

HP-GL/2 and HP RTL Setup Guide

Version 1.11

Canon Inc.

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INTRODUCTION

This manual explains the HP-GL/2 and HP RTL function settings that can be configured from the control panel of an imagePROGRAF Series HP-GL/2 or HP RTL model printer. Read this manual in conjunction with the product manual of the printer you are using.

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■ Important

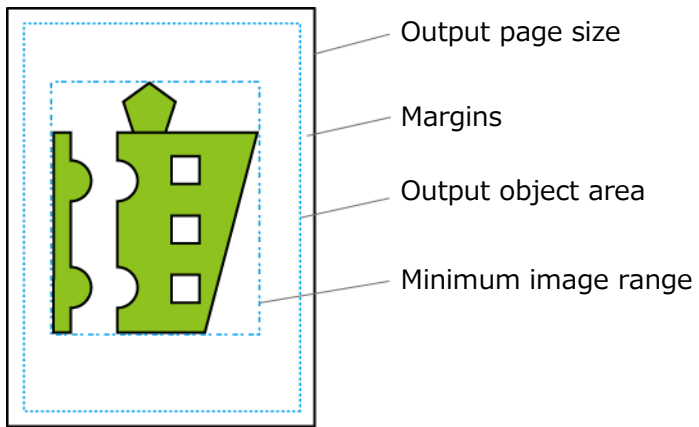
- Some of the information contained in this manual may not apply to certain printer models.
- The contents of this manual are subject to change without notice.

TERMS USED IN THIS MANUAL

This section explains some of the terms used in this manual.

Term	Meaning
HP-GL/2	<p>HP-GL/2 is an extended language based on the HP-GL (Hewlett-Packard Graphics Language) graphic printer language for plotters manufactured by Hewlett-Packard Company. However, not all HP-GL commands are compatible. Some commands have slightly different specifications, even though they share the same name.</p> <p>There are also differences in the handling of the origin of coordinates.</p> <p>Because of this, there may be cases where proper printing is not achieved when data that includes HP-GL native commands is output to an imagePROGRAF printer.</p> <p>HP-GL/2 also supports network printing and roll paper large-format printing, and since image data is handled based on coordinates, data volume is lighter and highly accurate lines can be reproduced.</p>
HP RTL	<p>HP RTL (Hewlett-Packard Raster Transfer Language) is a raster language created by Hewlett-Packard Company.</p> <p>HP RTL handles photographs and figures that cannot be supported by HP-GL/2 as raster data.</p> <p>HP-GL/2 and HP RTL can co-exist within data.</p>
HP-GL/2 data	<p>In this manual print data in which HP-GL/2, HP RTL, or both languages exists is referred to as "HP-GL/2 data".</p>
Output page size	<p>The size of output data the printer generates from received HP-GL/2 data.</p> <p>It is the size with margins added to the top, bottom, left, and right of the output object area.</p>
Margins	<p>Non-printed areas required for a print operation by the printer. Margins are located at the top, bottom, left, and right edges of the output page size.</p> <p>Margin settings are configured using [Set./Adj. Menu] - [GL2 Settings] - [Paper Manager] - [Margin], or [Paper Menu] - [Paper Details] - [NearEnd RollMrgn] or [NearEnd Sht Mrgn].</p>
Output object area	<p>Printing area based on analysis of the image drawing range information by the printer.</p> <p>This is the output page size less top, bottom, left, and right margins.</p>
Minimum image range	<p>Minimum rectangular area into which the entire figure being drawn can fit.</p>

MEANINGS OF TERMS



SETTINGS

The settings of HP-GL/2 functions are configured using control panel menus.

For menu item examples, see the appendix at the back of this manual.

Note that menus may differ depending on the printer model.

For details about how to use menus and the control panel, see the user's guide that comes with your printer.

MENUS

Menu items marked with an asterisk (*) are initial factory default settings.

[GL2 REPLOT]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Replot]

FUNCTION

Prints the last page of HP-GL/2 data that was printed since power was turned on. This data is stored in printer memory.

The print setting items below are configured with the same settings in effect when the last page was printed prior to execution of [GL2 Replot].

All other items maintain the settings in effect when [GL2 Replot] was executed.

- [Input Resolution]
- [Auto Rotate]
- [Enable merge]
- [Pen Setup]
- [Smoothing]
- [ThickenFineLines]
- [AdjustFaintLines]
- [PageSizeProcess1]
- [PageSizeProcess2]

This function cannot be executed in cases described below.

- During the period from start of receipt of the next print data until printing is complete.
- If the last page of data saved was cleared by execution of [GL2 BufferClear].
- When there has been no printing of HP-GL/2 data since power was turned on.
- When the volume of data is too big to allow execution.

■ Supplementary information

This function is available only on models without a hard disk drive.

If the printer is equipped with a hard disk, shared boxes and print jobs stored in a box or other location can also be re-plotted. Data other than the last page printed can be printed in this case.

(For details, see the user's guide of your printer.)

[GL2 BUFFERCLEAR]

MENU LEVEL

[Set./Adj. Menu] - [GL2 BufferClear]

FUNCTION

Clears [GL2 Replot] data stored in printer memory.

This function cannot be executed in cases described below.

- During the period from start of receipt of HP-GL/2 data until printing is complete.

■ Supplementary information

This function is available only on models without a hard disk drive.

[COLOR MODE]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Quality Manager] - [Color Mode]

FUNCTION

Lets you specify the color(s) to use when printing HP-GL/2 data.

Note, however, that printing with approximate colors produces colors that do not exactly match the specified model's hues.

Model Group Correspondence Table (1/2)

Selection Option \ Model	iPF680/iPF681 iPF685/iPF686 iPF780/iPF781 iPF785/iPF786	iPF810/iPF820 iPF815/iPF825	iPF650/iPF655 iPF750/iPF755 iPF760/iPF765
[Monochrome]	Prints in monochrome.	Prints in monochrome.	Prints in monochrome.
[Color] (*)	————	————	————
[Color (CAD) 1]*	Prints in standard colors.	Prints in standard colors.	Prints in standard colors.
[Color (CAD) 2]	Prints in colors that approximate Canon iPF750, iPF755, iPF650, iPF655, iPF760, and iPF765 colors.	Prints in brighter colors.	Prints in brighter colors.
[Color (CAD) 3]	Prints in colors that approximate Canon iPF500, iPF600, iPF700, iPF510, iPF610, iPF710, iPF605, iPF720, iPF810, iPF820, iPF815, and iPF825 colors.	Prints in colors that approximate Canon BJ-W3000/W3050 colors. The BJ-W3000/W3050 are not sold in Japan.	Prints in colors that approximate Canon iPF500, iPF600, iPF700, iPF510, iPF610, iPF710, iPF605, iPF720, iPF810, iPF820, iPF815 and iPF825 colors.
[Color (CAD) 4]	Prints in colors that approximate HP Designjet 500/800 colors.	Prints in colors that approximate HP Designjet 500/800 colors.	Prints in colors that approximate HP Designjet 500/800 colors.
[Color (CAD) 5]	Prints in colors that approximate HP Designjet T1100 colors.	Prints in colors that approximate HP Designjet 1000 colors.	Prints in colors that approximate HP Designjet 1000 colors.
[Color (CAD) 6]	————	Prints in colors that approximate HP Designjet 4000/4500 colors.	————

Model Group Correspondence Table (2/2)

Selection Option \ Model	iPF710 iF720	iPF510 iPF605 iPF610
[Monochrome]	Prints in monochrome.	Prints in monochrome.
[Color] (*)	————	Prints in color.
[Color (CAD) 1]*	Prints in standard colors.	————
[Color (CAD) 2]	Prints in brighter colors.	————
[Color (CAD) 3]	————	————
[Color (CAD) 4]	————	————
[Color (CAD) 5]	————	————
[Color (CAD) 6]	————	————

[PRINT QUALITY]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Quality Manager] - [Print Quality]

FUNCTION

Lets you specify print quality.

Selection Option	Description
[Draft]	Select this setting for faster printing.
[Standard]*	Select this setting for standard printing that balances print quality and printing speed.
[High]	Select this setting to give print quality priority. This causes printing to take longer and consume more ink than the [Standard] and [Draft] settings, but print quality is higher.

[INPUT RESOLUTION]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Quality Manager] - [Input Resolution]

FUNCTION

Specifies the resolution for internal rendering process.

Selection Option	Description
[600dpi]*	Specifies 600 dpi for internal rendering resolution. This setting raises the accuracy of internal processes for finer printing.
[300dpi]	Specifies 300 dpi for internal rendering resolution. This setting increases the speed of internal processes for faster printing.

[PRINT (ECONOMY)]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Quality Manager] - [Print (Economy)]

FUNCTION

Enables printing in a way that conserves ink.

Selection Option	Description
[Off]*	[Print (Economy)] not performed.
[On]	Printing density is less than that of normal printing, which suppresses ink consumption. Use this setting when you want to conserve ink while checking image layouts. Note that the [Paper Type] and [Print Quality] settings may inhibit this function.

[PAPER SOURCE]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Paper Manager] - [Paper Source]

FUNCTION

Specifies the paper source for HP-GL/2 data printing.

Selection Option	Description
[Automatic]*	Prints on the paper loaded in the printer.
[Roll Paper]	Prints on roll paper.
[Cut Sheet]	Prints on cut sheet paper.

[MARGIN]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Paper Manager] - [Margin]

FUNCTION

Specifies the margins for HP-GL/2 data printing.

If the [Paper Menu] [NearEnd RollMrgn] and/or [NearEnd Sht Mrgn] settings are different from the settings here, the larger of the settings is given priority.

Selection Option	Description
[3mm(Standard)]*	Specifies 3 mm margin. However, the trailing edge margin for cut sheet paper is 23 mm.
[5mm]	Specifies 5 mm margin. However, the trailing edge margin for cut sheet paper is 23 mm.

[OVERSIZE]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Paper Manager] - [Oversize]

FUNCTION

Specifies whether margins are within or outside the HP-GL/2 data image drawing range. (This function is the same as [PageSizeProcess1]. However, on/off descriptions are reversed.)

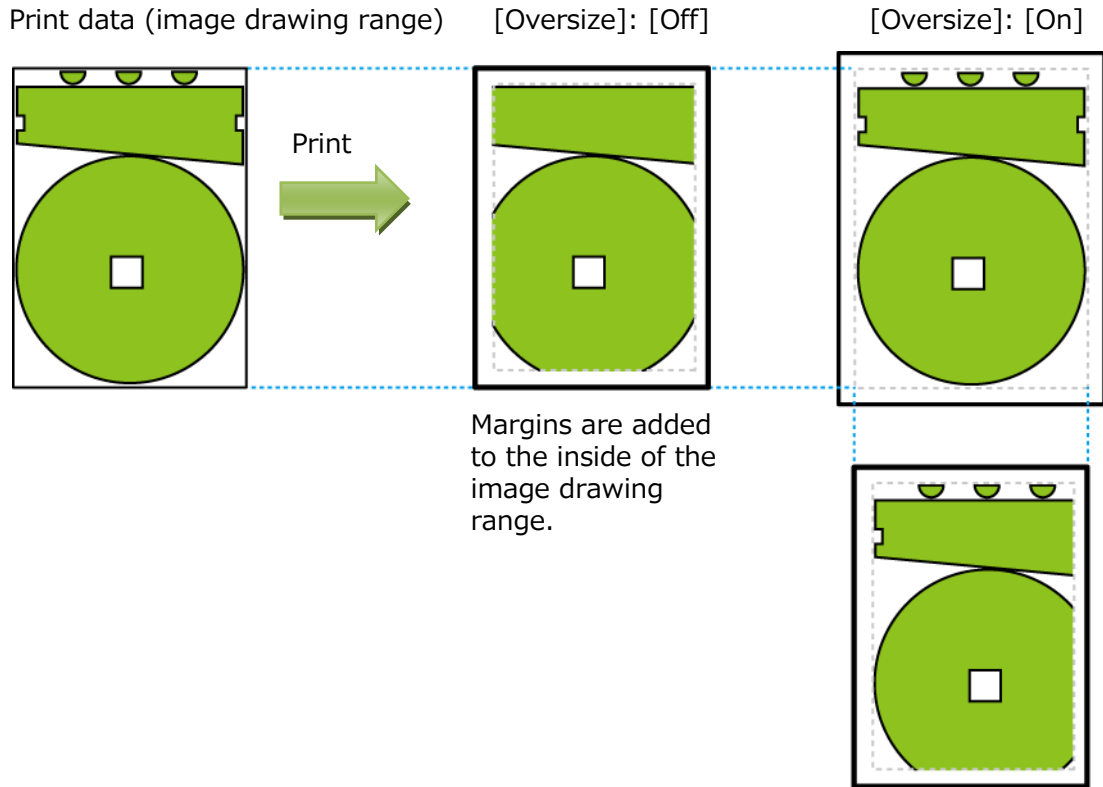
Selection Option	Description
[Off]	Specifies margins inside the HP-GL/2 data image drawing range. Depending on the layout, adding margins inside the image drawing range may cause part of the image to be cut off.
[On]*	Specifies margins outside the HP-GL/2 data image drawing range. Adding margins outside the image drawing range will not cause part of the image to be cut off. However, you will need to print on paper of a size that is greater than the size of the image drawing range specified by the HP-GL/2 data plus the top, bottom, left, and right margins.

■ Supplementary information

This function is available only on models with a hard disk drive.

Some CAD applications can cause the origin to be out of position and part of the image to be cut off. Experiment with the [Off] and [On] settings of this function to find the one that works best.

OVERSIZE SETTING EXAMPLES



Margins added outside the image drawing range.

- The image is not cut off if printing is on a paper size that is greater than the image-plus-margins size. (Upper figure)

- The margins may cause part of the image to be cut off if the paper size is not changed. (Lower figure)

[CONSERVE PAPER]

MENU LEVEL

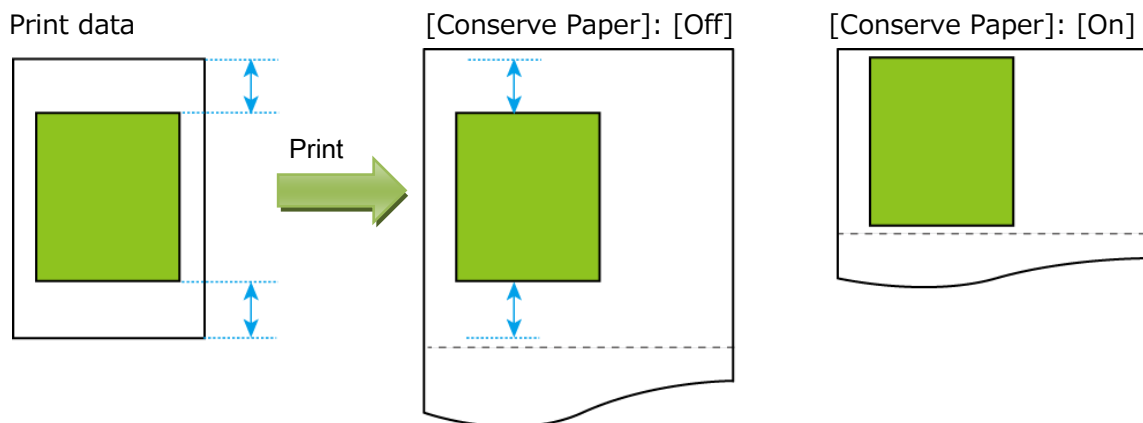
[Set./Adj. Menu] - [GL2 Settings] - [Paper Manager] - [Conserve Paper]

FUNCTION

When printing on roll paper, eliminates blank space (margins) above and/or below the image (if there is any) to conserve paper.

Selection Option	Description
[Off]*	[Conserve Paper] not performed.
[On]	Blank space above and below the image is eliminated when printing.

CONSERVE PAPER SETTING EXAMPLES



[AUTO ROTATE]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Paper Manager] - [Auto Rotate]

FUNCTION

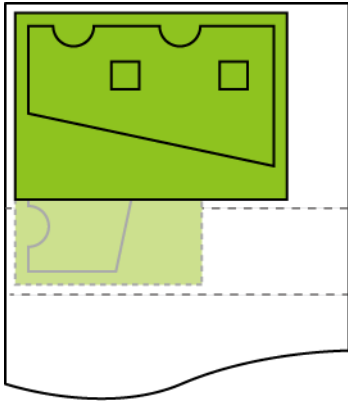
Printing on roll paper (or cut sheet paper^{*1}) while [Auto Rotate] is enabled ([On]) causes the image to be rotated automatically in accordance with the most efficient image layout in order to conserve paper and avoid images running off the edges of the paper.

Selection Option	Description
[Off]*	[Auto Rotate] not performed.
[On]	<p>Image is rotated 90° to the right in the cases described below.</p> <ul style="list-style-type: none">• When the output page is in portrait orientation and the long side is shorter than the roll paper width, the image is rotated for efficient layout and to conserve paper.• When the output page is in landscape orientation, and the long side is longer than the paper width and the short side is shorter than the paper width, the image is rotated to prevent the image from running off the edges of the paper.• Even if the long edge and short edge of the output page are both longer than the paper width, and the output page is in landscape orientation, the image is rotated to expand the print range. ^{*1} <p>Supplementary information</p> <ul style="list-style-type: none">• The length that the roll paper will be cut to depends on rotation.• The desired printing results may not be obtained when HP-GL/2 data that does not include image drawing range information is received. In this case, specify [Command priority] or [Detected size] for [Detect img size].• When the print data includes HP RTL, the HP RTL image part is not rotated.

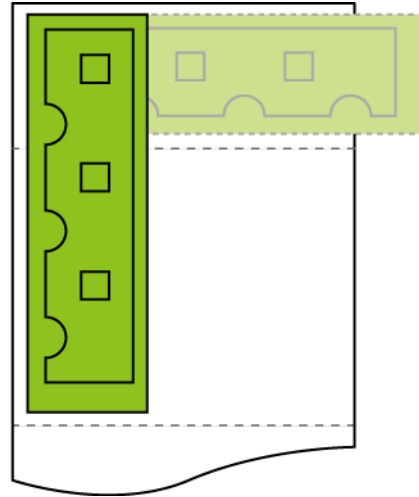
*1:iPF680/iPF681/iPF685/iPF686/iPF780/iPF781/iPF785/iPF786

AUTO ROTATE EXAMPLES

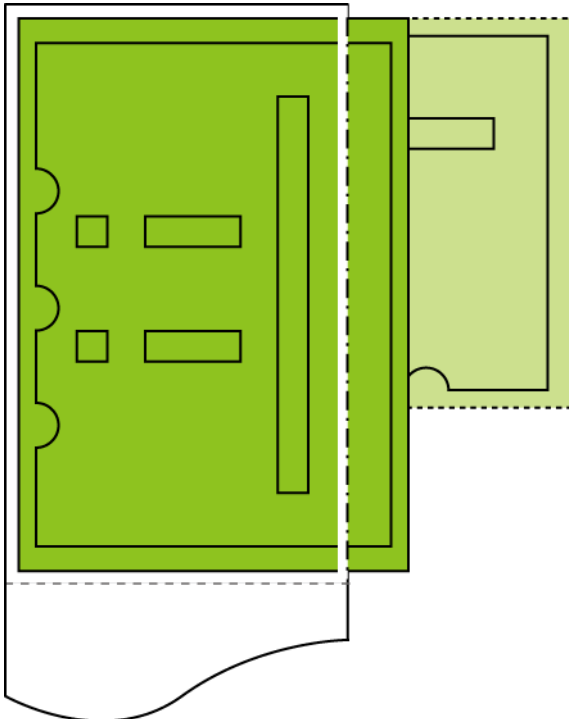
Efficient layout.



Prevents image from running off edge.



Even if the image runs off the edge of the paper, it is rotated to expand the print range.*¹



*1:iPF680/iPF681/iPF685/iPF686/iPF780/iPF781/iPF785/iPF786

[ENLARGE/REDUCE]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Paper Manager] - [Enlarge/Reduce]

FUNCTION

Enlarges or reduces images.

Selection Option	Description
[Off]*	[Enlarge/Reduce] not performed.
[Specify scaling]	Enlarges or reduces the image to the specified scaling value for printing. Scaling can be specified within a range of [25%] to [400%]. Supplementary information <ul style="list-style-type: none">• Data line widths are not enlarged or reduced.• Margin widths are not enlarged or reduced.
[Fit to paper]* ¹	Enlarges or reduces the image for printing to fit to the paper loaded in the printer. Supplementary information <ul style="list-style-type: none">• Data line widths are not enlarged or reduced.• Margin widths are not enlarged or reduced. Because of this, paper size scaling and post-processing image scaling may not be the same.• Nesting cannot be performed while [Fit to paper] is specified.

*1:iPF685/iPF686/iPF785/iPF786

■ Supplementary information

This function is available only on models with a hard disk drive. (Except iPF720/iPF810/iPF820)

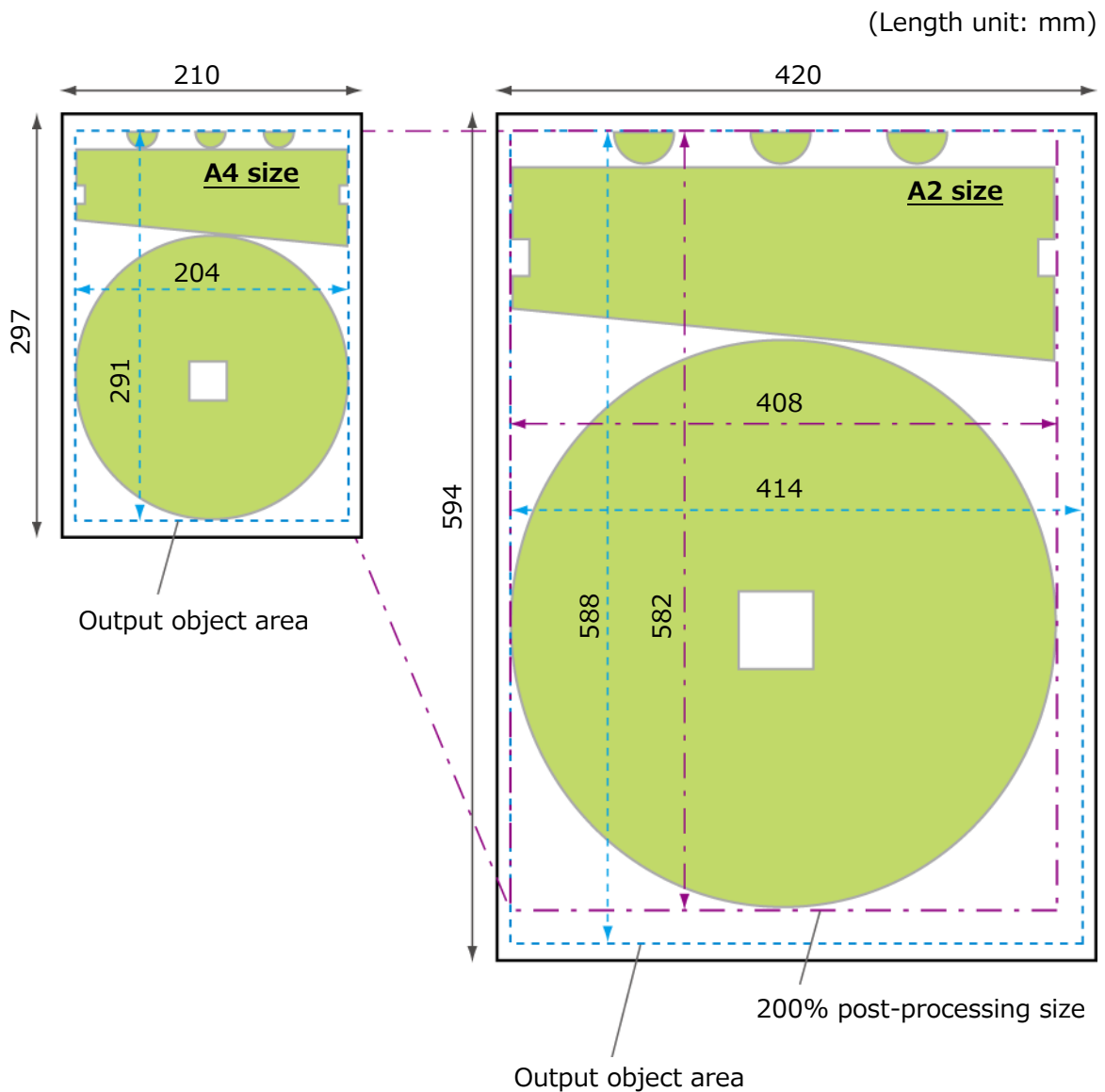
ENLARGE/REDUCE [SPECIFY SCALING] SETTING EXAMPLE

The output object area is enlarged or reduced as specified by the [Specify scaling] setting. The origin is in the upper-left corner.

For example, doubling the length and width of A4 size paper results in A2 size paper. If there are margins of 3 mm, the A4 size output object area measures 291 mm x 204 mm.

Specify a value of 200% for the [Specify scaling] setting to produce a post-processing size of 582 mm x 408 mm.

(Note that ambient conditions may cause paper to expand and contract.)



ENLARGE/REDUCE [FIT TO PAPER]^{*1} SETTING EXAMPLE

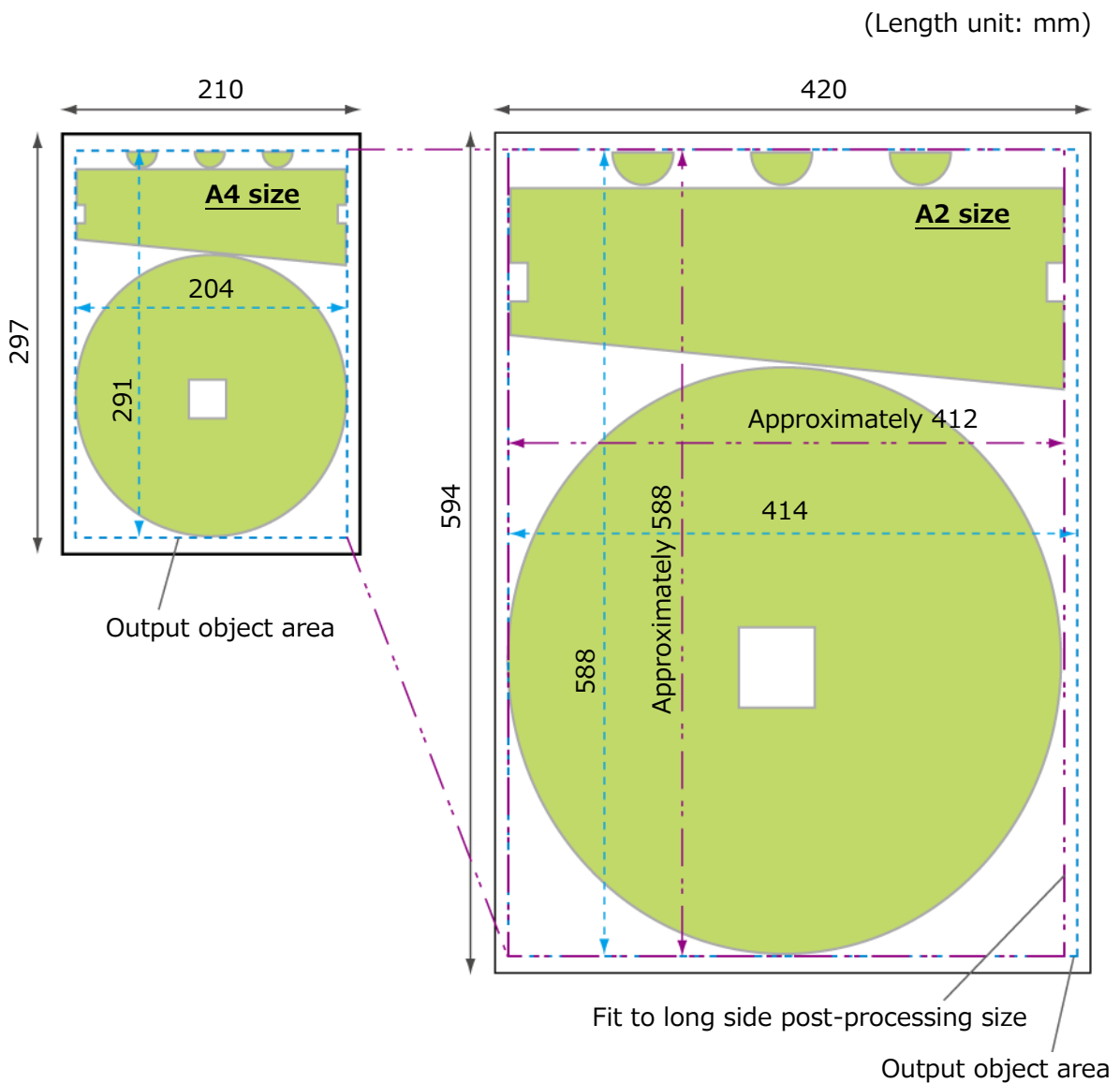
[Fit to paper]^{*1} expands or reduces the long side of the print data's output object area so it matches the long side of the output page size output object area. The origin is in the upper-left corner.

Margin widths are not enlarged or reduced. Because of this, paper size scaling and post-processing image scaling may not be the same.

For example, doubling the length and width of A4 size paper results in A2 size paper. If there are margins of 3 mm, the A4 size output object area measures 291 mm x 204 mm.

Specifying [Fit to paper]^{*1} will result in a post-processing size of approximately 588 mm x 412 mm.

(Note that ambient conditions may cause paper to expand and contract.)



*1:iPF685/iPF686/iPF785/iPF786

[PRINT CENTERED]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Paper Manager] - [Print centered]

FUNCTION

Prints the output object area in the center of the paper.

Selection Option	Description
[Off]*	[Print centered] not performed.
[On]	<p>Cut sheet paper Prints the output object area in the center of the paper.</p> <p>Roll paper Prints the output object area in the horizontal center of the paper.</p> <p>Supplementary information</p> <ul style="list-style-type: none">• The [Print centered] operation is not performed when the paper size is smaller than the output page size.• Nesting cannot be performed while [Print centered] is specified.

■ Supplementary information

This function is available only on models with a hard disk drive. (Except iPF720/iPF810/iPF820)

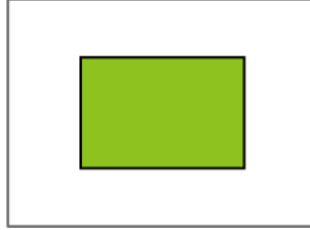
Print Centered Examples

- **Cut sheet paper**

[Print centered]: [Off]

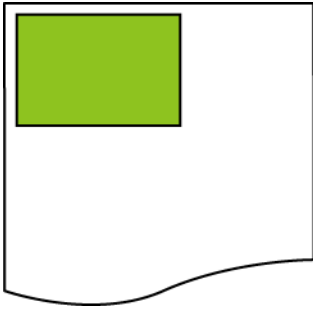


[Print centered]: [On]

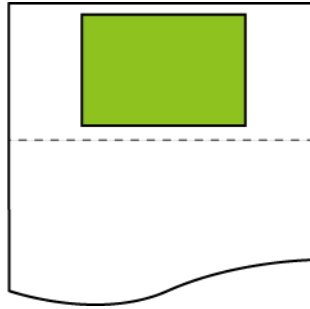


- **Roll paper**

[Print centered]: [Off]



[Print centered]: [On]



[STANDARD CUT]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Paper Manager] - [Standard cut]^{*1}

FUNCTION

Specifies standard size as the output page size when printing on roll paper.

Selection Option	Description
[Off] [*]	[Standard cut] ^{*1} not performed.
[On]	<p>Cuts to standard size in accordance with the roll paper width. When there are two lengths/widths applicable for a given roll paper width, the optimum size is selected automatically.</p> <p>Supplementary information</p> <ul style="list-style-type: none">• Nesting cannot be performed while [Standard cut]^{*1} is specified.• If [Conserve Paper] is specified and there is blank space above/below the image, the size will not be standard size.• When [Print centered] is specified, printing will be in the center of the standard size.• If there is no standard size corresponding to the roll paper width, operation is the same as if [Off] is specified. No message is displayed.• For information about supported standard sizes, see the appendix at the back of this manual.

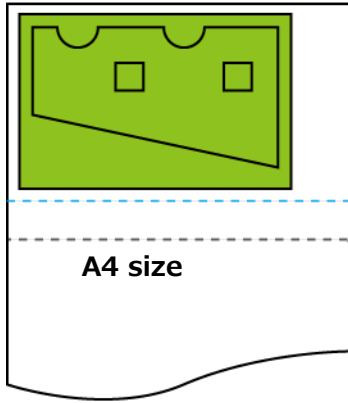
■ Supplementary information

This function is available only on models with a hard disk drive.

^{*1}:iPF685/iPF686/iPF785/iPF786

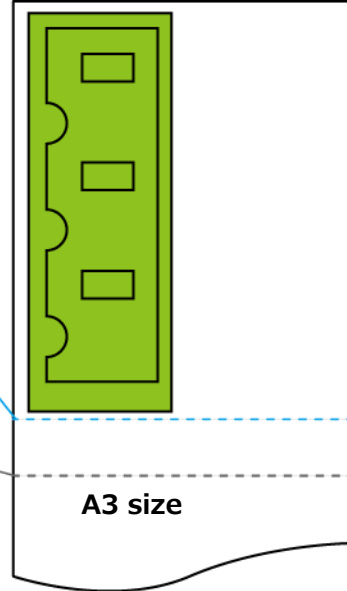
STANDARD CUT EXAMPLES

A3-size width roll paper



Position of cut
when [Off]

A3-size width roll paper



Position of cut
when [On]

[USE NESTING]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Paper Manager] - [Nesting] - [Use Nesting]

FUNCTION

When printing on roll paper, this function can be used to print multiple pages sequentially across the side of the paper.

Selection Option	Description
[Off]*	Nesting not performed.
[On]	<p>Print data is temporarily stored as a nesting wait page, and printed in a layout that arranges the pages so they fill the width of the roll paper.</p> <p>Pages are aligned in the sequence they are received.</p> <p>Up to 7 pages (or 24 pages^{*1}) can be aligned across the paper.</p> <p>Pages are laid out in the next line from the 8 (25th^{*1}) page.</p> <p>Cutting is performed in accordance with the longest page among the aligned pages.</p> <p>Supplementary information</p> <ul style="list-style-type: none">• The desired printing results may not be obtained when HP-GL/2 data that does not include image drawing range information is received. <p>In this case, specify [Command priority] or [Detected size] for [Detect img size].</p> <ul style="list-style-type: none">• When the printer is being used in a network environment, nesting can be performed on HP-GL/2 data from multiple users.• Nesting cannot be performed while any of the items below are specified.<ul style="list-style-type: none">• [Fit to paper] specified for [Enlarge/Reduce]^{*1}• [Print centered]• [Standard cut]• [On-the-Fly]• In the cases below, printing starts even if the nesting wait page does not fill the entire width of the roll paper.<ul style="list-style-type: none">• When data other than HP-GL/2 or HP RTL data is

	<p>received.</p> <ul style="list-style-type: none"> • When data to a destination other than the roll paper is received. • When data with different print settings is received. When the printer is being used in a network environment, the above types of data may be sent from another user and preempt other jobs in the print queue. • When the wait time specified by [Nesting WaitTime] elapses. • During nesting wait, when [Print] is selected on the control panel and then the OK button is pressed.
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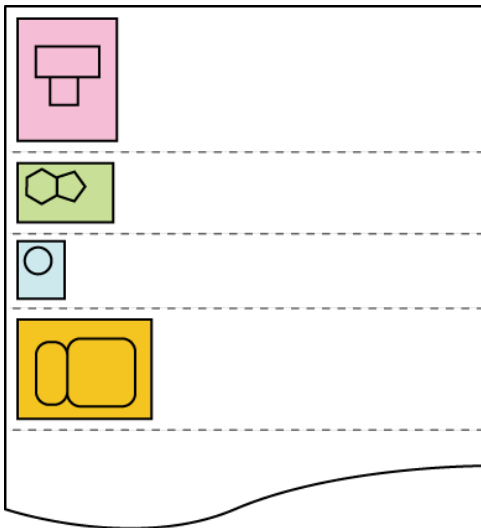
*1:iPF685/iPF686/iPF785/iPF786

■ Supplementary information

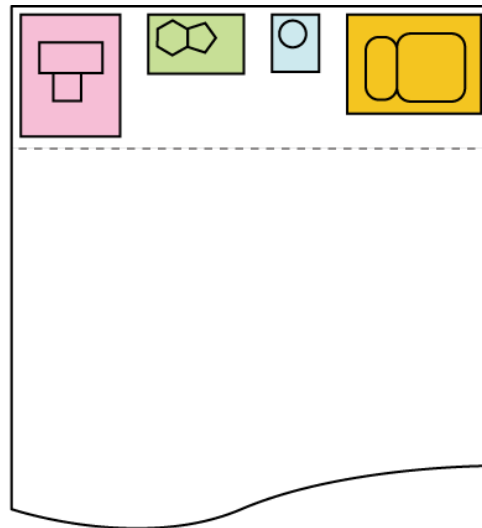
This function is available only on models with a hard disk drive.

NESTING EXAMPLE

[Use Nesting]: [Off]



[Use Nesting]: [On]



[NESTING WAITTIME]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Paper Manager] - [Nesting] - [Nesting WaitTime]

FUNCTION

Can be used to set the wait time until printing starts after nesting wait page receipt is paused.

Selection Option	Description
xx minutes	This setting can be set when [On] is specified for [Use Nesting]. It specifies the wait time until printing of the stored nesting wait page starts after nesting wait page receipt is paused. Time can be specified in the range of 1 to 99 minutes. The wait time is counted from the point the last page was completed.

[CUT LINES]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Paper Manager] - [Nesting] - [Cut Lines]

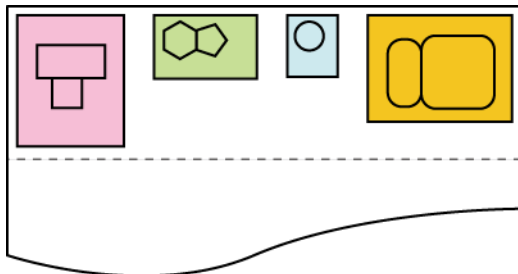
FUNCTION

Prints cut lines to separate nested data.

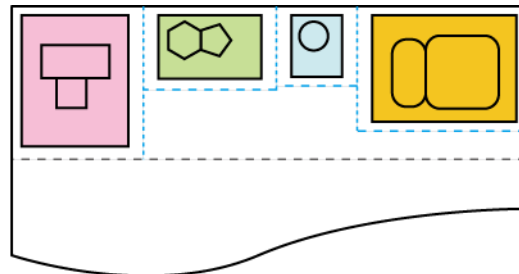
Selection Option	Description
[Off]*	[Cut Lines] not performed.
[On]	This setting can be set when [On] is specified for [Use Nesting]. It causes cut lines that separate pages to be printed.

CUT LINES EXAMPLE

[Off]



[On]



[ENABLE MERGE]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Line&Pen Manager] - [Enable merge]

FUNCTION

Specifies how colors should be processed when lines overlap.

Note, however that the data is given priority when a specification command is included in the HP-GL/2 data.

If the HP-GL/2 data does not include a specification command, the operation is performed using the specified selection value.

Selection Option	Description
[Off]*	The section where lines overlap becomes the same color as one of the intersecting lines. (The overwrite color used is the one specified for the line whose command comes last in the HP-GL/2 data.)
[On]	The section where lines overlap becomes the mixed color of the intersecting lines.

ENABLE MERGE EXAMPLE

[Enable merge]: [Off]



[Enable merge]: [On]



[SELECT PALETTE]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Line&Pen Manager] - [Pen Setup] - [Select Palette]

FUNCTION

Specifies whether the pen setting should be in accordance with HP-GL/2 data or a palette specification.

A "palette" is a set of 16 pens configured using [Define Palette].

Up to two palettes can be specified at the same time.

Selection Option	Description
[Software]*	Prints using HP-GL/2 data settings.
[Palette A]	Prints using [Palette A] settings.
[Palette B]	Prints using [Palette B] settings.
[Factory]	Prints using pre-defined settings.

[DEFINE PALETTE]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Line&Pen Manager] - [Pen Setup] - [Define Palette]

FUNCTION

Configures pen parameter settings for two palettes (A and B).

Selection Option	Description
[Palette A]	Displays [Palette A]. Settings for 16 pens can be configured.
[Palette B]	Displays [Palette B]. Settings for 16 pens can be configured.
[Factory]	Displays the [Factory] palette. Select to view the 16 pre-defined pens. The settings of the [Factory] palette cannot be changed.

■ What is a palette?

HP-GL/2 uses pen setup commands to specify colors, widths, and other settings for drawing lines. Settings for multiple pens can be configured at the same time.

A collection of settings for multiple pens is a palette.

Since HP-GL/2 data always uses command notation to configure line color and width settings, the user does not need to configure the pen settings that make up a palette.

Conversely, pen plotter output devices that were widely used before the popularization of inkjet printers do not require command-based settings because line color, width, and other settings are configured by the plotter hardware.

Because of this, some HP-GL/2 data that was output for pen plotter use does not include line settings.

The palette function was provided in order to allow configuration of line settings by the imagePROGRAF printer so it can use data intended for a pen plotter.

To print normally when you are using a pen plotter or using data created using that kind of environment, you must specify a pallet on which each pen is set appropriately to print correctly on the imagePROGRAF.

[Palette Selection Tips]

- Normally select "Software", which causes HP-GL/2 commands to be followed.
- Select from among three palettes: "Factory", "Palette A", or "Palette B".
- For Palette A and Palette B, each can be configured with pen settings to suit the current usage environment and/or data.
- The pen settings of the Factory palette are Canon presets, which cannot be modified by the user.
- The initial settings of Palette A and B are the same as "Factory".
- Panel settings take priority, even if pen settings (color, line width) are included within HP-GL/2 data.

[PEN NO. N] (N = 0 TO 15)

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Line&Pen Manager] - [Pen Setup] - [Define Palette]
- [Palette A]*¹ -[Pen no. n]

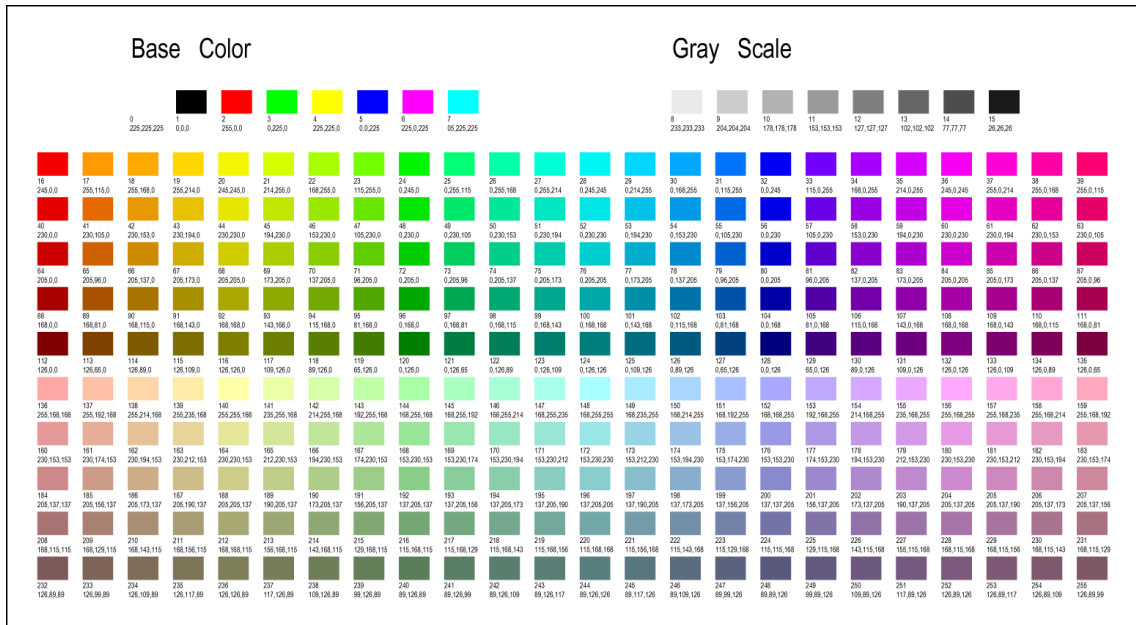
*1: Select [Palette A], [Palette B], or [Factory].

FUNCTION

Configures [Width], [Color], and [Line Attributes] settings for each of the 16 pens (numbered 0 to 15) that make up each palette.

Selection Option	Description
[Width]	Specifies the line width as one of the values below. 0.04, 0.08, 0.13, 0.18, 0.25, 0.35, 0.50, 0.65, 0.70, 0.80, 0.90, 1.0, 1.4, 2.0, 3.0, 5.0, 8.0, 12.0 (mm)
[Color]	Specifies the line color a color palette number from 0 to 255, as shown on palette produced by [Test Print] - [Color Palette].
[Line Attributes]	Specifies line cap and joint attributes. [No Setting] Leaves line caps unchanged and miters line joints. [Circle Setting] Rounds line caps and line joints.

COLOR PALETTE PRINT EXAMPLE



LINE ATTRIBUTES EXAMPLES

[No Setting]



No processing



Miter processing

[Circle Setting]



Rounds line caps



Rounds line joints.

[RESET PALETTE]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Line&Pen Manager] - [Pen Setup] - [Reset Palette]

FUNCTION

Resets palette pen parameters configured using [Define Palette].

Resetting parameters returns them to their default settings. (See next page.)

Selection Option	Description
[All Palette]*	Resets all palette pen parameters.
[Palette A]	Resets [Palette A] pen parameters.
[Palette B]	Resets [Palette B] pen parameters.

PALETTE DEFAULTS

Pen number	Line Width (mm)	Colors (R, G, B)	Line Attributes	Tip	Connecting Line
0	0.13	0 (255, 255, 255)	Rounds	Rounds	Rounds
1	0.18	1 (0, 0, 0)	Rounds	Rounds	Rounds
2	0.25	2 (255, 0, 0)	Rounds	Rounds	Rounds
3	0.35	3 (0, 255, 0)	Rounds	Rounded	Rounds
4	0.50	4 (255, 255, 0)	No setting	No setting	Miter
5	0.65	5 (0, 0, 255)	No setting	No setting	Miter
6	0.70	6 (255, 0, 255)	No setting	No setting	Miter
7	0.80	7 (0, 255, 255)	No setting	No setting	Miter
8	0.90	8 (233, 233, 233)	No setting	No setting	Miter
9	1.0	12 (127, 127, 127)	No setting	No setting	Miter
10	1.4	19 (255, 214, 0)	No setting	No setting	Miter
11	2.0	27 (0, 255, 214)	No setting	No setting	Miter
12	3.0	35 (214, 0, 255)	No setting	No setting	Miter
13	5.0	68 (205, 205, 0)	No setting	No setting	Miter
14	8.0	100 (0, 168, 168)	No setting	No setting	Miter
15	12.0	110 (168, 0, 115)	No setting	No setting	Miter

[LINE WIDTH]

MENU LEVEL

[GL2 Settings] - [Line Width]

FUNCTION

Specifies the printing width of lines for data that has no line width specified. The line width dot unit is 300 dpi.

Selection Option	Description
[1 dot]	Prints lines for data with no specified line width as 1 dot wide (300 dpi).
[2 dots]	Same as above (2 dots wide)
[3 dots]	Same as above (3 dots wide)
[4 dots]*	Same as above (4 dots wide)
[5 dots]	Same as above (5 dots wide)
[6 dots]	Same as above (6 dots wide)
[7 dots]	Same as above (7 dots wide)

[LINE CAP]

MENU LEVEL

[GL2 Settings] - [Line Cap]

FUNCTION

Specifies [Software] or [Rounded] for the line cap shape.

Selection Option	Description
[Software]*	Operation performed as specified by the application. If there is no specification by the application, line caps and line joints are not processed.
[Rounded]	Rounds line caps and line joints.

- [Software]



- [Rounded]



[SMOOTHING]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Line&Pen Manager] - [Smoothing]

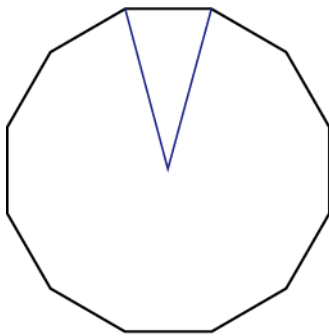
FUNCTION

Makes arc drawing smoother.

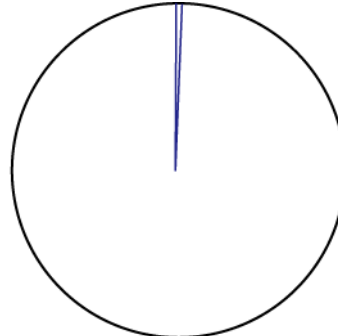
Selection Option	Description
[Software]*	Draws arcs using HP-GL/2 data settings. Default value of the central angle of an arc in HP-GL/2 is 5° (Regular 72-sided polygon).
[Smooth]	Draws curves that are smoother than arcs with a central angle of 1°.

SMOOTHING EXAMPLES

Central angle: 30°



Central angle: 1°



[THICKENFINELINES]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Line&Pen Manager] - [ThickenFineLines]

FUNCTION

Performs correction to avoid breaks in fine lines.

Selection Option	Description
[Off]*	[ThickenFineLines] not performed. Some line thicknesses may cause them to become broken.
[On]	Corrects line widths so fine lines are drawn more sharply, without breaking. The line color is not changed.

[ADJUSTFAINTLINES]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Line&Pen Manager] - [AdjustFaintLines]

FUNCTION

Performs correction to avoid breaks in brightly colored fine lines.

Selection Option	Description
[Off]	[AdjustFaintLines] not performed. Some line colors and thicknesses may cause them to become broken.
[On]*	Adjusts the colors of brightly colored fine lines so they are drawn more clearly. The line width is not changed.

[LN WPTH CORRECT]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [Line&Pen Manager] - [Ln wpth correct]

FUNCTION

Corrects pen widths in accordance with a specific correction setting.
Correction settings can be configured for two groups: [Black/gray] and [Color].

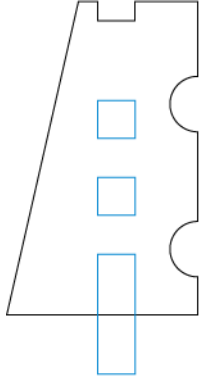
Selection Option	Description
Black/gray	<p>For configuring the correction setting of black and gray line widths. A value within the range of -20 to +20 can be specified. 1 unit of the correction value is equivalent to 0.025 mm.</p> <p>Supplementary information</p> <ul style="list-style-type: none">• This setting is not applied to white lines.• This setting is applied to vector data line widths.• When this setting is a minus value, it is not applied to fine lines of widths that are less than the minimum line width of the printer.• When [ThickenFineLines] is specified, the resulting line may be thicker than the setting specified by [Ln wpth correct].
Color	<p>For configuring the correction setting of color line widths. A value within the range of -20 to +20 can be specified. 1 unit of the correction value is equivalent to 0.025 mm.</p> <p>Supplementary information</p> <ul style="list-style-type: none">• This setting is applied to vector data line widths.• When this setting is a minus value, it is not applied to fine lines of widths that are less than the minimum line width of the printer.• When [ThickenFineLines] is specified, the resulting line may be thicker than the setting specified by [Ln wpth correct].

■ Supplementary information

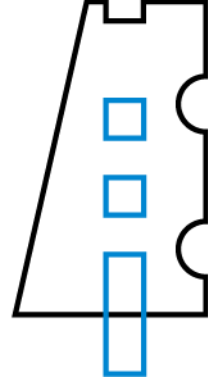
This function is available only on models with a hard disk drive. (Except iPF720/iPF810/iPF820)

LINE WIDTH CORRECTION EXAMPLE

Negative (-) setting



Positive (+) setting



[WARNING]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [ProcessingOption] - [Warning]

FUNCTION

Displays HP-GL/2 warnings.

Selection Option	Description
[Off]*	Suppresses display of HP-GL/2 warnings.
[On]	Displays all HP-GL/2 warnings. This setting is normally not used. Use it when analyzing HP-GL/2 data.

[ON-THE-FLY]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [ProcessingOption] - [On-the-Fly]

FUNCTION

Shortens the time until HP RTL printing starts.

Selection Option	Description
[Off]*	[On-the-Fly] not performed. Causes data processing and printing to be done after all of the HP RTL data is received. Though the time required before printing starts is longer, this setting eliminates improperly formed images.
[On]	As data is sequentially received, starting from the beginning of the data, it is processed and printed in blocks of a specific size. This setting shortens the time required until printing starts. Some types of data may result in part of the image being cut off when this setting is selected, so keep an eye on printing results. If part of an image is cut off, change this setting to [Off]. Supplementary information Nesting cannot be performed while [On-the-Fly] is specified.

■ Supplementary information

This function is available only on models with a hard disk drive.

[DETECT IMG SIZE]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [ProcessingOption] - [Detect img size]

FUNCTION

Specifies the output object area method that provides efficient printing, which avoids parts of images being cut off.

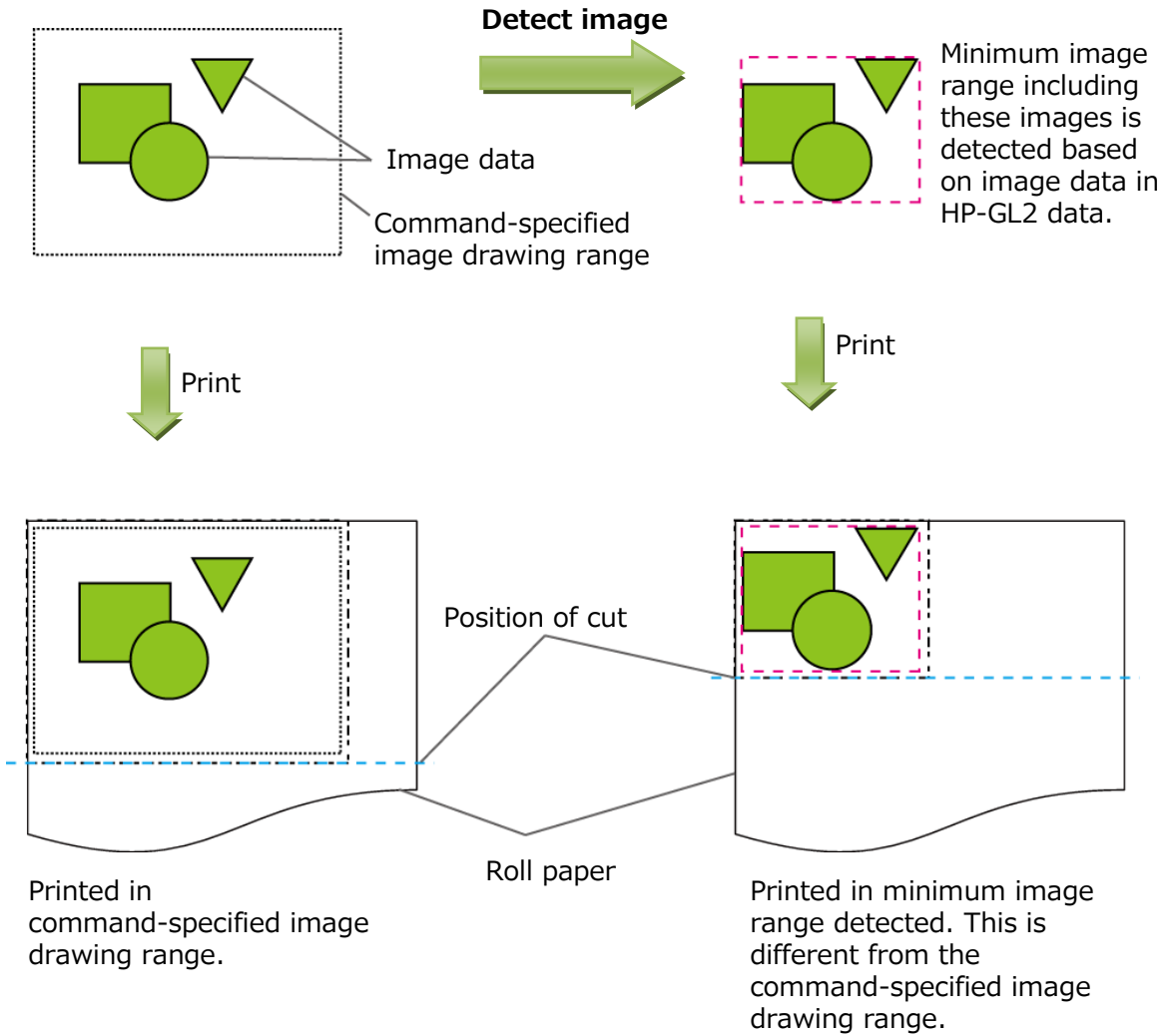
If part of an image is being cut off or if an image is out of alignment, try using each of the settings in the following sequence: [Off], [Command priority], [Detected size].

Selection Option	Description
[Off]*	<p>Image drawing range information included in HP-GL/2 data The output object area is in accordance with the image drawing range information. The origin specified by the image drawing range information is drawn in the upper-left corner of the paper.</p> <p>Image drawing range information not included in HP-GL/2 data The output object area uses the printer's maximum roll paper width as the horizontal dimension and 1.5 times the maximum roll paper width as the vertical dimension.</p>
[Command priority]	<p>Image drawing range information included in HP-GL/2 data The output object area is in accordance with the image drawing range information. The origin specified by the image drawing range information is drawn in the upper-left corner of the paper.</p> <p>Image drawing range information not included in HP-GL/2 data Applies the minimum image range detected as the output object area. The upper left corner of the detected minimum image range is drawn in the upper left corner of the paper.</p>
[Detected size]	<p>Applies the minimum image range detected as the output object area. Image drawing range information included in HP-GL/2 data is not used. The upper left corner of the detected minimum image range is drawn in the upper left corner of the paper.</p>

■ Supplementary information

This function is available only on models with a hard disk drive. (Except iPF720/iPF810/iPF820)

DETECT IMAGE SIZE EXAMPLE



[PAGESIZEPROCESS1]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [ProcessingOption] - [PageSizeProcess1]*¹

FUNCTION

Specifies whether margins are outside or within the HP-GL/2 data image drawing range. (This function is the same as [Oversize]. However, on/off descriptions are reversed.)

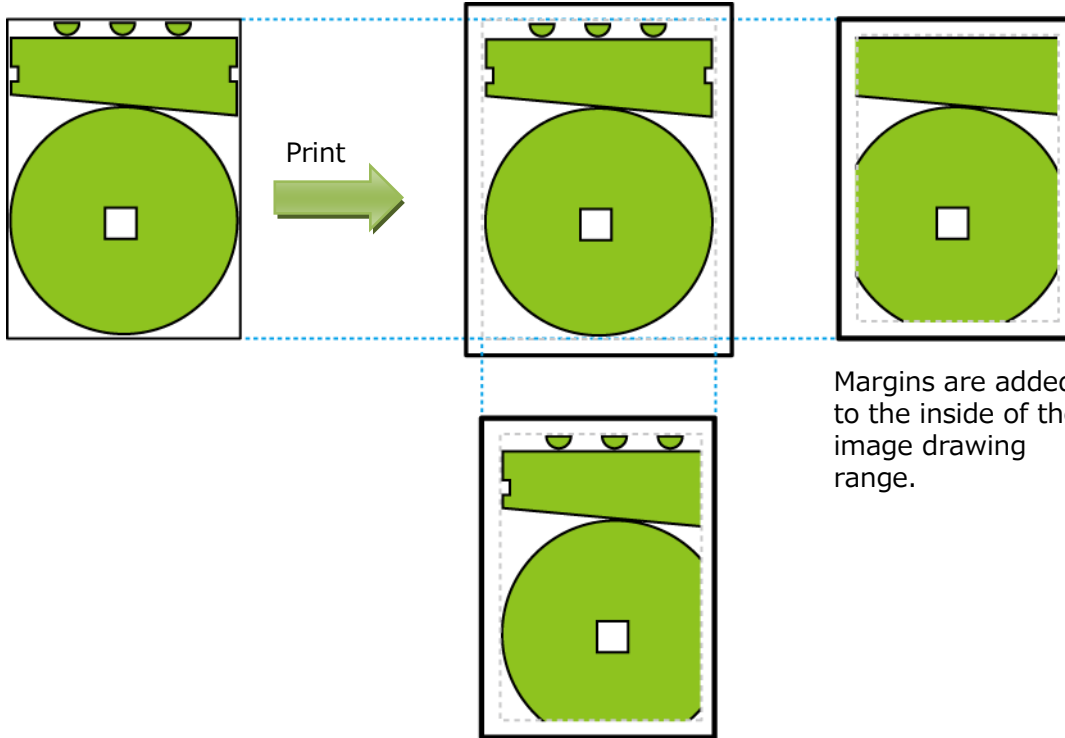
Selection Option	Description
[Off]*	Specifies margins outside the HP-GL/2 data image drawing range. Adding margins outside the image drawing range will not cause part of the image to be cut off. However, you will need to print on paper of a size that is greater than the size of the image drawing range specified by the HP-GL/2 data plus the top, bottom, left, and right margins.
[On]	Specifies margins inside the HP-GL/2 data image drawing range. Depending on the layout, adding margins inside the image drawing range may cause part of the image to be cut off.

■ Supplementary information

*1: iPF650/iPF680/iPF681/iPF720/iPF750/iPF760/iPF780/iPF781/iPF810/iPF820

PAGE SIZE PROCESS1 EXAMPLE

Print data (image drawing range) [PageSizeProcess1]: [Off] [PageSizeProcess1]: [On]



Margins are added to the inside of the image drawing range.

Margins are added outside the image drawing range.

- The image is not cut off if printing is on a paper size that is greater than the image-plus-margins size. (Upper figure)

- The margins may cause part of the image to be cut off if the paper size is not changed. (Lower figure)

[PAGESIZEPROCESS2]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [ProcessingOption] - [PageSizeProcess2]*¹

FUNCTION

Changes the process used for handling HP-GL/2 data image drawing range information.

Selection Option	Description
[Off]*	Normally leave this setting [Off].
[On]	Try changing the setting to [On] when the [Off] setting results in cut off images or blank sheets. However, this setting may not work for all data.

■ Supplementary information

*1: iPF650/iPF680/iPF681/iPF720/iPF750/iPF760/iPF780/iPF781/iPF810/iPF820

[GL2 SET PRINT]

MENU LEVEL

[Set./Adj. Menu] - [GL2 Settings] - [GL2 Set Print]

FUNCTION

Prints [GL2 Settings].

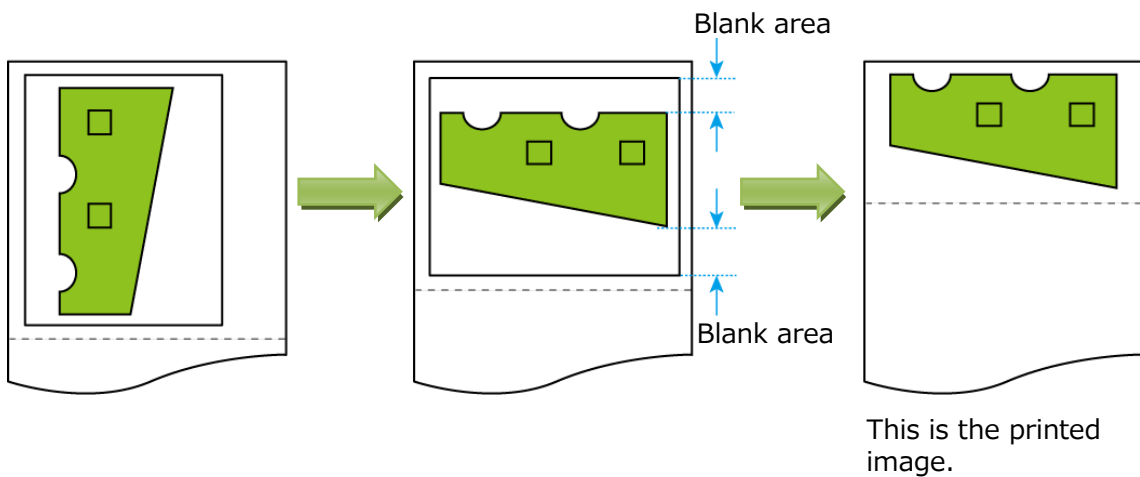
MENU SETTING COMBINATIONS

This section provides print examples that show what is produced by main menu setting combinations.

[CONSERVE PAPER] AND [AUTO ROTATE]

When [Conserve Paper] and [Auto Rotate] are both specified, [Auto Rotate] is performed first, followed by the [Conserve Paper] process. After [Auto Rotate] is applied to the print data, the image is printed with upper and lower blank areas removed.

[CONSERVE PAPER] AND [AUTO ROTATE] EXAMPLE

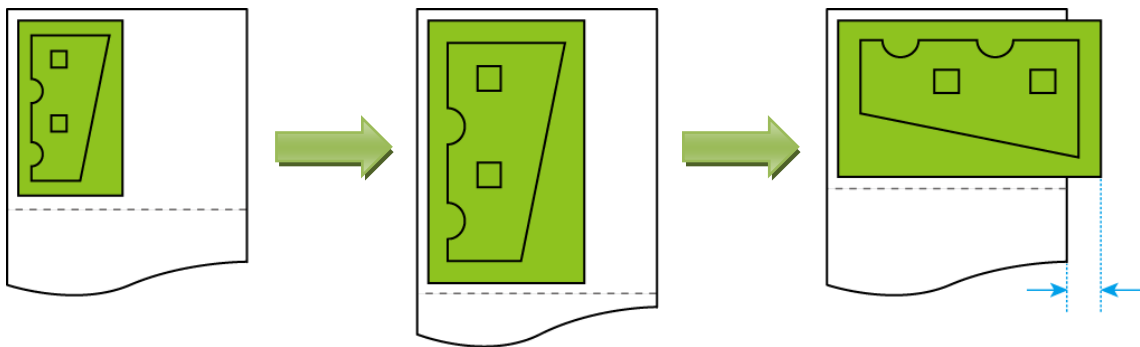


[ENLARGE/REDUCE (SPECIFY SCALING)] AND [AUTO ROTATE]

When both [Enlarge/Reduce (Specify scaling)] and [Auto Rotate] are specified, [Enlarge/Reduce (Specify scaling)] is done first and then [Auto Rotate] is done to determine if printing is possible.

Printing is done without [Auto Rotate] if the size of the image after doing [Enlarge/Reduce (Specify scaling)] would cause the image to run off the edge of the paper were [Auto Rotate] executed.

[ENLARGE/REDUCE (SPECIFY SCALING)] AND [AUTO ROTATE] EXAMPLE



OK
Printing with
[Enlarge/Reduce
(Specify scaling)]
only.

NG
[Auto Rotate] is not
performed.

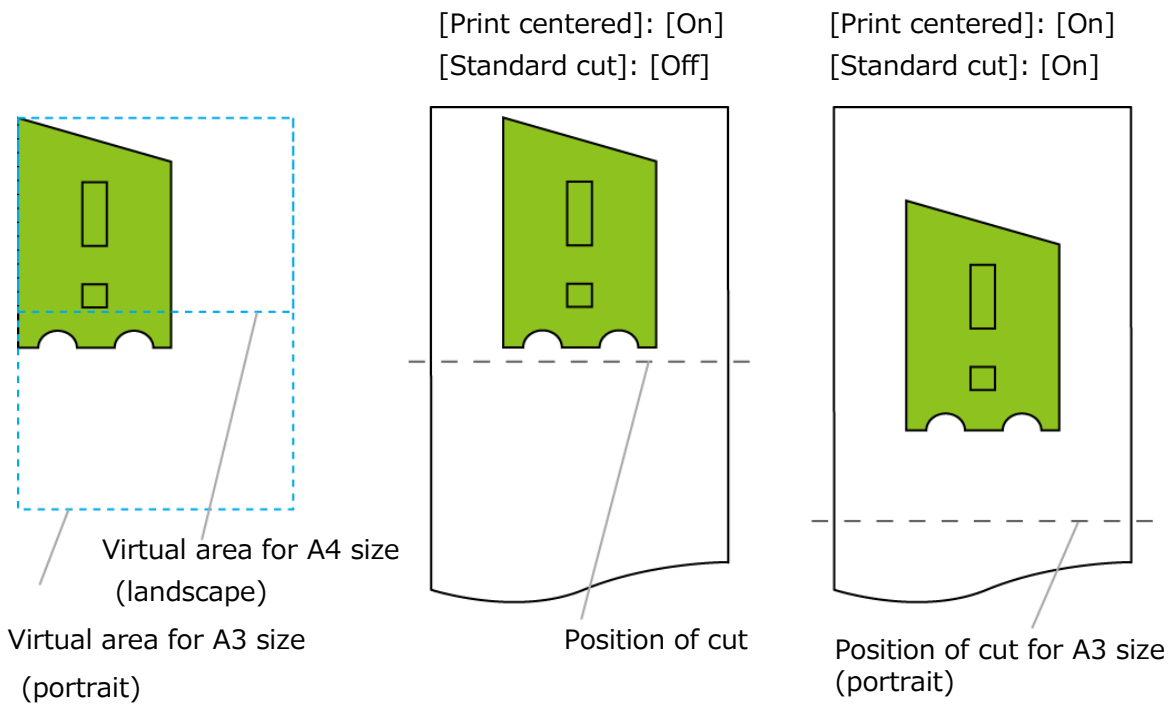
[PRINT CENTERED] AND [STANDARD CUT]

When both [Print centered] and [Standard cut] are specified, first the optimum standard size is determined based on the HP-GL/2 data and the roll paper loaded on the printer. Next, [Print centered] is performed in accordance with the resulting standard size.

[PRINT CENTERED] AND [STANDARD CUT] EXAMPLE

When A3 width roll paper is loaded, A3 portrait is chosen as the optimal standard size based on the roll paper width and image size.

Next, [Print centered] is performed in accordance with the A3 portrait.

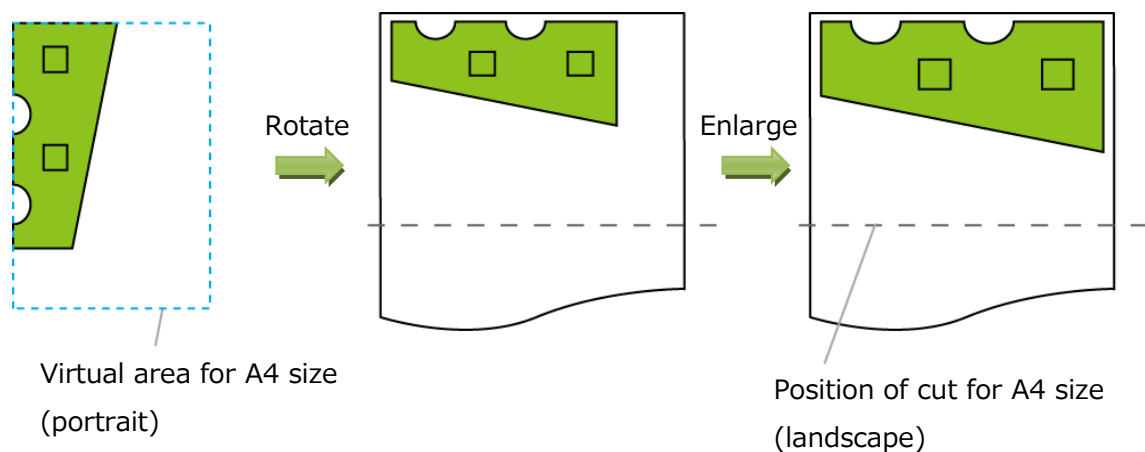


[STANDARD CUT] AND [AUTO ROTATE] AND [ENLARGE/REDUCE (FIT TO PAPER)]

When [Standard cut], [Auto Rotate], and [Enlarge/Reduce (Fit to paper)] are all specified, first the optimum standard size is determined based on the HP-GL/2 data and the roll paper loaded on the printer. Next, [Auto Rotate] and [Enlarge/Reduce (Fit to paper)] processes are performed in accordance with the resulting standard size.

SMALL IMAGE EXAMPLE

When A3 width roll paper is loaded, A4 landscape is chosen as the optimal standard size based on the roll paper width and image size. Next, [Auto Rotate] is performed in accordance with the A4 landscape. Finally, the image is enlarged and printed to match A4 size paper.



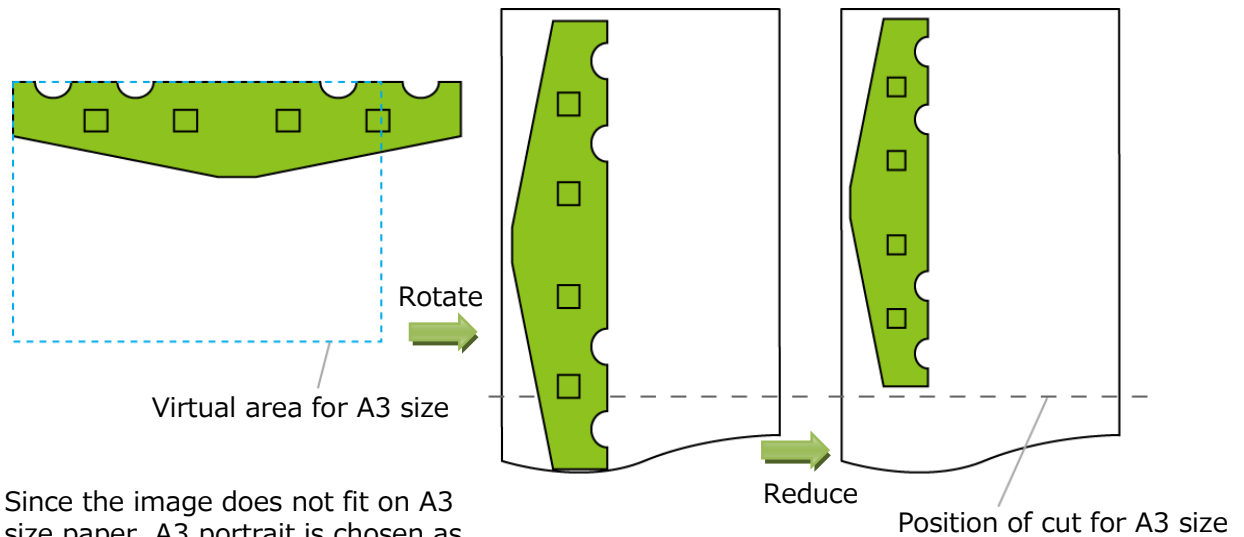
Since the image fits on A4 size paper, A4 landscape is chosen as the standard size.

LARGE IMAGE EXAMPLE

When A3 width roll paper is loaded, A3 portrait is chosen as the optimal standard size based on the roll paper width and image size.

Next, [Auto Rotate] is performed in accordance with the A3 portrait.

Finally, the image is reduced and printed to match A3 size paper.



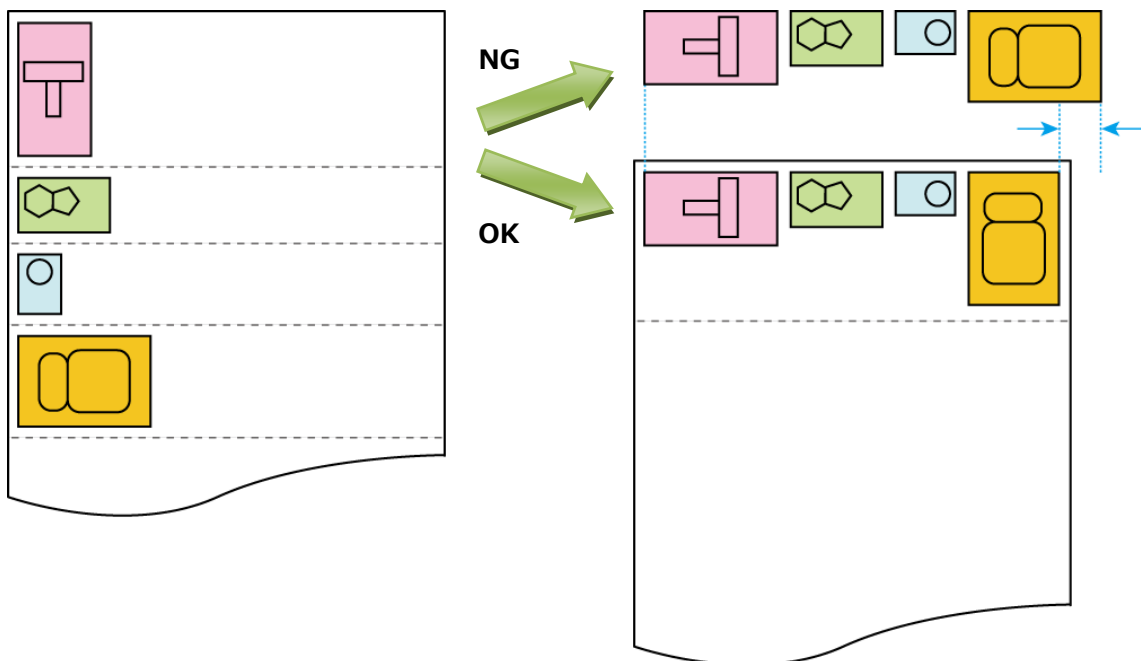
Since the image does not fit on A3 size paper, A3 portrait is chosen as the maximum standard size.

[USE NESTING] AND [AUTO ROTATE]

When both [Use Nesting] and [Auto Rotate] are specified, [Auto Rotate] is performed as each page is received and then the nesting process is performed.

The image on each received page is rotated as required to achieve an efficient layout that conserves paper or to prevent the image from running off the edges of the paper, the images are laid out to fill the width of the roll paper, and then printing is performed.

[USE NESTING] AND [AUTO ROTATE] EXAMPLE



First, the pink image is rotated for better paper usage efficiency and it is positioned on the paper.

Only the nesting process is performed on the light green image and it is positioned next to the pink image.

The light blue image is rotated for better paper usage efficiency and it is positioned next to the light green image.

The orange image is rotated to keep it from running off the edge of the paper and it is positioned next to the light blue image.

Printing is performed using the layout labeled OK.

PAPER SWITCHING ON A DOUBLE-ROLL PRINTER MODEL AND [AUTO ROTATE]

When the paper settings of a double-roll type printer are configured as shown below and [Auto Rotate] is specified, first a decision is made about performing [Auto Rotate] and then the paper is selected based on which width results in the narrower side margins.

-Printer Status-

Both upper and lower roll paper loaded, with paper fed from the upper roll.

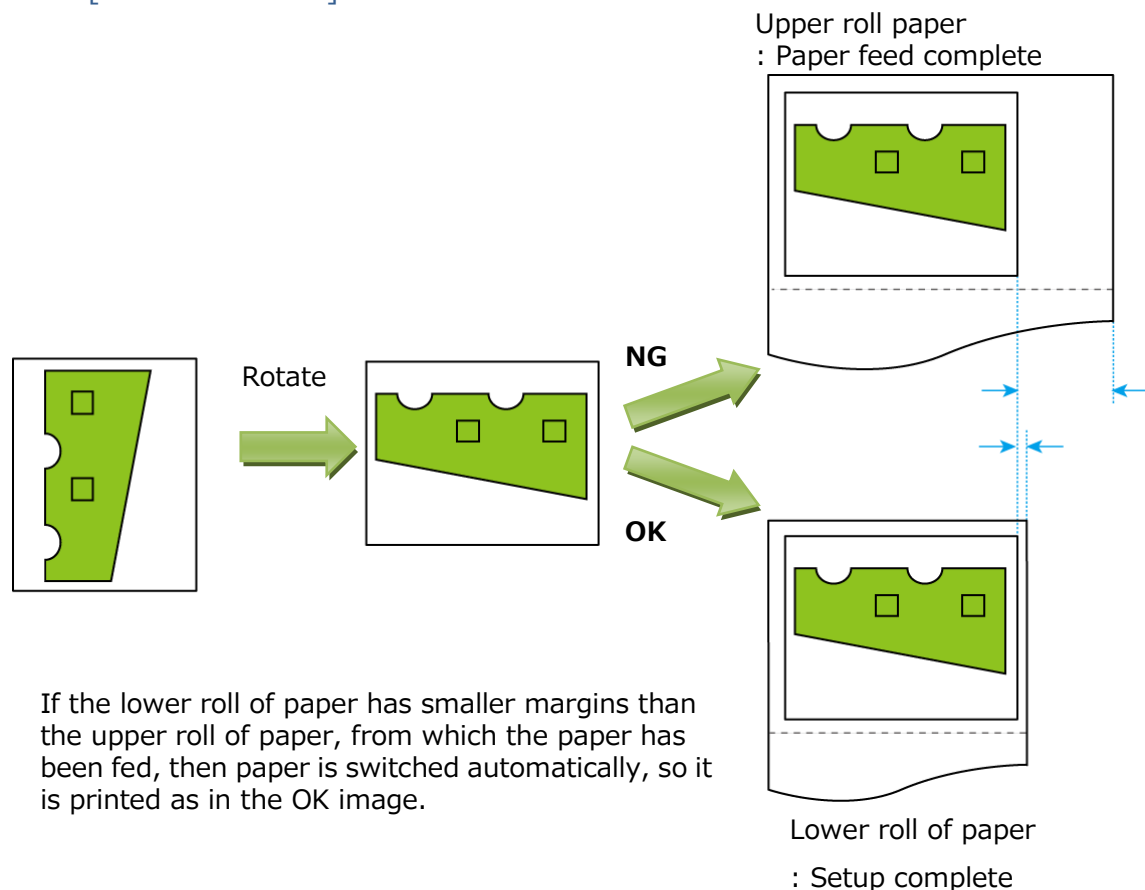
[System Setup] - [Roll Switching] - [Use Optimal Size]

[GL2 Settings] - [Paper Manager] - [Paper Source] - [Automatic]

When the output page is in portrait orientation, image rotation is done first to conserve paper.

For a rotated image that is in landscape orientation, either the upper or lower paper roll is selected for printing based on which roll results in the narrower side margins.

EXAMPLE OF PAPER SWITCHING ON A DOUBLE-ROLL PRINTER MODEL AND [AUTO ROTATE]



If the lower roll of paper has smaller margins than the upper roll of paper, from which the paper has been fed, then paper is switched automatically, so it is printed as in the OK image.

PAPER SWITCHING ON A DOUBLE-ROLL PRINTER MODEL AND [ENLARGE/REDUCE (SPECIFY SCALING)]

The example below shows printing when [Enlarge/Reduce (Specify scaling)] is specified on a double-roll printer model.

EXAMPLE OF PAPER SWITCHING ON A DOUBLE-ROLL PRINTER MODEL AND [ENLARGE/REDUCE (SPECIFY SCALING)]

-Printer Status-

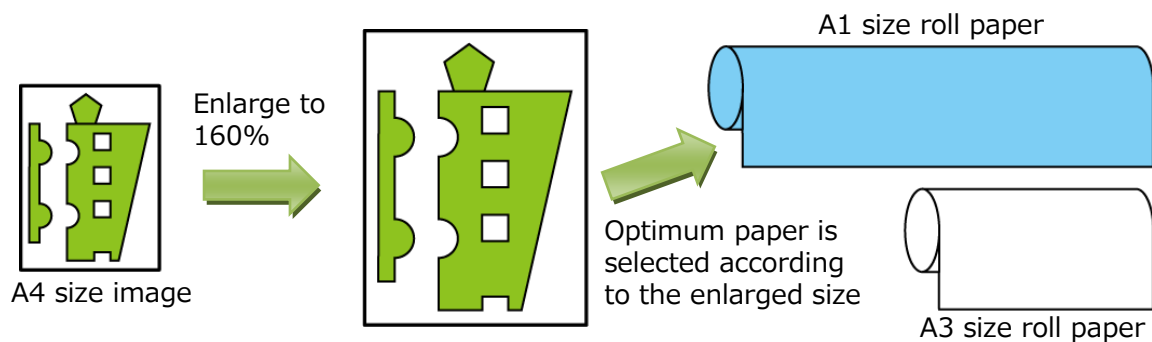
A1 size roll paper loaded on the upper roll and A3 size paper loaded on the lower roll, with paper source switching enabled.

[System Setup] - [Roll Switching] - [Use Optimal Size]

[GL2 Settings] - [Paper Manager] - [Paper Source] - [Automatic]

First, the image is enlarged and then the paper that can be used for printing the enlarged image is selected.

When an A4 size image is enlarged by setting [Specify scaling] to 160%, printing is performed on the A1 width roll paper.



[DETECT IMG SIZE] AND [OVERSIZE]

Operation is as described below when both [Detect img size] and [Oversize] are specified.

- When [Detect img size] is [Off] or [Command priority] and [Oversize] is [Off], [Oversize]-[Off] is performed in accordance with the command-specified image drawing range.
Margins are added within the command-specified image drawing range.
Depending on the layout, part of the image may be cut off.

When [Detect img size] is [Off] or [Command priority] and [Oversize] is [On], [Oversize]-[On] is performed in accordance with the command-specified image drawing range. Margins are added outside the command-specified image drawing range.

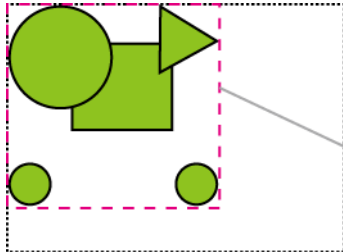
The image is not cut off by the margins.

However, you will need to print on paper of a size that is greater than the size of the image drawing range specified by the HP-GL/2 data plus the top, bottom, left, and right margins.

- When [Detect img size] is [Detected size] and [Oversize] is [Off], processing of the detected minimum image range is performed in accordance with the [Oversize] [Off] setting.
Margins are added within the detected minimum image range.
Parts of the image are cut off.
- When [Detect img size] is [Detected size] and [Oversize] is [On], processing of the detected minimum image range is performed in accordance with the [Oversize] [On] setting.
Margins are added outside the detected minimum image range.
The image is not cut off by the margins.

[DETECT IMG SIZE] AND [OVERSIZE] EXAMPLE

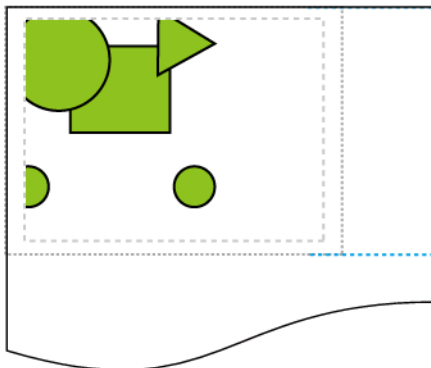
The example below shows printing of data in which a figure is located in the upper left corner with margins below and to the right, on roll paper that is larger than the command-specified image drawing range (size normally specified by the application).



Command-specified image drawing range
(When [Detect img size] is [Off] or when [Command priority] is used)

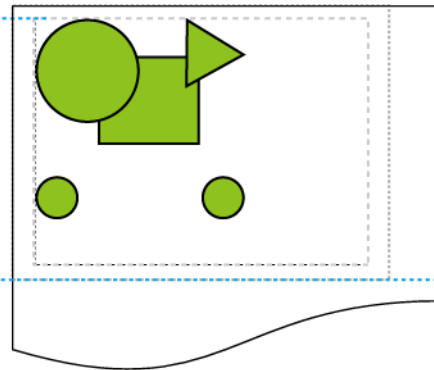
Minimum image range detected
(When [Detect img size] is [Detected size])

- [Detect img size]: [Off]
or [Command priority]
[Oversize]: [Off]



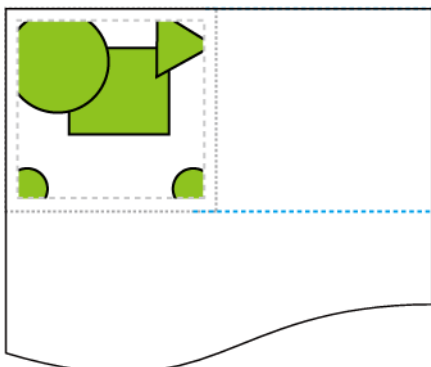
Cut at length of command-specified image drawing range.

- [Detect img size]: [Off]
or [Command priority]
[Oversize]: [On]



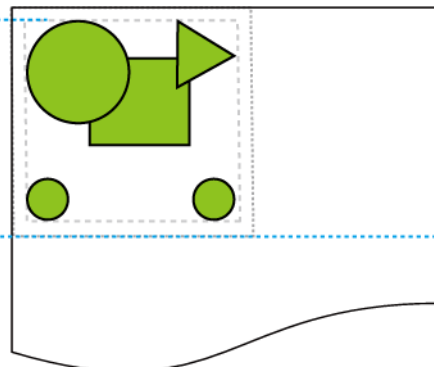
Cut at length of upper and lower margins added to length of command-specified image drawing range.

- [Detect img size]: [Detected size]
[Oversize]: [Off]



Cut at length of minimum image range detected.

- [Detect img size]: [Detected size]
[Oversize]: [On]



Cut at length of upper and lower margins added to length of minimum image range detected.

[DETECT IMG SIZE] AND [PRINT CENTERED]

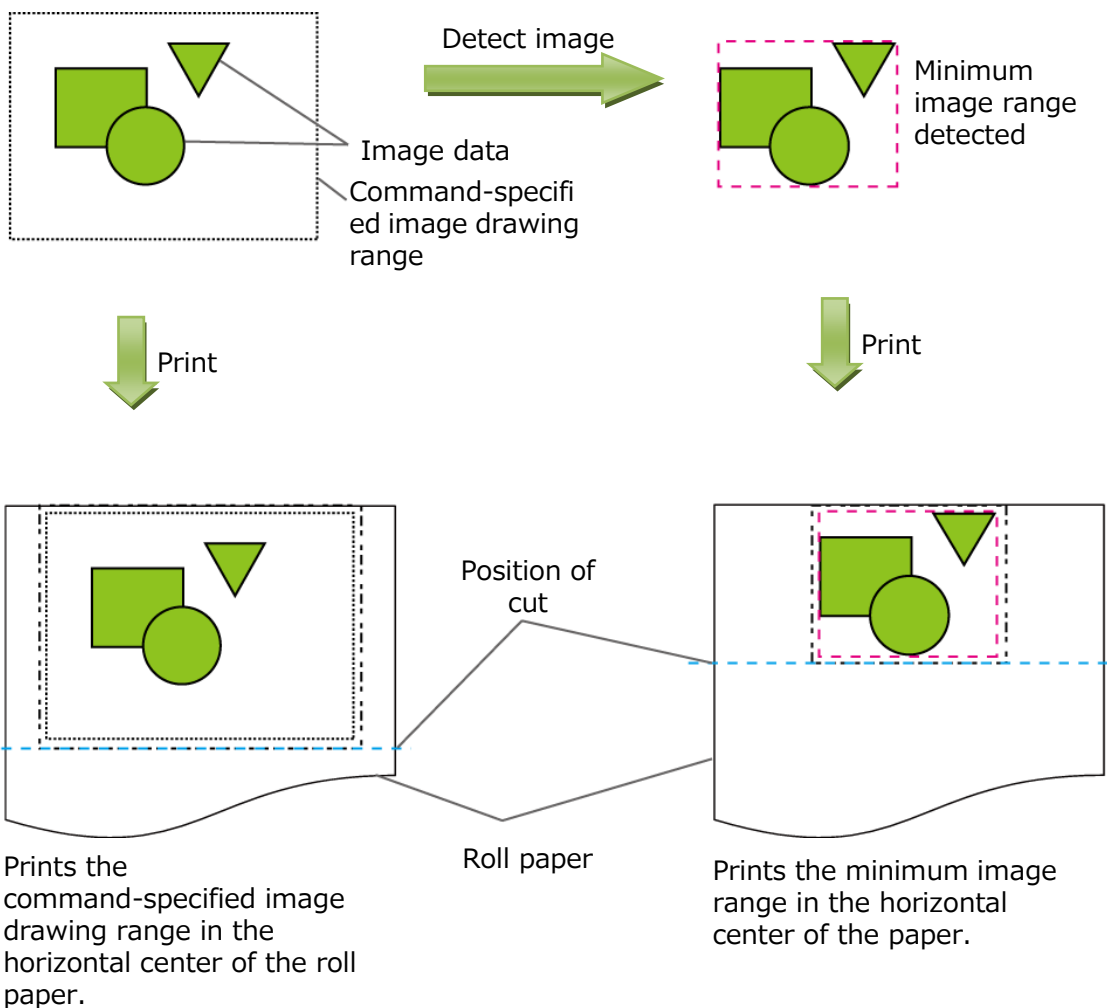
Operation is as described below when both [Detect img size] and [Print centered] are specified.

- When [Detect img size] is [Off] or [Command priority], [Print centered] is performed in accordance with the command-specified image drawing range.
- When [Detect img size] is [Detected size], [Print centered] is performed in accordance with the detected minimum image range.

[DETECT IMG SIZE] AND [PRINT CENTERED] EXAMPLE

[Off] or [Command priority]

[Detected size]



PRECAUTIONS DURING USE

Note the precaution below when printing HP-GL/2 data on an imagePROGRAF series model that supports HP-GL/2 and HP RTL.

- HP-GL data is not supported.

APPENDIX

MENU ITEMS

The following pages show a table of menu items and the notation used for of items printed by [GL2 Set Print].

Note that menus differ depending on the printer model.

For details about how to use menus and the control panel, see the user's guide that comes with your printer.

Also, note that the following models do not have a [Print GL2 Settings] function: iPF510, iPF605, iPF610, iPF710, iPF720, iPF810, iPF820, iPF815, and iPF825. With these models, [GL2 Set Print] is included within [Status Print].

MENU ITEMS

Item *1	Model	Printing notations for GL2 settings	iPF685	iPF680	iPF815	iPF810	iPF655	iPF650	iPF720	iPF510
			iPF686	iPF681	iPF825	iPF820	iPF755	iPF750		iPF605
			iPF785	iPF780			iPF765	iPF760		iPF610
			iPF786	iPF781						iPF710
Set./Adj. Menu			YES	YES	YES	YES	YES	YES		
GL2 Replot				YES				YES		YES
GL2 BufferClear				YES				YES		YES
GL2 Settings			YES	YES	YES	YES	YES	YES	YES	YES
Quality Manager	Quality Manager		YES	YES	YES	YES	YES	YES		
Color Mode	Color Mode		YES	YES	YES	YES	YES	YES	YES	YES
Print Quality	Print Quality		YES	YES	YES	YES	YES	YES	YES	YES
Input Resolution	Input Resolution		YES	YES	YES	YES	YES	YES	YES	YES
Print (Economy)	Print (Economy)		YES	YES	YES	YES	YES	YES		
Paper Manager	Paper Manager		YES	YES	YES	YES	YES	YES		
Paper Source *2	Paper Source		YES	YES	YES	YES	YES	YES	YES	YES
Margin	Margin		YES	YES	YES	YES	YES	YES		
Oversize	Oversize		YES		YES		YES			
Conserve Paper	Conserve Paper		YES	YES	YES	YES	YES	YES	YES	YES
Auto Rotate	Auto Rotate		YES	YES	YES	YES	YES	YES	YES	
Enlarge/Reduce	Enlarge/Reduce		YES		YES		YES			
Specify scaling	Specify scaling		YES		YES		YES			
Fit to paper	Fit to paper		YES							
Print centered	Print centered		YES		YES		YES			
Standard cut	Standard cut		YES							
Nesting	Nesting		YES		YES	YES	YES		YES	
Use Nesting	Use Nesting		YES		YES	YES	YES		YES	
Nesting WaitTime	Nesting WaitTime		YES		YES	YES	YES		YES	
Cut Lines	Cut Lines		YES		YES	YES	YES		YES	
Line&Pen Manager	Line&Pen Manager		YES	YES	YES	YES	YES	YES		
Enable merge	Enable merge		YES	YES	YES	YES	YES	YES		
Pen Setup	Pen Setup		YES	YES	YES	YES	YES	YES		
Select Palette	Select Palette		YES	YES	YES	YES	YES	YES		

Item *1	Model			Printing notations for GL2 settings	iPF685	iPF680			iPF655	iPF650		iPF510
					iPF686	iPF681	iPF815	iPF810	iPF755	iPF750	iPF720	iPF605
					iPF785	iPF780	iPF825	iPF820	iPF765	iPF760		iPF610
					iPF786	iPF781						iPF710
	Define Palette			Define Palette	YES	YES	YES	YES	YES	YES		
	Palette A	Pen no. n (n = 0 to 15)	Width	Width	YES	YES	YES	YES	YES	YES		
	Palette B		Color	Color	YES	YES	YES	YES	YES	YES		
	Factory		Line Attributes	Line Attributes	YES	YES	YES	YES	YES	YES		
	Reset Palette				YES	YES	YES	YES	YES	YES		
	Line Cap			Line Cap							YES	YES
	Smoothing			Smoothing	YES	YES	YES	YES	YES	YES	YES	YES
	ThickenFineLines			ThickenFineLines	YES	YES	YES	YES	YES	YES	YES	YES
	AdjustFaintLines*3			AdjustFaintLines	YES	YES	YES	YES	YES	YES	YES	YES
	Ln width correct			Ln width correct	YES		YES		YES			
	Black/gray			Black/gray	YES		YES		YES			
	Color			Color	YES		YES		YES			
	Line Width			Line width							YES	YES
	ProcessingOption			ProcessingOption	YES	YES	YES	YES	YES	YES	YES	
	Warning			Warning	YES	YES	YES	YES	YES	YES		
	On-the-Fly			On-The-Fly	YES		YES	YES	YES		YES	
	Detect img size			Detect img size	YES		YES		YES			
	PageSizeProcess1			PageSizeProcess1		YES		YES		YES	YES	
	PageSizeProcess2			PageSizeProcess2		YES		YES		YES	YES	
	GL2 Set Print			GL2 Set Print	YES	YES	*1	*1	YES	YES		

*1: GL2 setting notation in status print.

STANDARD SIZE TABLE

The table below shows the standard sizes supported by [Standard cut].

Standard Size Portrait			Standard Size Landscape		
	Width (mm)	Height (mm)		Width (mm)	Height (mm)
ISO A0	841.0	1189.0	ISO A1	841.0	594.0
ISO A1	594.0	841.0	ISO A2	594.0	420.0
ISO A2	420.0	594.0	ISO A3	420.0	297.0
A3 Nobi	329.0	483.0	No standard	-	-
ISO A3	297.0	420.0	ISO A4	297.0	210.0
ISO A4	210.0	297.0	No standard	-	-
ISO B1	707.0	1000.0	ISO B2	707.0	500.0
ISO B2	500.0	707.0	ISO B3	500.0	353.0
ISO B4	250.0	353.0	No standard	-	-
JIS B1	728.0	1030.0	JIS B2	728.0	515.0
JIS B2	515.0	728.0	JIS B3	515.0	364.0
JIS B3	364.0	515.0	JIS B4	364.0	257.0
JIS B4	257.0	364.0	No standard	-	-
ANSI E	863.6	1117.6	ANSI D	863.6	558.8
ANSI F1	711.2	1016.0	No standard	-	-
ANSI D	558.8	863.6	ANSI C	558.8	431.8
ANSI C	431.8	558.8	LEDGER	431.8	279.4
LEDGER	279.4	431.8	LETTER	279.4	215.9
LETTER	215.9	279.4	No standard	-	-
No standard	-	-	LEGAL	355.6	215.9
ARCH E	914.4	1219.2	ARCH D	914.4	609.6
ARCH E1	762.0	1066.8	No standard	-	-
ARCH E2	660.4	965.2	No standard	-	-
ARCH E3	685.8	990.6	No standard	-	-
ARCH D	609.6	914.4	ARCH C	609.6	457.2
ARCH C	457.2	609.6	ARCH B	457.2	304.8
ARCH B	304.8	457.2	ARCH A	304.8	228.6
ARCH A	228.6	304.8	No standard	-	-
DIN C1	648.0	917.0	DIN C2	648.0	458.0
DIN C2	458.0	648.0	DIN C3	458.0	324.0
DIN C3	324.0	458.0	DIN C4	324.0	229.0
DIN C4	229.0	324.0	No standard	-	-