

Photo Printer

Command Specification

(DS40/DS80/DP-DS80D/
DP-DS620 Series/DP-DS820/
DP-QW410)

Ver. 2.528_D

Published November 25, 2021

Revision History Chart		First Edition: October 11.2007			Page 1/4
Revised Item	Type of Revision	Revision No.	Revision Date	Approved	Designer
Title Page ii iii P18 P19	Title was renamed. "Model to apply" was added. "Command table" was added. "3-4 The number of free buffers which can transmit printing data" was added. "3-5 Multi-cut pattern specification value" was added. "3-6 Cutter control specification value" was added. * Refer to the document of revision 1.31 for the revision before 2.00.	2.000	Feb. 7, 2012		
P4 P20	In "1-1.2.9 Get media lot information ", the description mistake of the number of transmission data size was corrected. "3-7 Example of acquisition of a media lot number" was added.	2.010	Nov. 7, 2012		
	• Title was renamed. • DP- DS80D was added.	2.200	Dec. 18, 2013		
P30	Figure of the RF-ID write tool was changed	2.210	Feb. 6, 2014		
P24,25 P30	• The explanation for recovering from a Duplex unit error was changed. • The explanation for the RF-ID media lot numbers was changed.	2.220	Feb. 28, 2014		
Front Cover, i - v P4,6,9 P11-14, P17-20,22 P29-30, P33-35, 39 P41-50	• Title was renamed. • DP- DS620 was added. • The following command were added. 1-1.2.7-2 Get L/PC Size Conversion Media Counter of Remaining Sheets 1-1.2.13 Get Printer Serial Number 1-3.6 Full Cutter Set-up 1-4.6 Get Color Data Version <Type Designation> 1-4.7 Get Color Data Checksum <Type Designation> 1-5.11 Set Standby mode transition time 1-5.12 Get Standby mode transition time 1-5.13 Set Media End Keep Mode 1-5.14 Get Media End Keep Mode 1-5.15 Set USB iSerialNumber availability setting 1-5.16 Get USB iSerialNumber availability setting • The following supplementary information were added 3-11 Full Cutter Set-up command 3-12 Standby Mode 3-13 Ribbon Rewind Function • The following media sizes were added 5x5, 6x6	2.300	July 17, 2014		
P18-20	• Stated that the settings were stored in the printer. The default value for the setting was clarified.	2.310	July 25, 2014		
i, iv, v P7,23,25 36,42	• Cut paper 8x6x2 size was added. • The following command were added. 1-1.2.14 Get duplex-unit firmware rewrite information 1-6.3 Changing to the firmware rewrite mode for duplex-unit 1-6.4 Transmission of firmware rewriting data for duplex-unit	2.320	Aug. 22, 2014		

Revision History Chart		First Edition: October 11.2007			Page 2/4
Revised Item	Type of Revision	Revision No.	Revision Date	Approved	Designer
P2 P21 P37 P53 P14-16,54 P4,55 Piv,52	<ul style="list-style-type: none"> • Sensor information was added. • Changed the factory preset value of the Media End Keep Mode. (0: not Keep Media End -> 1: Keep Media End) • Rewind (5 x 3.5) was supported. • Stated that the DP-DS620 (A) is printed without rewinding the ribbon. • 3-14 Procedure to update of color control data was added. (include 610.cwd) • 3-15 Ribbon End Check Operation was added. • Get printer version information was changed to the command that can be used in Standby Mode 	2.321	Oct. 31, 2014		
P9, 54 P26,37,38 44,46, 55-57	<ul style="list-style-type: none"> • Get initial media count command was added. • The following media sizes were added. (for DP-DS620) 6x9, 6x4.5, (6x4.5)x2 • The command sending sequence for Procedure to update of color control data was modified. 	2.330	Feb. 27, 2015		
iv P9,12,13, P42 P38,39 P60-66	<ul style="list-style-type: none"> • The Panorama Print Start Check command was added. • Panorama Printing was added to the Cutter Control commands. • Fine Matte and Partial Matte was added to the Overcoat Finish command. • The list of the numbers of buffers of each paper type which a printer was added. • Detailed explanations of Panorama Printing and Partial Matte Printing was added. 	2.340	Apr. 24, 2015		
iv P26,37,38,4 0,46	<ul style="list-style-type: none"> • DS40 was added to the full-cutter setup compatible models of command table • The following media sizes were added. (for DS40) 6x6 	2.341	June 30, 2015		
iv v P10 P49	<ul style="list-style-type: none"> • DS40 was added to the Get initial media count compatible models of command table • DS40 was added to the Set USB iSerialNumber availability setting compatible models of command table • DS40 was added to the Get USB iSerialNumber availability setting compatible models of command table • Get media offset count command was added. • The media offset count was added to the table of counter default value. • The note *2 was added 	2.342	Aug. 31, 2015		
i-vi P2,5 P15-20, P23-24,34, P41-42,45, P48-51,56, P58,60-61 P63,66-67, P69-77	<ul style="list-style-type: none"> • Title was renamed. • DP- DS820 was added. • Luster was added to the 1-3.3 Overcoat finish command • The parameter to specify the intermediate scrap setting was added to the 1-3.6 Full Cutter Set-up • The parameter to specify the media type was added to the 1-4.6 Acquisition of color control data version <Type designation> command • The parameter to specify the media type and the command for high density were added to the 1-4.7 Acquisition of color control data checksum <Type designation> command. • The following commands were added. 1-3.7 Continuous Panoramic Prints settings 1-3.8 Print speed designation • The following media sizes were added 8x7, 8x9, A4 Format, A5 Format, A4x5, A4x6, A4x8, A4x10,(A4x5)x2, A5x2 	2.400	Feb. 29, 2016		

Revision History Chart		First Edition: October 11.2007			Page 3/4
Revised Item	Type of Revision	Revision No.	Revision Date	Approved	Designer
iv, v P13 P29 P30 P30 P27,28 P40 P52,55 P56 P63 P73 P74 P80 P76	<p>The following commands were added.</p> <ul style="list-style-type: none"> • 1-1.2.20 Get media class • 1-4. 8 Gamma Correction Data update • 1-4.9 Get Gamma Correction Data checksum • 1-4.10 Correction Data reset <p>The following notation has been changed.</p> <ul style="list-style-type: none"> • RX media -> SD media • HDM media -> PP media <p>DP-DS820-related portion of the table in the following sections have been updated.</p> <ul style="list-style-type: none"> • 2-1 Image size • 3-4 The number of free buffers which can transmit printing data • 3-5 Multi-cut pattern specification value • 3-9 Counter count-up action • 3-12 Standby Mode • 3-13 Ribbon Rewind Function • 3-16 Panorama Printing <p>The following section has been changed.</p> <ul style="list-style-type: none"> • "3-14 Procedure to update of color control data" <p>-- Command use examples related to the DP-DS820 has been changed.</p>	2.420	June 24, 2016		
P11 P74 P75 P76 P78	<p>The following section has been changed.</p> <ul style="list-style-type: none"> • 1-1.2.16 Panorama Printing Start Check • 3-16 Panorama Printing <p>(2) Panorama Printing Process Flow</p> <p>Delete (Table. Regarding damage to the print caused by the de-curling and media grip sections)</p> <p>(Table. Printing Time)</p> <p>(7) Notes regarding Panorama Printing</p>	2.422_D	Sept. 13, 2016		
i -x P16-17,19, 38,48,53,55, 57-59, 63,66,78, 85-86 P2 P12 P24 P26 P27, P23 P23 P2, P49 P66	<ul style="list-style-type: none"> • Title was renamed. • DP-QW410 was added. <p>The following section has been changed.</p> <ul style="list-style-type: none"> • 1-1.2.2 Get printer sensor information • 1-1.2.18 Get media type • 1-3.8 Print speed designation • 1-4.6 Acquisition of color control data version <Type designation> • 1-4.7 Acquisition of color control data checksum <Type designation> <p>The following commands were added.</p> <ul style="list-style-type: none"> • 1-3.11 Decurl Control • 1-3.12 Current time notification <p>The mistyping was fixed.</p> <p>Changed the description of media subtraction processing when initializing paper.</p>	2.523_D	Dec. 24, 2019		

Revision History Chart		First Edition: October 11.2007			Page 4/4
Revised Item	Type of Revision	Revision No.	Revision Date	Approved	Designer
Front Cover, P12,26, 27,76,79	DP-DS620 Series was supported. (DP DS620 firmware version 3.00 or later)	2.527_D	May. 20, 2021		
P40,50,57, 68	<ul style="list-style-type: none"> • 4.5x6 media was corresponded. (for DP-QW410) • Added of coressponding firmware version. 				
xi,P37	<ul style="list-style-type: none"> • Added Get supported media information command 				
P12	The following section has been changed.				
P15	<ul style="list-style-type: none"> • 1-1.2.20 Get media type • 1-3.2 Cutter control 				
P30	<ul style="list-style-type: none"> • 1-5.2 Reading the print volume life counter 	2.528_D	Nov. 25, 2021		
P32	<ul style="list-style-type: none"> • 1-5.7 Reading the print volume Matte counter 				
P61	<ul style="list-style-type: none"> • 3-6 Cutter control specification value 				
P79	<ul style="list-style-type: none"> • 3-14 Procedure to update of color control data 				
P20,42,58,60, 64,70	<ul style="list-style-type: none"> • The following media sizes were added. (for DP-QW410) (4x3), (4x4.5), (4.5x3), (4.5x4), (4x3)x2, (4.5x3)x2, (4.5x4)x2 				
P42,43,45,46, 58-65	<ul style="list-style-type: none"> • Unification of notation such as paper type. 				

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Notes



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Model to apply

This command specification is applied to the following models.

- DS40
- DS80
- DP-DS80D
- DP-DS620 Series
- DP-DS820
- DP-QW410

Command table

A part of commands has restriction of support by the firmware version.

○:Support Value: Effective firmware version (This or later)

§	Function	Command	Note	Model						Notes
				DS40	DS80	DP-DS80D	DP-DS620	DP-DS820	DP-QW410	
1-1.1	Get printer status	<ESC>P STATUS	*1	○	○	○	○	○	○	Refer to 3-3.1
1-1.2.1	Get printer version information	<ESC>P INFO FVER	*1	○	○	○	○	○	○	
1-1.2.2	Get printer sensor information	<ESC>P INFO SENSOR	*2	○	○	○	○	○	○	
1-1.2.3	Get printer media information	<ESC>P INFO MEDIA	*1	○	○	○	○	○	○	Refer to 3-2
1-1.2.4	Get printer horizontal resolution	<ESC>P INFO RESOLUTION_H	*2	○	○	○	○	○	○	
1-1.2.5	Get printer vertical resolution	<ESC>P INFO RESOLUTION_V	*2	○	○	○	○	○	○	
1-1.2.6	Get number of free print buffers	<ESC>P INFO FREE_PBUFFER	*2	○	○	○	○	○	○	Refer to 3-4
1-1.2.7-1	Get remaining print quantity	<ESC>P INFO MQTY	*1	○	○	○	○	○	○	Refer to 3-10
1-1.2.7-2	Get Half Size Conversion Media Counter of Remaining Sheets	<ESC>P INFO RQTY	*1	-	-	-	○	○	-	Refer to 3-13
1-1.2.8	Get Media Color offset values of the lot	<ESC>P INFO MCOLOR	*2	○	○	○	○	○	○	
1-1.2.9	Get media lot information	<ESC>P INFO MLOT	*1	○	○	○	○	○	○	Refer to 3-7
1-1.2.10	Get duplex unit status	<ESC>P INFO UNIT_STATUS	-	-	-	○	-	-	-	Refer to 3-3.2
1-1.2.11	Get cut media information	<ESC>P INFO CUT_PAPER	-	-	-	○	-	-	-	
1-1.2.12	Get duplex-unit version information	<ESC>P INFO UNIT_FVER	-	-	-	○	-	-	-	
1-1.2.13	Get Printer Serial Number	<ESC>P INFO SERIAL_NUMBER	*1	○	○	○	○	○	○	
1-1.2.14	Get duplex-unit firmware rewrite information	<ESC>P INFO DUNIT_UPD_STS	-	-	-	1.20	-	-	-	
1-1.2.15	Get initial media count	<ESC>P INFO MQTY_DEFAULT	*1	2.00	-	-	○	○	○	
1-1.2.16	Panorama Printing Start Check	<ESC>P INFO PANORAMA_PRINT	*2	-	-	-	1.20	○	-	
1-1.2.17	Get media offset count	<ESC>P INFO MEDIA_OFFSET	-	2.00	-	-	-	○	○	
1-1.2.18	Get media class	<ESC>P INFO MEDIA_CLASS_RFID	*4	-	-	-	○	○	○	
1-2.1	Sending command of Yellow graphic data block	<ESC>P IMAGE YPLANE	*3	○	○	○	○	○	○	Refer to 2-1, 3-1
1-2.2	Sending command of Magenta graphic data block	<ESC>P IMAGE MPLANE	*3	○	○	○	○	○	○	Refer to 2-1, 3-1
1-2.3	Sending command of Cyan graphic data block	<ESC>P IMAGE CPLANE	*3	○	○	○	○	○	○	Refer to 2-1, 3-1
1-2.4	Designate multi-cut pattern	<ESC>P CNTRL MULTICUT	*3	○	○	○	○	○	○	Refer to 3-5

§	Function	Command	Note	Model						Notes
				DS40	DS80	DP-DS80D	DP-DS620	DP-DS820	DP-QW410	
1-3.1	Print start	<ESC>P CNTRL START	*3	○	○	○	○	○	○	
1-3.2	Cutter control	<ESC>P CNTRL CUTTER	*3	○	○	○	○	○	○	Refer to 3-6,3-8
1-3.3	Overcoat finish	<ESC>P CNTRL OVERCOAT	*3	1.30	1.30	○	○	○	○	
1-3.4	Print re-try control	<ESC>P CNTRL BUFCNTRL	*3	1.30	1.30	Roll media only	○	○	○	
1-3.5	Duplex unit: Cancel back print & eject	<ESC>P CNTRL DUPLEX_CANCEL	-	-	-	○	-	-	-	
1-3.6	Full Cutter Set-up	<ESC>P CNTRL FULL_CUTTER_SET	*3	1.60	-	-	○	○	○	Refer to 3-11
1-3.7	Continuous Panoramic Prints settings	<ESC>P CNTRL CONT_PANORAMA	*3	-	-	-	1.32	0.50	-	
1-3.8	Print speed designation	<ESC>P CNTRL PRINTSPEED	*3	-	-	-	-	○	○	
1-3.9	Decurl Control	<ESC>P CNTRL DECURL	-	-	-	-	-	-	○	
1-3.10	Current time notification	<ESC>P CNTRL SET_SYS_TIME	-	-	-	-	-	-	○	
1-4.1	Clearing of printer table information	<ESC>P TBL_CL	*3	○	○	○	○	○	○	
1-4.2	Update of color control data	<ESC>P TBL_WT CTRLD_UPDATE	*3	○	○	○	○	○	○	
1-4.3	Setting of color control data version	<ESC>P TBL_WT Version	*3	○	○	○	○	○	○	
1-4.4	Acquisition of color control data version	<ESC>P TBL_RD Version	*2	○	○	○	○	○	○	
1-4.5	Acquisition of color control data checksum	<ESC>P MNT_RD CTRLD_CHKSUM	*2	○	○	○	○	○	○	
1-4.6	Acquisition of color control data version <Type designation>	<ESC>P TBL_RD CWD300_Version CWD310_Version CWD600_Version CWD610_Version CWD620_Version	*2	-	-	-	○	○	○	
1-4.7	Acquisition of color control data checksum <Type designation>	<ESC>P TBL_RD CWD300_Checksum CWD310_Checksum CWD600_Checksum CWD610_Checksum CWD620_Checksum	*2	-	-	-	○	○	○	
1-4.8	Gamma Correction Data update	<ESC>P TBL_WT CTRLD_GAMMA16	*3	-	-	-	-	0.50	-	
1-4.9	Get Gamma Correction Data checksum	<ESC>P TBL_RD CTRLD_GAMMA16	*2	-	-	-	-	0.50	-	
1-4.10	Correction Data reset	<ESC>P TBL_WT CTRLD_CWE_RESET	*3	-	-	-	-	0.50	-	

§	Function	Command	Note	Model						Notes
				DS40	DS80	DP-DS80D	DP-DS620	DP-DS820	DP-QW410	
1-5.1	Clearing the counter A/B	<ESC>P MNT_WT COUNTER_CLR	*3	○	○	○	○	○	○	
1-5.2	Reading the print volume life counter	<ESC>P MNT_RD COUNTER_LIFE	*2	○	○	○	○	○	○	Refer to 3-9
1-5.3	Reading the print volume counter A	<ESC>P MNT_RD COUNTER_A	*2	○	○	○	○	○	○	Refer to 3-9
1-5.4	Reading the print volume counter B	<ESC>P MNT_RD COUNTER_B	*2	○	○	○	○	○	○	Refer to 3-9
1-5.5	Reading the print volume counter P	<ESC>P MNT_RD COUNTER_P	*2	1.04	1.02	○	○	○	○	Refer to 3-9
1-5.6	Setting counter P value	<ESC>P MNT_WT COUNTERP_SET	*3	1.04	1.02	○	○	○	○	
1-5.7	Reading the print volume Matte counter	<ESC>P MNT_RD COUNTER_MATTE	*2	1.30	1.30	○	○	○	○	Refer to 3-9
1-5.8	Reading the print volume counter M	<ESC>P MNT_RD COUNTER_M	*2	1.30	1.30	○	○	○	○	Refer to 3-9
1-5.9	Clearing the counter M	<ESC>P MNT_WT COUNTER_CLR	*3	1.30	1.30	○	○	○	○	
1-5.10	Read Duplex Counter	<ESC>P MNT_RD COUNTER_DUPLEX	-	-	-	○	-	-	-	Refer to 3-9
1-5.11	Standby mode transition time setting	<ESC>P MNT_WT STANDBY_TIME	*3	-	-	-	○	○	-	Refer to 3-12
1-5.12	Standby mode transition time acquisition	<ESC>P MNT_RD STANDBY_TIME	*2	-	-	-	○	○	-	Refer to 3-12
1-5.13	Setting of Media end keep mode	<ESC>P MNT_WT END_KEEP_MODE	*3	-	-	-	○	○	○	
1-5.14	Acquisition of Media end keep mode	<ESC>P MNT_RD END_KEEP_MODE	*2	-	-	-	○	○	○	
1-5.15	Set USB iSerialNumber availability setting	<ESC>P MNT_WT USB_ISERI_SET	*3	2.00	-	-	○	○	○	
1-5.16	Get USB iSerialNumber availability setting	<ESC>P MNT_RD USB_ISERI_SET	*2	2.00	-	-	○	○	○	
1-5.17	Get Supported Media Information	<ESC>P MNT_RD SUPPORTED_MEDIA	*2	-	-	-	4.00	-	-	
1-6.1	Changing to the firmware rewrite mode	<ESC>P FW_UPD FLASH_REWRITE	*3	○	○	○	○	○	○	
1-6.2	Transmission of firmware rewriting data	<ESC>P FW_UPD FLASH_PROGRAM	-	○	○	○	○	○	○	
1-6.3	Changing to the firmware rewrite mode for duplex-unit	<ESC>P FW_UPD DUNIT_REWRITE	-	-	-	○	-	-	-	
1-6.4	Transmission of firmware rewriting data for duplex-unit	<ESC>P FW_UPD DUNIT_PROGRAM	-	-	-	○	-	-	-	

Note

*1: Compatible model= DP-DS620/DP-DS820

The printer can send return data even in Standby mode. (Refer to 3-12)

*2: Compatible model = DP-DS620/DP-DS820

During Standby mode, the printer will return to normal mode before carrying out the command and sending the return data (sends after approx. 10 sec). The Host will have to wait for the printer to send the return data.
(Refer to 3-12)

*3: Compatible model = DP-DS620/DP-DS820

During Standby mode, the printer will return to normal mode before carrying out the command (performs command after approx. 10 sec). (Refer to 3-12)

*4: Compatible model= DP-DS820/DP-DS620(ver.3.00 or later)

The printer can send return data even in Standby mode. (Refer to 3-12)

1. Details of commands

The commands to be sent to printers shall have a fixed length of 32 bytes in total, consisting of 2-byte start code, 6-byte Argument 1, 16-byte Argument 2 and 8-byte Argument 3. If Argument 4 is additionally needed, the data size of Argument 4 that follows Argument 3 shall be designated.

If the command character strings in Arguments 1 and 2 is less than the specified length, all remaining spaces shall be filled with space data (0x20).

Argument 3, which indicates the Argument 4 data length, shall be designated in 32-bit unit (4-byte unit), 8-digit decimal ASCII numbers. If the valid data length of Argument 4 does-not consist of 32-bit unit numbers, null data (0x00) shall be added to the end of valid data to complete the 32-bit unit. If Argument 4 is not needed, every space of Argument 3 shall be filled with space data.

The data returned from the printer contains 8-byte, fixed-length data at its head. This data indicates the size of successive data in 8-digit decimal ASCII numbers. The successive data will be in 32-bit unit. If the valid data length is less than this, null data shall be added to the end of valid data.

1-1.1 Get printer status

[Code]

Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
<ESC>P	STATUS			

[Transmitted data]

Start code

ESC[1Bh] P

STATUS

Request to send printer status

[Function]

The printer sends status information in 5-digit ASCII numbers (with CR<0Dh> at its end).

(See 3-3.1 for status codes.)

[Returned data]

Size (8)	Data
00000008	nnnnn<CR> <null> <null>

[Returned data example]

00000008

00001<CR> <null> <null> (Printing)

1-1.2.1 Get printer version information

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	INFO	FVER		

[Transmitted data]	Start code	ESC[1Bh] P
	INFO	Request to send printer information
	FVER	Request to send printer firmware version

[Function] The printer sends version information in variable-length ASCII character string (with CR<0Dh> at its end).

[Returned data]	Size (8)	Data
	0000nnnn	Variable-length ASCII character string <CR>

[Returned data example]	00000012	ABCD0123<CR> <null> <null> <null>
-------------------------	----------	-----------------------------------

1-1.2.2 Get printer sensor information

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	INFO	SENSOR		

[Transmitted data]	Start code	ESC[1Bh
	INFO	Request to send printer information
	SENSOR	Request to send printer sensor information

[Function] The printer sends sensor information in variable-length ASCII character string (with CR<0Dh> at its end).

[Returned data]	Size (8)	Data
	0000nnnn	Variable-length ASCII character string <CR>

[Returned data example] 00000200 HDT-011;MDT-022;RML-033;...GSB-099; ...<CR>

[Sensor Information]

HDT-***;	Head temperature	
MDT-***;	Media temperature	
PMK-***;	Paper mark	
RML-***;	Ribbon mark left	
RMC-***;	Ribbon mark center	
RMR-***;	Ribbon mark right	
PSZ-***;	Paper size	
PNT-***;	Paper notch	
PJM-***;	Paper jam	
PED-***;	Paper end	
PET-***;	Paper empty	
HDV-***;	Head voltage	
HMD-***;	Humidity	
RP1-***;	Roll media paper end detection sensor-1	(Only compatible for DP-DS80D)
RP2-***;	Roll media paper end detection sensor-2	(Only compatible for DP-DS80D)
CSR-***;	Color Sensor (Red)	(Only compatible for DP-DS620/DP-DS820)
CSG-***;	Color Sensor (Green)	(Only compatible for DP-DS620/DP-DS820)
CSB-***;	Color Sensor (Blue)	(Only compatible for DP-DS620/DP-DS820)
DC5-***;	USB power supply voltage	(Only compatible for DP-QW410)

1-1.2.3 Get printer media information

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	INFO	MEDIA		

[Transmitted data] Start code ESC[1Bh] P
 INFO Request to send printer information
 MEDIA Request to send printer media information

[Function] The printer sends media information in 7-digit ASCII character string (with CR<0Dh> at its end). (See 3-2 for 5-digit codes representing the media.)

[Returned data]	Size (8)	Data
	00000008	MTnnnnn<CR>

[Returned data example] 00000008 MT00200<CR>

1-1.2.4 Get printer horizontal resolution

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	INFO	RESOLUTION_H		

[Transmitted data] Start code ESC[1Bh] P
 INFO Request to send printer information
 RESOLUTION_H Request to send printer media information

[Function] The printer sends head resolution information in 6-digit ASCII character string (with CR<0Dh> at its end).

[Returned data]	Size (8)	Data
	00000008	RHnnnn<CR> <null>

[Returned data example] 00000008 RH0300<CR> <null> (300dpi)

1-1.2.5 Get printer vertical resolution

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	INFO	RESOLUTION_V		

[Transmitted data]	Start code	ESC[1Bh] P
	INFO	Request to send printer information
	RESOLUTION_V	Request to send printer media information

[Function] The printer sends paper feed resolution information in 6-digit ASCII character string (with CR<0Dh> at its end).

[Returned data]	Size (8)	Data
	00000008	RVnnnn<CR> <null>

[Returned data example]	00000008	RV0600<CR> <null> (600dpi)
-------------------------	----------	----------------------------

1-1.2.6 Get number of free print buffers

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	INFO	FREE_PBUFFER		

[Transmitted data]	Start code	ESC[1Bh] P			
	INFO	Request to send printer information			
	FREE_PBUFFER	Request to send the number of free print buffers			

[Function]	The printer sends the number of pages of free print buffers in 5-digit ASCII character string (with CR<0Dh> at its end).				
	Refer to 3-4 for the relation with the number of free print buffers which can transmit paper type and its printing data.				

[Returned data]	Size (8)	Data			
	00000008	FPBnn<CR> <null><null>			

[Returned data example]	00000008	FPB01<CR> <null><null> (1 free page)			
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1-1.2.7-1 Get remaining print quantity

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	INFO	MQTY		

[Transmitted data]	Start code	ESC[1Bh] P
	INFO	Request to send printer information
	MQTY	Send the remaining number of media to issue

[Function]	The printer sends the number of remaining media to issue in 8-digit ASCII character string (with CR<0Dh> at its end). (Refer to 3-10 for the counter default value) (For the DP-DS620, if this value is 0 it signals ribbon end, but it runs ribbon check before this point. See "3-15 Ribbon End Check Operation (DP-DS620/DP-DS820)" for details.)
------------	---

[Returned data]	Size (8)	Data
	00000012	MQTYnnnn<CR> <null><null><null>

[Returned data example]	00000012	MQTY0010<CR> <null><null><null>
-------------------------	----------	---------------------------------

1-1.2.7-2 Get Half Size Conversion Media Counter of Remaining Sheets

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	INFO	RQTY		

[Transmitted data]	Start code	ESC[1Bh] P
	INFO	Request to send printer information
	RQTY	Send the number of remaining sheets which has been converted to the half size

[Function]	The printer sends the number of remaining sheets which has been converted to the half size of the loaded media into the printer. 8-digit ASCII character string (with CR<0Dh> at its end)
------------	---

Loaded media size	Conversion size
5x7	L(5x3.5)
6x8	PC(6x4)
6x9	6x4.5
8x10	8x5
8x12	8x6
A4	A5

[Returned data]	Size (8)	Data
	00000012	RQTYnnnn<CR> <null><null><null>

[Returned data example]	00000012	RQTY0400<CR> <null><null><null>
-------------------------	----------	---------------------------------

1-1.2.8 Get Media Color offset values of the lot

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	INFO	MCOLOR		

[Transmitted data]	Start code	ESC[1Bh	P
	INFO	Request to send printer information	
	MCOLOR	Send color correction values between media lots	

[Function]	The printer sends color correction values between media lots in 6-digit binary character string (with CR<0Dh> at its end).
------------	--

[Returned data]	Size (8)	Data
	00000008	MCnnnn<CR><null>

[Returned data example]	00000008	MC<0x0A><0x0A><0x0A><0x0A> <CR><null>
-------------------------	----------	---------------------------------------

1-1.2.9 Get media lot information

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	INFO	MLOT		

[Transmitted data]	Start code	ESC[1Bh] P
	INFO	Request to send printer information
	MLOT	Send media user information (lot number)

[Function]	The printer sends data of 16 bytes of media user information (lot number) by 20-digit binary character string (CR<0Dh> terminus is included).
------------	---

[Returned data]	Size (8)	Data
	00000020	MLnnnnnnnnnnnnnnnnnnnn<CR><null>

[Returned data example]	00000020	ML<0x30><0x31><0x32><0x33><0x34><0x35><0x36><0x37><0x38> <0x39><0x41><0x42><0x43><0x44><0x45><0x46><CR><null>
-------------------------	----------	--

Note: In a RF-ID write tool, when lot number input data is less than 16 bytes, a space (0x20) is embedded for the remaining place of data. (See 3-7 for details)

1-1.2.10 Getting the Duplex Unit status

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	INFO	UNIT_STATUS		

[Transmitted data]	Start code	ESC[1Bh] P
	INFO	Requests transmission of printer information
	UNIT_STATUS	Sends the duplex unit status

[Function] The printer sends the duplex unit status in a 5-digit ASCII code (ending with CR<0Dh>).
(Refer to 3-3.2 for the status code)

[Return data]	Size (8)	Data
	00000008	nnnnn<CR> <null> <null>

[Returned data example] 00000008 05017<CR> <null> <null>

1-1.2.11 Getting cut media information

[Code]	Start (2)	Parameter 1 (6)	Parameter 2 (16)	Parameter 3 (8)	Parameter 4
	<ESC>P	INFO	CUT_PAPER		

[Transmitted data]	Start code	ESC [1Bh] P
	INFO	Requests transmission of printer information
	CUT_PAPER	Sends cut paper size(cut paper tray position) and media status

[Function] This sends the cut paper size (tray guide position) and media status in ASCII code
(ending with CR<0Dh>).

[Return data]	Size (8)	Data
	00000012	CUTPnnnn<CR> <null> <null> <null>

[Returned data example] 00000012 CUTP0102<CR> <null> <null> <null>

Duplex unit status

4, 3 digits (nn00) Paper size (tray guide position)	2, 1 digits (00nn) Paper status
0000 Unit not connected	0000 No cut paper
0100 8 x 10.75	0001 Protective sheet
0200 8 x 12	0002 Cut paper set

Sample code

Paper size	Paper status	Code
8x10.75	Cut paper set	0102
8x10.75	Protective sheet	0101
8x10.75	No cut paper	0100

1-1.2.12 Get duplex-unit version information

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	INFO	UNIT_FVER		

[Transmitted data]	Start code	ESC[1Bh] P
	INFO	Request to send printer information
	FVER	Request to send duplex-unit firmware version

[Function]	The printer sends duplex-unit version information in fixed length ASCII character string (with CR<0Dh> at its end).
------------	---

[Returned data]	Size (8)	Data
	00000008	nnnnnn <CR><null>

[Returned data example]	00000008	0.85 <0x20> <0x20><CR><null>
-------------------------	----------	------------------------------

When duplex-unit firmware is not support function or duplex-unit is not connected, return data is all blank <0x20>.

1-1.2.13 Get Printer Serial Number

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	INFO	SERIAL_NUMBER		

[Transmitted data]	Start code	ESC[1Bh] P
	INFO	Request to send printer information
	SERIAL_NUMBER	Request to send printer serial number

[Function]	The printer sends the serial number in a 32-digit ASCII code.
------------	---

[Returned data]	Size (8)	Data
	00000032	nnnnnnnn <null> <null> ... <null>

[Returned data example]	00000032	1234ABCD <null> <null> ... <null>
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1-1.2.14 Get duplex-unit firmware rewrite information

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	INFO	DUNIT_UPD_STS		

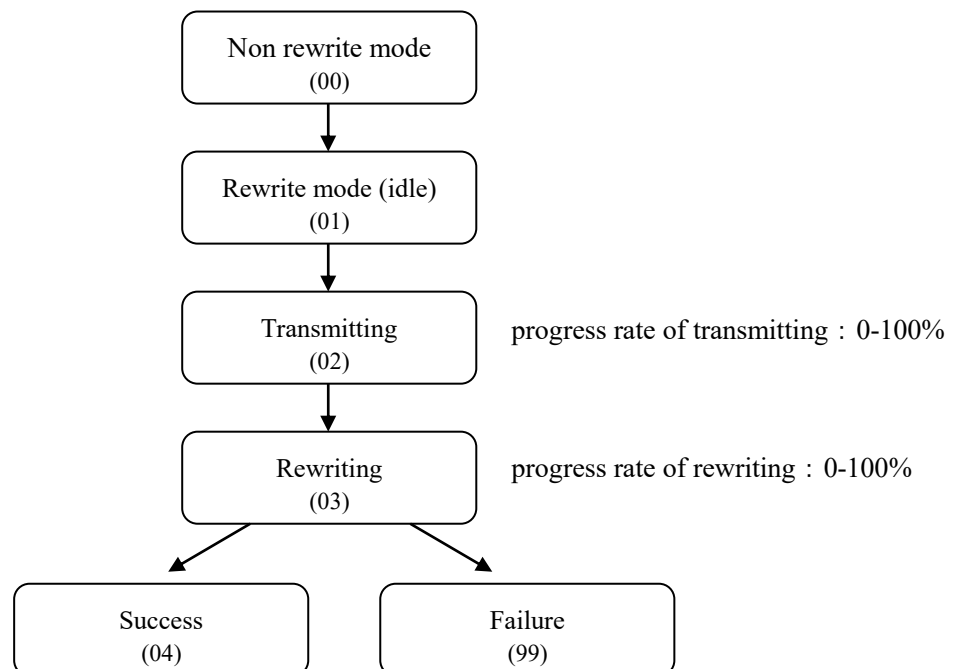
[Transmitted data] Start code ESC[1Bh] P
 INFO Request to send printer information
 DUNIT_UPD_STS Request to send firmware rewrite information

[Function] The printer sends duplex-unit firmware rewrite information in variable-length ASCII character string (with CR<0Dh> at its end).

[Returned data]	Size (8)	Data
	0000nnnn	Variable-length ASCII character string <CR>

[Returned data example] 00000032 STS-02; PRG-050; EXT-00000000; <CR>

No	Items	Strings	Setting Values
1	Status	STS-	00 : non rewrite mode 01 : duplex-unit firmware rewrite mode (idle) 02 : duplex-unit firmware is transmitting. 03 : duplex-unit firmware is rewriting. 04 : Rewriting the duplex-unit firmware is success. 99 : Rewriting the duplex-unit firmware is failure.
2	Progress Rate	PRG-	000~100
3	Extended Information	EXT-	00000000~99999999



Status transition diagram of duplex-unit firmware rewrite mode

1-1.2.15 Get initial media count

[Code]

Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
<ESC>P	INFO	MQTY_DEFAULT		

[Transmitted data]

Start code

ESC[1Bh] P

INFO

Request to send printer information

MQTY_DEFAULT

Send the initial number of media

[Function]

The printer sends the initial number of media in 8-digit ASCII character string (with CR<0Dh> at its end)
(Refer to 3-10 for the counter default value)

[Returned data]

Size (8)	Data
00000012	MDEFnnnn<CR> <null><null><null>

[Returned data example]

00000012

MDEF0450<CR> <null><null><null>

1-1.2.16 Panorama Printing Start Check

[Code]	Start (2)	Parameter1 (6)	Parameter 2 (16)	Parameter 3 (8)	Parameter 4
	<ESC>P	INFO	PANORAMA_PRINT		

[Transmitted data]	Start code	ESC[1Bh] P
	INFO	Requests transmission of printer information
	PANORAMA_PRINT	Checks criteria to start Panorama Printing

[Function] This returns data related to starting the panorama printing as a 5-character ASCII code (CR<0Dh>terminus).

[Return data]	Size (8)	Data
	00000008	nnnnn<CR> <null> <null>

[Sample return data] 00000008 00000<CR> <null> <null>

Data	Status	Printer Status
00000	Panoramic Prints is possible.	Idle
xxxx1	High head temp.	
xxx1x	<reserved>	
xxx2x *2	Low media temp.	
xx1xx *1	High humidity.	
x1xxx	<reserved>	
1xxxx	Panorama printing can't start due to error or currently printing.	Other than Idle

x : Don't care.

*1: DP-DS620(Ver. 1.40 or later) and DP-DS820 (Ver. 1.01 or later).

*2: DP-DS620(Ver. 1.40 or later) and DP-DS820 (Ver. 1.03 or later).

[Attention] • When the head temperature is high, send the panoramic prints data without waiting for the status to change to show printing is possible. (The same as for normal printing, it will start cooling, and printing will start when the head temperature has dropped.)

• When the humidity is high, the print quality of the panoramic prints may deteriorate, so we don't recommend printing in high-humidity situations.

• When the media temperature is low, don't perform the continuous panoramic prints. (It may occur the problem such as a paper jam according to the image.)

(For details regarding panorama printing with a white border, please refer to “3-16 Panorama Printing with White Border”.)

(Please refer to the continuous panorama SDK for continuous panorama printing)

1-1.2.17 Get media offset count

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	INFO	MEDIA_OFFSET		

[Transmitted data]	Start code	ESC[1Bh] P
	INFO	Request to send printer information
	MEDIA_OFFSET	Send the offset number of media

[Function]	The printer sends the offset number of media in 8-digit ASCII character string (with CR<0Dh> at its end). (Refer to 3-10 for the media offset count)
------------	---

[Returned data]	Size (8)	Data
	00000012	MOFSnnnn<CR> <null><null><null>

[Returned data example]	00000012	MOFS0050<CR> <null><null><null>
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1-1.2.18 Get media type

[Code]	Start (2)	Parameter1 (6)	Parameter 2 (16)	Parameter 3 (8)	Parameter 4
	<ESC>P	INFO	MEDIA_CLASS_RFID		

[Transmitted data]	Start code	ESC[1Bh] P
	INFO	Requests transmission of printer information
	MEDIA_CLASS_RFFID	Request to send media type

[Function]	The printer sends the media type at 4-character ASCII numeric code (CR<0Dh> terminus)
------------	---

Media Type

Acquired Value	Description
(None)	Default media
0001	Digital (SD) media.
0002	Premium Digital(PD) media
0003	Pure Premium (PP) media.
1004	Metallic paper
1023	Silverpearl paper

*When you check the media type, please use the first four characters.

*The default media depends on the model.

[Returned data]	Size (8)	Data
	00000008	nnnn<CR> <null> <null> <null>

[Returned data example]	00000008	0001<CR> <null> <null> <null>
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1-2.1 Sending command of Yellow graphic data block

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	IMAGE	YPLANE	nnnnnnnn	data

[Transmitted data] Start code ESC[1Bh] P
 IMAGE Designate start of color image
 YPLANE Designate color (yellow)
 nnnnnnnn Graphic data size (8-digit decimal ASCII number)
 data Graphic data

[Function] This command downloads yellow graphics.

[Attention] Refer to "2-1. Image size" about data transmission with this command.
 Designate the graphic data in 8-bit grayscale in BMP format.
 (The data structure varies partially from that on Windows disk files. See 3-1 for details.)

1-2.2 Sending command of Magenta graphic data block

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	IMAGE	MPLANE	nnnnnnnn	data

[Transmitted data] Start code ESC[1Bh] P
 IMAGE Designate start of color image
 MPLANE Designate color (magenta)
 nnnnnnnn Graphic data size (8-digit decimal ASCII number)
 data Graphic data

[Function] This command downloads magenta graphics.

[Attention] Refer to "2-1. Image size" about data transmission with this command.
 Designate the graphic data in 8-bit grayscale in BMP format.
 (The data structure varies partially from that on Windows disk files. See 3-1 for details.)

1-2.3 Sending command of Cyan graphic data block

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	IMAGE	CPLANE	nnnnnnnn	data

[Transmitted data] Start code ESC[1Bh]P
 IMAGE Designate start of color image
 CPLANE Designate color(Cyan)
 nnnnnnnn Graphic data size (8-digit decimal ASCII number)
 data Graphic data

[Function] This command downloads cyan graphics.

[Attention] Refer to "2-1. Image size" about data transmission with this command.
 Designate the graphic data in 8-bit grayscale in BMP format.
 (The data structure varies partially from that on Windows disk files. See 3-1 for details.)

1-2.4 Designate multi-cut pattern

[Code]	Start (2)	Argument(6)	Argument2 (16)	Argument 3(8)	Argument 4
	<ESC>P	IMAGE	MULTICUT	00000008	data

[Transmitted data]	Start code	ESC[1Bh]P
	IMAGE	Designate start of color image
	MULTICUT	Designate multi-cut pattern
	00000008	Argument 4 data length (8-digit decimal ASCII number)
	data	Paper Size value (Multi-cut pattern)

[Function] Designate the paper size no (Multi-cut pattern). (See 3-5 for details)

[Attention] Send this command before transmitting the image data.

1-3.1 Print start

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	CNTRL	START		
[Transmitted data]	Start code	ESC[1Bh] P			
	CNTRL	Printer control command			
	START	Designate print start			
[Function]	Starts printing.				

1-3.2 Cutter control

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	CNTRL	CUTTER	00000008	data

[Transmitted data]	Start code	ESC[1Bh] P
	CNTRL	Printer control command
	CUTTER	Designate cutter control
	00000008	Argument 4 data length (8-digit decimal ASCII number)
	data	00000000: Normal operation
		00000001: Non-scrap cutter operation
		00000100: 2 image layout and both sheets non-scrap cutter operation
		00000101: 2 image layout and 1st sheet non-scrap cutter operation
		00000102: 2 image layout and 2nd sheet non-scrap cutter operation
		00000120: 2inch cut operation
		00001000: Panorama Print operation (with white borders between prints)

[Function] Controls cutter movement. (See 3-6 for details)

[Attention] Send this command before the start print command is sent.
This command is only valid once for each image. The printer returns to standard cut operation after each image is printed.
2inch cut operation is effective only in paper size (6x4) or (6x8).
Refer to “3-8 Recommended image layout of 2 inch cut operation” about the image layout of 2 inches cut operation.
If you specify both this command and Full Cutter Set-up command, Full Cutter Set-up command will be given priority.
For details on Panorama Printing, refer to “3-16 Panorama Printing with White Border”.

The Non-scrap cutter operation when the 2image layout and Non-scrap cutter operation parameter (00000100,00000101,00000102) is selected is shown in the table below.

Specified value	2image layout		1image layout
	First print	Second print	
00000100	Non-scrap cutter operation	Non-scrap cutter operation	Non-scrap cutter operation
00000101	Non-scrap cutter operation	Normal operation	Non-scrap cutter operation
00000102	Normal operation	Non-scrap cutter operation	Non-scrap cutter operation

1-3.3 Overcoat finish

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	CNTRL	OVERCOAT	00000008	data

[Transmitted data]	Start code	ESC[1Bh] P
	CNTRL	Printer control command
	OVERCOAT	Designate overcoat finish
	00000008	Argument 4 data length (8-digit decimal ASCII number)
	data	00000000: Glossy (default)
		00000001: Matte
		00000021: Fine Matte
		00000022: Luster
		00000101: Partial matte (Matte)
		00000121: Partial matte (Fine Matte)
		00000122: Partial matte (Luster)

[Function] This prints with either a matte or glossy overcoat.
Refer to “3-18 Overcoat finish control specification value” for the support status of each model.

[Attention] Send this command before transmitting the image data.
This command is only valid once for each image.
The printer returns to Glossy setting after each image is printed.
When designating Partial Matte, send the partial matte pattern after sending this command.
For details on Partial Matte, refer to “3-17 Partial Matte”.

1-3.4 Print re-try control

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	CNTRL	BUFFCNTRL	00000008	data

[Transmitted data]	Start code	ESC[1Bh] P
	CNTRL	Printer control command
	BUFFCNTRL	Designate print re-try control
	00000008	Argument 4 data length (8-digit decimal ASCII number)
	data	00000000: Print re-try is disabled (default)
		00000001: Print re-try is enabled

[Function] This controls whether, after an error such as media end occurs, the data that had been received in the printer buffer is printed or not. When the setting is enabled, the image will be printed after the error is cleared.

[Attention] Send this command before the start print command is sent.
This command is only valid once for each image. The printer will return to disable after each image is printed.
If the error requires the printer power to be turned OFF then back ON, the printing after error recovery will be invalid regardless of the setting.

1-3.5 Duplex Printer: cancelling back print and ejecting the media

[Code]	Start (2)	Parameter 1 (6)	Parameter 2 (16)	Parameter 3 (8)	Parameter 4
	<ESC>P	CNTRL	DUPLEX_CANCEL		

[Transmitted data] Start code ESC[1Bh] P
 CNTRL Printer control command
 DUPLEX_CANCEL Cancel back print command

[Function] During duplex printing, this cancels the back print after printing the front, then ejects the media.
 This command is used to eject the media with the front side printed in cases such as when the ribbon ends mid-print.

1-3.6 Full Cutter Set-up

[Code]	Start (2)	Argument1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	CNTRL	FULL_CUTTER_SET	00000016	data

[Transmitted data] Start code ESC[1Bh] P
 CNTRL Printer control command
 FULL_CUTTER_SET Full cutter set-up
 00000016 Argument 4 data length (8-digit decimal ASCII code)
 data mmmnnpppqqrrr<CR>
 A set 15-digit decimal ASCII character string sets the cut size
 mmm Image 1 cut-size setting Setting value is: 020~090, 000
 000 is regular (6x8) size print, and subsequent cut size settings will be ignored.
 If the setting exceeds the range, the command will be invalid.
 nnn Image 2 cut-size setting Setting value is: 020~070, 000
 Set to 000 if the cut sheet count is 1, and subsequent cut size settings will be ignored.
 If the setting exceeds the range, the command will be invalid.
 ppp Image 3 cut-size setting Setting value is: 020~050, 000
 Set to 000 if the cut sheet count is 1~2, and subsequent cut size settings will be ignored.
 If the setting exceeds the range, the command will be invalid.
 qq q Image 4 cut-size setting Setting value is: 020~030, 000
 Set to 000 if the cut sheet count is 1~3, and subsequent cut size settings will be ignored.
 If the setting exceeds the range, the command will be invalid.
 rrr Intermediate scrap setting (the intermediate scrap size when cutting 2~4 prints) (*1)
 Setting value: 000 (no intermediate scrap), 012~022 (*2)
 If the setting exceeds the range, the command will be invalid.

Default: 0000000000000000 (all 0)

The default setting will print regular size

(*1) This is valid for DP-DS620(Ver.1.20 or later), DS40(Ver.1.60 or later) and DP-QW410.

(*2) DP-QW410 can only be set to 0(no intermediate scrap cut) or 022.

■DP-DS820

[Code]

Start (2)	Argument1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
<ESC>P	CNTRL	FULL_CUTTER_SET	00000024	data

[Transmitted data]

Start code ESC[1Bh] P

CNTRL Printer control command

FULL_CUTTER_SET Full cutter set-up

00000016 Argument 4 data length (8-digit decimal ASCII code)

data mmmnnppqqrrsstt<CR>

A set 21-digit decimal ASCII character string sets the cut size

mmm Image 1 cut-size setting Setting value is: 020 ~ 120, 000
000 is regular size print, and subsequent cut size settings will be ignored.
If the setting exceeds the range, the command will be invalid.

nnn Image 2 cut-size setting Setting value is: 020 ~ 100, 000
Set to 000 if the cut sheet count is 1, and subsequent cut size settings will be ignored.
If the setting exceeds the range, the command will be invalid.

ppp Image 3 cut-size setting Setting value is: 020 ~ 080, 000
Set to 000 if the cut sheet count is 1 ~ 2, and subsequent cut size settings will be ignored.
If the setting exceeds the range, the command will be invalid.

qqq Image 4 cut-size setting Setting value is: 020 ~ 060, 000
Set to 000 if the cut sheet count is 1 ~ 3, and subsequent cut size settings will be ignored.
If the setting exceeds the range, the command will be invalid.

rrr Image 5 cut-size setting Setting value is: 020 ~ 040, 000
Set to 000 if the cut sheet count is 1 ~ 4, and subsequent cut size settings will be ignored.
If the setting exceeds the range, the command will be invalid.

sss Image 6 cut-size setting Setting value is: 020, 000
Set to 000 if the cut sheet count is 1 ~ 5, and subsequent cut size settings will be ignored.
If the setting exceeds the range, the command will be invalid.

ttt Intermediate scrap setting (the intermediate scrap size when cutting 2 ~ 5 prints)
Setting value: 000 (no intermediate scrap), 012 ~ 022
If the setting exceeds the range, the command will be invalid.

Default: 00000000000000000000 (all 0)

The default setting will print regular size

[Function]

This cuts the designated sizes, from 1 to a maximum of 4 sheets.

The cut size can be set in 0.1-inch increments, as long as the total does not exceed the paper size.

(Minimum cut size 2 inches)

When setting for intermediate scrap, you can set the scrap size from 0.12 inch (3mm) to 0.22 inch (5.5mm) in 0.01 inch increments. Also, make sure the sum total of the print cut sizes and intermediate scrap sizes (2 intermediate scraps when cutting 3 prints) does not exceed the paper size. (*2)

(See 3-11 Full cutter set-up command for details)

(*2) 1. There were some cut problems (folding) when cutting a width of 2mm.

2. Also, the scrap itself bends easily, causing problems in filling the scrap box (scrap overflow).

3. The range of +1.5mm~-1.5mm of the cut position of a picture is a standard cut domain.

Therefore, the scrap size setting should be 3mm or more.

■ Paper size and cut size setting ranges

Paper size	Maximum cut count	Maximum size	Images	Cut size setting ranges	
				Minimum	Maximum
6x4(PC) (*3) 4x4 (*6) 4.5x4 (*7)	2 sheets	4 inches	1	20	40
			2	20	20
4x4.5 (*7) 4.5x4.5 (*6)	2 sheets	4.5 inches	1	20	45
			2	20	25
4x6 (*6) 4.5x6 (*6)	3 sheets	6 inches	1	20	60
			2	20	40
			3	20	20
5x7(2L) (*3)	3 sheets	7 inches	1	20	70
			2	20	50
			3	20	30
6x8(A5) (*4) 4.5x8 (*6)	4 sheets	8 inches	1	20	80
			2	20	60
			3	20	40
			4	20	20
6x9(A5W) (*3)	4 sheets	9 inches	1	20	90
			2	20	70
			3	20	50
			4	20	30
8x10 (*5)	5 sheets	10 inches	1	20	100
			2	20	80
			3	20	60
			4	20	40
			5	20	20
8x12 (*5)	6 sheets	12 inches	1	20	120
			2	20	100
			3	20	80
			4	20	60
			5	20	40
			6	20	20
A4 (*5)	5 sheets	11.7 inches	1	20	117
			2	20	97
			3	20	77
			4	20	57
			5	20	37

*3: This is valid for DP-DS620(Ver.1.20 or later).

*4: This is valid for DP-DS620 and DS40(Ver.1.60 or later).

*5: This is valid for DP-DS820.

*6: This is valid for DP-QW410.

*7: This is valid for DP-QW410(Ver.1.09 or later).

[Attention]

Send this command before the start print command is sent.

This command is only valid once for each image. The printer will return to the normal size print operation after each image is printed.

If the total cut size set using this command is larger than the image size sent to the printer, this command is disabled and printing is done with the media size (normal size) sent to the printer.

If this command and the cutter control command are both designated, this command will be given priority.

When setting for intermediate scrap, take care to keep scraps less than 400 cuttings, and empty the scrap box after 400 cuttings. If the scraps overflow, they could cause problems such as print feed-out jam.

1-3.7 Continuous Panoramic Prints settings

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	CNTRL	CONT_PANORAMA	00000008	data

[Transmitted data]	Start code	ESC[1Bh] P
	CNTRL	Printer control command
	CONT_PANORAMA	Specifies Continuous Panorama
	00000008	Argument 4 data length (8-digit decimal ASCII number)
	data	kkkkmmmm : A 8-digit decimal ASCII character string sets the Panoramic Prints parameters.
		kkkk Continuous Panoramic Prints specification
		0000 : Last image of Continuous Panoramic Prints, or normal printing (Continuous Panoramic Prints cancelation)
		0001 : Continuous Panoramic Prints has specified.
		mmmm Overlap width
		0000 to 0200 (to be specified in increments of 0.01 in the 0.00 to 2.00 range)
		[Recommended value] 0200 (2.00in.)

[Function]	This command sets the operation of the continuous panoramic prints.
------------	---

[Attention]	Continuous Panoramic Prints specification is only valid for the first image and second image. If you set this parameter for the third image, the specified parameter will be ignored, and the paper will be cut.
	The overlap width for the first image printed with Continuous Panoramic Prints is also applied to the second image and later on, but is disabled if a different value is set for the second or later images. Also, if you set this value to less than the recommended value, the print quality of the overlapped area will deteriorate.

1-3.8 Print speed designation

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	CNTRL	PRINTSPEED	00000008	data

[Transmitted data]	Start code	ESC[1Bh] P
	CNTRL	Printer control command
	PRINTSPEED	Print speed designation
	00000008	Argument 4 data length (8-digit decimal ASCII number)
	data	00000000: Printing of 300dpi resolution (default)
		00000010: Printing of 600dpi resolution (*1)
		00000020: Low speed printing
		00000030: High density printing (*1)

*1: This is valid for DP-DS820.

[Function]	Printing is carried out at the designated print speed. This command can be used to lower print speed in order to increase the image quality.
------------	---

[Attention]	This command must be designated for each image. The printer will revert to the conventional operation after each image is printed. This printer has a function that slows the print speed when printing high-density images in order to minimize damage to the media. In order to maintain the print conditions that achieved the radio/safety concepts, the printing speed may be automatically decreased to lower than the designated speed.
-------------	---

Print speed relationship between specified value and print data

		Print Data	
data	Name	300dpi resolution	600dpi resolution
00000000	Printing of 300dpi resolution	Printing of 300dpi resolution	Printing of 600dpi resolution
00000010	Printing of 600dpi resolution	Printing of 600dpi resolution	Printing of 600dpi resolution
00000020	Low speed printing	Low speed printing	Low speed printing
00000030	High density printing	High density printing	High density printing

*Printing speed varies according to model and media.

Example of print speed and the color control data to use

Print speed	Color control data to use	
	SD	PP
Printing of 300dpi resolution	300dpi control data (e.g. DS820_SD_300_0100.cwd)	300dpi control data (e.g. DS820_PP_300_0100.cwd)
Printing of 600dpi resolution	600dpi control data (e.g. DS820_SD_600_0100.cwd)	600dpi control data (e.g. DS820_PP_600_0100.cwd)
Low speed printing	Low speed control data (e.g. DS820_SD_610_0100.cwd)	Low speed control data (e.g. DS820_PP_610_0100.cwd)
High density printing	High density control data (e.g. DS820_SD_620_0100.cwd)	High density control data (e.g. DS820_PP_620_0100.cwd)

1-3.9 Decurl Control

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	CNTRL	DECURL	00000012	data

[Transmitted data]	Start code	ESC[1Bh] P
	CNTRL	Printer control command
	DECURL	Decurl control
	00000012	Argument 4 data length (12-digit decimal ASCII number)
	data	000000000000 Do not perform the decurl operation
		010000000000 Perform the decurl operation
		020000000000 Automatic control (default)

[Function]	This controls the paper decurl operation. Send this command before sending image data. This command is valid once for one image. The printer will return to the default settings for each image.
------------	--

1-3.10 Current time notification

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	CNTRL	SET_SYS_TIME	00000016	data

[Transmitted data]	Start code	ESC[1Bh] P
	CNTRL	Printer control command
	SET_SYS_TIME	Current time notification
	00000016	Argument 4 data length (8-digit decimal ASCII number)
	data	Local time (14-digit decimal ASCII number) yyymmddHHMMSS<CR><NULL>
		yyyy year setting value: 2000 - 9999
		mm month setting value: 01 - 12
		dd day setting value: 01 - 31
		HH hour setting value: 00 - 23
		MM minute setting value: 00 - 59
		SS second setting value: 00 - 59
		[default value] Jan. 1, 2000 00:00:00

[Function]	Notify the printer of the current time (local time) of the operating environment. This current time is used when the decurl control setting is “automatic control”. Set this before sending print data.
------------	---

[Attention]	The printer does not have a clock function, so updating the time requires notification from the host. When the printer is turned on, this setting has been an initial value. If you set a value outside the range, it will be set with the minimum or maximum value of each set value.
-------------	--

1-4.1 Clearing of printer table information

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	TBL_CL			

[Transmitted data] Start code ESC[1Bh] P
 TBL_CL Start clearing printer table information

[Function] Clears printer table information (color control data) written in the printer.
 Refer to "3-14 Procedure to update of color control data" for details.

[Attention] After clearing the information, make sure to write new color control data with an update command of color control data.

1-4.2 Update of color control data

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	TBL_WT	CTRLD_UPDATE_CW	nnnnnnnn	data

[Transmitted data] Start code ESC[1Bh] P
 TBL_WT Start writing printer table information
 CTRLD_UPDATE_CW Update color control data
 nnnnnnnn Number of color control data (8-digit decimal ASCII number in 4-byte unit)
 data Color control data

[Function] Rewrites color control data.
 The color control data is provided in binary files in unique format.
 Refer to "3-14 Procedure to update of color control data" for details.

[Attention] Before writing new color control data with this command, clear the existing color control data with a printer table information clear command.
 If the color control data is not provided in 32-bit (4-byte) unit, send the data after adding null data to the end of color control data to complete the 32-bit unit.

1-4.3 Setting of color control data version

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	TBL_WT	Version	nnnnnnnn	data

[Transmitted data] Start code ESC[1Bh] P
 TBL_WT Start writing printer table information
 Version Set version of color control data
 nnnnnnnn Character string of version information of color control data (4-byte unit)
 data Character string of version information of color control data

[Function] Writes version information of color control data.
 Refer to "3-14 Procedure to update of color control data" for details.

[Attention] After rewriting the data with a color control data update command, use this command to set the color control data version.
 Use the version information of color control data to be set as a file name of color control data file to be provided.
 If the version information character string is not provided in 32-bit (4-byte) unit, send the data after adding null data to the end of version information character string to complete the 32-bit unit.

1-4.4 Acquisition of color control data version

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	TBL_RD	Version		

[Transmitted data]	Start code	ESC[1Bh] P
	TBL_RD	Start reading printer table information
	Version	Acquire color control data version

[Function] The printer sends version information (variable-length character string) of color control data.
Refer to "3-14 Procedure to update of color control data" for details.

[Returned data]	Size (8)	Data
	nnnnnnnn	Data (variable-length character string)

[Returned data example]	00000016	DS40_0100.CWD<null><null><null>
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1-4.5 Acquisition of color control data checksum

[Code]

Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
<ESC>P	MNT_RD	CTRLD_CHKSUM		

[Transmitted data]

Start code

ESC[1Bh] P

MNT_RD

Start reading printer maintenance information

CTRLD_CHKSUM

Acquire color control data checksum

[Function]

The printer sends color control data checksum (in hexadecimal number) in 4-digit ASCII character string (with CR<0Dh> at its end).

Refer to "3-14 Procedure to update of color control data" for details.

[Returned data]

Size (8)	Data
nnnnnnnn	nnnn<CR><null><null><null>

[Returned data example]

00000008

D032<CR><null><null><null>

1-4.6 Acquisition of color control data version <Type designation>

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	TBL_RD	CWDxxx_Version	00000004 (*1)	data (*1)

[Transmitted data]	Start code	ESC[1Bh P
	TBL_RD	Start reading printer table information
	CWDxxx_Version	Acquire the version information of color control data that has been type specification

Color control data version type and xxx value

Type	DP-DS620	DP-DS820	DP-QW410
300dpi	300	300	300
600dpi	600	600	(not applicable)
Low speed	610	610	310
High density	(not applicable)	620	(not applicable)

00000004	<p>Number of the Media type (8-digit decimal ASCII number in 4-byte unit) (*)</p> <p>For DP-DS620 firmware version less than 3.00, there is no media type, so argument 3 is padded with blanks and argument 4 is omitted.</p>
----------	---

data	Media type (*1) 0001 : SD media 0002 : PD media (*3) 0003 : PP media (*2) If it specifies other than the above value, the printer returns the value depending on the loaded media type.
------	---

*1:only DP-DS820, DP-QW410 and DP-DS620(ver.3.00 or later).

*2:only DP-DS820.

*3:only DP-QW410 and DP-DS620(ver.3.00 or later).

[Function] The printer sends version information (variable-length character string) of color control data that has been type specification.
Refer to "3-14 Procedure to update of color control data" for details.

[Returned data]	Size (8)	Data
	nnnnnnnn	Data (variable-length character string)

```
[Returned data example] 00000020    DS620 300 0100.CWD<null><null>
```

1-4.7 Acquisition of color control data checksum <Type designation>

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	TBL_RD	CWDxxx_Checksum	00000004 (*1)	data (*1)

[Transmitted data] Start code ESC[1Bh] P
 TBL_RD Start reading printer table information
 CWDxxx_Checksum Acquire the checksum of color control data that has been type specification

Color control data checksum type and xxx value

Type	DP-DS620	DP-DS820	DP-QW410
300dpi	300	300	300
600dpi	600	600	(not applicable)
Low speed	610	610	310
High density	(not applicable)	620	(not applicable)

00000004 Number of the Media type (8-digit decimal ASCII number in 4-byte unit) (*1)
 For DP-DS620 firmware version less than 3.00, there is no media type, so
 argument 3 is padded with blanks and argument 4 is omitted.

data Media type (*1)
 0001 : SD media
 0002 : PD media (*3)
 0003 : PP media (*2)
 If it specifies other than the above value, the printer returns the value depending
 on the loaded media type.

*1:only DP-DS820, DP-QW410 and DP-DS620(ver.3.00 or later).

*2:only DP-DS820.

*3:only DP-QW410 and DP-DS620(ver.3.00 or later).

[Function] The printer sends the checksum of color control data that has been type specification (in hexadecimal number) in
 4-digit ASCII character string (with CR<0Dh> at its end).
 Refer to "3-14 Procedure to update of color control data" for details.

[Returned data]	Size (8)	Data
	nnnnnnnn	nnnn<CR><null><null><null>

[Returned data example] 00000008 D032<CR><null><null><null>

1-4.8 Gamma Correction Data Update

【Code】	Start (2)	Arg.1 (6)	Arg.2 (16)	Arg.3 (8)	Arg.4(2064)
	<ESC>P	TBL_WT	CTRLD_GAMMA16	nnnnnnnn	Correction Data

【Send data】	Start Code	ESC[1Bh] P
	TBL_WT	Correction data update
	CTRLD_GAMMA16	Updates Gamma Correction data
	nnnnnnnn	Correction data size (“00002064” fixed; 8 digits of decimal ASCII characters)

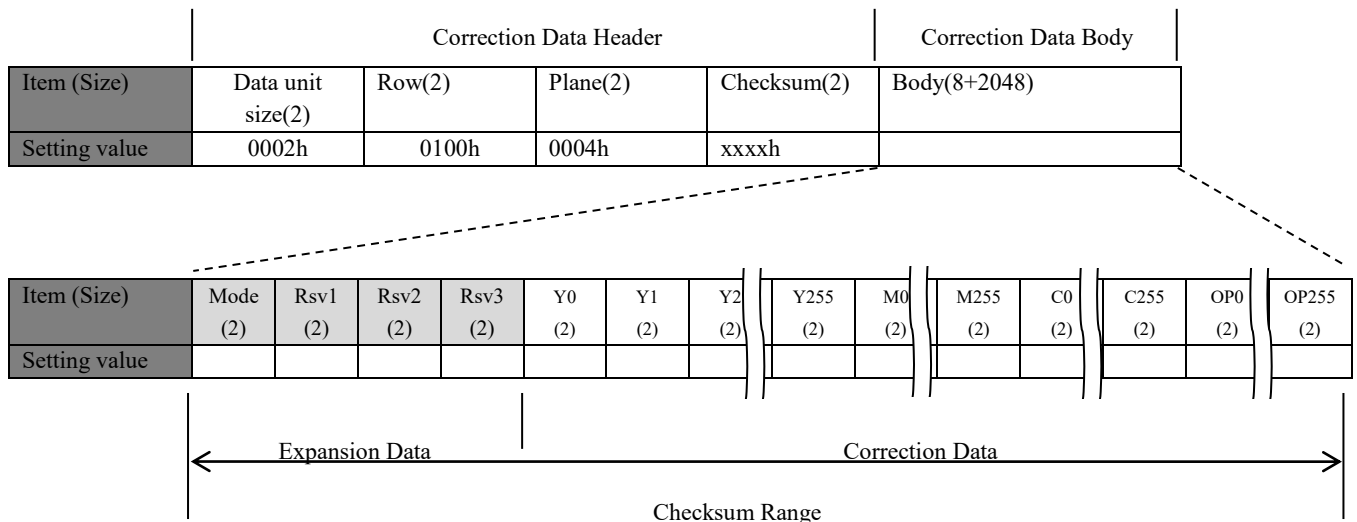
Correction data

Type	Item	Explanation
Header (8 bytes)	Data unit size	0002h(=2 bytes) fixed
	Row	0100h(=256) fixed
	Plane	0004h(= planes for Y,M,C,OP) fixed
	Checksum	xxxxh (sum value of expansion and correction data)
Expansion Data (8 bytes)	Mode	0000h fixed
	Rsv1	0000h fixed
	Rsv2	0000h fixed
	Rsv3	0000h fixed
Correction Data (2048 bytes)	Y[0]..Y[255] M[0]..M[255] C[0]..C[255] OP[0]..OP[255]	0000h(=0) ~ FFFFh(=65535)

The Correction Data is made up of the Correction Data Header and the Correction Data Body.

The Correction Data Header content is binary, and the byte order is Big-Endian.

The Correction Data Body is made up of the Expansion Data and the Correction Data, and sets the data in the following order.



【Function】	This updates the Gamma Correction data. The Gamma Correction data will be applied when the 8-bit image data is expanded to 16-bit. Correction data line count should be set at 256 lines.
------------	---

1-4.9 Get Gamma Correction Data Checksum

【Code】	Start (2)	Arg.1 (6)	Arg.2 (16)	Arg.3 (8)	Arg.4
	<ESC>P	TBL_RD	CTRLD_GAMMA16		

【Send data】	Start Code	ESC[1Bh] P
	TBL_RD	Requests Correction data checksum
	CTRLD_GAMMA16	Requests Gamma Correction data checksum

【Function】	The printer sends a set-length hexadecimal ASCII character string (CR<0Dh> terminus, 4-byte padding) checksum for Gamma Correction data.
	However, if the Correction data is not set at the printer, it will send a 4-character space character string " " (CR<0Dh> terminus, 4-byte padding).

【Return data】	Size (8)	Data
	00000008	Set-length ASCII character string <CR>

【Return data sample】	00000008	ABCD<CR> <null> <null> <null>
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1-4.10 Correction Data Reset

【Code】	Start (2)	Arg.1 (6)	Arg.2 (16)	Arg.3 (8)	Arg.4
	<ESC>P	TBL_WT	CTRLD_CWE_RESET		

【Send data】	Start Code	ESC[1Bh] P
	TBL_WT	Correction data update
	CTRLD_CWE_RESET	Resets Correction data.

【Function】	Gamma Correction data will have default values set.
------------	---

1-5.1 Clearing the counter A/B

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT_WT	COUNTER_CLR	00000004	Cn<CR><NULL>

[Transmitted data] Start code ESC[1Bh] P
 MNT_WT Start setting printer maintenance information
 COUNTER_CLR Various maintenance commands
 00000004 Argument 4 data length (8-digit decimal ASCII number)
 Cn<CR><NULL> n=A or B

[Function] Clears the print volume counter A or B.

1-5.2 Reading the print volume life counter

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT_RD	COUNTER_LIFE	00000004 *1	data *1

[Transmitted data] Start code ESC[1Bh] P
 MNT_RD Start reading printer maintenance information
 COUNTER_LIFE Read print volume life counter
 00000004 Argument 4 data length (8-digit decimal ASCII number) *1
 If the model does not support Argument 4, Argument 3 will be filled with blanks and
 Argument 4 will be omitted.
 data Specifying read target*1
 0000 : Life Counter for All Media
 0001 : Life Counter printed by SD Media
 0002 : Life Counter printed by PD Media
 When you set the Other than those above, it is returned Life Counter for all media.
 *1 : DP-DS620 firmware version 4.00 or later

[Function] Reads the print volume life counter on the printer. (Refer to 3-9 for count-up action)

[Returned data]	Size (8)	Data
	00000012	Fixed-length ASCII character string <CR>

[Returned data example] 00000012 CLnnnnnn<CR> <null> <null>

1-5.3 Reading the print volume counter A

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT_RD	COUNTER_A		

[Transmitted data]	Start code	ESC[1Bh] P
	MNT_RD	Start reading printer maintenance information
	COUNTER_A	Read print volume counter A

[Function] Reads the print volume counter A on the printer. (Refer to 3-9 for count-up action)

[Returned data]	Size (8)	Data
	00000012	Fixed-length ASCII character string <CR>

[Returned data example] 00000012 CAnnnnnnn<CR> <null> <null>

1-5.4 Reading the print volume counter B

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT_RD	COUNTER_B		

[Transmitted data]	Start code	ESC[1Bh] P
	MNT_RD	Start reading printer maintenance information
	COUNTER_B	Read print volume counter B

[Function] Reads the print volume counter B on the printer. (Refer to 3-9 for count-up action)

[Returned data]	Size (8)	Data
	00000012	Fixed-length ASCII character string <CR>

[Returned data example] 00000012 CBnnnnnnnn<CR> <null> <null>

1-5.5 Reading the print volume counter P

[Code]	Start(2)	Argument1 (6)	Argument (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT_RD	COUNTER_P		

[Transmitted data]	Start code	ESC[1Bh] P
	MNT_RD	Start reading printer maintenance information
	COUNTER_P	Read Print volume counter P

[Function] Reads the print volume counter P on the printer. (Refer to 3-9 for count- up action)

[Returned data]	Size (8)	Data
	00000012	Fixed-length ASCII character string<CR>

[Returned data example] 00000012 CPnnnnnnn<CR> <null> <null>

1-5.6 Setting counter P value

[Code]	Start (2)	Argument1 (6)	Argument2(16)	Argument3(16)	Argument 4
	<ESC>P	MNT_WT	COUNTERP_SET	00000008	nnnnnnn<CR>

[Transmitted data]	Start code	ESC[1Bh] P
	MNT_WT	Start writing printer maintenance information
	COUNTERP_SET	Write print quantity command
	00000008	Argument 4 data length (8-digit decimal ASCII number)
	nnnnnnn<CR>	Counter value information strings.

[Function] Set the counter P value on the printer

1-5.7 Reading the print volume Matte counter

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT_RD	COUNTER_MATTE		

[Transmitted data] Start code ESC[1Bh] P

 MNT_RD Start reading printer maintenance information

 COUNTER_MATTE Read Matte counter

 00000004 Argument 4 data length (8-digit decimal ASCII number) *1

 data Specifying read target*1

 0000 : Matte Counter for All Media

 0001 : Matte Counter printed by SD Media

 0002 : Matte Counter printed by PD Media

 When you set the Other than those above, it is returned Matte Counter for all media.

 *1 : DP-DS620 firmware version 4.00 or later

[Function] Reads the print volume Matte counter on the printer.

 When overcoat finish is matte print, Matte counter (clearing is impossible) will be counted up.

 (Refer to 3-9 for count-up action)

[Returned data]	Size (8)	Data
	00000012	Fixed-length ASCII character string <CR>

[Returned data example] 00000012 CMATnnnnnnn<CR>

1-5.8 Reading the print volume counter M

[Code]	Start(2)	Argument1 (6)	Argument (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT_RD	COUNTER_M		

[Transmitted data]	Start code	ESC[1Bh] P
	MNT_RD	Start reading printer maintenance information
	COUNTER_M	Read Print volume counter M

[Function]	Reads the print volume counter M on the printer.
	When overcoat finish is matte print, counter M (clearing is possible) will be counted up.
	(Refer to 3-9 for count-up action)

[Returned data]	Size (8)	Data
	00000012	Fixed-length ASCII character string<CR>

[Returned data example]	00000012	CMnnnnnnnn<CR> <null> <null>
-------------------------	----------	------------------------------

1-5.9 Clearing the counter M

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT_WT	COUNTER_CLEAR	00000004	CM<CR><NULL>

[Transmitted data]	Start code	ESC[1Bh] P
	MNT_WT	Start setting printer maintenance information
	COUNTER_CLEAR	Various maintenance commands
	00000004	Argument 4 data length (8-digit decimal ASCII number)
	CM<CR><NULL>	Counter M is cleared

[Function]	Clears the print volume counter M.
------------	------------------------------------

1-5.10 Read Duplex Counter

[Code]	Start (2)	Argument 1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT_RD	COUNTER_DUP LEX		

[Transmitted data]	Start code	ESC[1Bh] P
	MNT_RD	Starts reading printer maintenance information
	COUNTER_DUPLEX	Reads the Duplex counter

[Function]	<p>This reads the sheet count of duplex prints from the printer.</p> <p>The Duplex counter (which cannot be reset) counts up for printing of cut media (from the duplex unit).</p> <p>This counter is only valid for the duplex unit.</p> <p>(Refer to 3-9 for count up action)</p>
------------	---

1-5.11 Standby mode transition time setting

[Code]	Start (2)	Argument1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT_WT	STANDBY_TIME	00000004	nnnn

[Transmitted data]	Start code	ESC[1Bh] P
	MNT_WT	Start setting printer maintenance information
	STANDBY_TIME	Standby mode transition time
	00000004	Argument 4 data length (8-digit decimal ASCII number in 4-byte unit)
	nnnn	Transition time (4-digit ASCII character string)
		nnnn=0000~0099
		0001~0099=1~99 minutes (default 10 minutes)
		0000=Not transition to the standby mode

[Function] Set the time to transition to standby mode in 1 minute increments. (Up to 99 minutes maximum) Settings are stored in the printer. (It is valid even when you turn off the printer.)
If the Idle state continues for a set time, it transitions to the standby mode.
The printer does not transition to the standby mode if you set the transition time to 0000.

[Attention] When changing to a time shorter than the 10-minute default time, please check the information listed in the “Power Consumption” section of the Printer Product Specification Manual before proceeding.

1-5.12 Standby mode transition time acquisition

[Code]	Start (2)	Argument1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT RD	STANDBY TIME		

[Transmitted data]	Start code	ESC[1Bh] P
	MNT_RD	Start reading printer maintenance information
	STANDBY TIME	Standby mode transition time

[Function]	The printer sends standby mode transition time in 2-digit ASCII character string (with CR<0Dh> at its end). The default value for this setting is "10 minutes".
------------	--

[Returned data]	size (8)	data
	00000008	00nn<CR> <null><null> <null>

[Returned data example]	00000008	0010<CR>	<null>	<null>	<null>
-------------------------	----------	----------	--------	--------	--------

1-5.13 Setting of Media end keep mode

[Code]	Start (2)	Argument1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT_WT	END_KEEP_MODE	00000004	nn<CR><NULL>

[Transmitted data]	Start code	ESC[1Bh] P
	MNT_WT	Start setting printer maintenance information
	END_KEEP_MODE	Media end keep mode
	00000004	Argument 4 data length (8-digit decimal ASCII number in 4-byte unit)
	nn<CR><NULL>	Setting of mode (2-digit ASCII character string)
	nn = 00 or 01	
	01 = The mode to keep media end (factory preset value)	
	00 = The mode not to keep media end	

[Function]	After Media End occurs, this command sets whether the Media End status is saved after the cover is opened/closed or the power is turned back ON. This command is valid for both Media End (ribbon end or paper end) and Media Error (ribbon error or paper jam). In the "Keep" mode, change the ribbon and paper while the printer is still ON in order to cancel the Media End status. To cancel the Media Error status, resolve the cause of the Media Error and reset the media while the printer is still ON. In the "Don't Keep" mode, the Media End status and Media Error status will be cancelled as in current models when the cover is opened/closed or the power turned back ON. Settings are stored in the printer. (It is valid even when you turn off the printer.)
------------	---

1-5.14 Acquisition of Media end keep mode

[Code]	Start (2)	Argument1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT_RD	END_KEEP_MODE		

[Transmitted data]	Start code	ESC[1Bh] P
	MNT_RD	Start reading printer maintenance information
	END_KEEP_MODE	Media end keep mode

[Function]	The printer sends setting of media end keep mode in 2-digit ASCII character string (with CR<0Dh> at its end). The factory preset value for this setting is " The mode to keep media end (1)".
------------	--

[Returned data]	size (8)	data
	00000004	nn<CR> <null>

[Returned data example]	00000004	00<CR> <null>
-------------------------	----------	---------------

1-5.15 Set USB iSerialNumber availability setting

[Code]	Start (2)	Argument1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT_WT	USB_ISERI_SET	00000004	nn<CR><NULL>

[Transmitted data]	Start code	ESC[1Bh] P
	MNT_WT	Start setting printer maintenance information
	USB_ISERI_SET	USB iSerialNumber Setting
	00000004	Argument 4 data length (8-digit decimal ASCII number in 4-byte unit)
	nn	availability setting of USB iSerialNumber
		01 = Enable the USB iSerialNumber
		00 = Disable the USB iSerialNumber (default)

[Function]	Set the availability of USB iSerialNumber
	When you enable this setting, serial number is the product serial number of the product-specific information.
	Settings are stored in the printer. (It is valid even when you turn off the printer.)
	This configuration change will be effective when the power of the printer is turned on again.

1-5.16 Get USB iSerialNumber availability setting

[Code]	Start (2)	Argument1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT_RD	USB_ISERI_SET		

[Transmitted data]	Start code	ESC[1Bh] P
	MNT_RD	Start reading printer maintenance information
	USB_ISERI_SET	USB iSerialNumber Setting

[Function]	The printer sends the availability setting of USB iSerialNumber in 2-digit ASCII character string. (with CR<0Dh> at its end).
	The default value for this setting is "Disable the USB iSerialNumber (0)".

[Returned data]	size (8)	data
	0000nnnn	nn<CR> <null>

[Returned data example]	00000004	nn<CR> <null>
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1-5.17 Get Supported Media Information

[Code]	Start (2)	Argument1 (6)	Argument 2 (16)	Argument 3 (8)	Argument 4
	<ESC>P	MNT_RD	SUPPORTED_MEDIA		

[Transmitted data] Start code ESC[1Bh] P
 MNT_RD Start reading printer maintenance information
 SUPPORTED_MEDIA Supported Media Information

[Function] The printer sends the information of supported media. (with CR<0Dh> at its end).

[Returned data]	size (8)	data
	00000012	00000000<CR> <null> <null> <null>

[Returned data example] 00000012 00000111<CR> <null> <null> <null>

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○ :Support ×:No support

Setting value	Supported media		
	Luxury(LX) Media	Digital(SD) Media	Premium Digital(PD) Media
00000101	○	×	○
00000110	○	○	×
00000111	○	○	○

1-6.1 Changing to the firmware rewrite mode

]Eqf g_	Uctv'4+ "	Cti wo gpv'3'*8+ "	Cti wo gpv'4'*38+ "	Cti wo gpv'5'*+ "	Cti wo gpv'6 "
	>GUE @R "	HY a WRF "	HNCUI a TGY TK/G "		

]Vtcpuo kwgf "f cve_ " Uctv'eqf g" " GUE]3Dj _R "

HY a WRF " " Ego o cpf 'hqt'tgy tklpi 'hko y ctg "

HNCUI a TGY TK/G " Uy kej "q'j g'tgy tkg'o qf g "

]Hwpevkqp_ " Vj ku'eqo o cpf 'uy kej gu'q'j g'hko y ctg'tgy tkg'o qf g0'

Dghqtg"ugpf lpi "j g'hko y ctg'tgy tklpi "f cve."o cng'uwg"q"wg"j ku'eqo o cpf "q"uy kej "q"j g'tgy tkg'o qf g"qp"j g "

r tlpvgt0*Y j gp'uy kej lpi "q'j g'tgy tkg'o qf g'ku'eqo r ngvf."c'dmg'NGF "qp'j g'r tlpvgt'uctu'drnlpi 0 "

1-6.2 Transmission of firmware rewriting data

]Eqf g_	Uctv'4+ "	Cti wo gpv'3'*8+ "	Cti wo gpv'4'*38+ "	Cti wo gpv'5'*+ "	Cti wo gpv'6 "
	>GUE @R "	HY a WRF "	HNCUI a RTQI TCO "	pppppppp "	f cve "

]Vtcpuo kwgf "f cve_ " Uctv'eqf g" " GUE]3Dj _R "

HY a WRF " Ego o cpf 'hqt'tgy tklpi 'hko y ctg "

HNCUI a RTQI TCO " Uctv'tgy tklpi 'hko y ctg "

pppppppp " " P wo dgt'qh'tgy tklpi "f cve"*./f ki k'f geko cniCUEKpwo dgt'kp'6/d{vg'wplk" }

f cve " Tgy tklpi "f cve "

]Hwpevkqp_ " Ugpf u'hko y ctg'tgy tklpi "f cve"cpf'tgy tkgu'j g'hko y ctg0'

Vj g'hko y ctg'tgy tklpi "f cve"ku'r tqxkf gf "lp'O qvqtqr"U'htgo cv'hkgu0'

]Cwgpvkqp_ " Dghqtg"ugpf lpi "j g'hko y ctg'tgy tklpi "f cve."o cng'uwg"q"wg"j ku'eqo o cpf "q"uy kej "q"j g'tgy tkg'o qf g"qp"j g'r tlpvgt0'

K'j g'hko y ctg'tgy tklpi "f cve"ku'pqr'tqxkf gf "lp'54/dk'6/d{vg+'wplk:"ugpf "j g'f cve"chgt'cf f lpi "pwni'f cve"q "

yj g'gpf "qh'eqmt'eqpvtqnf cve"q"eqo r ngvf"j g'54/dk'wplk0'

1-6.3 Changing to the firmware rewrite mode for duplex-unit

]Eqf g_	Uctv'4+ "	Cti wo gpv'3'*8+ "	Cti wo gpv'4'*38+ "	Cti wo gpv'5'*: + "	Cti wo gpv'6 "
	>GUE @R "	HY a WRF "	F WP K/a TGY TK/G "	2222222: " "	f cvc "

]Vtcpuo kwgf "f cvc_ " Uctv'eqf g " GUE]3Dj _R "

HY a WRF " Ego o cpf 'hqt'tgy tskpi 'hko y ctg "

F WP K/a TGY TK/G " Uy kej 'v'j g'tgy tsk'o qf g "

2222222: " " Cti wo gpv'6'f cvc'rgpi vj '*: /f ki k/f geko cniCUEKpwo dgt + "

f cvc " Dcwf 'tvcg'ugwlp " "

2222222<5: 622'dr u "

22222223<79822'dr u "

22222224<337422'dr u "

22222225<452622'dr u "

]Hwpevkqp_ " Vj ku'eqo o cpf 'uy kej gu'v'j g'f w rgz/wpk/hko y ctg'tgy tsk'o qf g0 "

Dghqtg'ugpf lpi "j g'f w rgz/wpk/hko y ctg'tgy tskpi "f cvc."o cng'uwg'v'wug'v'j ku'eqo o cpf 'v'uy kej 'v'j g'f w rgz/wpk "

tgy tsk'o qf g'qp"j g'r tlpvgt0 *Y j gp'uy kej lpi "v'j g'tgy tsk'o qf g'ku'eqo r ngvf ."c"dwg"NGF "qp"j g'r tlpvgt'uuctu "

drkplpi 0 "

Vj ku'o qf g'y knieqpvkpwg'wpvklhpkuj gf 'v'j g'tgy tsk'j g'hko y ctg'qt'wtpgf "qhi'j g'r tlpvgt0 "

]Cwgpvkqp_ " F wtkpi 'j g'f w rgz/wpk/hko y ctg'tgy tsk'o qf g'ecppqv'r tlpv0 "

1-6.4 Transmission of firmware rewriting data for duplex-unit

]Eqf g_	Uctv'4+ "	Cti wo gpv'3'*8+ "	Cti wo gpv'4'*38+ "	Cti wo gpv'5'*: + "	Cti wo gpv'6 "
	>GUE @R "	HY a WRF "	HNCUI aRTQI TCO "	pppppppp "	f cvc "

]Vtcpuo kwgf "f cvc_ " Uctv'eqf g " GUE]3Dj _R "

HY a WRF " Ego o cpf 'hqt'tgy tskpi 'hko y ctg "

F WP K/aRTQI TCO " Uctv'tgy tskpi "f w rgz/wpk/hko y ctg "

pppppppp " " P wo dgt'qh'tgy tskpi "f cvc'*: /f ki k/f geko cniCUEKpwo dgt 'lp'6/d{ v'g'wpk:"

f cvc " Tgy tskpi "f cvc "

]Hwpevkqp_ " Ugpf u'f w rgz/wpk/hko y ctg'tgy tskpi "f cvc'cpf'tgy tsk'v'j g'hko y ctg0 "

Vj g'f w rgz/wpk/hko y ctg'tgy tskpi "f cvc'ku'r tqxkf gf 'lp'dkpt { 'hqtto cv'hkgu0 "

]Cwgpvkqp_ " Dghqtg'ugpf lpi "j g'hko y ctg'tgy tskpi "f cvc."o cng'uwg'v'wug'v'j g'hko y ctg'tgy tsk'o qf g'ej cpi lpi "eqo o cpf "hqt "

f w rgz/wpk/v'ej cpi g'v'j g'f w rgz/wpk'tgy tsk'o qf g'qp"j g'r tlpvgt0 "

Ki'j g'hko y ctg'tgy tskpi "f cvc'ku'pqv'r tqxkf gf "lp'54/dk'6/d{ v'g+wpk:'ugpf "j g'f cvc'chgt'cf f lpi "pwni'f cvc'v'q "

vj g'gpf "qh'hko y ctg'tgy tskpi "f cvc'v'eqo r ngv'j g'54/dk'wpk0 "

2-1. Image size

Model: DP-QW410

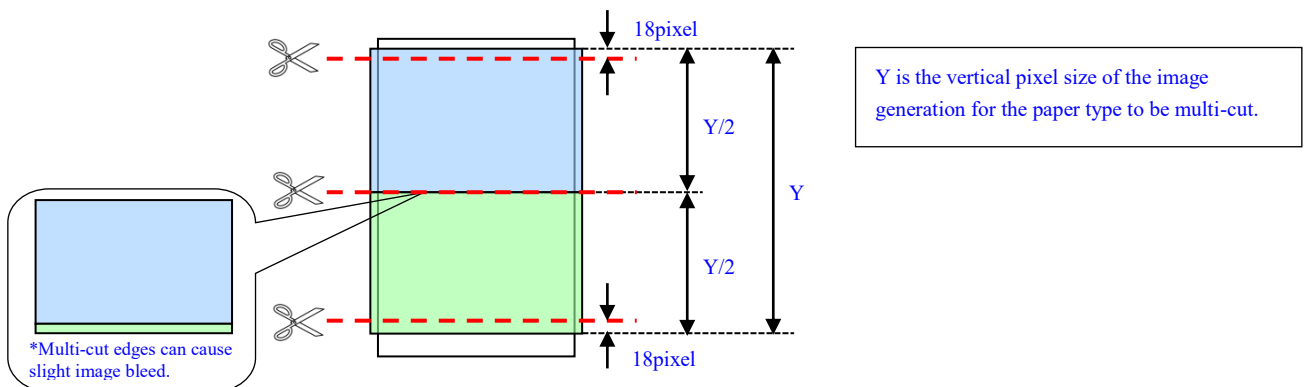
Paper Type	Paper Size (inch)	Print area size *1 Width (head-width direction) x Length (paper-feed direction)	Image pixel size
			300 x 300 DPI (pixel)
(4x3) *2	4"x 3"	107.2 x 79.3mm	1266 x 936
(4x4)	4"x 4"	107.2 x 104.7mm	1266 x 1236
(4x4.5) *2	4"x 4.5"	107.2 x 117.4mm	1266 x 1386
(4x6)	4"x 6"	107.2 x 155.5mm	1266 x 1836
(4.5x3) *2	4.5"x 3"	119.3 x 79.3mm	1408 x 936
(4.5x4) *2	4.5"x 4"	119.3 x 104.7mm	1408 x 1236
(4.5x4.5)	4.5"x 4.5"	119.3 x 117.4mm	1408 x 1386
(4.5x6)	4.5"x 6"	119.3 x 155.5mm	1408 x 1836
(4.5x8)	4.5"x 8"	119.3 x 206.3mm	1408 x 2436
(4x3)x2 *2 *3	4"x 3" (2 sheets)	107.2 x 155.5mm	1266 x 1836
(4.5x3)x2 *2 *3	4.5"x 3" (2 sheets)	119.3 x 155.5mm	1408 x 1836
(4.5x4)x2 *2 *3	4.5"x 4" (2 sheets)	119.3 x 206.3mm	1408 x 2436
Margin (top/bottom)		4.5mm	54
Margin (left/right)		5.54mm	66
Medium size for multi-cutting		0mm	0
Transmission data width (head width)			1408

*1: The print area sizes are set to be larger than the actual paper sizes. (1.5mm larger for top and bottom, 2.54mm larger for left and right)

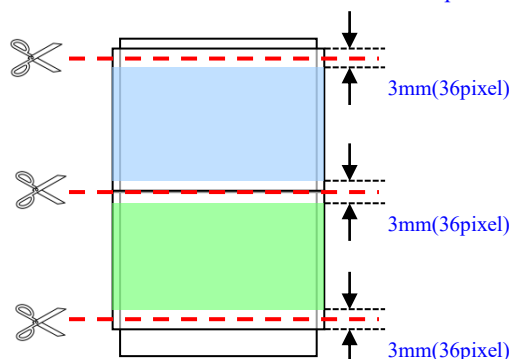
*2: version 1.09 or later.

*3: For image assignment in the case of performing the multi-cut

When performing multi-cut with DP-QW410, single cut without intermediate waste is performed. For this reason, due to mechanical limitations, its edges can cause slight image bleed. It can be prevented by making the space between the images a single color of about 3 mm as shown in the figure.



< When using a single color of about 1.5 mm above and below the cut position >



Model: DS40 / DP-DS620

Paper Type	Paper Size (inch)	Print area size *1 Width (head-width direction) x Length (paper-feed direction)	Image pixel size	
			300 x 300 DPI (pixel)	300 x 600 DPI (pixel)
(5x3.5) (L)	5"x3.5"	131.1 x 92.1mm	1548 x 1088	1548 x 2176
(5x5) *3	5"x5"	131.1 x 130.4mm	1548 x 1540	1548 x 3080
(6x4) (PC)	6"x 4"	156.1 x 105.0mm	1844 x 1240	1844 x 2480
(6x4.5) *5	6"x 4.5"	156.1 x 117.3mm	1844 x 1386	1844 x 2772
(6x6) *6	6"x6"	156.1 x 155.4mm	1844 x 1836	1844 x 3672
(5x7) (2L)	5"x 7"	131.1 x 181.0mm	1548 x 2138	1548 x 4276
(6x8) (A5)	6"x 8"	156.1 x 206.2mm	1844 x 2436	1844 x 4872
(6x9) (A5W) *4	6"x 9"	156.1 x 232.0mm	1844 x 2740	1844 x 5480
(5x3.5)x2 (L dual image) *2	5"x3.5" (2 sheets)	131.1 x 184.2mm	1548 x 2176	1548 x 4352
(6x4)x2 (PC dual image)	6"x 4" (2 sheets)	156.1 x 211.5mm	1844 x 2498	1844 x 4996
(6x4.5)x2 (6x4.5 dual image) *5	6"x 4.5" (2 sheets)	156.1 x 237.2mm	1844 x 2802	1844 x 5604
Margin (top/bottom) () is for the paper type of (6x4) or (6x4)x2.		4.5mm	54 (60)	108 (120)
Margin (left/right)		5.0mm	60	60
Medium size for (5x3.5)x2		0 mm	0	0
Medium size for (6x4)x2		1.52mm	18	36
Medium size for (6x4.5)x2 *5		2.54mm	30	60
Transmission data width (head width)			1920	1920

*1 : The print area sizes are set to be larger than the actual paper sizes. (1.5mm larger for top and bottom, 2.0mm larger for left and right)

*2 DS40 version 1.50 or later.

*3 Not supported by DS40.

*4 DP-DS620 version 1.10 or later.

*5 only DP-DS620. Version 1.10 or later.

*6 DS40 version 1.60 or later.

Model: DS80

Paper Type	Paper Size (inch)	Print area size *1 Width (head-width direction) x Length (paper-feed direction)	Image pixel size	
			300 x 300 DPI (pixel)	300 x 600 DPI (pixel)
(8x4)	8"x 4"	207.3 x 104.6mm	2448 x 1236	2448 x 2472
(8x5)	8"x 5"	207.3 x 130.0mm	2448 x 1536	2448 x 3072
(8x6)	8"x 6"	207.3 x 155.4mm	2448 x 1836	2448 x 3672
(8x8)	8"x 8"	207.3 x 206.2mm	2448 x 2436	2448 x 4872
(8x4)x2	8"x 4" (2 sheets)	207.3 x 211.8mm	2448 x 2502	2448 x 5004
(8x5) (8x4)	8"x 5", 8"x 4"	207.3 x 237.2mm	2448 x 2802	2448 x 5604
(8x10)	8"x 10"	207.3 x 257.0mm	2448 x 3036	2448 x 6072
(8x5)x2	8"x 5" (2 sheets)	207.3 x 262.6mm	2448 x 3102	2448 x 6204
(8x6) (8x4)	8"x 6", 8"x 4"	207.3 x 262.6mm	2448 x 3102	2448 x 6204
(8x6) (8x5)	8"x 6", 8"x 5"	207.3 x 288.0mm	2448 x 3402	2448 x 6804
A4 Length	8"x 11.7"	207.3 x 300.0mm	2448 x 3544	2448 x 7088
8x12	8"x 12"	207.3 x 307.8mm	2448 x 3636	2448 x 7272
(8x6)x2	8"x 6" (2 sheets)	207.3 x 313.4mm	2448 x 3702	2448 x 7404
(8x8) (8x4)	8"x 8", 8"x 4"	207.3 x 313.4mm	2448 x 3702	2448 x 7404
(8x4)x3	8"x 4" (3 sheets)	207.3 x 319.0mm	2448 x 3768	2448 x 7536
Margin (top/bottom)		4.5mm	54	108
Margin (left/right)		5.0mm	60	60
Medium size for multi-cutting		2.54mm	30	60
Transmission data width (head width)			2560	2560

*1 : The print area sizes are set to be larger than the actual paper sizes. (1.5mm larger for top and bottom, 2.0mm larger for left and right)

Model: DP-DS820

Paper Type	Paper Size (inch)	Print area size *1 Width (head-width direction) x Length (paper-feed direction)	Image pixel size	
			300 x 300 DPI (pixel)	300 x 600 DPI (pixel)
(8x4)	8"x 4"	207.3 x 104.6mm	2448 x 1236	2448 x 2472
(8x5)	8"x 5"	207.3 x 130.0mm	2448 x 1536	2448 x 3072
(8x6)	8"x 6"	207.3 x 155.4mm	2448 x 1836	2448 x 3672
(8x7)	8"x 7"	207.3 x 181.0mm	2448 x 2136	2448 x 4272
(8x8)	8"x 8"	207.3 x 206.2mm	2448 x 2436	2448 x 4872
(8x9)	8"x 9"	207.3 x 232.0mm	2448 x 2736	2448 x 5472
(8x10)	8"x 10"	207.3 x 257.0mm	2448 x 3036	2448 x 6072
A4 Length (8xA4)	8"x 11.7"	207.3 x 300.0mm	2448 x 3544	2448 x 7088
(8x12)	8"x 12"	207.3 x 307.8mm	2448 x 3636	2448 x 7272
(A4x5)	8.3"x 5"	214.0 x 130.0mm	2528 x 1536	2528 x 3072
A5 Format	8.3"x 5.8"	214.0 x 151.0mm	2528 x 1784	2528 x 3568
(A4x6)	8.3"x 6"	214.0 x 155.4mm	2528 x 1836	2528 x 3672
(A4x8)	8.3"x 8"	214.0 x 206.2mm	2528 x 2436	2528 x 4872
(A4x10)	8.3"x 10"	214.0 x 257.0mm	2528 x 3036	2528 x 6072
A4 Format	8.3"x 11.7"	214.0 x 300.0mm	2528 x 3544	2528 x 7088
(8x4)x2	8"x 4" (2 sheets)	207.3 x 211.8mm	2448 x 2502	2448 x 5004
(8x5)x2	8"x 5" (2 sheets)	207.3 x 262.6mm	2448 x 3102	2448 x 6204
(8x6)x2	8"x 6" (2 sheets)	207.3 x 313.4mm	2448 x 3702	2448 x 7404
(8x4)x3	8"x 4" (3 sheets)	207.3 x 319.0mm	2448 x 3768	2448 x 7536
(8x5) (8x4)	8"x 5", 8"x 4"	207.3 x 237.2mm	2448 x 2802	2448 x 5604
(8x6) (8x4)	8"x 6", 8"x 4"	207.3 x 262.6mm	2448 x 3102	2448 x 6204
(8x6) (8x5)	8"x 6", 8"x 5"	207.3 x 288.0mm	2448 x 3402	2448 x 6804
(8x8) (8x4)	8"x 8", 8"x 4"	207.3 x 313.4mm	2448 x 3702	2448 x 7404
(A4x5)x2	8.3"x 5" (2 sheets)	214.0 x 262.6mm	2528 x 3102	2528 x 6204
A5x2	8.3"x 5.8" (2 sheets)	214.0 x 304.6mm	2528 x 3598	2528 x 7196
White border area top-bottom		4.5mm	54	108
White border area left-right		5.0mm	60	60
Median size for multi-cut		2.54mm	30	60
Transmit data width (head width)			2560	2560

*1 : The print area sizes are set to be larger than the actual paper sizes. (1.5mm larger for top and bottom, 2.0mm larger for left and right)

Model: DP-DS80D

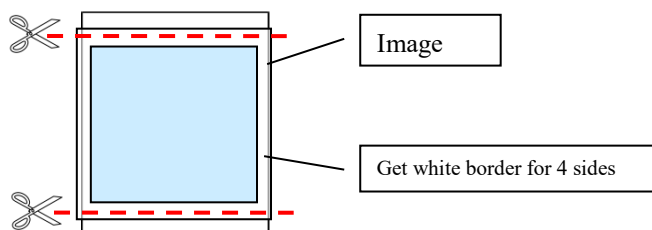
<Roll paper>

Paper Type	Paper Size (inch)	Print area size*1 Width (head-width direction) x Length (paper-feed direction)	Image pixel size	
			300 x 300 DPI (pixel)	300 x 600 DPI (pixel)
(8x4)	8"x 4"	207.3 x 104.6mm	2448 x 1236	2448 x 2472
(8x5)	8"x 5"	207.3 x 130.0mm	2448 x 1536	2448 x 3072
(8x6)	8"x 6"	207.3 x 155.4mm	2448 x 1836	2448 x 3672
(8x8)	8"x 8"	207.3 x 206.2mm	2448 x 2436	2448 x 4872
(8x4)x2	8"x 4" (2 sheets)	207.3 x 211.8mm	2448 x 2502	2448 x 5004
(8x5) (8x4)	8"x 5", 8"x 4"	207.3 x 237.2mm	2448 x 2802	2448 x 5604
(8x10)	8"x 10"	207.3 x 257.0mm	2448 x 3036	2448 x 6072
(8x5)x2	8"x 5" (2 sheets)	207.3 x 262.6mm	2448 x 3102	2448 x 6204
(8x6) (8x4)	8"x 6", 8"x 4"	207.3 x 262.6mm	2448 x 3102	2448 x 6204
(8x6) (8x5)	8"x 6", 8"x 5"	207.3 x 288.0mm	2448 x 3402	2448 x 6804
A4 Length	8"x 11.7"	207.3 x 300.0mm	2448 x 3544	2448 x 7088
(8x12)	8"x 12"	207.3 x 307.8mm	2448 x 3636	2448 x 7272
(8x6)x2	8"x 6" (2 sheets)	207.3 x 313.4mm	2448 x 3702	2448 x 7404
(8x8) (8x4)	8"x 8", 8"x 4"	207.3 x 313.4mm	2448 x 3702	2448 x 7404
(8x4)x3	8"x 4" (3 sheets)	207.3 x 319.0mm	2448 x 3768	2448 x 7536
White border area top-bottom		4.5mm	54	108
White border area left-right		5.0mm	60	60
Median size for multi-cut		2.54mm	30	60
Transmit data width (head width)			2560	2560

<Cut paper>

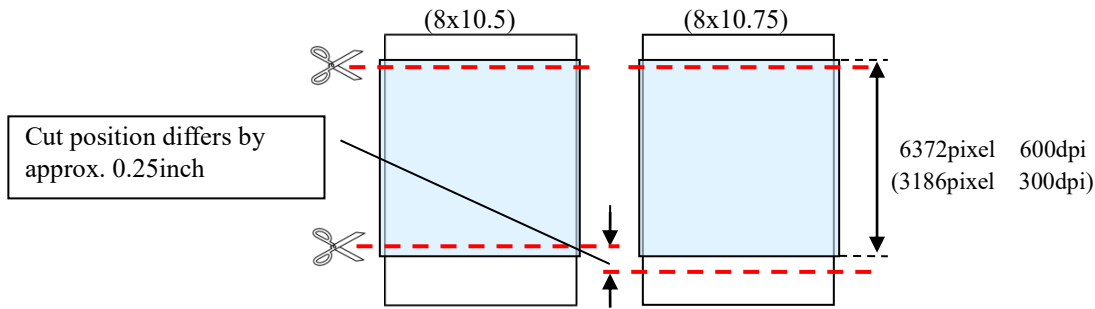
Paper Type	Paper Size (inch)	Print area size*1 Width (head-width direction) x Length (paper-feed direction)	Image pixel size	
			300 x 300 DPI (pixel)	300 x 600 DPI (pixel)
(8x4)	8"x 4"	207.3 x 104.6mm	2448 x 1236	2448 x 2472
(8x5)	8"x 5"	207.3 x 130.0mm	2448 x 1536	2448 x 3072
(8x6)	8"x 6"	207.3 x 155.4mm	2448 x 1836	2448 x 3672
(8x8)	8"x 8"	207.3 x 206.2mm	2448 x 2436	2448 x 4872
(8x10)	8"x 10"	207.3 x 257.0mm	2448 x 3036	2448 x 6072
(8x10.5) *2	8"x 10.5"	207.3 x 269.7mm	2448 x 3186	2448 x 6372
(8x10.75) *2	8"x 11.75"	207.3 x 269.7mm	2448 x 3186	2448 x 6372
(8x12)	8"x 12"	207.3 x 307.8mm	2448 x 3636	2448 x 7272
(8x4)x2	8"x 4" (2 sheets)	207.3 x 211.8mm	2448 x 2502	2448 x 5004
(8x5)x2	8"x 5" (2 sheets)	207.3 x 262.6mm	2448 x 3102	2448 x 6204
(8x6)x2	8"x 6" (2 sheets)	207.3 x 313.4mm	2448 x 3702	2448 x 7404
(8x4)x3 *3	8"x 4" (3 sheets)	207.3 x 313.40mm	2448 x 3702	2448 x 7404
White border area top-bottom		4.5mm	54	108
White border area left-right		5.0mm	60	60
Medium size for (8x4)x2 or (8x5)x2,(8x6)x2 size		2.54mm	30	60
Medium size for (8x4)x3 size		-0.27mm	-3(Over rap)	-6 (Over rap)
Transmit data width (head width)			2560	2560

When printing with a white border on all sides, a white border is added to the image. See the chart for the border size.



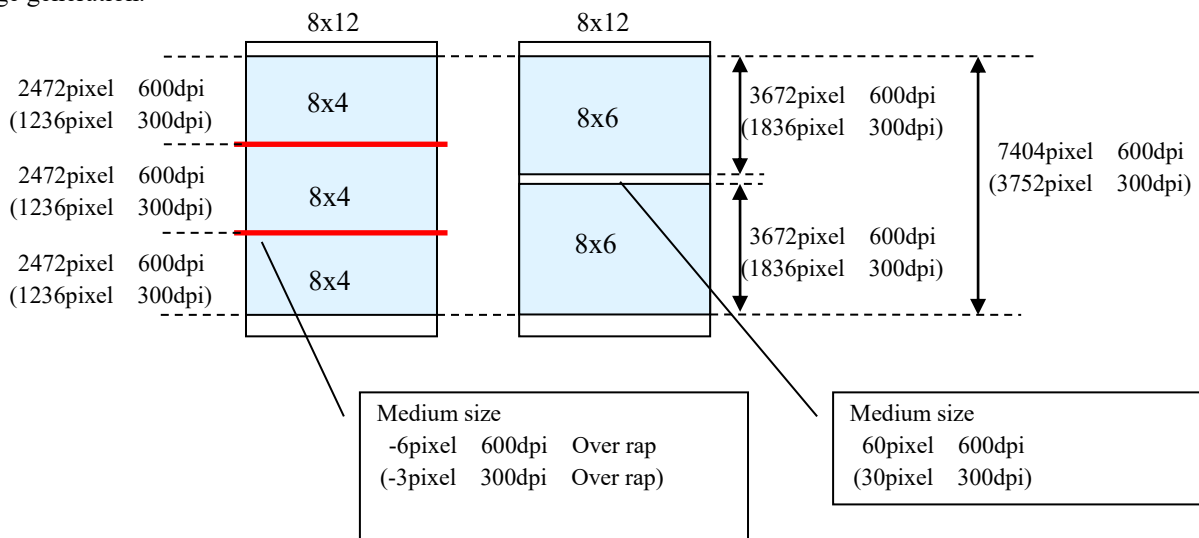
When transferring data of the above image pixel size, every one of them should be laid out at the center of above-mentioned "Transmission data width (head width)" pixels. The left and right free pixels shall be filled with blank data.

- *1: The print area sizes are set to be larger than the actual paper sizes. (1.5mm larger for top and bottom, 2.0mm larger for left and right)
- *2: Image pixel sizes for (8x10.5) and (8x10.75) are the same. Print output differs as shown below.



- *3: When it is multi-cut 8x4x3 print using cut paper, for image layout.

When it is multi-cut 8x4x3 print using cut paper, should be the same as the roll paper 8x6x2 size the vertical size of the image generation.



[Note when Transmitting Image]

The order of transmission of plain data is Y at first, the next is M, and the last is C. Please keep this order.

Moreover, in DS40 or DS80 model, it transmits as follows.

- ※ When sending the data by USB2.0, please send such that the terminal data for each plane is a short packet (512 bytes or less). The data terminus needs to be a short packet for operational stability, and is not needed for anything else.

Ex.) In this example, with L-size 300DPI 1920(horizontal, head width) × 1088(vertical) = 2088960, a data terminus USB short packet of 256 bytes is made and sent (sample shown for Windows OS).

```
HANDLE USBHandle; // Output destination handle address
DWORD lengthL1 = 1920 * 1088 - 256; // Value of data length minus 256 bytes from data terminus
DWORD lengthL2 = 256; // Short packet 256 bytes (data terminus)
LPVOID data_ptr; // Pointer to the head of the plane data
DWORD bytes_written; // Number of bytes of data written
BYTE bRes; // Result of function execution

// This writes the value of the data length minus 256 bytes.
bRes = WriteFile(USBHandle,data_ptr,lengthL1,&bytes_written,NULL);
// This writes the terminal 256 bytes of data.
bRes = WriteFile(USBHandle,(data_ptr+lengthL1),lengthL2,&bytes_written,NULL);
```

2-2. Duplex printer: Relationship between the image created by the application and the printer operation/output image

The application determines the order that images are sent to the printer for the desired result, and rotates and alters the image size to be sent depending on the print orientation, etc.
The relationship between the orientation of the image sent to the printer and the completed print is as shown in the chart below.

◆ For duplex printing (Duplex cut paper, no layout. For 1-side printing with overcoating on the reverse side, the process is the same.)

Paper type Output size	Duplex designation	Image creation、 Layout & transmit order		Image Transmit Process and Printer Operation	Media Delivery Image
Duplex Cut paper Single-layout	Long edge	<div><div>① ② ③</div><div>Front</div><div>A</div><div>④ ⑤ ⑥</div><div>Back</div><div>B</div></div> <div>Image transmission order</div>	⇒	<div><Image transmission procedure></div> <div><div>Process</div><div>Command</div><div>Sample parameter(for 8×8 size)</div></div> <div><div>① Paper size setting</div><div><ESC>P IMAGE MULTICUT</div><div>(Parameter4)00000211</div></div> <div><div>② Send BMP image A</div><div><ESC>P IMAGE YPLANE</div><div><ESC>P IMAGE MPLANE</div><div><ESC>P IMAGE CPLANE</div><div>※1</div></div> <div><div>③ Print command</div><div><ESC>P CNTRL START</div><div></div></div> <div><div>④ Paper size setting</div><div><ESC>P IMAGE MULTICUT</div><div>(Parameter4)00000311</div></div> <div><div>⑤ Send BMP image B</div><div>(※Same order as in 1)</div><div></div></div> <div><div>⑥ Print command</div><div><ESC>P CNTRL START</div><div></div></div> <div>(Example of the process for 1-side printing with overcoating on the reverse side) ※When printing an image on one side, and only overcoating the reverse side, send an all-white BMP image to the overcoat side.</div>	
	Short edge	<div><div>① ② ③</div><div>Front</div><div>A</div><div>④ ⑤ ⑥</div><div>Back</div><div>B</div></div> <div>Image transmission order</div>	⇒	<div><Printer operation></div> <div><div>1. Standby</div><div>2. Paper feed</div><div>3. Printing</div><div>4. Reverse</div><div>5. Printing</div><div>6. Feed out/cut</div><div>7. Finish/Standby</div></div>	

◆For duplex printing (Duplex cut paper, 2-image layout. When printing only 1 side and overcoating the other side, the process is the same.)

Paper type Output size	Duplex designation	Image creation、 Layout & transmit order		Printer Operation and Image Transmit Process	Media Delivery Image
Duplex Cut paper Multi-layout	Long edge	<div>① ② ③</div> <div>Front C</div> <div>8x5</div> <div>④ ⑤ ⑥</div> <div>Back D</div> <div>8x5</div> <div>① ② ③</div> <div>Front A</div> <div>8x5</div> <div>④ ⑤ ⑥</div> <div>Back B</div> <div>8x5</div> <div>Create and send a 2-image layout</div>	⇨	<div><Image transmission procedure></div> <div><div>Process</div><div>① Paper size setting</div><div>② Send BMP Image C+A</div><div>③ Print command</div><div>④ Paper size setting</div><div>⑤ Send BMP Image D+B</div><div>⑥ Print command</div></div> <div><div>Command</div><div><ESC>P IMAGE MULTICUT</div><div><ESC>P IMAGE YPLANE</div><div><ESC>P IMAGE MPLANE</div><div><ESC>P IMAGE CPLANE</div><div><ESC>P CNTRL START</div><div><ESC>P IMAGE MULTICUT</div><div><ESC>P IMAGE YPLANE</div><div><ESC>P IMAGE MPLANE</div><div><ESC>P IMAGE CPLANE</div><div><ESC>P CNTRL ST</div></div> <div><div>Sample parameter (for 8x5x2 size)</div><div>(Parameter 4)00000214</div><div>Create and send a 2-image layout</div><div>(Parameter 4)00000314</div><div>Create and send a 2-image layout</div></div> <div>(Example of the process for 1-side printing with overcoating on the reverse side) ※When printing an image on one side, and only overcoating the reverse side, send an all-white BMP image to the overcoat side.</div>	
	Short edge	<div>① ② ③</div> <div>Front C</div> <div>8x5</div> <div>④ ⑤ ⑥</div> <div>Back D</div> <div>8x5</div> <div>① ② ③</div> <div>Front A</div> <div>8x5</div> <div>④ ⑤ ⑥</div> <div>Back B</div> <div>8x5</div> <div>Create and send a 2-image layout</div>	⇨	<div><Printer operation></div> <div><div>①Stand by</div><div>②Paper feed</div><div>③Printing</div><div>④Reverse</div><div>⑤Printing</div><div>⑥Feed out/cut</div><div>⑦Finish/Stand by</div></div> <div>Two 5-inch cuts</div>	

◆For single-side printing (Cut media, using the duplex unit)

Paper type Output size	Duplex designation	Image creation、 Layout & transmit order		Printer Operation and Image Transmit Process	Media Delivery Image
Cut paper Single-layout	No	<div>① ② ③</div> <div>Front</div> <div>A</div>	⇒	<div><Image transmission procedure></div> <div><div>Process</div><div>① Paper size setting</div><div>② Send BMP image A</div><div>③ Print command</div></div> <div><div>Command</div><div><ESC>P IMAGE MULTICUT</div><div><ESC>P IMAGE YPLANE</div><div><ESC>P IMAGE MPLANE</div><div><ESC>P IMAGE CPLANE</div><div><ESC>P CNTRL START</div></div> <div><div>Sample parameter(for 8x8 size)</div><div>(Parameter4)00000111</div></div> <div><Printer operation></div> <div><div>①Standby</div><div>②Paper feed</div><div>③Printing</div><div>④Feed out/Cut</div></div>	
Cut paper Multi-layout	No	<div>Create and send a 2-image layout</div> <div><div>① ② ③</div><div>Front</div><div>B</div><div>8x5</div><div>Front</div><div>A</div><div>8x5</div></div>	⇒	<div><Image transmission procedure></div> <div><div>Process</div><div>① Paper size setting</div><div>② Send BMP Image B+A</div><div>③ Print command</div></div> <div><div>Command</div><div><ESC>P IMAGE MULTICUT</div><div><ESC>P IMAGE YPLANE</div><div><ESC>P IMAGE MPLANE</div><div><ESC>P IMAGE CPLANE</div><div><ESC>P CNTRL START</div></div> <div><div>Sample parameter (for 8x5x2 size)</div><div>(Parameter 4)00000114</div><div>Create and send a 2-image layout</div></div> <div><Printer operation></div> <div><div>①Standby</div><div>②Paper feed</div><div>③Printing</div><div>④Feed out/Cut</div></div> <div>Two 5-inch cuts</div>	

◆ For 1-side printing (roll paper, not using the duplex unit)

Paper type Output size	Duplex designation	Image creation、 Layout & transmit order		Image Transmit Process and Printer Operation	Media Delivery Image
Roll paper Single-layout	No	<div><div>① ② ③</div><div>Front</div><div>A</div></div>	⇒	<div><div><Image transmission procedure></div><div><div>Process</div><div>① Paper size setting</div><div>② Send BMP image A</div><div>③ Print command</div></div><div><div>Command</div><div><ESC>P IMAGE MULTICUT</div><div><ESC>P IMAGE YPLANE</div><div><ESC>P IMAGE MPLANE</div><div><ESC>P IMAGE CPLANE</div><div><ESC>P CNTRL START</div></div><div><div>Sample parameter (for 8×8 size)</div><div>(Parameter4)00000011</div></div></div> <div><div><Printer operation></div><div><div>1. Standby</div><div>2. Printing</div><div>3. Feed out /Cut</div></div></div>	
Roll paper Multi-layout	No	<div><div>Create and send a 2-image layout</div><div><div>① ② ③</div><div>Front B 8x6</div><div>Front A 8x6</div></div></div>	⇒	<div><div><Image transmission procedure></div><div><div>Process</div><div>① Paper size setting</div><div>② Send BMP image B+A</div><div>③ Print command</div></div><div><div>Command</div><div><ESC>P IMAGE MULTICUT</div><div><ESC>P IMAGE YPLANE</div><div><ESC>P IMAGE MPLANE</div><div><ESC>P IMAGE CPLANE</div><div><ESC>P CNTRL START</div></div><div><div>Sample parameter (for (8×6)×2 size)</div><div>(Parameter4)00000015</div><div>Create and send a 2-image layout</div></div></div> <div><div><Printer operation></div><div><div>1. Standby</div><div>2. Printing</div><div>3. Feed out /Cut</div></div></div>	

3. Supplementary information

3-1 Plane data format of each color

The 8-bit grayscale in BMP format is used to transmit print data. To locate the pixel data counted from the head of BMP format data to be at the 32-bit border, some data structure shall be expanded by adding data for adjusting the pixel data border, as shown in the table below.

Case of 1920x1240 pixel image

	On Windows disk file			For print data transmission command		
Data structure	BITMAPFILEHEADER	14	bytes	BITMAPFILEHEADER	14	bytes
	BITMAPINFOHEADER	40	bytes	BITMAPINFOHEADER	40	bytes
	RGBQUAD	1024	bytes	RGBQUAD	1024	bytes
	Border adjustment data (null)	10	bytes <- Added			
	Total of header part	1078	bytes	Total of header part	1088	bytes
	Pixel data	2380800	bytes	Pixel data	2380800	bytes
	Total	2381878	bytes	Total	2381888	bytes
BITMAPFILEHEADER data	bfType	"BM"		bfType	"BM"	
File size	bfSize	0x00245836		bfSize	0x00245840	
	bfReserved1	0x0000		bfReserved1	0x0000	
	bfReserved2	0x0000		bfReserved2	0x0000	
Offset up to pixel data	bfOffBits	0x00000436	Not located at 32-bit border	bfOffBits	0x00000440	Located at 32-bit border

3-2.1 Media codes

This printer indicates every media to use in 5-digit decimal numbers.

The data returned by the Printer media information transmission request command consists of these 5-digit codes (ASCII numbers) allocated to each media.

Media code setting

Fifth and Fourth digit (nn000) Reserved	Third and second digit (00nn0) Paper type	First digit (0000n)
nn = 00	No. 00150 4inch width	0:4x6
	No. 00160 4.5inch width	1:4.5x8 3:4.5x6
	No. 00200 5x3.5 (L)	n = 0 or 1 (1:6x4 only)
	No. 00210 5x7 (2L)	
	No. 00300 6x4 (PC)	
	No. 00310 6x8 (A5)	
	No. 00400 6x9 (A5W)	
	No. 00500 8x10	
	No. 00510 8x12	
	No. 00600 A4	

Support media of each model			Model			
Type	Size (W x L)	Code	DS40, DP-DS620	DS80, DP-DS80D	DP-DS820	DP-QW410
4x6	(102.0 x 152.0mm)	00150	-	-	-	○
4.5x6	(114.0 x 152.0mm)	00163	-	-	-	○*3
4.5x8	(114.0 x 203.0mm)	00161	-	-	-	○
5x3.5 (L)	(127.0 x 89.0mm)	00200	○*2	-	-	-
6x4 (PC)	(152.0 x 101.0 mm)	00301	○	-	-	-
5x7 (2L)	(127.0 x 178.0 mm)	00210	○	-	-	-
6x8 (A5)	(152.0 x 203.0 mm)	00310	○	-	-	-
6x9 (A5W)	(152.0 x 229.0 mm)	00400	○*1	-	-	-
8x10	(203.0 x 254.0mm)	00500	-	○	○	-
8x12	(203.0 x 305.0mm)	00510	-	○	○	-
A4	(210.0 x 297.0mm)	00600	-	-	○	-

(○ : Support, - : No support)

*1 : DS620 version 1.10 or later.

*2 : DS620 version 1.60 or later.

*3 : QW410 version 1.07 or later.

3-3.1 Status codes

All printer information returned by the Printer status transmission request command consists of 5-digit decimal number data.

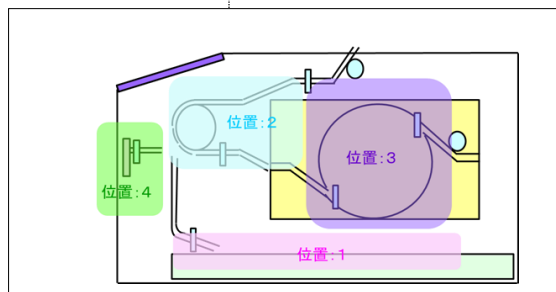
Please use these codes to judge the printer operation status and occurrence of various errors.

The following is a classification list of status codes. (The status generated by the model differs.)

Code classification	Occurrence level	How to recover from error	Code	Status	Model				
					DS40 DS80	DP- DS80D	DP- DS620	DP- DS820	DP- QW410
00000-00999	Occurs during normal operation	As per normal procedure	00000	Idling	○	○	○	○	○
			00001	Printing	○	○	○	○	○
			00500	Head cooling down	○	○	○	○	○
			00510	Cooling the paper winding motor	○	○	-	-	-
			00900	Standby Mode	-	-	○	○	-
01000-01999	Occurs due to user setting	Recovers by maintenance by users	01000	Cover is open	○	○	○	○	○
			01010	No Scrap box	○	○	-	○	○
			01100	Paper End	○	○	○	○	○
			01200	Ribbon End	○	○	○	○	○
			01300	Paper jam	○	○	○	○	○
			01400	Ribbon errors (detect error, ribbon break)	○	○	○	○	○
			01500	Paper Definition Error (The setting is different from printer setting)	○	○	○	○	○
02000-02999	Hardware error	Call for service if system does not recover after reboot.	01600	Data error (improper data)	○	○	○	○	○
			02000	Head voltage error	○	○	○	○	○
			02010	USB power supply voltage error	-	-	-	-	○
			02100	Head position error	○	○	○	○	○
			02200	Power supply fun stopped	○	○	○	○	-
			02300	Cutter error (Cut jamming etc.)	○	○	○	○	○
			02400	Pinch roller position error	-	-	-	-	-
			02500	Abnormal head temperature	○	○	○	○	○
			02600	Abnormal media temperature	○	○	○	○	○
			02610	Abnormal temperature of paper winding motor	○	○	-	-	-
03000-03999	Other internal error	Call for service if system does not recover after reboot.	02700	Ribbon tension error	○	○	-	-	-
			02800	RF-ID module error	○	○	○	○	○
			02900	RS422 communication error	-	○	-	-	-
			03000	System error	○	○	○	○	○

(○ : Status is generated. - : Status is not generated.)

					Model
Code classification	Occurrence level	How to recover from error	Code	Status	DP-DS80D
05000- 05999	Duplex unit errors	For error codes and error recovery, please refer to the Duplex unit manual.	05017	Paper jam in duplex unit paper supply area (loc. 1)	○
			05019	Paper jam in duplex unit upper paper feed area (loc. 2)	○
			05023	Paper jam in area of duplex unit shell (loc. 3)	○
			05027	Paper jam in area of duplex unit eject slot (loc. 4)	○
			05049	Duplex unit paper delivery motor malfunction	○
			05065	Duplex unit reversing block (shell) internal feed motor malfunction	○
			05081	Duplex unit pinch malfunction	○
			05097	Duplex unit act pass guide malfunction	○
			05113	Duplex unit side guide malfunction	○
			05129	Duplex unit skew correction malfunction	○
			05145	Duplex unit reverse block (shell) malfunction	○
			05161	Duplex unit feed tray malfunction	○
			05177	Duplex unit cut operation malfunction	○
			05193	Duplex unit tray error	○
			05209	Duplex unit maintenance cover open	○
			05241	Duplex unit system error	○



(○ : Status is generated. - : Status is not generated.)

3-3.2 Duplex-specific status codes

The information returned to the duplex unit status request command is shown in the chart below.

These status codes allow you to get the operating status and discern errors in the duplex unit.

For error codes and error recovery, please refer to the Duplex unit manual.

API definition	Code	Status
NON_ERROR	5000	No error
UCS_NONCONNECT	5500	Duplex unit is not connected
UCS_JAMMING_SUPPLY_SENS_ON	5017	The print didn't pass the supply sensor, so the sensor didn't switch ON (no paper) (paper feed operation)
UCS_JAMMING_SUPPLY_SENS_OFF	5018	The print didn't reach the supply sensor, so the sensor didn't switch OFF (paper present) (paper feed operation)
UCS_JAMMING_SLOT_SENS_ON	5019	The print didn't pass the delivery slot sensor, so the sensor didn't switch ON (no paper) (paper feed / reversing operation)
UCS_JAMMING_SLOT_SENS_OFF	5020	The print didn't reach the delivery slot sensor, so the sensor didn't switch OFF (paper pres.) (paper feed/reversing operation)
UCS_JAMMING_PASS_SENS_ON	5021	The print didn't pass the pinch pass sensor, so the sensor didn't switch ON (no paper) (reversing / ejecting operation)
UCS_JAMMING_PASS_SENS_OFF	5022	The print didn't reach the pinch pass sensor, so the sensor didn't switch OFF (paper present) (reversing / ejecting operation)
UCS_JAMMING_SHELL_SENS1_ON	5023	The print didn't pass shell pass sensor-1, so the sensor didn't switch ON (no paper) (reversing / ejecting operation)
UCS_JAMMING_SHELL_SENS1_OFF	5024	The print didn't reach shell pass sensor-1, so the sensor didn't switch OFF (paper present) (reversing / ejecting operation)
UCS_JAMMING_SHELL_SENS2_ON	5025	The print didn't pass shell pass sensor-2, so the sensor didn't switch ON (no paper) (reversing operation)
UCS_JAMMING_SHELL_SENS2_OFF	5026	The print didn't reach shell pass sensor-2, so the sensor didn't switch OFF (paper present) (reversing operation)
UCS_JAMMING_EJECT_SENS_ON	5027	The print didn't pass the eject sensor, so the sensor didn't switch ON (no paper) (ejecting operation)
UCS_JAMMING_EJECT_SENS_OFF	5028	The print didn't reach the eject sensor, so the sensor didn't switch OFF (paper present) (ejecting operation)
UCS_JAMMING_SLOT_FG_SENS	5029	During printing, the printer transfer FG sensor didn't detect the print (printing)
UCS_JAMMING_SHELL_FG_SENS	5030	While delivering the print out of the shell roller, the FG sensor in the shell didn't detect the print (reversing operation)
UCS_REMAIN_SUPPLY_SENS	5033	Paper supply sensor is OFF (paper present)
UCS_REMAIN_SLOT_SENS	5034	Printer feed slot sensor is OFF (paper present)
UCS_REMAIN_PASS_SENS	5035	Pinch pass sensor is OFF (paper present)
UCS_REMAIN_SHELL_SENS1	5036	Shell pass sensor 1 is OFF (paper present)
UCS_REMAIN_SHELL_SENS2	5037	Shell pass sensor 2 is OFF (paper present)
UCS_REMAIN_EJECT_SENS	5038	Eject sensor is OFF (paper present)
UCS_CAPSTAN_TRAPZ_ERROR	5049	The capstan drive control didn't end within the set time
UCS_SHELL_ROLLER_ERROR	5065	Shell roller malfunction (slow or stuck)
UCS_PINCH_OPEN_ERROR	5081	The pinch roller could not be moved to the release position
UCS_PINCH_CLOSE_ERROR	5082	The pinch roller could not be moved to the pinch position
UCS_PINCH_INIT_ERROR	5083	The pinch roller initialization could not be completed
UCS_PINCH_POS_UNKNOWN	5084	The pinch roller position is unknown (during trials only)
UCS_PASS_GUIDE_SUPPLY_ERROR	5097	The pass guide could not be moved to the supply position
UCS_PASS_GUIDE_SHELL_ERROR	5098	The pinch roller could not be moved to the retracted position
UCS_PASS_GUIDE_EJECT_ERROR	5099	The pinch roller could not be moved to the eject position
UCS_PASS_GUIDE_INIT_ERROR	5100	The pass guide initialization could not be completed
UCS_PASS_GUIDE_POS_UNKNOWN	5101	The pass guide position is unknown (during trials only)
UCS_SIDE_GUIDE_HOME_ERROR	5113	The side guide could not be moved to the HOME position
UCS_SIDE_GUIDE_POS_ERROR	5114	The side guide could not be moved to the prescribed position
UCS_SIDE_GUIDE_INIT_ERROR	5115	The side guide initialization could not be completed
UCS_ACT_GUIDE_HOME_ERROR	5129	The act guide could not be moved to the HOME position
UCS_SHELL_ROTATE_HOME_ERROR	5145	The shell roller didn't rotate to the HOME position
UCS_SHELL_ROTATE_REV_ERROR	5146	The shell roller didn't rotate to the REV position
UCS_LEVER_DOWN_ERROR	5161	The paper feed lever could not be moved to the DOWN position

API definition	Code	Status
UCS_LEVER_LOCK_ERROR	5162	The paper feed lever could not be moved to the LOCK position
UCS_LEVER_UP_ERROR	5163	The paper feed lever could not be moved to the UP position
UCS_CUTTER_HOME_ERROR	5177	The cutter could not be returned to the HOME position
UCS_CUTTER_AWAY_ERROR	5178	The cutter could not be moved to the AWAY position
UCS_CUTTER_INIT_ERROR	5179	Cutter initialization could not be completed
UCS_CUTTER_POS_UNKNOWN	5180	Cutter position is unknown (in testing only)
UCS_TRAY_OUT	5193	Paper tray removed during printing
UCS_TOP_COVER_OPEN	5209	Maintenance cover opened during printing
UCS_SYSTEM_ERROR	5241	System error

3-4 The number of free buffers which can transmit printing data

When the numbers of free buffers are the following value, printing data can be transmitted to a printer.

However, when changing gloss printing and matte printing mutually, the number of free buffers is 2 by every paper type.

Model : DP-QW410

Paper Type	Gloss printing	Matte printing
	300 x 300 DPI	300 x 300 DPI
(4x3) * ₁	1, 2	1, 2
(4x4)	1, 2	1, 2
(4x4.5) * ₁	1, 2	1, 2
(4x6)	1, 2	1, 2
(4.5x3) * ₁	1, 2	1, 2
(4.5x4) * ₁	1, 2	1, 2
(4.5x4.5)	1, 2	1, 2
(4.5x6)	1, 2	1, 2
(4.5x8)	1, 2	1, 2
(4x3) x2 * ₁	1, 2	1, 2
(4.5x3) x2 * ₁	1, 2	1, 2
(4.5x4) x2 * ₁	1, 2	1, 2

*₁ version 1.09 or later

Model : DS40 / DP-DS620

Paper Type	Gloss printing		Matte printing	
	300 x 300 DPI	300 x 600 DPI	300 x 300 DPI	300 x 600 DPI
(5x3.5) (L)	1, 2	1, 2	1, 2	1, 2
(5x5) * ₆	1, 2	1, 2	1, 2	1, 2
(6x4) (PC)	1, 2	1, 2	1, 2	1, 2
(6x4.5) * ₄	1, 2	1, 2	1, 2	1, 2
(6x6) * ₅	1, 2	1, 2	1, 2	1, 2
(5x7) (2L)	1, 2	1, 2	1, 2	1* ₂ , 2
(6x8) (A5)	1, 2	1* ₂ , 2	1, 2	1* ₂ , 2
(6x9) * ₃ (A5W)	1, 2	2	1, 2	2
(5x3.5) x2 * ₁ (L dual image)	1, 2	1* ₂ , 2	1, 2	1* ₂ , 2
(6x4) x2 (PC dual image)	1, 2	1* ₂ , 2	1, 2	1* ₂ , 2
(6x4.5) x2 * ₄ (6x4.5 dual image)	1, 2	2	1, 2	2

*₁ DS40 version 1.50 or later.

*₂ only DP-DS620.

*₃ DP-DS620 version 1.10 or later.

*₄ only DP-DS620. Version 1.10 or later.

*₅ DS40 version 1.60 or later.

*₆ Not supported by DS40.

Model : DS80 / DP-DS820

Paper Type	Gloss printing		Matte printing	
	300 x 300 DPI	300 x 600 DPI	300 x 300 DPI	300 x 600 DPI
(8x4)	1, 2	1, 2	1, 2	1, 2
(8x5)	1, 2	1, 2	1, 2	1, 2
(8x6)	1, 2	1, 2	1, 2	1, 2
(8x7) *1	1, 2	1, 2	1, 2	1, 2
(8x8)	1, 2	1, 2	1, 2	1, 2
(8x9) *1	1, 2	1, 2	1, 2	1, 2
(8x10)	1, 2	1, 2	1, 2	1, 2
A4 Length (8xA4)	1, 2	1, 2	1, 2	1*1, 2
(8x12)	1, 2	1, 2	1, 2	1*1, 2
(8x4)x2	1, 2	1, 2	1, 2	1, 2
(8x5) (8x4)	1, 2	1, 2	1, 2	1, 2
(8x5)x2	1, 2	1, 2	1, 2	1, 2
(8x6) (8x4)	1, 2	1, 2	1, 2	1, 2
(8x6) (8x5)	1, 2	1, 2	1, 2	1, 2
(8x6)x2	1, 2	1, 2	1, 2	1*1, 2
(8x8) (8x4)	1, 2	1, 2	1, 2	1*1, 2
(8x4)x3	1, 2	1, 2	1, 2	1*1, 2
A5 Format *1	1, 2	1, 2	1, 2	1, 2
(A4x5) *1	1, 2	1, 2	1, 2	1, 2
(A4x6) *1	1, 2	1, 2	1, 2	1, 2
(A4x8) *1	1, 2	1, 2	1, 2	1, 2
(A4x10) *1	1, 2	1, 2	1, 2	1, 2
A4 Format *1	1, 2	1, 2	1, 2	1, 2
(A4x5)x2 *1	1, 2	1, 2	1, 2	1, 2
A5x2 *1	1, 2	1, 2	1, 2	1, 2

*1 only DP-DS820

Model : DP-DS80D

Paper type	Gloss printing		Matte printing	
	300 x 300 DPI	300 x 600 DPI	300 x 300 DPI	300 x 600 DPI
(8x4)	1, 2	1, 2	1, 2	1, 2
(8x5)	1, 2	1, 2	1, 2	1, 2
(8x6)	1, 2	1, 2	1, 2	1, 2
(8x8)	1, 2	1, 2	1, 2	1, 2
(8x4)x2	1, 2	1, 2	1, 2	1, 2
(8x5) (8x4)	1, 2	1, 2	1, 2	1, 2
(8x10)	1, 2	1, 2	1, 2	1, 2
(8x5)x2	1, 2	1, 2	1, 2	1, 2
(8x6) (8x4)	1, 2	1, 2	1, 2	1, 2
(8x6) (8x5)	1, 2	1, 2	1, 2	1, 2
A4 Length	1, 2	1, 2	1, 2	2
(8x12)	1, 2	1, 2	1, 2	2
(8x6)x2	1, 2	1, 2	1, 2	2
(8x8) (8x4)	1, 2	1, 2	1, 2	2
(8x4)x3	1, 2	1, 2	1, 2	2
(8x10.5)	1, 2	1, 2	1, 2	1, 2
(8x10.75)	1, 2	1, 2	1, 2	1, 2

The number of buffers of each paper type which a printer has is shown below.

In the case of the paper type with the buffer for “Double”, it is possible to receive next image data during a printing. (It is excepted when gloss printing and matte printing change.)

Model : DP-QW410

Paper Type	Gloss printing	Matte printing
	300 x 300 DPI	300 x 300 DPI
(4x3) * ₁	Double	Double
(4x4)	Double	Double
(4x4.5) * ₁	Double	Double
(4x6)	Double	Double
(4.5x3) * ₁	Double	Double
(4.5x4) * ₁	Double	Double
(4.5x4.5)	Double	Double
(4.5x6)	Double	Double
(4.5x8)	Double	Double
(4x3)x2 * ₁	Double	Double
(4.5x3)x2 * ₁	Double	Double
(4.5x4)x2 * ₁	Double	Double

*₁ version 1.09 or later

Model : DS40

Paper Type	Gloss printing		Matte printing	
	300 x 300 DPI	300 x 600 DPI	300 x 300 DPI	300 x 600 DPI
(5x3.5) (L)	Double	Double	Double	Double
(6x4) (PC)	Double	Double	Double	Double
(6x6) * ₃	Double	Double	Double	Double
(5x7) (2L)	Double	Double	Double	Single
(6x8) (A5)	Double	Single	Double	Single
(6x9) (A5W)	Double	Single	Double	Single
(5x3.5)x2 * ₁ (L dual image)	Double	Single	Double	Single
(6x4)x2 (PC dual image)	Double	Single	Double	Single

*₁ version 1.50 or later

*₃ version 1.60 or later

Model : DP-DS620

Paper Type	Gloss printing		Matte printing	
	300 x 300 DPI	300 x 600 DPI	300 x 300 DPI	300 x 600 DPI
(5x3.5) (L)	Double	Double	Double	Double
(5x5)	Double	Double	Double	Double
(6x4) (PC)	Double	Double	Double	Double
(6x4.5) *2	Double	Double	Double	Double
(6x6)	Double	Double	Double	Double
(5x7) (2L)	Double	Double	Double	Double
(6x8) (A5)	Double	Double	Double	Double
(6x9) *2 (A5W)	Double	Single	Double	Single
(5x3.5)x2 (L dual image)	Double	Double	Double	Double
(6x4)x2 (PC dual image)	Double	Double	Double	Double
(6x4.5)x2 *2 (6x4.5 dual image)	Double	Single	Double	Single

*2 version 1.10 or later

Model : DS80

Paper Type	Gloss printing		Matte printing	
	300 x 300 DPI	300 x 600 DPI	300 x 300 DPI	300 x 600 DPI
(8x4)	Double	Double	Double	Double
(8x5)	Double	Double	Double	Double
(8x6)	Double	Double	Double	Double
(8x8)	Double	Double	Double	Double
(8x4)x2	Double	Double	Double	Double
(8x5) (8x4)	Double	Double	Double	Double
(8x10)	Double	Double	Double	Double
(8x5)x2	Double	Double	Double	Double
(8x6) (8x4)	Double	Double	Double	Double
(8x6) (8x5)	Double	Double	Double	Double
A4 Length	Double	Double	Double	Single
(8x12)	Double	Double	Double	Single
(8x6)x 2	Double	Double	Double	Single
(8x8) (8x4)	Double	Double	Double	Single
(8x4)x3	Double	Double	Double	Single

Model : DP-DS820

Paper Type	Gloss printing		Matte printing	
	300 x 300 DPI	300 x 600 DPI	300 x 300 DPI	300 x 600 DPI
(8x4)	Double	Double	Double	Double
(8x5)	Double	Double	Double	Double
(8x6)	Double	Double	Double	Double
(8x7)	Double	Double	Double	Double
(8x8)	Double	Double	Double	Double
(8x9)	Double	Double	Double	Double
(8x10)	Double	Double	Double	Double
A4 Length (8xA4)	Double	Double	Double	Double
(8x12)	Double	Double	Double	Double
A5 Format	Double	Double	Double	Double
(A4x5)	Double	Double	Double	Double
(A4x6)	Double	Double	Double	Double
(A4x8)	Double	Double	Double	Double
(A4x10)	Double	Double	Double	Double
A4 Format	Double	Double	Double	Double
(8x4)x2	Double	Double	Double	Double
(8x5)x2	Double	Double	Double	Double
(8x5) (8x4)	Double	Double	Double	Double
(8x6)x2	Double	Double	Double	Double
(8x6) (8x4)	Double	Double	Double	Double
(8x6) (8x5)	Double	Double	Double	Double
(8x8) (8x4)	Double	Double	Double	Double
(8x4)x3	Double	Double	Double	Double
(A4x5)x2	Double	Double	Double	Double
A5x2	Double	Double	Double	Double

Model : DP-DS80D

Paper Type	Gloss printing		Matte printing	
	300 x 300 DPI	300 x 600 DPI	300 x 300 DPI	300 x 600 DPI
(8x4)	Double	Double	Double	Double
(8x5)	Double	Double	Double	Double
(8x6)	Double	Double	Double	Double
(8x8)	Double	Double	Double	Double
(8x4)x2	Double	Double	Double	Double
(8x5) (8x4)	Double	Double	Double	Double
(8x10)	Double	Double	Double	Double
(8x5)x2	Double	Double	Double	Double
(8x6) (8x4)	Double	Double	Double	Double
(8x6) (8x5)	Double	Double	Double	Double
A4 Length	Double	Double	Double	Single
(8x12)	Double	Double	Double	Single
(8x6)x2	Double	Double	Double	Single
(8x8) (8x4)	Double	Double	Double	Single
(8x4)x3	Double	Double	Double	Single
(8x10.5)	Double	Double	Double	Double
(8x10.75)	Double	Double	Double	Double

3-5 Multi-cut pattern specification value

Transmit the specification value applicable to each paper type. (Paper type supported by the model differs.)

■ Roll-paper designation

○:Support, -:No support Value: Effective firmware version (This or later)

Paper Type	Specification value	Support paper type of each model					
		DS40	DS80	DP-DS80D	DP-DS620	DP-DS820	DP-QW410
(5x3.5)	00000001	○	-	-	○	-	-
(6x4)	00000002	○	-	-	○	-	-
(5x7)	00000003	○	-	-	○	-	-
(6x8)	00000004	○	-	-	○	-	-
(6x9)	00000005	○	-	-	1.10	-	-
(8x10)	00000006	-	○	○	-	○	-
(8x12)	00000007	-	○	○	-	○	-
(8x4)	00000008	-	○	○	-	○	-
(8x5)	00000009	-	○	○	-	○	-
(8x6)	00000010	-	○	○	-	○	-
(8x8)	00000011	-	○	○	-	○	-
(6x4)x2	00000012	○	-	-	○	-	-
(8x4)x2	00000013	-	○	○	-	○	-
(8x5)x2	00000014	-	○	○	-	○	-
(8x6)x2	00000015	-	○	○	-	○	-
(8x5) (8x4)	00000016	-	○	○	-	○	-
(8x6) (8x4)	00000017	-	○	○	-	○	-
(8x6) (8x5)	00000018	-	○	○	-	○	-
(8x8) (8x4)	00000019	-	○	○	-	○	-
(8x4)x3	00000020	-	○	○	-	○	-
A4 Length	00000021	-	○	○	-	○	-
(5x3.5)x2	00000022	1.50	-	-	○	-	-
(6x6)	00000027	1.60	-	-	○	-	-
(5x5)	00000029	-	-	-	○	-	-
(6x4.5)	00000030	-	-	-	1.10	-	-
(6x4.5)x2	00000031	-	-	-	1.10	-	-
(8x7)	00000032	-	-	-	-	○	-
(8x9)	00000033	-	-	-	-	○	-
A5 Format	00000034	-	-	-	-	○	-
A5x2	00000035	-	-	-	-	○	-
(A4x5)	00000037	-	-	-	-	○	-
(A4x6)	00000038	-	-	-	-	○	-
(A4x8)	00000039	-	-	-	-	○	-
(A4x10)	00000040	-	-	-	-	○	-
A4 Format	00000041	-	-	-	-	○	-
(A4x5)x2	00000043	-	-	-	-	○	-
(4x4)	00000047	-	-	-	-	-	○
(4x6)	00000048	-	-	-	-	-	○
(4.5x4.5)	00000050	-	-	-	-	-	○
(4.5x6)	00000051	-	-	-	-	-	○
(4.5x8)	00000052	-	-	-	-	-	○
(4x3)	00000053	-	-	-	-	-	1.09
(4x4.5)	00000054	-	-	-	-	-	1.09
(4.5x3)	00000055	-	-	-	-	-	1.09
(4.5x4)	00000057	-	-	-	-	-	1.09
(4x3)x2	00000058	-	-	-	-	-	1.09
(4.5x3)x2	00000059	-	-	-	-	-	1.09
(4.5x4)x2	00000060	-	-	-	-	-	1.09
(5x3.5)xN	00000401	-	-	-	0.30	-	-
(6x4)xN	00000402	-	-	-	○	-	-
(6x4.5)xN	00000430	-	-	-	1.10	-	-
(8x4)xN	00000408	-	-	-	-	○	-
(8x5)xN	00000409	-	-	-	-	○	-
(8x6)xN	00000410	-	-	-	-	○	-
A5xN	00000434	-	-	-	-	○	-
(A4x5)xN	00000437	-	-	-	-	○	-

■ Cut-paper designation

○:Support, -:No support Value: Effective firmware version (This or later)

			Support paper type of each model	
Paper Type		Specification value	DP-DS80D	
Simplex printing	(8x10)	00000106	○	
	(8x12)	00000107	○	
	(8x4)	00000108	○	
	(8x5)	00000109	○	
	(8x6)	00000110	○	
	(8x8)	00000111	○	
	(8x10.5)	00000125	○	
	(8x10.75)	00000126	○	
	(8x4)x2	00000113	○	
	(8x5)x2	00000114	○	
	(8x6)x2	00000115	○	
	(8x4)x3	00000128	○	
Duplex printing	Front design.	(8x10)	00000206	○
		(8x12)	00000207	○
		(8x4)	00000208	○
		(8x5)	00000209	○
		(8x6)	00000210	○
		(8x8)	00000211	○
		(8x10.5)	00000225	○
		(8x10.75)	00000226	○
		(8x4)x2	00000213	○
		(8x5)x2	00000214	○
		(8x6)x2	00000215	○
		(8x4)x3	00000228	○
	Back design.	(8x10)	00000306	○
		(8x12)	00000307	○
		(8x4)	00000308	○
		(8x5)	00000309	○
		(8x6)	00000310	○
		(8x8)	00000311	○
		(8x10.5)	00000325	○
		(8x10.75)	00000326	○
		(8x4)x2	00000313	○
		(8x5)x2	00000314	○
		(8x6)x2	00000315	○
		(8x4)x3	00000328	○

3-6 Cutter control specification value

Cutter operation which can be specified by the firmware version differs.

○:Support -:No support Value: Effective firmware version (This or later)

Cutter operation	Specification value	Model					
		DS40	DS80	DP-DS80D	DP-DS620	DP-DS820	DP-QW410
Normal operation	00000000	○	○	Roll media only	○	○	○
Non-scrap cutter operation	00000001	○	○	Roll media only	○	○	○
2 image layout and both sheets non-scrap cutter operation	00000100	-	-	-	4.00	-	-
2 image layout and 1st sheet non-scrap cutter operation	00000101	-	-	-	4.00	-	-
2 image layout and 2nd sheet non-scrap cutter operation	00000102	-	-	-	4.00	-	-
2inch cut operation	00000120	1.40	-	-	○	○	○
Panorama print	00001000	-	-	-	1.20	○	-

3-7 Example of acquisition of a media lot number

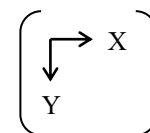
Media lot number input data (RF-ID write setup)		RF-ID tag data (*1)	Host side acquisition data
0 character (When there's no setup)	""	0x20 0x20 0x20 ... 0x20 └──────────────────┘ 16 characters are spaces	ML<0x20><0x20><0x20>...<0x20><0x0D><0x00> └──────────────────┘ 16 characters
Setup of 1 character	"A"	0x41 0x20 0x20 ... 0x20 └──────────────────┘ 15 characters are spaces	ML<0x41><0x20><0x20>...<0x20><0x0D><0x00> └──────────────────┘ 16 characters
Setup of 2 characters	"AB"	0x41 0x42 0x20 ... 0x20 └──────────────────┘ 14 characters are spaces	ML<0x41><0x42><0x20>...<0x20><0x0D><0x00> └──────────────────┘ 16 characters
:	:	:	:
Setup of 16 characters	"ABCDEFGHIJKLMNPO"	0x41 0x42 0x43 ... 0x50	ML<0x41><0x42><0x43>...<0x50><0x0D><0x00> └──────────────────┘ 16 characters
Setup of 17 characters (It can't setup) (*2)	"ABCDEFGHIJKLMNPO"	0x41 0x42 0x43 ... 0x50	ML<0x41><0x42><0x43>...<0x50><0x0D><0x00> └──────────────────┘ 16 characters

(*1) RF-ID tag data

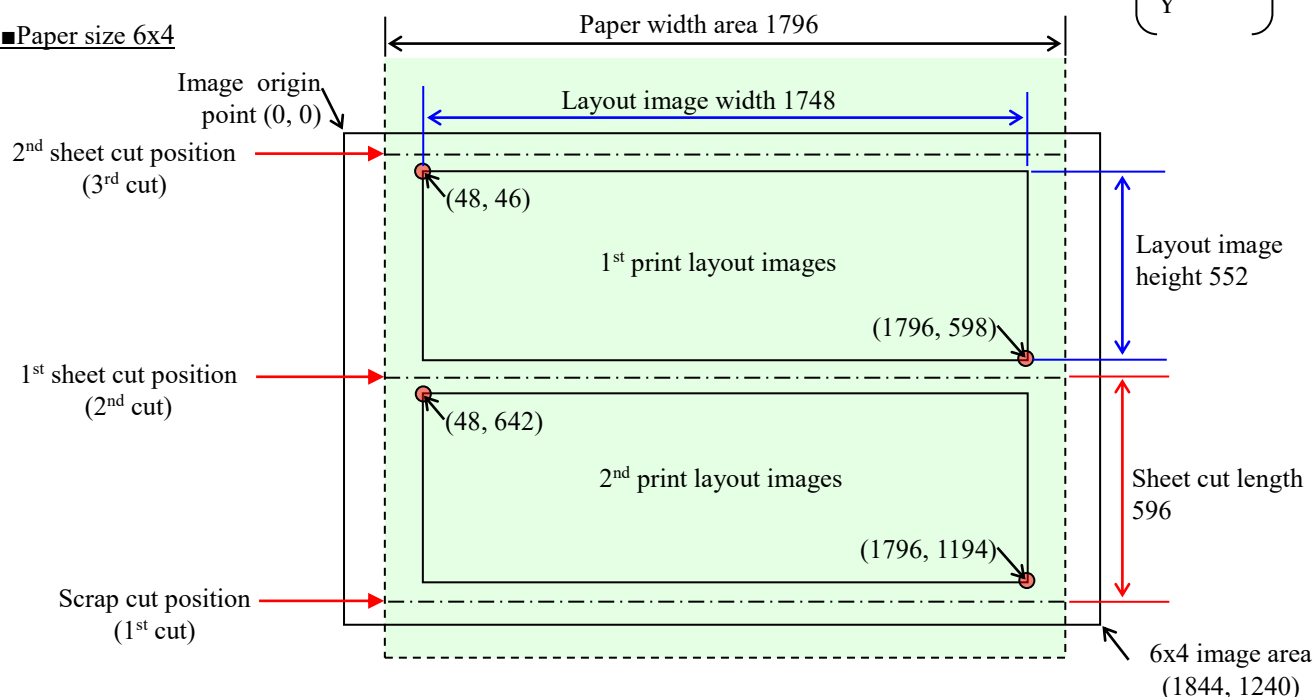
If the RF-ID tag media lot number does not reach 16 characters, space (0x20) is written in the part of the remainder.

3-8 Recommended image layout of 2 inch cut operation

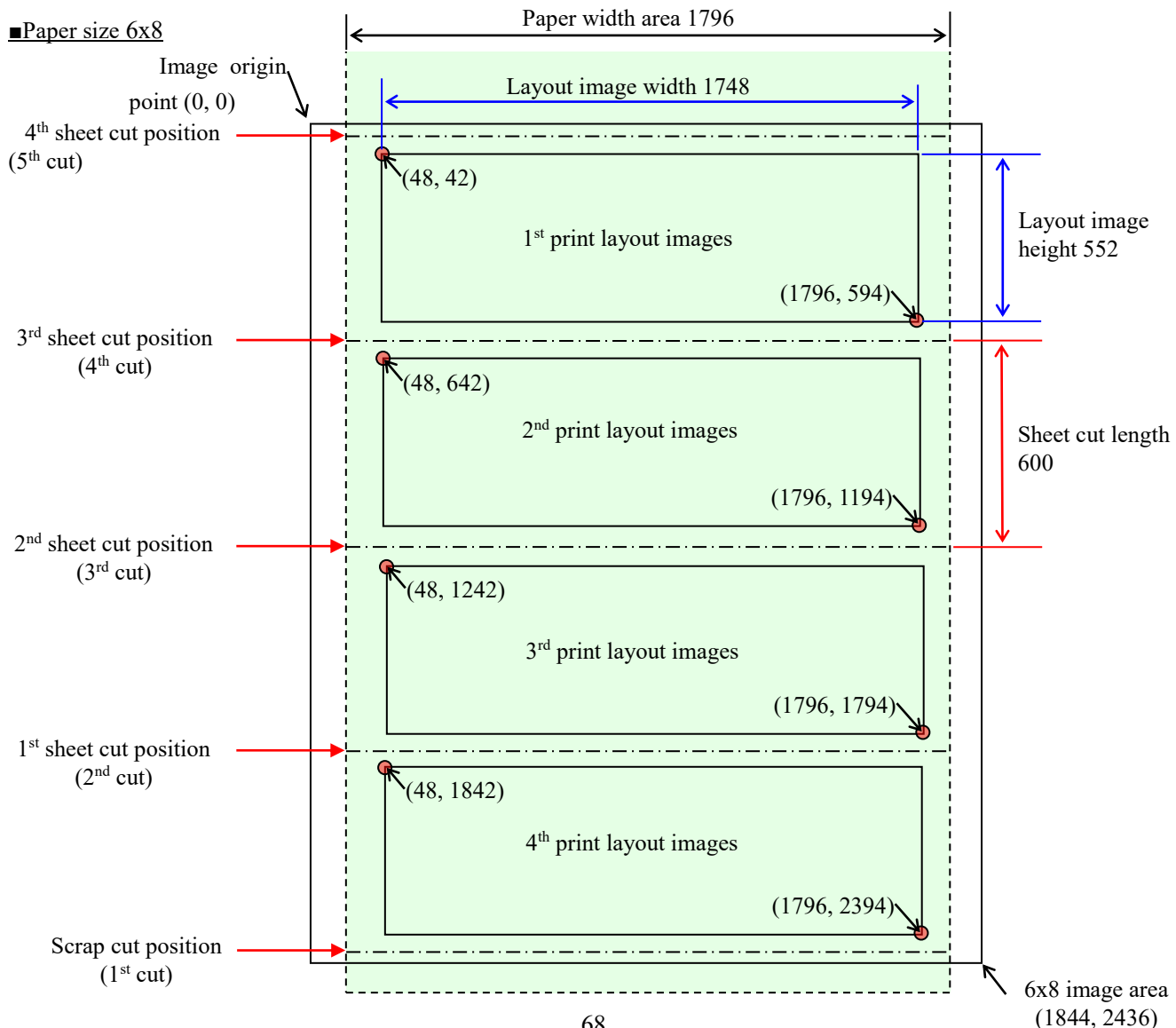
(For when the resolution setting is 300x300dpi)



■Paper size 6x4



■Paper size 6x8



Parameter List (units=pixels)

		Paper size 6x4		Paper size 6x8	
		Resolution(dpi)	300x300	300x600	300x300
Image size	X	1844	1844	1844	1844
	Y	1240	2480	2436	4872
For 2-inch cuts	X	1748	1748	1748	1748
Layout image size	Y	552	1104	552	1104
1 st print coord.(X,Y)	Top left	48,46	48,92	48,42	48,84
	Bot. right	1796,598	1796,1196	1796,594	1796,1188
2 nd print coord.(X,Y)	Top left	48,642	48,1284	48,642	48,1284
	Bot. right	1796,1194	1796,2388	1796,1194	1796,2388
3 rd print coord. (X,Y)	Top left	---	---	48,1242	48,2484
	Bot. right	---	---	1796,1794	1796,3588
4 th print coord. (X,Y)	Top left	---	---	48,1842	48,3684
	Bot. right	---	---	1796,2394	1796,4788
Y-space between layouts		44	88	48	96
Sheet cut length	Y	596	1192	600	1200
Sheet size(W x H)		152mm x 50.5mm		152mm x 50.8mm	

3-9 Counter count-up action

■Stand-alone:

Timing of a count-up is after performing a cut of a print picture correctly.

Count-up is not performed when an error occurred. Counter P is cleared to 0, if a power supply is turned off.

DP-QW410	Print Size		Counter L/A/B Matte/M	Counter P
Single-cut	(4x3) * ₁		+1	+1
	(4x4)		+1	+1
	(4x4.5) * ₁		+1	+1
	(4x6)		+1	+1
	(4.5x3) * ₁		+1	+1
	(4.5x4) * ₁		+1	+1
	(4.5x4.5)		+1	+1
	(4.5x6)		+1	+1
	(4.5x8)		+1	+1
Multi-cut	(4x3) x2 * ₁	1st sheet	---	+1
		2nd sheet	+1	+1
	(4.5x3) x2 * ₁	1st sheet	---	+1
		2nd sheet	+1	+1
	(4.5x4) x2 * ₁	1st sheet	---	+1
		2nd sheet	+1	+1
2inch cut	(4x4), (4.5x4) * ₁	1 st sheet	---	+1
		2 nd sheet	+1	+1
	(4x6), (4.5x6)	1 st sheet	---	+1
		2 nd sheet	---	+1
		3 rd sheet	+1	+1
	(4x8), (4.5x8)	1 st sheet	---	+1
		2 nd sheet	---	+1
		3 rd sheet	---	+1
		4 th sheet	+1	+1

*1: version 1.09 or later.

DS40 / DP-DS620	Print Size		Counter L/A/B Matte/M	Counter P
Single-cut	(5x3.5) (L)		+1	+1
	(6x4) (PC)		+1	+1
	(6x4.5) * ₄		+1	+1
	(5x5) * ₂		+2	+1
	(6x6) * ₅		+2	+1
	(5x7) (2L)		+2	+1
	(6x8) (A5)		+2	+1
	(6x9) (A5W) * ₃		+2	+1
Multi-cut	(5x3.5) x2 (L 2-image layout) * ₁	1st image	---	+1
		2nd image	+2	+1
	(6x4) x2 (PC 2-image layout)	1st image	---	+1
		2nd image	+2	+1
	(6x4.5) x2 * ₄ (6x4.5 2-image layout)	1st image	---	+1
		2nd image	+2	+1
2inch cut *Only correspondence model Refer to cutter control command	(6x4)	1st sheet	---	+1
		2nd sheet	+1	+1
	(6x8)	1st sheet	---	+1
		2nd sheet	---	+1
		3rd sheet	---	+1
		4th sheet	+2	+1

*1: DS40 version 1.50 or later.

*2: Not supported by DS40.

*3: DP-DS620 version 1.10 or later.

*4: Only DP-DS620. Version 1.10 or later.

*5: DS40 firmware version 1.60 or later.

DS80/DP-DS820	Print Size		Counter L/A/B Matte/M	Counter P
Single-cut	(8 x 10)		+1	+1
	(8 x 12)		+1	+1
	(8 x 4)		+1	+1
	(8 x 5)		+1	+1
	(8 x 6)		+1	+1
	(8 x 7) *1		+1	+1
	(8 x 8)		+1	+1
	(8 x 9) *1		+1	+1
	A4 Length (8 x A4)		+1	+1
	(A4 x 5) *1		+1	+1
	(A4 x 6) *1		+1	+1
	A5 Format *1		+1	+1
	A4 Format *1		+1	+1
Multi-cut	(8 x 4) x 2	1st image	---	+1
		2nd image	+1	+1
	(8 x 5) x 2	1st image	---	+1
		2nd image	+1	+1
	(8 x 6) x 2	1st image	---	+1
		2nd image	+1	+1
	(8 x 5)_(8 x 4)	1st image	---	+1
		2nd image	+1	+1
	(8 x 6)_(8 x 4)	1st image	---	+1
		2nd image	+1	+1
	(8 x 6)_(8 x 5)	1st image	---	+1
		2nd image	+1	+1
	(8 x 8)_(8 x 4)	1st image	---	+1
		2nd image	+1	+1
	(8 x 4) x 3	1st image	---	+1
		2nd image	---	+1
		3rd image	+1	+1
	(A4 x 5) x 2 *1	1st image	---	+1
		2nd image	+1	+1
	A5 x 2 *1	1st image	---	+1
		2nd image	+1	+1
2inch cut *1	(8 x 4)	1st image	---	+1
		2nd image	+1	+1
	(8 x 6) A4 x 6	1-2nd image	---	+1/image
		3rd image	+1	+1
	(8 x 8) A4 x 8	1-3rd image	---	+1/image
		4th image	+1	+1
	(8 x 10) A4 x 10	1-4th image	---	+1/image
		5th image	+1	+1
	(8 x 12)	1-5th image	---	+1/image
		6th image	+1	+1

*1: only DP-DS820

■Duplex

The counter is increased after a print image is cut normally.

The counter doesn't increase when an error occurs. Counter P is cleared to 0 when the power is turned OFF.

When using roll media

DP-DS80D	Print size		Counter L/A/B Matte/M	Counter P	Counter Duplex
Single cut	(8x10)		+1	+1	---
	(8x12)		+1	+1	---
	(8x4)		+1	+1	---
	(8x5)		+1	+1	---
	(8x6)		+1	+1	---
	(8x8)		+1	+1	---
	A4 Length		+1	+1	---
Multi-cut	(8x4)x2	1 st side	---	+1	---
		2 nd side	+1	+1	---
	(8x5)x2	1 st side	---	+1	---
		2 nd side	+1	+1	---
	(8x6)x2	1 st side	---	+1	---
		2 nd side	+1	+1	---
	(8x5)_(8x4)	1 st side	---	+1	---
		2 nd side	+1	+1	---
	(8x6)_(8x4)	1 st side	---	+1	---
		2 nd side	+1	+1	---
	(8x6)_(8x5)	1 st side	---	+1	---
		2 nd side	+1	+1	---
	(8x8)_(8x4)	1 st side	---	+1	---
		2 nd side	+1	+1	---
	(8x4)x3	1 st side	---	+1	---
		2 nd side	---	+1	---
		3 rd side	+1	+1	---

When using cut media

DP-DS80D	Print size		Counter L/A/B Matte/M	Counter P	Counter Duplex
Single Cut	(8x10)	1 side	+1	+1	+1
		Both sides	+2	+1	+2
	(8x12)	1 side	+1	+1	+1
		Both sides	+2	+1	+2
	(8x4)	1 side	+1	+1	+1
		Both sides	+2	+1	+2
	(8x5)	1 side	+1	+1	+1
		Both sides	+2	+1	+2
	(8x6)	1 side	+1	+1	+1
		Both sides	+2	+1	+2
	(8x8)	1 side	+1	+1	+1
		Both sides	+2	+1	+2
	(8x10.5)	1 side	+1	+1	+1
		Both sides	+2	+1	+2
	(8x10.75)	1 side	+1	+1	+1
		Both sides	+2	+1	+2
Multi-cut	(8x4)x2	1 side	1st sheet	--	--
			2nd sheet	+1	+1
		Both sides	1st sheet	--	--
			2nd sheet	+2	+2
	(8x5)x2	1 side	1st sheet	--	--
			2nd sheet	+1	+1
		Both sides	1st sheet	--	--
			2nd sheet	+2	+2
	(8x6)x2	1 side	1st sheet	--	--
			2nd sheet	+1	+1
		Both sides	1st sheet	--	--
			2nd sheet	+2	+2
	(8x4)x3	1 side	1st sheet	--	--
			2nd sheet	--	--
			3rd sheet	+1	+1
		Both sides	1st sheet	--	--
			2nd sheet	--	--
			3rd sheet	+2	+2

3-10 Get the Media Counter of Remaining Sheets(Counter default value)

Counter default value of each model and each media are as follows.

Machine	Media	Sheet/Roll	Counter default Value	Media offset count (*2)
DS40	5x3.5 (L)	400	450	50
	6x4 (PC)	400	450	50
		400	401	1
	5x7 (2L)	230	280	50
		220	270	50
		200	250	50
	6x8 (A5)	200	250	50
		200	201	1
	6x9 (A5W)	180	230	50
DS80 DP-DS80D	8x10	130	180	50
	8x12	110	160	50
		110	111	1
DP-DS620	5x3.5 (L) *3	420	420	0
	6x4 (PC)	400	400	0
	5x7 (2L)	230	230	0
	6x8 (A5)	200	200	0
	6x9 (A5W) *1	180	180	0
DP-DS820	8x10	130	130	0
	8x12	110	110	0
	A4	110	110	0
DP-QW410	4x6	150	150	0
	4.5x6 *4	150	150	0
	4.5x8	110	110	0

*1 : DS620 version 1.10 or later.

*2 : DS40 version 2.00 or later.

*3 : DS620 version 1.60 or later.

*4 : QW410 version 1.07 or later.

When paper initialize is performed, such as after changing the media, the paper will be fed out and the remaining media quantity will be decreased by 1. (DP-DS620, DP-DS820 only feeds out paper. In the case of unused media, DP-QW410 only feeds out paper.)

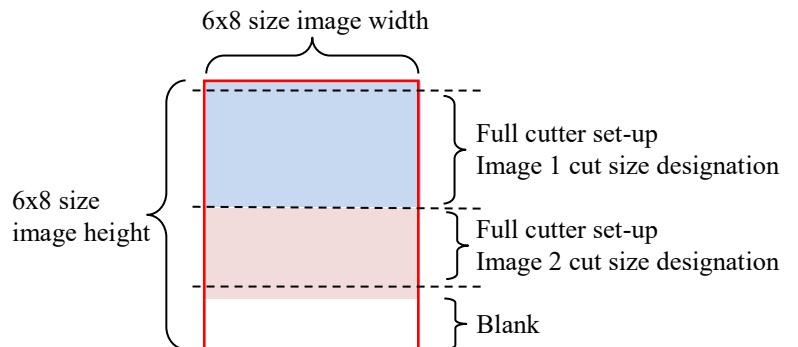
3-11 Full cutter set-up command

■Basic concept

(ex.) In case of paper size (6x8).

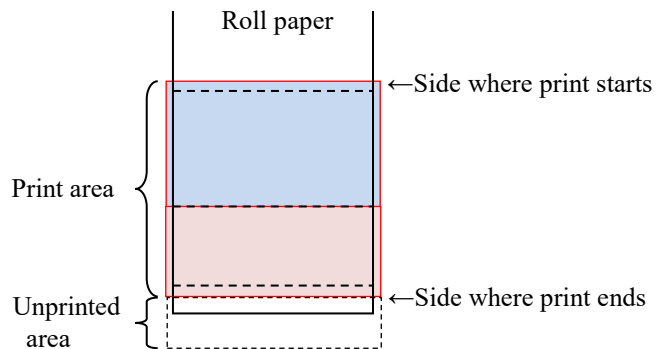
Image layout

Set the image layout in the 6x8 area according to the designated cut size.



Printing

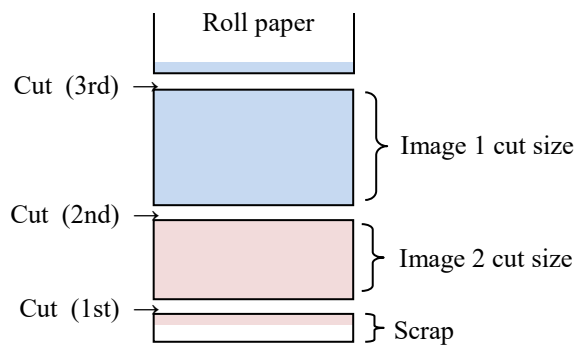
Of the 6x8 size area, only the total length of the designated cut sizes is printed.



Cutting

After cutting off the scrap, the designated print size sheets will be fed out.

A Blank is not printed, so no unnecessary paper is fed out.

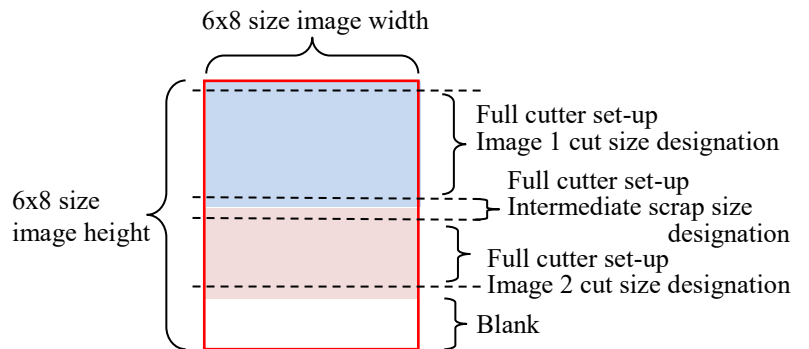


When designating the intermediate scrap size:

(ex.) In case of paper size (6x8).

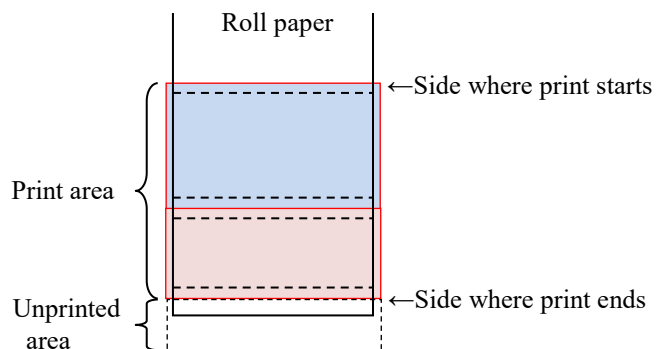
Image layout

Set the image layout in the 6x8 area according to the designated cut size.



Printing

Of the 6x8 size area, only the total length of the designated cut sizes is printed.

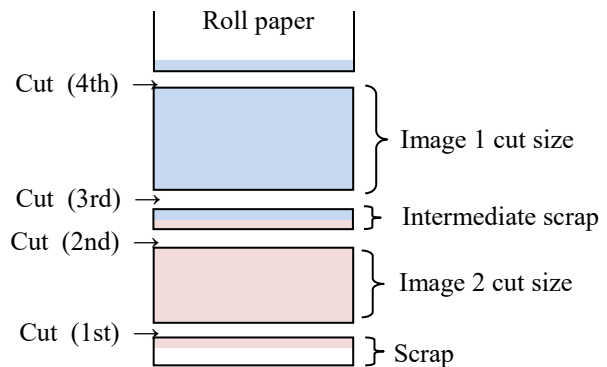


Cutting

After cutting off the scrap, the designated print size sheet will be fed out (Image 2).

The intermediate scrap between images 1 and 2 is cut off, and the next print size sheet will be fed out (Image 1).

A Blank is not printed, so no unnecessary paper is fed out.

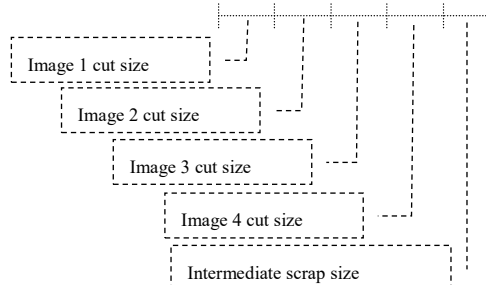


Setting examples (Standard type)

This shows the output results when the following commands are transmitted.

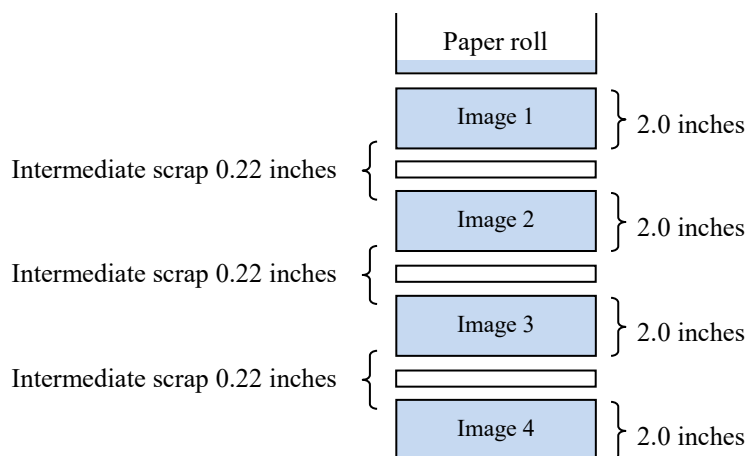
<Transmitted command 1>

<ESC>PCNTRL_FULL_CUTTER_SET_00000016020020020020022<CR>



<Output result 1>

1-4 are all cut as 2 inches, and four prints are output.



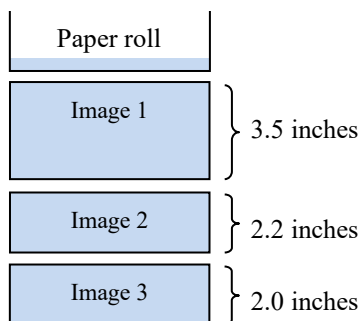
< Transmitted command 2>

<ESC>PCNTRL_FULL_CUTTER_SET_00000016035022020000000<CR>



< Output result 2>

This outputs one 3.5 inch, one 2.2 inch, and one 2.0 inch print, for a total of three prints.

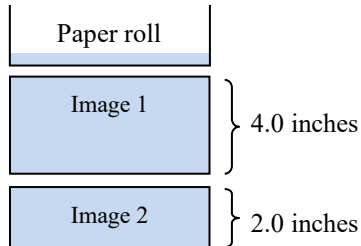


< Transmitted command 3>

<ESC>PCNTRL_FULL_CUTTER_SET_000000160400200000000000<CR>

< Output result 3>

This outputs one 4.0 inch and one 2.0 inch print, for a total of two prints.



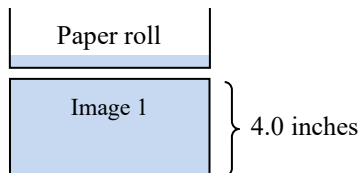
< Transmitted command 4>

<ESC>PCNTRL_FULL_CUTTER_SET_000000160400000200000000<CR>

< Output result 4>

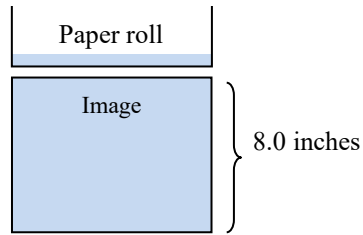
This outputs one 4.0 inch print.

Image 2 cut size is designated as “000” (cut quantity 1), so any following cut sizes are disregarded.



Setting examples (Non-standard type)

If the following commands are transmitted, standard-sized (6x8) printing is performed. *1



<Case 1>

`<ESC>PCNTRL_FULL_CUTTER_SET_000000160400300200000000<CR>` is transmitted.

→ The total cut size exceeds 8 inches, so the command is aborted and standard printing occurs. *1

<Case 2>

`<ESC>PCNTRL_FULL_CUTTER_SET_000000160100200200000000<CR>` is transmitted.

→ Image 1 cut size is outside value parameters, so the command is aborted and standard printing occurs.

<Case 3>

`<ESC>PCNTRL_FULL_CUTTER_SET_000000160400200200000000<CR>` (Standard) is transmitted, then
`<ESC>PCNTRL_FULL_CUTTER_SET_000000160400400200000000<CR>` (Over-sized) is transmitted.

→ The second command cancels the Full-Cutter Set-up function, and standard printing occurs.

<Case 4>

`<ESC>PCNTRL_FULL_CUTTER_SET_000000160400200200000000<CR>` (Standard) is transmitted, and (6x4) printing occurs, after which (6x8) printing is performed.

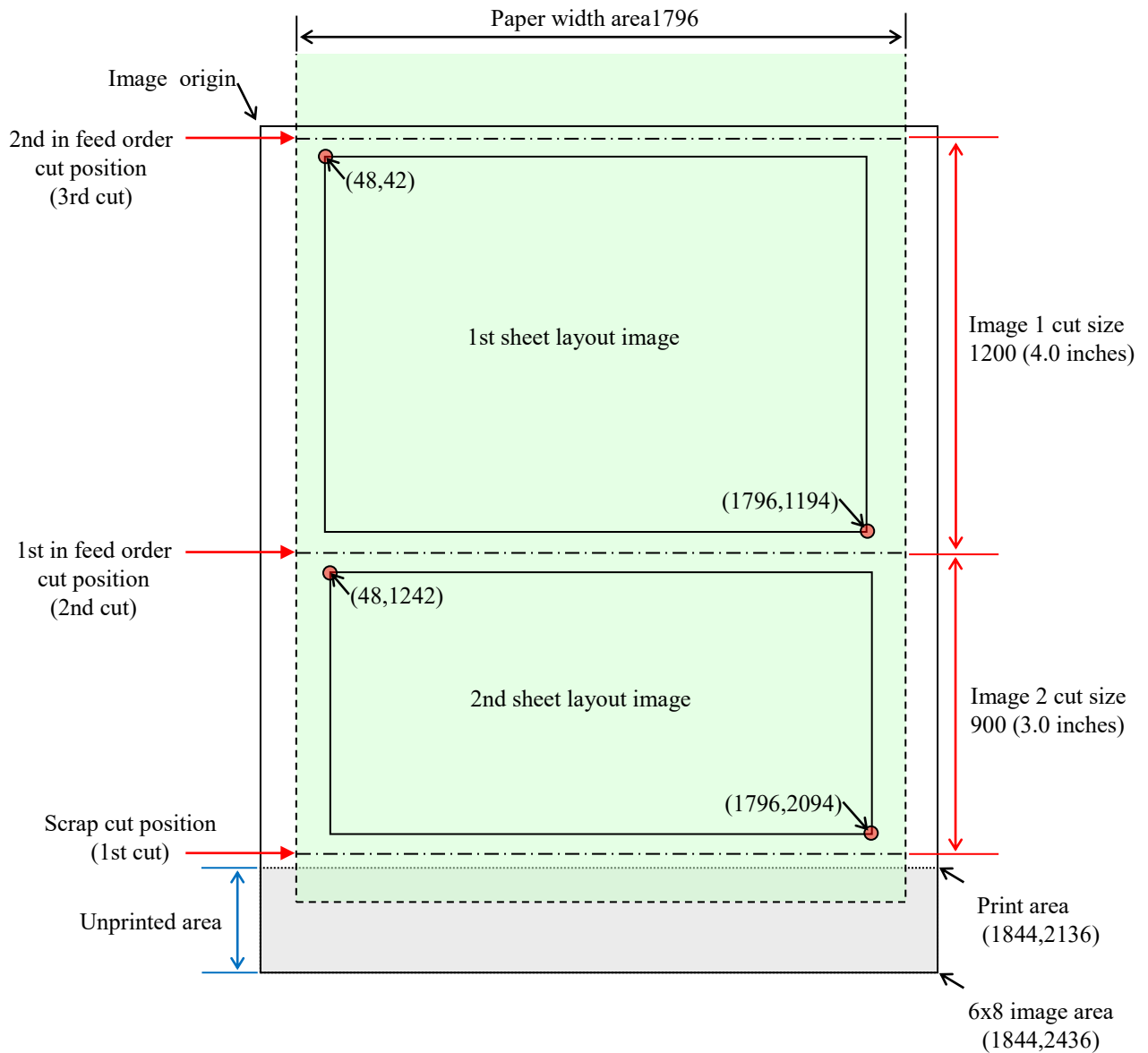
→ For printing other than (6x8) size, the Full Cutter Set-up function is cleared, and standard (6x8) printing occurs.

*1: The printed paper size and the total cut size depend on the size of the loaded media into the printer.

■ Image layout example

Resolution setting: 300x300dpi

Full cutter set-up setting value: 040 030 000 000 000 (for 2 sheets: 4.0 inches and 3.0 inches)



• Typical value of image data print area (Y coordinate, unit: pixels)

Total cut size	Resolution 300dpi	Resolution 600dpi
2.0 inch	0~636	0~1272
2.5 inch	0~786	0~1572
3.0 inch	0~936	0~1872
3.5 inch	0~1086	0~2172
4.0 inch	0~1236	0~2472
4.5 inch	0~1386	0~2772
5.0 inch	0~1536	0~3072
5.5 inch	0~1686	0~3372
6.0 inch	0~1836	0~3672
6.5 inch	0~1986	0~3972
7.0 inch	0~2136	0~4272
7.5 inch	0~2286	0~4572
8.0 inch	0~2436	0~4872
The value of print area per 0.1 inch		
	30	60

• Typical value of recommended layout coordinates for the image (unit: pixels)

Resolution setting			300x300dpi	300x600dpi	
Layout image Top left coordinates (X, Y)	Image 1		48, 42	48, 84	
	Image 2 (Image 1 cut size)	2.0 inch	48, 642	48, 1284	
		2.5 inch	48, 792	48, 1584	
		3.0 inch	48, 942	48, 1884	
		3.5 inch	48, 1092	48, 2184	
		4.0 inch	48, 1242	48, 2484	
		4.5 inch	48, 1392	48, 2784	
		5.0 inch	48, 1542	48, 3084	
		5.5 inch	48, 1692	48, 3384	
		6.0 inch	48, 1842	48, 3684	
	Image 3 (Image 1 and 2 total combined cut size)	4.0 inch	48, 1242	48, 2484	
		4.5 inch	48, 1392	48, 2784	
		5.0 inch	48, 1542	48, 3084	
		5.5 inch	48, 1692	48, 3384	
		6.0 inch	48, 1842	48, 3684	
	Image 4		48, 1842	48, 3684	
Layout image Bottom right coordinates (X, Y)	Image 1 (Image 1 cut size)	2.0 inch	1796, 594	1796, 1188	
		2.5 inch	1796, 744	1796, 1488	
		3.0 inch	1796, 894	1796, 1788	
		3.5 inch	1796, 1044	1796, 2088	
		4.0 inch	1796, 1194	1796, 2388	
		4.5 inch	1796, 1344	1796, 2688	
		5.0 inch	1796, 1494	1796, 2988	
		5.5 inch	1796, 1644	1796, 3288	
		6.0 inch	1796, 1794	1796, 3588	
		6.5 inch	1796, 1944	1796, 3888	
		7.0 inch	1796, 2094	1796, 4188	
		7.5 inch	1796, 2244	1796, 4488	
		8.0 inch	1796, 2394	1796, 4788	
	Image 2 (Image 1 and 2 total combined cut size)	4.0 inch	1796, 1194	1796, 2388	
		4.5 inch	1796, 1344	1796, 2688	
		5.0 inch	1796, 1494	1796, 2988	
		5.5 inch	1796, 1644	1796, 3288	
		6.0 inch	1796, 1794	1796, 3588	
		6.5 inch	1796, 1944	1796, 3888	
		7.0 inch	1796, 2094	1796, 4188	
		7.5 inch	1796, 2244	1796, 4488	
		8.0 inch	1796, 2394	1796, 4788	
	Image 3 (Images 1 ~ 3 total combined cut size)	6.0 inch	1796, 1794	1796, 3588	
		6.5 inch	1796, 1944	1796, 3888	
		7.0 inch	1796, 2094	1796, 4188	
		7.5 inch	1796, 2244	1796, 4488	
		8.0 inch	1796, 2394	1796, 4788	
	Image 4		1796, 2394	1796, 4788	
	The value of Y coordinate per 0.1 inch			30	60

3-12 Standby Mode (DP-DS620/DP-DS820)

- If the printer is Idle for 10 minutes (or the set time if the standby transition time command has been used to change it) and does not receive any commands from the host other than those listed below, it will enter Standby Mode.

< Commands that can be used in Standby Mode >

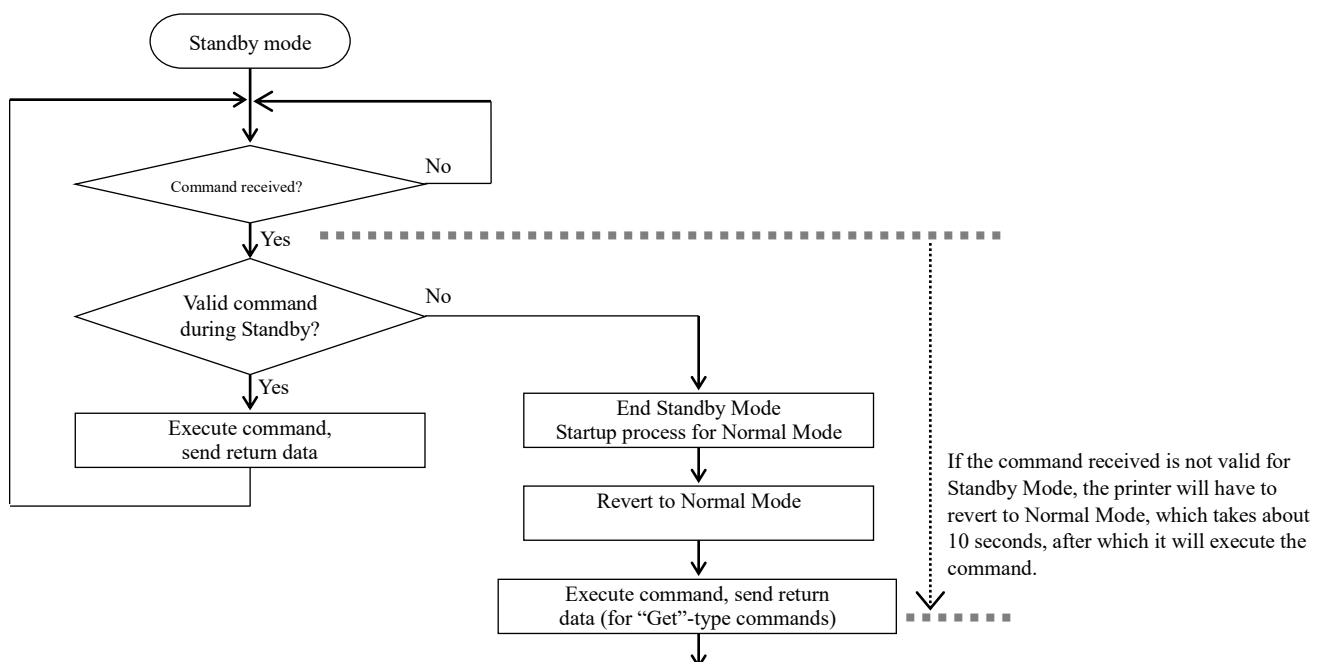
Function	Command
Get Printer Status	<ESC>P STATUS
Get Printer Serial Number	<ESC>P INFO SERIAL_NUMBER
Get initial media count	<ESC>P INFO MQTY_DEFAULT
Get Remaining Media Quantity	<ESC>P INFO MQTY
Get Half Size Conversion Ribbon Quantity	<ESC>P INFO RQTY
Get Media User Info (Lot No.)	<ESC>P INFO MLOT
Get Media Code	<ESC>P INFO MEDIA
Get Printer Version Information	<ESC>P INFO FVER *1
Get Media Class	<ESC>P INFO MEDIA_CLASS_RFID *2

*1: DP-DS620 firmware version 0.31 or later

*2: Excluding DP-DS620 firmware version less than 3.00

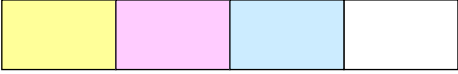
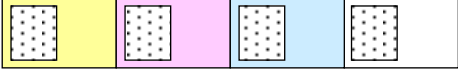
- The commands listed above can be used during Standby Mode.
- While in the Standby Mode, the printer status will be “Standby” (status code “00900”), and the green LED will change from lit to flashing.
- If any commands other than those listed above are sent, or the cover is opened, the printer will come out of Standby Mode.
- If the printer receives a command other than those listed above while in Standby Mode, it will revert to Normal Mode before executing the command. In this case, the printer will need to undergo the startup process to revert to Normal Mode, and it will take approximately 10 seconds for the command to be executed. (See the chart below)
For “Get”-type commands that require return data from the printer, it will take approximately 10 seconds from the time of the command until the return data is sent from the printer. Therefore, after the Host issues the command, it will be necessary to wait while the return data is sent back from the printer.

Printer operation when receiving commands during Standby



3-13 Ribbon Rewind Function (DP-DS620/DP-DS820)

- The host uses the Media Counter of Remaining Sheets information from the “Get Half Size Conversion Media Counter of Remaining Sheets” command to check the ribbon panel status. (5x7*1, 6x8, 6x9*2 / 8x10, 8x12, A4 media)
- If the Half Size Conversion Media Counter of Remaining Sheets returned is an even number, the ribbon panels are unused, and if it is an odd number, the panels are half-used.

Half Size Conversion Media Counter of Remaining Sheets	Example of the ribbon panel status		
Even number	Unused condition		
Odd number	Half-used condition		

- In order to use the ribbon rewind function for printing, you have to designate the multi-cut pattern code of the print size for rewind in the following table.

* In DP-DS620 (A) and DP-DS820 (A), even if the code of the print size for rewind is specified, printing is performed without rewinding the ribbon.

Print Size	Multi-cut pattern Designation value
Rewind (5 x 3.5) *1	00000401
Rewind (6 x 4)	00000402
Rewind (6 x 4.5) *2	00000430
Rewind (8 x 4)	00000408
Rewind (8 x 5)	00000409
Rewind (8 x 6)	00000410
Rewind A5 Format	00000434
Rewind (A4 x 5)	00000437

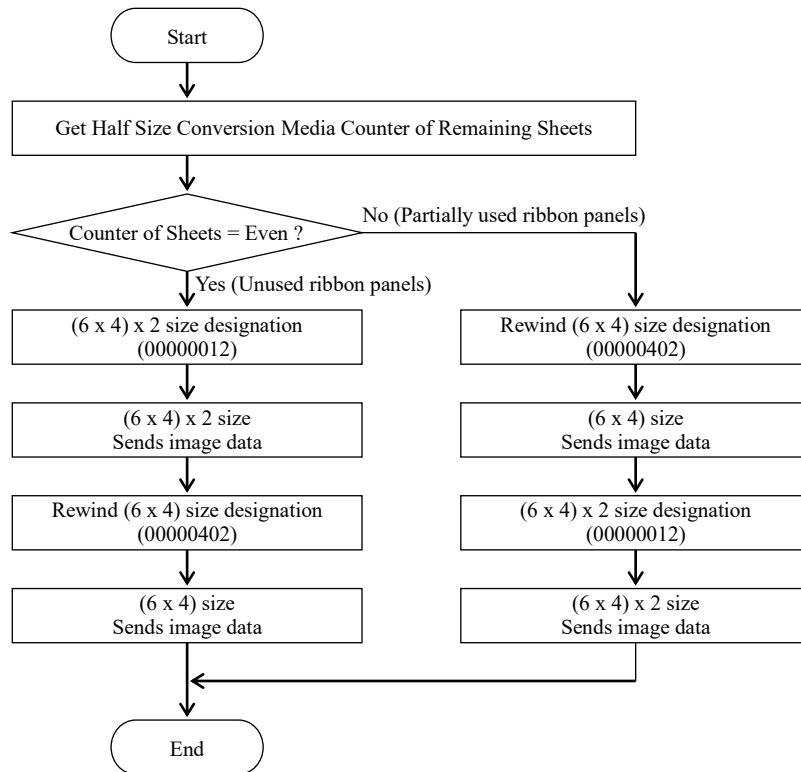
Note

*1 DP-DS620 Firmware version 0.30 or later

*2 DP-DS620 Firmware version 1.10 or later

■ Example of the Ribbon Rewind Operation Process

This shows the process for the printing of three 6x4-size prints.



3-14 Procedure to update of color control data

If you sets the color control data using a command, you can do it in the following procedures when the printer status is "IDLE (No error has occurred)". Then check that the writing occurred properly by checking the version and checksum.

Using Command)

1	<ESC>P STATUS	Check the printer status
2	<ESC>P TBL_CL	Clear the control data.
3	<ESC>P TBL_WT Version	Set the 300dpi control data version.
4	<ESC>P TBL_WT CTRLD_UPDATE_CW	Write the 300dpi control data.
5	<ESC>P TBL_RD Version	Check the 300dpi control data version.
6	<ESC>P MNT_RD CTRLD_CHKSUM	Check the 300dpi control data checksum.
7	<ESC>P TBL_WT Version	Set the 600dpi control data version.
8	<ESC>P TBL_WT CTRLD_UPDATE_CW	Write the 600dpi control data.
9	<ESC>P TBL_RD Version	Check the 600dpi control data version.
10	<ESC>P MNT_RD CTRLD_CHKSUM	Check the 600dpi control data checksum.

■DP-DS620 (firmware version less than 3.00)

Using Command)

1	<ESC>P STATUS	Check the printer status
2	<ESC>P TBL_CL	Clear the control data.
3	<ESC>P TBL_WT Version	Set the 300dpi control data version.
4	<ESC>P TBL_WT CTRLD_UPDATE_CW	Write the 300dpi control data.
5	<ESC>P TBL_RD CWD300_Version	Check the 300dpi control data version.
6	<ESC>P TBL_RD CWD300_Checksum	Check the 300dpi control data checksum.
7	<ESC>P TBL_WT Version	Set the 600dpi control data version.
8	<ESC>P TBL_WT CTRLD_UPDATE_CW	Write the 600dpi control data.
9	<ESC>P TBL_RD CWD600_Version	Check the 600dpi control data version.
10	<ESC>P TBL_RD CWD600_Checksum	Check the 600dpi control data checksum.
11	<ESC>P TBL_WT Version	Set the Low Speed (*1) control data version.
12	<ESC>P TBL_WT CTRLD_UPDATE_CW	Write the Low Speed (*1) control data.
13	<ESC>P TBL_RD CWD610_Version	Check the Low Speed (*1) control data version.
14	<ESC>P TBL_RD CWD610_Checksum	Check the Low Speed (*1) control data checksum.

*1. Low Speed: For rewind printing of high density images

■DP-DS620 (firmware version 3.00 or later)

Using Command)

1	<ESC>P STATUS	Check the printer status
2	<ESC>P TBL_CL	Clear the control data.
3	<ESC>P TBL_WT Version	Set the 300dpi control data version.
4	<ESC>P TBL_WT CTRLD_UPDATE_CW	Write the 300dpi control data.
5	<ESC>P TBL_RD CWD300_Version 00000004 nnnn	Check the 300dpi control data version.
6	<ESC>P TBL_RD CWD300_Checksum 00000004 nnnn	Check the 300dpi control data checksum.
7	<ESC>P TBL_WT Version	Set the 600dpi control data version.
8	<ESC>P TBL_WT CTRLD_UPDATE_CW	Write the 600dpi control data.
9	<ESC>P TBL_RD CWD600_Version 00000004 nnnn	Check the 600dpi control data version.
10	<ESC>P TBL_RD CWD600_Checksum 00000004 nnnn	Check the 600dpi control data checksum.
11	<ESC>P TBL_WT Version	Set the Low Speed control data version.
12	<ESC>P TBL_WT CTRLD_UPDATE_CW	Write the Low Speed control data.
13	<ESC>P TBL_RD CWD610_Version 00000004 nnnn	Check the Low Speed control data version.
14	<ESC>P TBL_RD CWD610_Checksum 00000004 nnnn	Check the Low Speed control data checksum.

(nnnn: Code that indicates the SD or PD media.)

■DP-DS820

Using Command)

- 1 <ESC>P STATUS
- 2 <ESC>P TBL_CL
- 3 <ESC>P TBL_WT Version
- 4 <ESC>P TBL_WT CTRLD_UPDATE_CW
- 5 <ESC>P TBL_RD CWD300_Version 00000004 nnnn
- 6 <ESC>P TBL_RD CWD300_Checksum 00000004 nnnn
- 7 <ESC>P TBL_WT Version
- 8 <ESC>P TBL_WT CTRLD_UPDATE_CW
- 9 <ESC>P TBL_RD CWD600_Version 00000004 nnnn
- 10 <ESC>P TBL_RD CWD600_Checksum 00000004 nnnn
- 11 <ESC>P TBL_WT Version
- 12 <ESC>P TBL_WT CTRLD_UPDATE_CW
- 13 <ESC>P TBL_RD CWD610_Version 00000004 nnnn
- 14 <ESC>P TBL_RD CWD610_Checksum 00000004 nnnn
- 15 <ESC>P TBL_WT Version
- 16 <ESC>P TBL_WT CTRLD_UPDATE_CW
- 17 <ESC>P TBL_RD CWD620_Version 00000004 nnnn
- 18 <ESC>P TBL_RD CWD620_Checksum 00000004 nnnn

Check the printer status
 Clear the control data.
 Set the 300dpi control data version.
 Write the 300dpi control data.
 Check the 300dpi control data version.
 Check the 300dpi control data checksum.
 Set the 600dpi control data version.
 Write the 600dpi control data.
 Check the 600dpi control data version.
 Check the 600dpi control data checksum.
 Set the Low Speed control data version.
 Write the Low Speed control data.
 Check the Low Speed control data version.
 Check the Low Speed control data checksum.
 Set the High Density control data version.
 Write the High Density control data.
 Check the High Density control data version.
 Check the High Density control data checksum.
 (nnnn: Code that indicates the SD or PP media.)

■DP-QW410

Using Command)

- 1 <ESC>P STATUS
- 2 <ESC>P TBL_CL
- 3 <ESC>P TBL_WT Version
- 4 <ESC>P TBL_WT CTRLD_UPDATE_CW
- 5 <ESC>P TBL_RD CWD300_Version 00000004 nnnn
- 6 <ESC>P TBL_RD CWD300_Checksum 00000004 nnnn
- 7 <ESC>P TBL_WT Version
- 8 <ESC>P TBL_WT CTRLD_UPDATE_CW
- 9 <ESC>P TBL_RD CWD310_Version 00000004 nnnn
- 10 <ESC>P TBL_RD CWD310_Checksum 00000004 nnnn

Check the printer status
 Clear the control data.
 Set the 300dpi control data version.
 Write the 300dpi control data.
 Check the 300dpi control data version.
 Check the 300dpi control data checksum.
 Set the Low Speed control data version.
 Write the Low Speed control data.
 Check the Low Speed control data version.
 Check the Low Speed control data checksum.
 (nnnn: Code that indicates the SD or PD media.)

3-15 Ribbon End Check Operation (DP-DS620/DP-DS820)

The ribbons for printers until now had a black line at the head of each color panel, and ribbon end was determined after the ribbon was wound following OP printing, by whether the black line for the next Yellow panel was detected or not. The end of the ribbon was made such that the black line for the next Yellow panel was in a position that would not be detected by the ribbon sensor (it was designed with a lengthened pitch between the OP and Yellow).

Conversely, the ribbon for the DP-DS620 and the DP-DS820 doesn't have a black line for detection at each color panel (it detects the panel color), and the panel pitch is shortened and the Yellow panel is in a position that can be detected by the ribbon sensor at the end of the ribbon. Therefore, for the DP-DS620 and the DP-DS820, the ribbon count is determined with the count recorded in the RF-ID tag. When the remaining count is 0, it determines ribbon end.

Normally, the actual remaining ribbon count and the ribbon count recorded in the RF-ID tag will match, but if trouble such as jamming occurs during printing, and the actual remaining ribbon count is 1 less than that recorded in the RF-ID tag, then even though it has used the last of the ribbon, it will detect the next Yellow panel and the RF-ID tag will show 1 remaining, so it won't show ribbon end.

In order to avoid this, only when the RF-ID tag shows the following remaining ribbon count, it will run the ribbon end check operation.

<Conditions for Ribbon End Check>

Media Size	RF-ID-tag Ribbon count (after OP printing)	
	Command: <ESC>P INFO MQTY	Command: <ESC>P INFO RQTY
5x3.5 (L)	2 or 1	-
6x4 (PC)	2 or 1	-
5x7 (2L)	2 or 1	4 or 2 (5x3.5 conversion qty)
6x8 (A5)	2 or 1	4 or 2 (6x4 conversion qty)
6x9 (A5W) *1	2 or 1	4 or 2 (6x4.5 conversion qty)
8x10 *2	2 or 1	4 or 2 (8x5 conversion qty)
8x12 *2	2 or 1	4 or 2 (8x6 conversion qty)
A4 *2	2 or 1	4 or 2 (A5 conversion qty)

*1 DP-DS620 Firmware version 1.10 or later

*2 Only DP-DS820

When the RF-ID ribbon count after OP printing is as shown above, it will run the following ribbon end check operation.

<Ribbon End Check Operation>

After OP printing, it will wind the ribbon until the ribbon sensor detects the Yellow panel.

After the ribbon sensor detects the Yellow panel, it will continue to wind the ribbon for a predetermined length (about 20mm). Note that, ribbon winding at this time is wound at slowly, in order to prevent peeling of the adhesion part of a ribbon supply bobbin and a ribbon film.

After it has wound for the predetermined length, the ribbon will rewind, Yellow panel position will be set, and operation will continue.

If it cannot be wound the predetermined length (winding stops), it will be ribbon end, and operation will stop.

3-16 Panorama Printing with White Border (DP-DS620/DP-DS820)

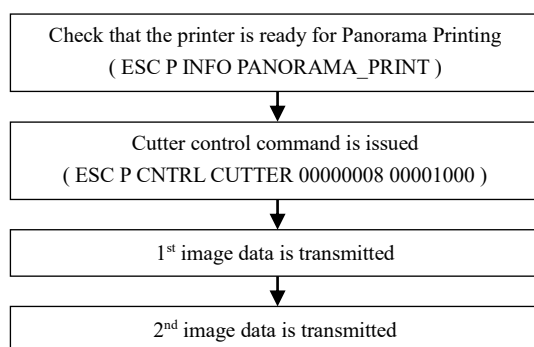
(1) Summary

- Using a command designation from the host, Panorama Printing can be performed.
- When the printer receives the Panorama Print command, it will finish printing the first image, and continue printing the next image data that was sent without cutting after the first image. If the Panorama Print command is sent again before the 2nd print data is sent, then it will print the 2nd image, and continue printing the data received without cutting after the 2nd image.

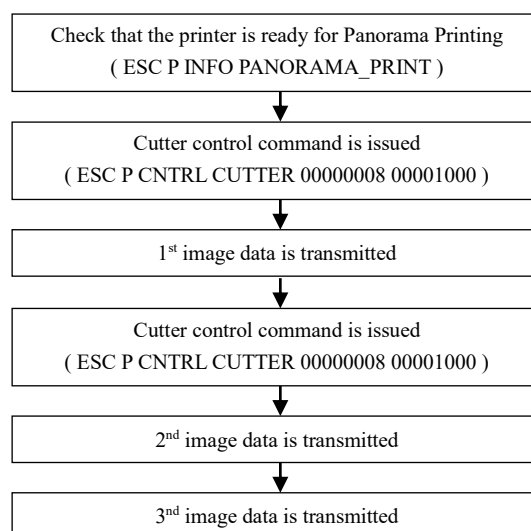
(2) Panorama Printing Process Flow

- ① When performing panorama printing, you can check whether the printer can perform panorama printing with the Panorama Printing Start Check command. (This can be skipped. When the head temperature is high, send the panorama print data without waiting for the status to change to show printing is possible.)
- ② Panorama Printing operation "00001000" is specified by the cutter control command.
- ③ After issuing the command, send a 6x8, a 8x10, a 8x12, or an A4 size print image data.

■For a 6x16, a 8x20, a 8x24, or an A4x2 print



■For a 6x24, a 8x30, a 8x36, or an A4x3 print



(3) Life Counter Operation

- For Panorama Printing, the counter increases after printing at the point when the print is cut.
(For 6x16: +4, For 6x24: +6, 8x20, 8x24, or A4x2: +2, For 8x30, 8x36, or A4x3: +3)
- The Counter P counts up +1 after printing at the point when the print is cut.

(4)

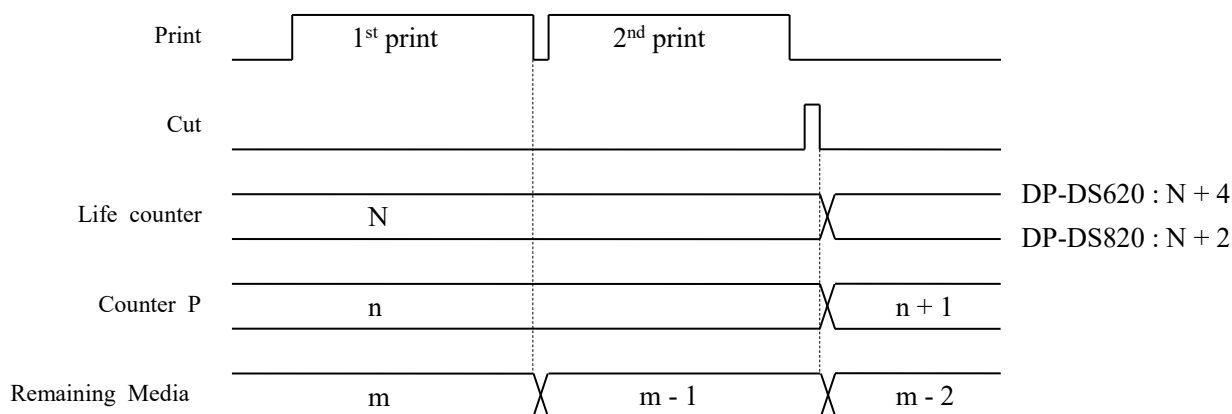
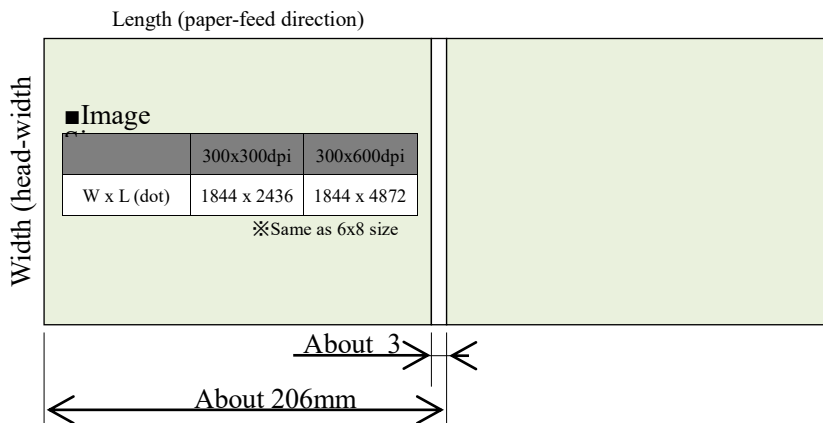


Image Size and Print Pitch

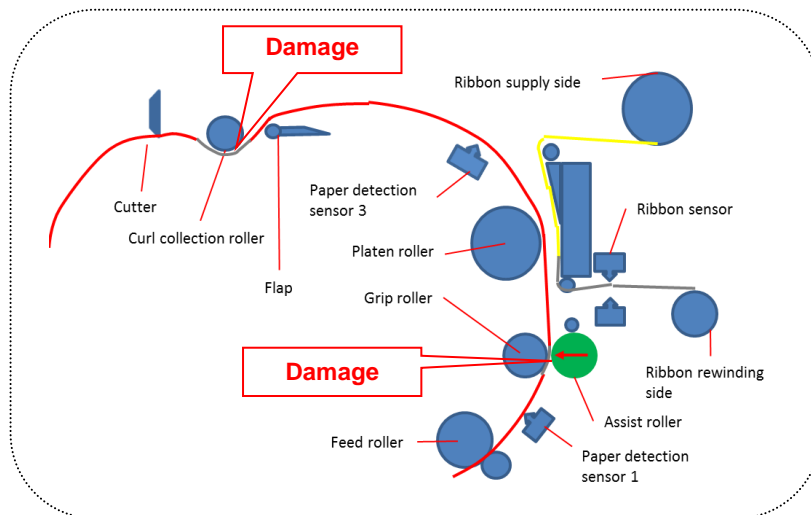


- In order to get the same output result as with normal single prints, the end 1.5mm of printing between the 1st and 2nd, and 2nd and 3rd prints will not be performed. (For single prints, this remains in the print cutting scrap.)

(5) Printer Operation during Panorama Printing

(5)-1 Overheating and Sending Data during Panorama Printing

When performing Panorama Printing, if the data for the 2nd or 3rd image is not received in time for continued printing, or if the printer overheats, the printer will stop with the print not completed. In this case, the print may be damaged (an impression left) by the de-curling section or the media grip section.

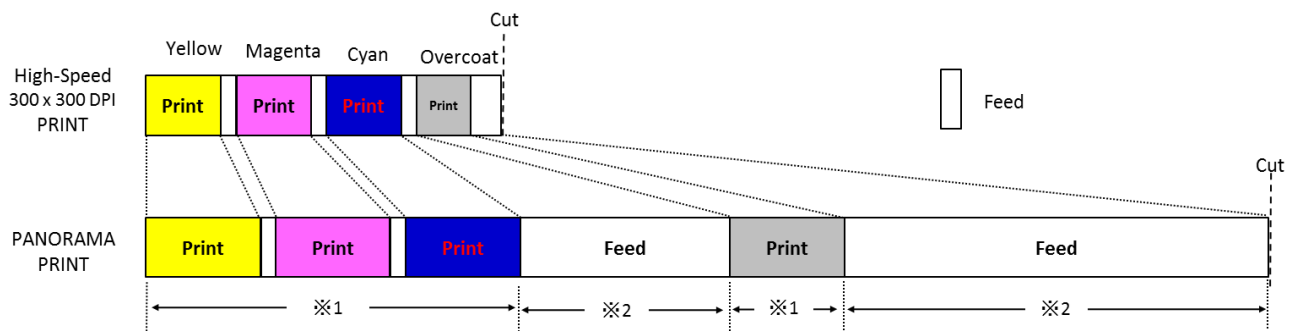


(5)-2 Avoiding overheating

a) Securing Time for Cooling

In order to curb the temperatures rise during printing, the print speed is lowered, and the feed speed is lowered after cyan printing until overcoat printing starts, and after overcoat printing until yellow printing starts.

	Mode	Print Speed ※1		Feed Speed ※2	
		Normal environment (Ext. temp approx. 25°C)	High-temp environment (Ext. temp approx. 30°C)	Normal environment (Ext. temp approx. 25°C)	High-temp environment (Ext. temp approx. 30°C)
DP-DS620 DP-DS820	High-speed (300x300dpi)	High-speed	High-quality	1.2ips or 17ips (DP-DS620)	0.6ips
	High-quality (300x600dpi)	High-quality		1.2ips or 14ips (DP-DS820)	



b) Start Temperature

In order to avoid overheating during Panorama Printing, the printer will wait until the head temperature is lower than that shown in the chart below before starting printing of the 1st image.

	Head Temperature	
	Normal environment (Ext. temp approx. 25°C)	High-temp environment (Ext. temp approx. 30°C)
DP-DS620 DP-DS820	51.2°C	48.1°C

When used in a normal environment (external temperature is approximately 25°C), continuous printing without overheating is possible for a gray (50%) image. However, when operating in a high-temperature environment (external temperature is approximately 30°C), it may take longer for cooling after printing the first image. Before sending the data, use the (ESC P INFO PANORAMA_PRINT) command to check that the printer is ready to start Panorama Printing.

■Printing Time (※Measurement conditions: 128 gray images, 25°C±5°C 50%±10%RH)

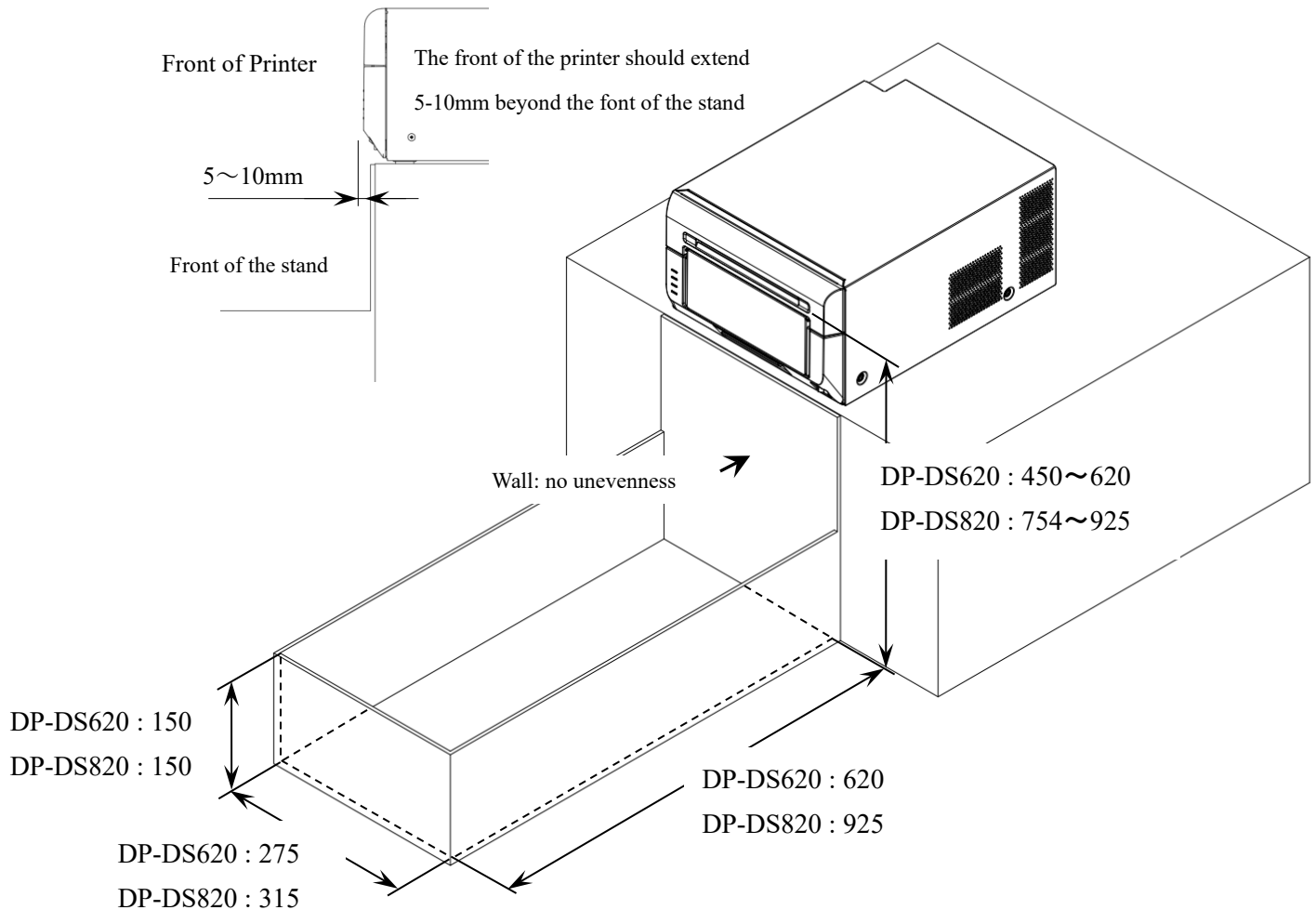
	Size of Panorama Print	
	6x16in	6x24in
DP-DS620	About 46 sec	About 64 sec

	Size of Panorama Print [PP media]					
	8x20in	8x30in	8x24in	8x36in	A4x2	A4x3
DP-DS820	About 89 sec	About 129 sec	About 103 sec	About 151 sec	About 102 sec	About 148 sec

(6) About the Set-up Location and Space for Panorama Printing

When performing Panorama Printing, we recommend space and stand set-up as shown below.

■If there is a wall on the front of the printer stand:



<Notes>

- Set the printer so that the height of the paper output slot is 450-620mm (DP-DS820:754~925mm) above the floor. If the height of the output slot is less than 450mm (DP-DS820:754mm), register slippage or printing irregularities could be caused when the end of the paper hits the floor. If the height is more than 620mm (DP-DS820:925mm), the end of the print could be bent or scratched when it drops to the floor.
- Put a wall on the front of the stand. be sure there is no unevenness in the wall, and that the front of the printer extends 5-10mm beyond the front of the stand.
- When performing panorama printing, the paper will be fed out from the printer during the printing process. Touching the paper during printing could cause paper-jam, register slippage, or printing irregularities, so please do not touch the paper. (Strong airflow from air-conditioners etc. could have the same effect.)

(7) Notes regarding Panorama Printing

- When the head temperature is high, the printer will wait for the head to cool before starting printing.
- When the humidity is high, the print quality of the panoramic prints may deteriorate, so we don't recommend printing in high-humidity situations.
- When the media temperature is low, don't perform the continuous panoramic prints. (It may occur the problem such as a paper jam according to the image.)
- When carrying out panorama printing, first get the remaining media quantity from the printer and check that there is enough media to complete the panorama printing.
- If ribbon end occurs during panorama printing, the printer will cut the print and stop printing. The printer status will be "Ribbon End".
- During Panorama Printing, if the next print data is not received, the printer will be Idle until the next data is sent. In this case, be aware that the de-curl section or media grip section could leave impressions on the printed media.
- During Panorama Printing, if the next print data is not received for approximately 60 seconds, the print will be cut and the printing stopped, and the printer status will switch to Idle.
- For Panorama Printing, the print re-try function is invalid.
- If the Full Cutter Set-up command, No Cut-scrap command, or 2-inch Cut command are received during Panorama Printing, the partially printed Panorama Print will be cut, and operation will revert to normal. (This is because the designated operations of these commands are incompatible.)
- If data other than 6x8-size (DP-DS820: 8x10, 8x12, A4) is received during Panorama Printing at DP-DS620, the Panorama Print being printed will be cut, and operation will return to normal.
- Be sure not to handle the media being fed out of the printer during Panorama Printing.
- A maximum length of 36 inches can be fed out, so be careful in the placement of the printer.

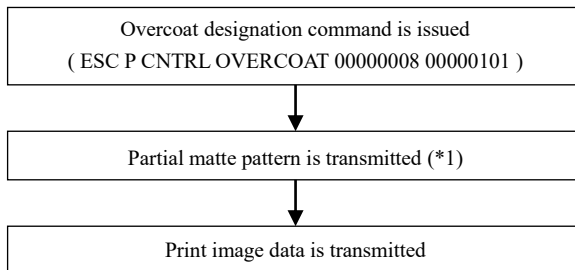
3-17 Partial Matte (DP-DS620/DP-DS820/DP-QW410)

(1) Summary

- By sending the Partial Matte mode designation command from the host, the printer switches to partial matte mode. After the command is sent, send the partial matte pattern image and then the print image data, and the partial matte printing will be carried out.
- After printing 1 image, the partial matte mode will revert to the normal mode. In order to print in the partial matte mode, the command and partial matte pattern must be sent for each print.
- To send the partial matte pattern data, create the pattern in black and white, and send it to the printer using the same process as for normal print data.

(2) Partial Matte Process Flow

- ① When performing Partial Matte printing, first designate the Overcoat Finish Control command to partial matte “00000101” or “00000121” or “00000122”.
- ② Send the partial matte pattern to the printer in the same way you would send normal print data.
- ③ After sending the partial matte pattern, send the print data.



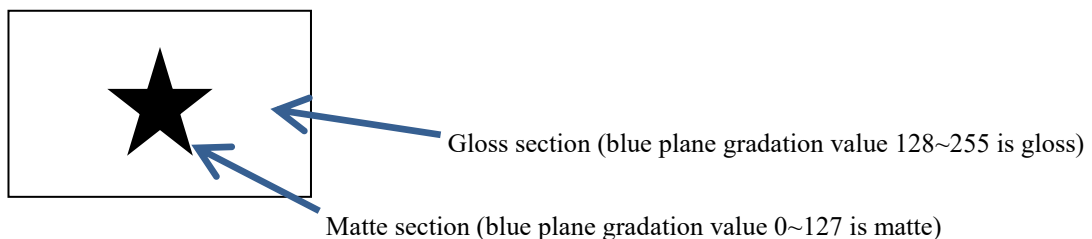
(*1) When sending the partial matte pattern, send the Print Start Command, the same as you would when sending normal print data.

```

ESC P IMAGE YPLANE
↓
ESC P IMAGE MPLANE
↓
ESC P IMAGE CPLANE
↓
ESC P CTRL START
  
```

(3) Regarding the Partial Matte Patterns

- Partial Matte patterns are designated the same as print data. The printer only refers to the blue plane data, and prints the gradation values 128~255 as gloss, and the gradation values 0~127 as matte.
- The print image resolution (300/600 dpi) and partial matte designated resolution can be combined freely. For example, the partial matte data can be sent as 300 dpi, while the print image data is sent as 600 dpi.



(4) Notes Regarding Partial Matte Printing

- When in Partial Matte mode, the printer will operate with a single buffer.

3-18 Overcoat finish control specification value

The overcoat finish that can be specified differs depending on the firmware version.

○:Support, -:No support Value: Effective firmware version (This or later)

Overcoat finish	Specification value	Model					
		DS40	DS80	DP-DS80D	DP-DS620	DP-DS820	DP-QW410
Glossy	00000000	○	○	○	○	○	○
Matte	00000001	○	○	○	○	○	○
Fine Matte	00000021	-	-	-	1.20	○	-
Luster	00000022	-	-	-	1.30	○	-
Partial matte (Matte)	00000101	-	-	-	1.20	○	○
Partial matte (Fine Matte)	00000121	-	-	-	1.20	○	-
Partial matte (Luster)	00000122	-	-	-	1.30	○	-