PCL

This section describes the PCL commands required for specific features. This table lists each feature and the PCL syntax that is required to use the feature. Following this table are examples of how to use these commands and what the PCL file looks like.

Refer to these reference materials: *PCL 5 Printer Language Technical Reference Manual*, Hewlett-Packard Manual Part Number 5961-0509.

Note: Throughout this document, <**ESC**> refers to the escape key. When you see <**ESC**>, substitute the escape character appropriate for your environment.

PCL Print Features

Feature	Implementation	Values
Job Name	@PJL COMMENT OID_ATT_JOB_NAME "*string*";	Where *string* is a maximum of 40 characters
Job Owner	@PJL COMMENT OID_ATT_JOB_OWNER "*string*";	Where *string* is a maximum of 40 characters
Custom Paper Size – available on DC 460/470 ST and only for PCL	@PJL COMMENT OID_ATT_PCL_CUSTOM_DIMENSIONS (*x*.0 *y*.0) <esc>101A	Where *x* and *y* are millimeters expressed as integer. **Note:** Both the PJL comment and the escape code must be used. The value 101in the escape code states that this is a custom size job. The PJL comment communicates the media size to be used.

Media Size	[esc] & ℓ *int* A	Where *int* is one of the following:
		  2 = US Letter (8.5 x 11 inches)
		  3 = US Legal (8.5 x 14 inches)
		  6 = Ledger (11 x 17 inches)
		 11 = 7.25 x 10.5 inches
		 26 = A4 (210 x 297 mm)
		 27 = A3 (297 x 420 mm)
		 41 = 8.5 x 5.5 inches
		 42 = A5 (148 x 210 mm)
		 43 = 215 x 315 mm
		 44 = 8.5 x 13 inches (215 x 330 mm)
		 45 = B5 (182 x 257 mm)
		 72 = Oufuku-Hagaki
		200 = Oversized A4 (223 x 297 mm)
		201 = 9 x 11 inches
		202 = B4 (257 x 364 mm)
		203 = A6 (105 x 148 mm)
		204 = 5 x 7 inches
		205 = B6 (128 x 182 mm)
		208 = 8 x 10 inches
		210 = 267 x 388 mm
		212 = 220 x 330 mm
		213 = 12 x 18 inches
		
		Note: This command must be used in conjunction with the following two commands, Media Type and Media Color.

Media Type	@PJL COMMENT OID_ATT_DEFAULT_MEDIUM_TYPE "*value*"	Where *value* is one of the following: standard, transparency, labels, drilled, recycled, pre-printed, heavyweight, other. **Note:** This command must be used in conjunction with the previous and following commands (Media Size and Media Color).

Feature	Implementation	Values
Media Color	@PJL COMMENT OID_ATT_DEFAULT_MEDIUM_ COLOR "*value*"	Where *value* is one of the following: yellow, green, buff, white, red, ivory, gray, clear, pink, goldenrod, orange, blue, other. **Note**: This command must be used in conjunction with the previous two commands (Media Size and Media Type).

Media Source	[esc] & ℓ *int* H	Where *int* is one of the following:
		    0 - Auto Select
		    1 - Tray 1
		    2 - Bypass Tray
		    4 - Tray 2
		    5 - High Capacity Feeder
		  23 - Tray 3
		  24 - Tray 4
		Note: See the media selection comments in the Dependencies / Caveats section.

Output Location – available on DC 460/470 ST only	@PJL COMMENT OID_ATT_OUTPUT_BINS *value*	Where *value* can be one of the following: OID_VAL_OUTPUT_BIN_TOP OID_VAL_OUTPUT_BIN_MAIN

Stapling	@PJL COMMENT OID_ATT_FINISHING OID_VAL_FINISHING_STAPLE; @PJL COMMENT XRXSTAPLE = *value*	Where *value* is one of the following:
		  PORTRAIT (For Single Staple, the Document Centre uses the Staple Head at the front of the Document Centre (Staple Head 1)
		  DUAL

Collation	@PJL COMMENT OID_ATT_OUTPUT *value*;	Where value is one of the following:
		  OID_VAL_OUTPUT_PAGE_COLLATE
		  OID_VAL_OUTPUT_NO_PAGE_COLLATE

Resolution	@PJL COMMENT SET RESOLUTION=*value*;	Where *value* is the following: 600
Quantity	[esc] & ℓ *int* X or @PJL SET COPIES = int	Where *int* is: 1 to 999
Simplex	[esc] & ℓ *int* S	Where *int* is the following: 0 = Simplex

Duplex	[esc] & ℓ *int* S	Where *int* is one of the following:
		  1 = Duplex Long Edge Binding
		  2 = Duplex Short Edge Binding

Orientation	[esc] & ℓ *int* O	Where *int* is one of the following:
		  0 = Portrait
		  1 = Landscape

Front Cover Imaged Enable/Disable	@PJL COMMENT OID_ATT_FIRSTLAST_PAGE_ IMAGED *value*;	Where *value* is one of the following: TRUE or FALSE TRUE produces an imaged cover. FALSE produces a blank cover. **Note**: This command must be used in conjunction with the following two commands: Front Cover Media Type and Front Cover Media Color.
Front Cover Media Size	@PJL COMMENT OID_ATT_FIRST_PAGE_MEDIA_SIZE "*xxx yyy*"	Where *xxx* and *yyy* are the media size expressed in mm. **Note**: This command is optional and can only be used when printing Blank Front Covers. This command must be used with Front Cover Imaged Enable/Disable. This implies you must use all three of the font commands listed above (Front Cover Media Type, Front Cover Media Color, and Front Cover Imaged Enable/Disable).
Front Cover Media Type	@PJL COMMENT OID_ATT_FIRST_PAGE_MEDIA_TYPE " *value*"	Where *value* is one of the following: system-default, standard, transparency, labels, drilled, recycled, preprinted, heavyweight, other. **Note**: This command must be used in conjunction with the previous and the following command: Front Cover Imaged Enable and Front Cover Media Color.

Feature	Implementation	Values
Front Cover Media Color	@PJL COMMENT OID_ATT_FIRST_PAGE_MEDIA_ COLOR "*value*"	Where *value* is one of the following: yellow, green, buff, white, red, ivory, gray, clear, pink, goldenrod, orange, blue, other **Note**: This command must be used in conjunction with the previous two commands: Front Cover Imaged Enable and Front Cover Media Type.
Front and Back Cover Imaged/Unimaged	@PJL COMMENT OID_ATT_FIRSTLAST_PAGE_ IMAGED *value*	Where *value* is one of the following: TRUE or FALSE TRUE produces an imaged front and back cover. FALSE produces a blank front and back cover. **Note**: This command must be used in conjunction with the following two commands: Front & Back Cover Media Type and Front & Back Cover Media Color.
Front & Back Cover Media Type	@PJL COMMENT OID_ATT_FIRSTLAST_PAGE_MEDIA_TY PE "*value*"	Where *value* is one of the following: system-default, standard, transparency, labels, drilled, recycled, pre-printed, heavyweight, other **Note**: This command must be used in conjunction with the previous and the following commands: Front and Back Cover Imaged Enable and Front and Back Cover Media Color.
Front & Back Cover Media Color	@PJL COMMENT OID_ATT_FIRSTLAST_PAGE_MEDIA_ COLOR "*value*"	Where *value* is one of the following: yellow, green, buff, white, red, ivory, gray, clear, pink, goldenrod, orange, blue, other **Note**: This command must be used in conjunction with the previous two commands: Front & Back Cover Imaged Enable and Front & Back Cover Media Type.
Front & Back Cover Media Size	@PJL COMMENT OID_ATT_FIRSTLAST_PAGE_MEDIA_SIZ E "*xxx yyy*"	Where *xxx* and *yyy* are the media size expressed in mm. **Note**: This option can only be used when printing blank front and back covers. This command must be used in conjunction with the Front/Back Cover Image Enable/Disable command. This implies you must use all of the 3 font commands listed above (Front/Back Cover Media Type, Front/Back Cover Media Color, and Front/Back Cover Imaged Enable/Disable).
Image Quality Selection	@PJL SET DENSITY= *value*	Where *value* is a number in the range 1 (lightest) to 7 (darkest).
Draft Mode Printing	@PJL COMMENT OID_ATT_PRINT_QUALITY *value*	Where *value* is one of the following: OID_VAL_PRINT_QUALITY_NORMAL OID_VAL_PRINT_QUALITY_DRAFT
Job Type	@PJL COMMENT OID_ATT_JOB_TYPE *value*	Where *value* is one of the following: OID_VAL_JOB_TYPE_PRINT OID_VAL_JOB_TYPE_ PROOF_PRINT
Banner Sheet	@PJL COMMENT OID_ATT_START_SHEET *value*	Where *value* is one of the following: OID_VAL_JOB_SHEET_FULL (On) OID_VAL_JOB_SHEET_NONE (Off)
Interleave	@PJL COMMENT OID_ATT_INTERLEAVE *value*	Where *value* is one of the following: OID_VAL_INTERLEAVE_NONE OID_VAL_INTERLEAVE_BLANK OID_VAL_INTERLEAVE_IMAGED
Interleave Media Color	@PJL COMMENT OID_ATT_INTERLEAVE_COLOR "*value*"	Where *value* is one of the following: yellow, green, buff, white, red, ivory, gray, clear, pink, goldenrod, orange, blue, other

Feature	Implementation	Values
Accounting	@PJL COMMENT OID_ATT_ACCOUNTING_INFORMATION "*UserID*|042*AccountID*";	Where *UserID* is a value the Printer Administrator has assigned to a user. Where *AccountID* is a value the Printer Administrator has assigned to the account. **Note**: The User ID and the Account ID must be delimited by a |042.
Delay Print	@PJL COMMENT OID_ATT_JOB_PRINT_AFTER "*yyyymmddhhmmss*"	Where *yyyy* is the year, *mm* is the month, *dd* is the date, *hh* is the hour, *mm* is the minute of the hour, and *ss* is the second of that minute. **Note**: The hours are expressed in a 24 hour clock. For example: July 29, 1999 at 3:25 PM is expressed as: 19990729152500.

Basic PCL Template

This section illustrates a standard PCL template that is used to access general print features as well as Document Centre Product specific features. This template lists each feature and the syntax, both PCL commands and PJL, required to use these features. The next section of this document contains other examples of how to use these commands.

Section 1 (Opening Command, Required for all files)

<ESC>%-12345X

Section 2 (PJL Set Commands)

@PJL SET RESOLUTION=600
@PJL SET COPIES=1
@PJL SET DENSITY=4
@PJL SET JOBOFFSET=ON

Section 3 (XRXbegin – Opening Comment Statement, Required)

@PJL COMMENT XRXbegin

Section 4 (PJL Comments)

@PJL COMMENT OID_ATT_JOB_NAME "Readme.txt";
@PJL COMMENT OID_ATT_START_SHEET OID_VAL_JOB_SHEET_NONE;
@PJL COMMENT OID_ATT_JOB_OWNER "John Smith";
@PJL COMMENT OID_ATT_JOB_TYPE OID_VAL_JOB_TYPE_PRINT;
@PJL COMMENT OID_ATT_DEFAULT_MEDIUM_TYPE "Cardstock";
@PJL COMMENT OID_ATT_DEFAULT_MEDIUM_COLOUR "Green";
@PJL COMMENT OID_ATT_PRINT_QUALITY OID_VAL_PRINT_QUALITY_DRAFT;
@PJL COMMENT OID_ATT_FINISHING OID_VAL_FINISHING_STAPLE;
@PJL COMMENT XRXSTAPLE=PORTRAIT;
"6.15.0.128.95.124.157.20.0.1.11.4";

Section 5 (XRXend - Closing Statement for Comment Section, Required)

@PJL COMMENT XRXend

Section 6 (PCL Code used to invoke PCL Language)

@PJL ENTER LANGUAGE=PCL_E_&u600D

Section 7 (PCL Data Stream or ASCII Document inserted here for Options such as Selecting Different Fonts, Simplex, Duplex, etc.)

[Document or Text to be printed out inserted here]

_%1BINWU0PW0,0PW0,1UL1,60,40UL2,12.5,12.5,12.5,12.5,12.5,12.5,12.5,12.5UL3,40,25,
10,25UL4,35,15,10,15,10,15LT0,10,1LTLA1,4,2,1SP1TR0CF2_%1A_&l1X_&l1S_&l0H_&l0o
6a4d1E_*t600R_*v1onT_*rF_*c7181x4609Y_*p162x555Y_*cT_*pxY_%1BIP0,0,1016,1016
SC0,600,0,600;_%1A_*v1O_*v1T_%0BFT10,0;_%0A_*p544x855Y_*c2160a3200b1P_(19U
_(s4099t0b0s20.00h0P_*vT_%0BFT;_%0A_*p544x883Y

Section 8 (Closing Command , Required at end of Document)

<ESC>%-12345X

Sample PCL Headers

Example 1 Simple Print Job

```
<ESC>%-12345X
@PJL SET COPIES= 1
@PJL COMMENT XRXbegin
@PJL COMMENT OID_ATT_JOB_OWNER "John Smith";
@PJL COMMENT OID_ATT_JOB_NAME "Print Job";
@PJL COMMENT XRXend
[Insert document or text to be printed here]
<ESC>%-12345X
```

Example 2 Proof Print

```
<ESC>%-12345X
@PJL SET COPIES= 6
@PJL COMMENT XRXbegin
@PJL COMMENT XRX_JOB_TYPE XRX_JOB_TYPE_PROOF_PRINT
@PJL COMMENT XRXend
[Insert document or text to be printed here]
<ESC>%-12345X
```

Example 3 Finishing Options

```
<ESC>%-12345X
@PJL COMMENT XRXbegin
@PJL COMMENT OID_ATT_JOB_OWNER "John Smith"
@PJL COMMENT OID_ATT_JOB_TYPE OID_VAL_JOB_TYPE_PROOF_PRINT;
@PJL COMMENT OID_ATT_FINISHING OID_VAL_FINISHING_STAPLE;
@PJL COMMENT XRXSTAPLE=PORTRAIT;
@PJL COMMENT XRXend
<ESC>\027& ℓ 2G
[Insert document or text to be printed here]
<ESC>%-12345X
```

PCL Feature Dependencies/Caveats

- All PJL commands must be in the first 4096 bytes of the job.

- Combining Printer Commands:

  ➢ The first two characters after the <**ESC**> MUST be the same, in order to combine them.

  ➢ All alpha-numeric characters MUST be lowercase, except the final terminating character.

  ➢ The commands are read left to right and MUST be combined in the order you wish them to be executed.

- In case of duplicate commands, the last one requested takes precedence.

- The @PJL SET COPIES takes precedence over the PCL Escape Command (<**ESC**> & ℓ *int* X>) to set copies.

- Do not duplex any job with media smaller than A6 (5.8 x 8.3 in. or 105 x 148 mm).

- Any job with Transparencies or Labels should not be duplexed.

- When printing an odd number of pages in a document with duplex front and back imaged covers, the printer always prints on both sides of the front and back covers. The remaining pages are printed on the document body media Type and Color with a blank page inserted to allow an image on both sides of the back cover.

- When using the Blank Front or the Blank Front & Back Cover command the Cover Media Size command is optional. If the cover size commnad is not in the PDL, the Printer will infer the Cover media size from the Document body.

- Media selection on the DC 240/255/265 is intended to be specified in one of two methods:

  ➢ Describing the media attributes with size, color, and type and allowing the device to select the matching source tray. If the media description method is used, source tray selection should be left out of the request or specifically set to Auto. If this is not done, the tray selection will defeat the auto tray selection capabilities of the device.

  ➢ Specifically indicating the tray to feed from. If the source tray method is used, the system automatically defaults paper type to the defined SYSTEM DEFAULT unless specified otherwise. This is done to prevent inadvertent use of special paper types. To override this, include a paper type specification of UNSPECIFIED in the job.