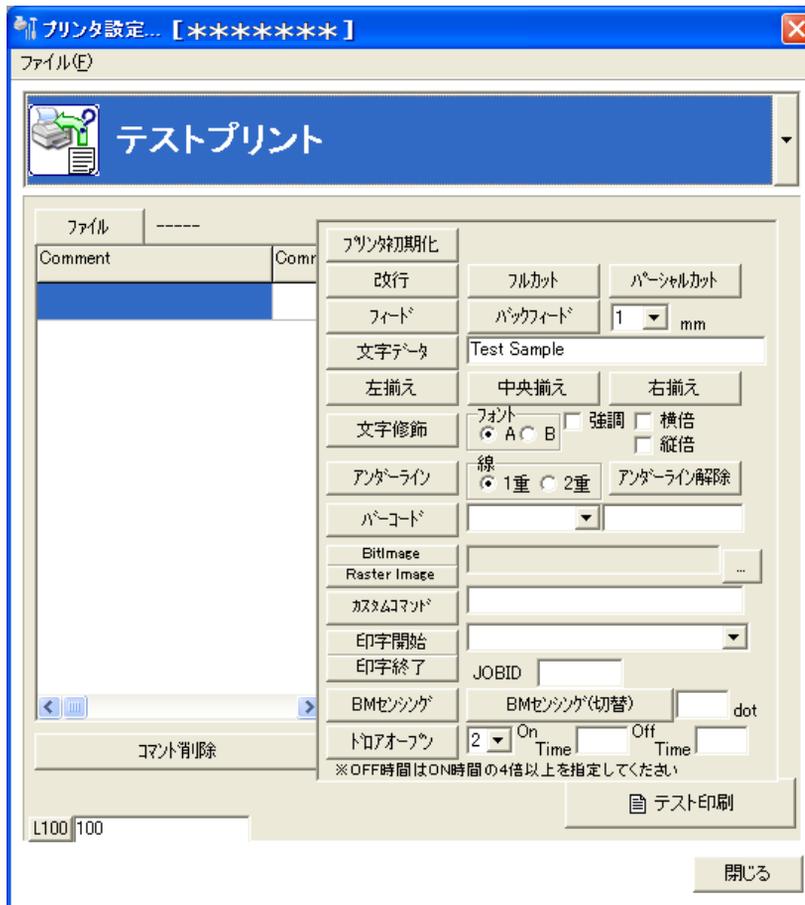
Item name	Value
Log setup	Designate when acquiring log of printer operation.
File	Designate file name to output log. Un-input does not acquire log.
Function call	Output function call and return information as output target.
Document information	Output information per document as output target.
Port receive data	Output data received from port.
Port transmit data	Output data transmitted from port.
File size	Designate maximum size of file when acquiring log.
Setup	Store a current status.
Cancel	Return to status before edit.

## Control Option

Item name	Value
Action at error	Designate action when printer has error.
Compulsory output	Enable to send data to printer even if printer has an error.
Treat near end as error	Transmitting to printer is stopped as error when detecting near end of printer. *document during printing will be printed continuously.
Serial signal line	Designate control corresponding to wiring status of serial communication.
DSR control OFF	designate when control by DSR signal line is not conducted.
CTS control OFF	Designate when control by CTS signal line is not conducted.
Remote status monitor	Designate when printer status is monitored by remote.
SMTP server	Designate SMT server to use when sending mail.
Mail ID	Designate ID when sending mail.
Mail PASS	Designate password to mail ID.
Sender mail address	Designate mail source address.
Destination mail address	Designate mail address of destination to send mail.
Remote maintenance port	Use at remote maintenance. Designate port number of TCP/IP. Default value = 5200
Remote Status Port	Use when monitoring status by using printer common Designate number of TCP/IP Port. Default value = 5202
Remote Function Port	Use when conducting function processing by using printer common. Designate port number of TCP/IP. Default value = 5201

## Printer Setting – Test Printing

Tool make test print of arbitrary image and print it.



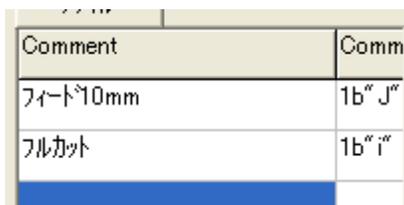
### operating instructions

#### ●create & output print sample

1. continue to add target command from command list located at right side screen.
2. [command name] and [command code] of added command is shown in grid at left side screen.
  - \*) If there is command line([command name] and [command code] desired to delete, selected command line only is deleted by selecting target command line, clicking on [command delete] button.
3. print sample created in [test printing] is output into printer.
  - \*) please be sure to build connecting properly to printer before test printing.

## Screen Instructions

- [File] menu
  - ◆[work area clear (X)] menu  
Clear print sample on grid.
  - ◆[Open (Y)] menu  
Select nsl format file, able to open.
  - ◆[save with name (Z)] menu  
save a created print sample with name in nsl format file.
- [test print] button  
Print a print sample on the grid.
- Grid at left side screen.  
added command is shown in command name + command code.  
example: paper feed 10mm + full cut.



Comment	Comm
フイート10mm	1b'' J''
フルカット	1b'' i''

- [character data] button  
please click on [character data] button after inputting character data desired to add into text box at [character data] button right side.
- [barcode] button  
please select type of barcode desired to add from combo box and click on [barcode] button after inputting into text box at [barcode] combo box right side.

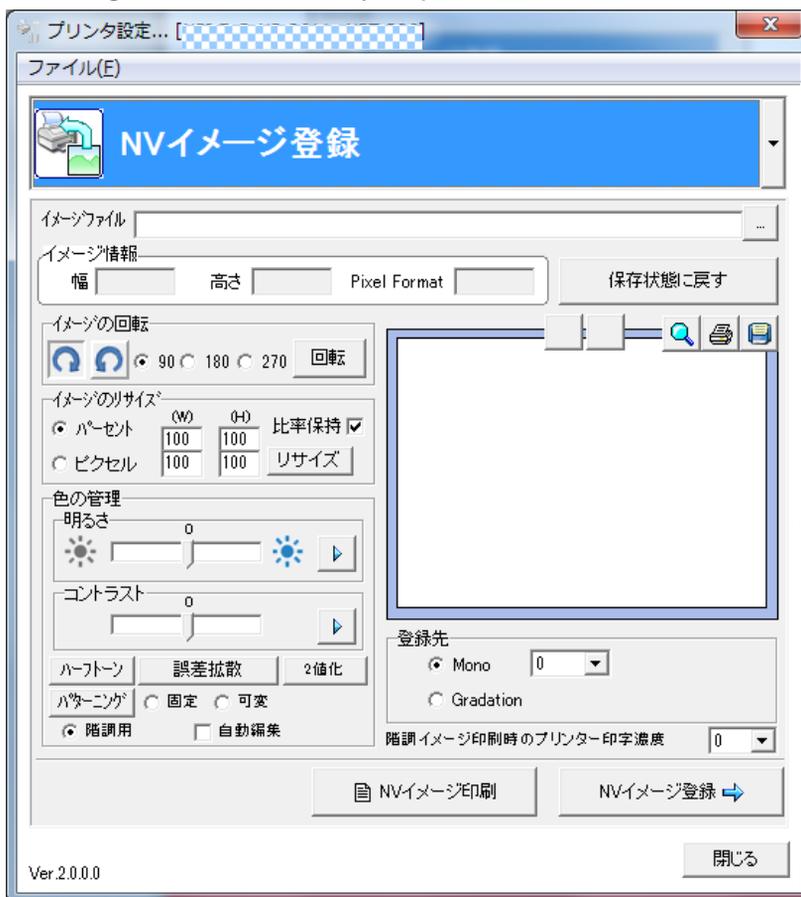
**reference** Please input data along with each barcode data condition.

- [Bit Image] button/[Raster Image] button  
Dialogue box is displayed upon clicking on [...] button.  
Please select target image. Path name is shown in text box.  
Added to the grid by clicking on [Bit Image] button/[Raster Image] button.
- [command delete] button  
move focus to command desired to delete.  
deleted by clicking on [command delete] button.

\*) Please refer to printer command on product specifications of printer for other button.

## Printer Setting – NV Image registration

A tool to register image into NV memory of printer and to conduct a test printing.



### About logo file

size of logo file to prepare varies on resolution described in printer product specifications.

Example: Printer resolution : 203dpi

width: 30mm

in case of printing 15mm height logo ,

calculate size of logo file with a following calculation.

dot equivalent value =  $25.4(1\text{inch}) / \text{resolution (dpi)}$

0.125 =  $25.4 / 203$  ;

\*rounded to four decimal place

image width (dot number) =  $\text{width (mm)} / \text{dot equivalent}$

240 =  $30 / 0.125$

image height (dot number) =  $\text{width (mm)} / \text{dot equivalent}$

120 =  $15 / 0.125$

will be a logo file of 240 x 120 dot.

## Operating Instructions

1. designate file name of image by absolute path.  
able to designate from read dialogue by clicking on [...] button .
2. select registration destination (Mono【0-2/0-255】, Gradation【0-24】, Water Mark).
4. register NV image by clicking on [NV image registration] button.

## Screen Instruction

- [NV image print] button  
When printer selects Mono as registration destination and does not correspond to 256 NV registrations:  
Print 3 patterns of registered NV bit image and water mark (Only when printer is set).  
When printer selects Mono as registration destination and corresponds to 256 NV registration:  
Print NV bit image of selected registration number.  
When blank is selected, print all of registered NV bit image.  
When printer selects Gradation as registration destination and corresponds to gray scale NV registration:  
Print gray scale NV bit image of selected register number.  
When blank is selected, print all of registered gray scale NV bit image.
- [return to storage condition] button  
return to default data.
- [undo] button  
One time delete content worked before.
- [redo] button  
return content deleted by [undo] button.
- [rotation] button  
rotate image by designated direction and angle.
- [resize] button  
resize image to designated value (percent or dot)  
\*) keep height and width ratio of image when ratio retention is checked.
- [patterning] button  
Display image by 16 gray scale.  
Fixed: Display image by 16 gray scale pattern by fixed value.  
Variable: Display image by 16 gray scale pattern depending on color generation density.  
For gray scale: Display image including gray scale value by fixed value.  
\*Display pattern after image editing when automatic-editing is checked.



Original image

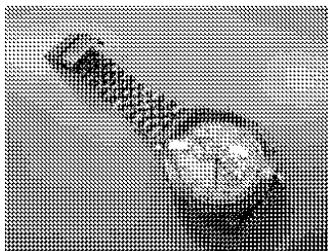


Image after converted.  
Fixed



Image after converted.  
For gray scale

# How to use NExD, Reference

- [brightness] button  
Change brightness by selected  $\pm$  value.
- [Contrast] button  
Change contrast by selected  $\pm$  value.
- [Half tone] button  
Display image converted by particular filter



Original image

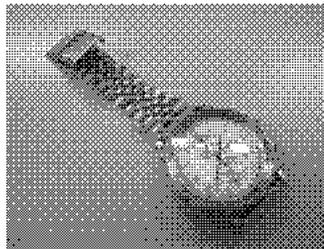


Image after conversion

- [Error diffusion] button  
Display image converted by error diffusion.



Original image

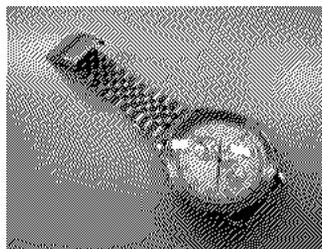


Image after converted



This tool has a simple image change function, but we recommend to design by black & white or gray scale with a dedicated tool beforehand.

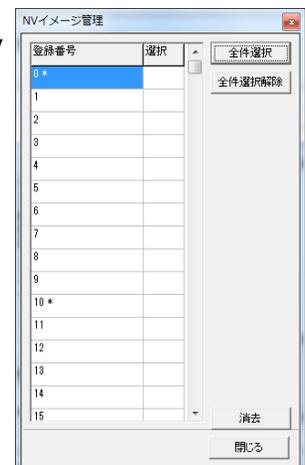
- [NV image management] button  
Display NV image management window of selected registration destination. Confirmation of registered number and saved position(only when gray scale NV image) and deletion of corresponding NV image are available on NV image management window.

\*NV image is registered to register number which has \* mark after the number when Mono.

\*NV image is registered to displayed register number when gray scale.

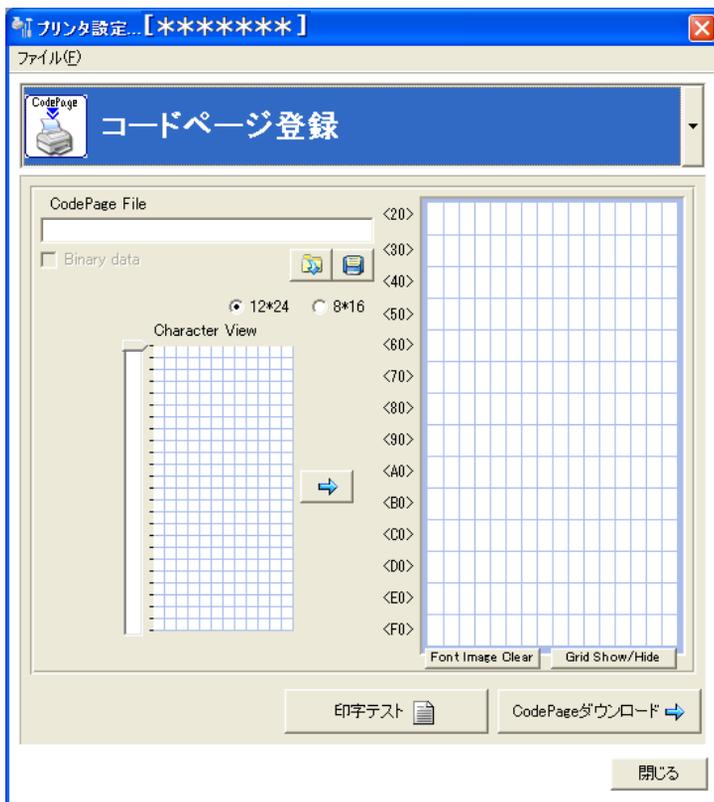
## Note

Sequential area is required for registration of large image when gray scale. Area lack error occurs when sequential area is not ensured.



## Printer Setting – Code Page registration

Tool to register and edit user code page, and to conduct a test printing.



### Operating instructions

1. designate code page file from [  ] button.  
Code page file is available for black & white bitmap file or binary file of Font A(12\*24) = 192x336, Font B(8\*16) = 128 x 224.
2. register in user code page by clicking on [Code Page download] button.

### Screen Explanation

- [  ] button  
open code page file.
- [  ] button  
save font image under edit in file name (absolute path designation) designated in Code Page File.
- [Character View]  
it will be displayed if make a double click on specific character of character list image at right side.  
edit of each character is also enabled here.  
mouse right click: white  
mouse left click: black

- [Character Size]  
Please select 12\*24 or 8\*16.  
12\*24 is treated as Font A.  
8\*16 treated as Font C.
- [Character View Image]  
Show font image under edition.  
Enlarged in Character View by double click on the specific character.  
Edition is enabled.
- [Grid Show/Hide]  
Switch display/non display of grid on character view image.
- [Code Page Download]  
[Register font image under edition to printer.
- [Printing Test]  
Print all the characters currently registered in user code page.

\*Once printing test of code page conducted, following character code table will be USER Code Page until change by command.

## Printer Setting – F/W download

Tool to download F/W to printer.



### Note

F/W updating is a service conducted under customer's responsibility. Card failure by updating is repaired at customer's expense.

### reference

When end of firmware download conducted during downloading firmware, F/W will not be downloaded correctly. Please do not end during downloading firmware.

### Operation Instruction

#### ●F/W Download ( On Line )

1. please confirm if connection to printer is established correctly in [Printing of Test Page]
2. Please acquire connecting printer information before F/W download.
3. Please designate target firmware file.
4. Please confirm if firmware file, version information are matched.
5. Please click [F/W download] button to start F/W download.

6. Once download started, ALM Lamp of Printer starts blinking.  
Then repeating light on/blinking, finally reset is executed to complete F/W download.

**reference** On the way, as timing of blinking get slower, it interprets failure in F/W download to printer, please click [cancel] button to stop transmitting. Then please turn OFF the printer power to end F/W download.

**reference** With printer downloading mandatorily, once downloaded from On-Line, printer gets freeze. At that time, please click [cancel] button to stop transmitting. Once powered off printer, end this screen to download with mandatory download procedure.

7. Once download is completed correctly, get a connecting printer information, or output self-diagnostic print to confirm firmware is written newly.

### ●F/W Download ( mandatory download)

1. please make sure that communication setup between PC and printer are matched.
2. please reboot printer at mandatory download mode.  
ALM lamp of printer start blinking.  
Please refer to product specifications of printer how to reboot at mandatory download mode.
3. Please check [Mandatory download]
4. Please designate target firmware file.
5. please be sure that firmware file and version information are matched.
6. Start F/W download by clicking [F/W download] button.
7. Once download started, Printer ALM lamp changes to ON from blinking.  
After that, light-on will be kept, finally reset is executed to complete download. Please use again once turned off printer power.

### Note

It is necessary to check mandatory output of movement at error in printer setup→Control option beforehand. If no check, F/W data may not be transmitted.

- [connecting printer information] item  
Enabled to acquire following information by clicking [Acquisition] button.
  - ◆Model Information
  - ◆F/W Version Information
  - ◆Boot Version Information
- [Firmware File :] & [Version Information] Item  
Display content of selected target firmware file.

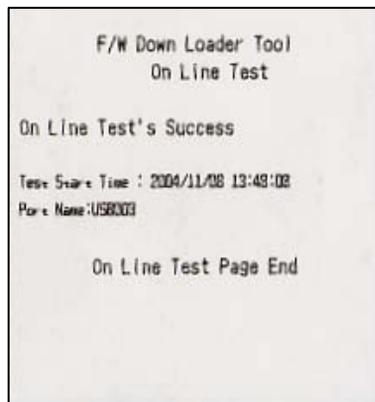
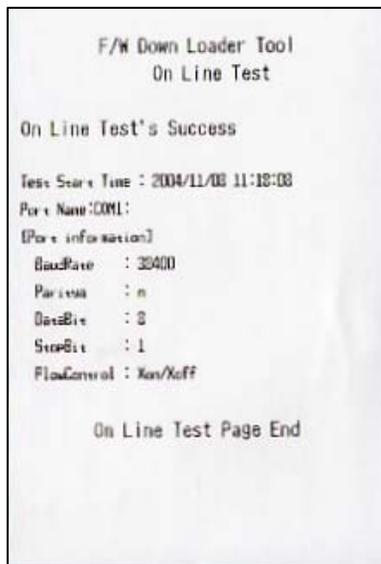
# How to use NExD, Reference

- [test page printing] button  
Conduct printing to confirm the communication setup is matched.  
following print sample is printed depending on printer driver  
communication configuration.

## Printing Sample

Serial connection

Other connection except for Serial



- [F/W download] button  
Activate F/W download
- [cancel] button  
Stop transmitting

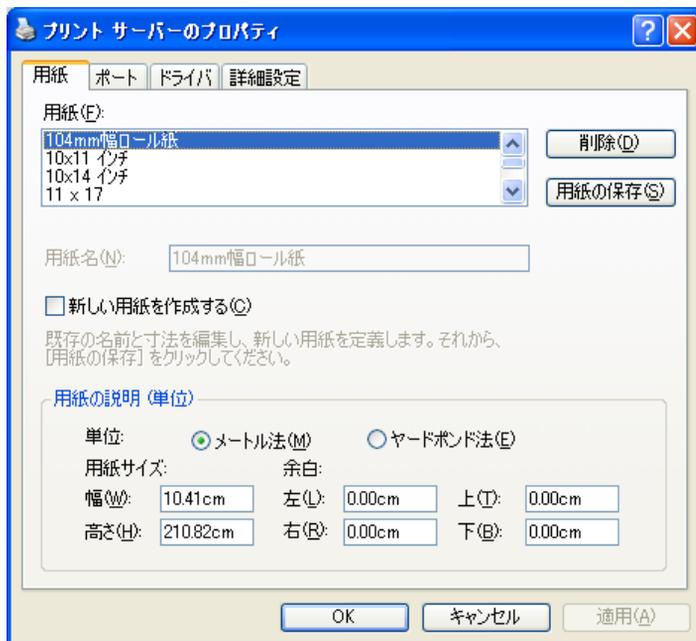
**Note** Please pay attention that F/W is not written correctly at cancel.

- [download status] bar  
display transmitting status

**Note** F/W download may not complete even the bar moves 100%.  
Please activate power OFF/ON and unplug the cable after printer  
reset.

## Making customized form

[Property of Print Server] window is displayed when executing [Property of Server (V)] command Of [File (F)] menu from (Printer & Fax) window.



1. Select form closer to a form to use, check [Make new form (C)]
2. Assign arbitrary form name, form width, height and so on.
3. Save form

### Note

Assigning duplicative form may cause deleting setup of original form.

### reference

In application supporting only form of fixed size, the same printing as preview is enabled by leveraging application once after making customized form.

## Print device font under .NET environment.

Since .NET Framework supports only True Type font and Open Type font, Device Font is disabled to use.

Thus, by using GDI function (gdi32.dll) of Win32API, Device font is enabled to use even With .NET Framework.

### 【GDI function to use】

CreateFont  
SelectObject  
DeleteObject  
TextOut

### 【How to Use】

- ① Import above-mentioned functions.
- ② Make Printing event (Print Page) of PrintDocument.
- ③ Acquire device context.  
by PrintPageEventArgs ev
- ④ Declare device font. (CreateFont, SelectObject)

Font height at this time will be:

NII FONT A = 12/48

NII ANK B = 9/36

NII ANK B = 8/32

NII Barcode\* = 8

NII Control = 8

NII ControlA = 8

NII 2D-Barcode\* = 8

- ⑤ Output by using TextOut function.  
\* Designate byte size for cbStrin argument .(not character number)
- ⑥ Open generated Font.



Provide sample output of device font from C# in sample source [DeviceFont\_CS.sln]

## How to look at Log file

Following is how to look at 1 record of Log file.

2009/03/24 14:34:39.145 <00000120,000004e4> [DOC] MonStartDocPort. entry jobid = 78

↑                    ↑                    ↑                    ↑                    ↑

Output date/time   Process ID   Thread ID                    Log partition                    Detailed information

Log partition	Content of detailed information
OUT	Data dump at port level to printer. Hexadecimal data of 16bytes and its display with character code. [OUT] 1B 21 00 1B 2D 00 1B 45 00 1B 47 00 1C 2E 1C 21 ! - E G . !
I N	Data dump at port level from printer. Output in the same format as OUT. Example [I N] 00 FF 01 00 00 00 0D
DOC	Function call related to document, output of setup content.
FNC	Function call of SDK and output of return value

### Example for output

```
2009/03/24 14:34:39.145 <00000120,000004e4> [DOC] MonStartDocPort. entry jobid = 78
2009/03/24 14:34:39.145 <00000120,000004e4> [DOC] MonStartDocPort. end
2009/03/24 14:34:39.145 <00000120,00001ed0> [DOC] StartDoc entry. Jobid = 78
2009/03/24 14:34:39.145 <00000120,00001ed0> [DOC] PaperSize = 3
2009/03/24 14:34:39.145 <00000120,00001ed0> [DOC] Color mode = 0
2009/03/24 14:34:39.145 <00000120,00001ed0> [DOC] All Image = 0
2009/03/24 14:34:39.145 <00000120,00001ed0> [DOC] Print speed = 0
2009/03/24 14:34:39.145 <00000120,00001ed0> [DOC] Print density = 0
2009/03/24 14:34:39.145 <00000120,00001ed0> [DOC] Watermark = 0
2009/03/24 14:34:39.145 <00000120,00001ed0> [DOC] Printing-action = Flag + Ack
2009/03/24 14:34:39.145 <00000120,00001ed0> [DOC] StartDoc end.
2009/03/24 14:34:39.161 <00000120,00001ed0> [DOC] StartDoc entry. Jobid = 0
2009/03/24 14:34:39.161 <00000120,00001ed0> [DOC] PaperSize = 3
2009/03/24 14:34:39.161 <00000120,00001ed0> [DOC] Color mode = 0
2009/03/24 14:34:39.161 <00000120,00001ed0> [DOC] All Image = 0
2009/03/24 14:34:39.161 <00000120,00001ed0> [DOC] Print speed = 0
2009/03/24 14:34:39.161 <00000120,00001ed0> [DOC] Print density = 0
2009/03/24 14:34:39.161 <00000120,00001ed0> [DOC] Watermark = 0
2009/03/24 14:34:39.161 <00000120,00001ed0> [DOC] Printing-action = Flag + Ack
2009/03/24 14:34:39.161 <00000120,00001ed0> [DOC] StartDoc end.
```

## Remote Maintenance

NExD has a remote maintenance function for printer firmware and printer driver in it.

HTTP server is required to make use of maintenance function.

Authorization of protocol is required since UDP communication (Port number:5200<Default>) is used.

Change in Control option is enabled by remote status monitor.

What maintenance function can do are of:

1. Download and execution of Exe file from HTTP server.
2. Download of FWF file and firmware download to target printer from HTTP server.
3. Delete of downloaded file.

Executing remote maintenance is activated with a dedicated tool.

\*Not opened in public. Please contact the seller for detailed information.

Executing result of remote maintenance is enabled to receive by email.

Necessary setup for email is possible by remote status monitor of Control option.

# Restrictions

This describes restrictions of NExD.  
Environment , OS setup.

1. In serial connection, “??” may be printed as OS rebooted, as returned from Sleep and hibernation.
2. Please use Windows XP/Vista in state of ON for [enable detailed print function] of printer driver [Detailed Setup] (EMF spool setup)
3. Movement under multi-user environment of Windows XP is not guaranteed.
4. Reserved name of resource.  
NExD reserves each name space below.  
Shared memory:           Global¥SHMEM/<printer name>/monitor/status/  
                              SHMEM /<printer name> / uni / devmode /  
    among this name, each printer name is inserted in the part of “<printer name>”
5. If multiple printer drivers allocated to the same port, correct status is disabled to acquire.
6. Driver has to be setup by user with administrative right.
7. UDP(port:5200<default>) is used for remote maintenance.
8. TCP(port:5201<default>), UDP(port:5202<default>) is used when common printer used, ◦
9. Status etc may not acquire correctly depending on utilization situation of network as to use in common printer.
10. User switch is not supported in use of common printer.
11. In created log file, there may be no data if file is opened during output to log file.
12. In import of management of printer setup, paper size is not imported correctly when customized paper is used.
13. In deletion by NEx\_UnInstaller.exe, following files below Windows¥system32 folder are not deleted under 64bit environment. After stopping spooler by manual and deleting, please reboot spooler. \*Stop/Reboot of spooler is activated by Print Spooler in service.
  - NExLM.DLL
  - NExStDoc.EXE
  - NExStPrt.EXE
  - NExStPrt.EXE.manifest
  - NExL\_RSV.EXE
14. In serial communication, there may be a temporary judgment as off-line if printer power OFF/ON (including software reset) is repeated.
15. Although there is log function of IN/OUT to port, it does not interpret guarantee against input and output.
16. When color print mode is set to other mode except for monochrome , transmitting data to printer is increased depending on color expression size.
17. Even if configurable items in this driver, there may be a case not supported to printer.
18. Reboot is required for enabling change of Remote Maintenance Port/Remote Status Port. \* It is switched in function of NiiGetStatus etc as needed.
19. It is not corresponds to uninstall by "NEx\_Uninstallwe.exe" in Windows7 or 64 bit OS.
21. When printer driver was deleted by NEx\_UnInstaller.exe, After rebooting, it may become the condition that installed printer driver again. If this problem occurs, please delete the device from "devices and printers", and also delete the driver from server properties.
22. If you set driver for the second, third and after PC in Windows7, the setting driver become NP-211, so it needs to change the settings manually.
23. Please note that more than 255 of half size of character cannot be used when device font used.
24. Please restart PC before reinstalling this driver.
25. Unprintable beyond 1m with color printing.