

NAME

foo2zjs-wrapper – Convert Postscript into a ZJS printer stream

SYNOPSIS

foo2zjs-wrapper [*options*] [*ps-file*]

DESCRIPTION

foo2zjs-wrapper is a Foomatic compatible printer wrapper for the **foo2zjs** printer driver. This script reads a Postscript *ps-file* or standard input and converts it to Zenographics ZjStream printer format for driving the Minolta/QMS 2300 DL network color laser printer and other Zenographics-based printers.

This script can be used in a standalone fashion, but is intended to be called from a printer spooler system which uses the Foomatic printer database.

COMMAND LINE OPTIONS**Normal Options**

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-c Print in color (else monochrome).

-C *colormode*

Color correction mode [0].

- 1 Photos (using m2300w CRDs)
- 2 Photos and text (using m2300w CRDs)
- 3 Graphics and text (using m2300w CRDs)
- 10 ICM color profile (using -G *.icm file)

-d *duplex*

Duplex code to send to printer [1].

| 1 off | 2 long edge | 3 short edge

-m *media*

Media code to send to printer [1].

| Media | 2300DL | 2200DL |
|--------------|--------|--------|
| standard | 1 | 1 |
| transparency | 2 | 2 |
| envelope | 257 | na |
| letterhead | 259 | na |
| thick | 261 | 4 |
| postcard | 262 | na |
| labels | 263 | 3 |

-p *paper*

Paper size code to send to printer [1].

| | | | |
|----|-------------|----|--------|
| 1 | letter | 9 | A4 |
| 5 | legal | 11 | A5 |
| 7 | executive | 13 | B5 |
| 20 | env #10 | 27 | env DL |
| 28 | env C5 | 34 | env B5 |
| 37 | env Monarch | | |

-n *copies*

Number of copies [1].

- r** *xresxyres*
Set device resolution in pixels/inch [1200x600].
- s** *source*
Source (Input Slot) code to send to printer [7].

| | | | |
|---|-------|---|--------|
| 1 | upper | 4 | manual |
| 2 | lower | 7 | auto |
- t** Draft mode. Every other pixel is white.
- 2 -3 -4 -5 -6 -8 -9 -10 -12 -14 -15 -16 -18**
Print in N-up. Requires the **psutils** package.
- o** *orient*
Orientation used for N-up.

| | | |
|-----------|-----|------------------------------------|
| Portrait | -op | (normal) |
| Landscape | -ol | (rotated 90 degrees anticlockwise) |
| Seascape | -os | (rotated 90 degrees clockwise) |

Printer Tweaking Options

These are the options used to customize the operation of **foo2zjs** for a particular printer.

- u** *xoffxyoff*
Set the offset of the start of the printable region from the upper left corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.
- l** *xoffxyoff*
Set the offset of the end of the printable region from the lower right corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.
- L** *mask*
Send the logical clipping values from -u/-l in the ZjStream. **foo2zjs-wrapper** always runs Ghostscript with the ideal page dimensions, so that the scale of the image is correct, regardless whether or not the printer has unprintable regions. This option is used to move the position of the clipped image back to where it belongs on the page. The default is to send the amount which was clipped by -u and -l, and should be good in most cases.

| | |
|---|---|
| 0 | don't send any logical clipping amounts |
| 1 | only send Y clipping amount |
| 2 | only send X clipping amount |
| 3 | send both X and Y clipping amounts |
- P** Do not send START_PLANE codes on monochrome output. May be needed by some monochrome-only printers, such as the HP LaserJet 1000.
- X** *padlen*
Add extra zero padding to the end of BID segments. The default is 16 bytes. Padding 16 bytes of zeroes is needed for older ZjStream printers, such as the Minolta 2200DL and HP LaserJet 1000, and seems harmless to newer ones, such as the Minolta 2300DL. So the default should be good for all cases.
- z** *model*
Model: 0=2300DL, 1=HP1020. Default is 0.

Color Tweaking Options

These are the options used to control the quality of color output. Color correction is currently a WORK IN PROGRESS.

- g** *gsopts*
Additional options to pass to Ghostscript, such as `-g“-dDITHERPPI=nnn”`, etc. This option may appear more than once.
- G** *profile.icm*
Convert *profile.icm* to a Postscript color rendering dictionary (CRD) using **foo2zjs-icc2ps** and adjust the printer colors by using the Postscript **setcolorrendering** operator. (WORK IN PROGRESS).
- G** *gamma-file.ps*
Prepend *gamma-file.ps* to the Postscript input to perform color correction using the **setcolortransfer** Postscript operator. For example, the file might contain:
{0.333 exp} {0.333 exp} {0.333 exp} {0.333 exp} setcolortransfer
- I** *intent*
Select profile intent from the ICM file. 0=Perceptual, 1=Colorimetric, 2=Saturation, 3=Absolute. Default is 0 (perceptual).

Debugging Options

These options are used for debugging **foo2zjs** and its wrapper.

- S** *plane*
Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.
 - 1 Cyan
 - 2 Magenta
 - 3 Yellow
 - 4 Black
- D** *level*
Set Debug level [0].

EXAMPLES

Create a monochrome ZjStream from a Postscript document, examine it, and then print it using a RAW print queue:

```
foo2zjs-wrapper testpage.ps > testpage.zm
zjsdecode < testpage.zm
lpr -P raw testpage.zm
```

Create a color ZjStream stream from a Postscript document:

```
foo2zjs-wrapper -c testpage.ps > testpage.zc
```

FILES

`/usr/bin/foo2zjs-wrapper`

SEE ALSO

foo2zjs(1), **zjsdecode(1)**

AUTHOR

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<http://foo2zjs.rkkda.com/>

NAME

foo2zjs – Convert Ghostscript pbmraw or bitcmk format into a ZJS printer stream

SYNOPSIS

foo2zjs [*options*] <*pbmraw-file*> >*zjs-file*

foo2zjs [*options*] <*bitcmk-file*> >*zjs-file*

foo2zjs [*options*] <*pksmraw-file*> >*zjs-file*

DESCRIPTION

foo2zjs converts Ghostscript pbmraw, bitcmk, or pksmraw output formats to monochrome or color ZJS streams, for driving the Minolta/QMS 2300 DL network color laser printer and other Zenographics-based printers.

COMMAND LINE OPTIONS**Normal Options**

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-c Force color mode if autodetect doesn't work.

-d duplex

Duplex code to send to printer [1].

| 1 off | 2 long edge | 3 short edge

-g xpixypix

Set page dimensions in pixels [10200x6600].

-m media

Media code to send to printer [1].

| Media | 2300DL | 2200DL |
|--------------|--------|--------|
| standard | 1 | 1 |
| transparency | 2 | 2 |
| envelope | 257 | na |
| letterhead | 259 | na |
| thick | 261 | 4 |
| postcard | 262 | na |
| labels | 263 | 3 |

-p paper

Paper code to send to printer [1].

| | | | |
|----|-------------|----|--------|
| 1 | letter | 9 | A4 |
| 5 | legal | 11 | A5 |
| 7 | executive | 13 | B5 |
| 20 | env #10 | 27 | env DL |
| 28 | env C5 | 34 | env B5 |
| 37 | env Monarch | | |

-n copies

Number of copies [1].

-r xresxyres

Set device resolution in pixels/inch [1200x600].

-s *source*
Source (InputSlot) code to send to printer [7].

| | | | |
|---|-------|---|--------|
| 1 | upper | 4 | manual |
| 2 | lower | 7 | auto |

-t Draft mode. Every other pixel is white.

-J *filename*
Filename string to send to printer.

-U *username*
Username string to send to printer.

Printer Tweaking Options

These are the options used to customize the operation of **foo2zjs** for a particular printer.

-u *xoff* *xyoff*
Set the offset of the start of the printable region from the upper left corner, in pixels [0x0].

-l *xoff* *xyoff*
Set the offset of the end of the printable region from the lower right corner, in pixels [0x0].

-L *mask*
Send logical clipping amounts implied by -u/-l in the ZjStream [3].

| | |
|---|---|
| 0 | don't send any logical clipping amounts |
| 1 | only send Y clipping amount |
| 2 | only send X clipping amount |
| 3 | send both X and Y clipping amounts |

-P Do not send START_PLANE codes on monochrome output. May be needed by some black and white only printers, such as the HP LaserJet 1000.

-A AllIsBlack: convert C=1,M=1,Y=1 to just K=1. Works with bitcmymk input only.

-B BlackClears: K=1 forces C,M,Y to 0. Works with bitcmymk input only.

-X *padlen*
Add extra zero padding to the end of BID segments. The default is 16 bytes. Padding 16 bytes of zeroes is needed for older ZjStream printers, such as the Minolta 2200DL and HP LaserJet 1000, and seems harmless to newer ones, such as the Minolta 2300DL. So the default should be good for all cases.

-z *model*
Model: 0=2300DL, 1=HP1020. Default is 0.

Debugging Options

These options are used for debugging **foo2zjs**.

-S *plane*
Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.

| | |
|---|---------|
| 1 | Cyan |
| 2 | Magenta |
| 3 | Yellow |
| 4 | Black |

-D *level*
Set Debug level [0].

EXAMPLES

Create a black and white ZJS stream:

```
gs -q -dBATCHE -dSAFER -dQUIET -dNOPAUSE
-sPAPERSIZE=letter -r1200x600 -sDEVICE=pbmraw
-sOutputFile=- - < testpage.ps
| foo2zjs -r1200x600 -g10200x6600 -p1 >testpage.zm
```

Create a color ZJS stream:

```
gs -q -dBATCHE -dSAFER -dQUIET -dNOPAUSE
-sPAPERSIZE=letter -g10200x6600 -r1200x600 -sDEVICE=bitcmyk
-sOutputFile=- - < testpage.ps
| foo2zjs -r1200x600 -g10200x6600 -p1 >testpage.zc
```

FILES

/usr/bin/foo2zjs

SEE ALSO

foo2zjs-wrapper(1), zjsdecode(1)

AUTHOR

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<http://foo2zjs.rkkda.com/>

NAME

`zjsdecode` – Decode a ZjStream into human readable form.

SYNOPSIS

`zjsdecode` [*options*] <*zjs-file*

DESCRIPTION

`zjsdecode` decodes a ZjStream into human readable form.

A ZjStream is the printer language used by some Minolta/QMS and HP printers, such as the 2300DL and LJ-1000.

More information on Zenographics ZjStream can be found at:

<http://ddk.zeno.com>

COMMAND LINE OPTIONS

These are the options that can appear on the command line.

-d *basename*

 Baseline of .pbm file for saving decompressed planes.

-r *basename*

 Baseline of .jbg file for saving raw planes

-h Print hex file offsets.

-o Print file offsets.

-p Don't do 4 byte padding

-D *level*

 Set Debug level [0].

EXAMPLES

Decode an ZjStream file created by `foo2zjs`.

```
$ zjsdecode < testpage.zm
ZJT_START_DOC, 3 items
    ZJI_PAGECOUNT, 0 (0x0)
    ZJI_DMDUPLEX, 1 (0x1)
    ZJI_QUANTITY, 1 (0x1)
ZJT_START_PAGE, 17 items
    ZJI_0x17, 0 (0x0)
    ZJI_0x16, 1 (0x1)
    ZJI_VIDEO_X, 10200 (0x27d8)
    ZJI_VIDEO_Y, 6600 (0x19c8)
    ZJI_VIDEO_BPP, 1 (0x1)
    ZJI_RASTER_X, 10200 (0x27d8)
    ZJI_RASTER_Y, 6600 (0x19c8)
    ZJI_OFFSET_X, 0 (0x0)
    ZJI_OFFSET_Y, 0 (0x0)
    ZJI_NBIE, 1 (0x1)
    ZJI_RESOLUTION_X, 1200 (0x4b0)
    ZJI_RESOLUTION_Y, 600 (0x258)
    ZJI_DMDEFAULTSOURCE, 7 (0x7)
    ZJI_DMCOPIES, 1 (0x1)
    ZJI_DMPAPER, 1 (0x1)
    ZJI_DMEDIATYPE, 1 (0x1)
```

```
ZJI_MINOLTA_PAGE_NUMBER, 1 (0x1)
ZJT_JBIG_BIH, 0 items
  Data: 20 bytes
    DL = 0, D = 0, P = 1, - = 0, XY = 10200 x 6600
    L0 = 128, MX = 16, MY = 0
    Order   = 3  ILEAVE SMID
    Options = 92  LRLTWO TPDON TPBON DPON
    52 stripes, 0 layers, 1 planes
ZJT_JBIG_BID, 0 items
  Data: 65536 bytes
ZJT_JBIG_BID, 0 items
  Data: 29120 bytes
ZJT_END_JBIG, 0 items
ZJT_END_PAGE, 0 items
ZJT_END_DOC, 0 items
```

FILES

`/usr/bin/zjsdecode`

SEE ALSO

`foo2zjs-wrapper(1)`, `foo2zjs(1)`, `jbg2pbm(1)`

AUTHOR

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NAME

foo2oak-wrapper – Convert Postscript into an OAKT printer stream

SYNOPSIS

foo2oak-wrapper [*options*] [*ps-file*]

DESCRIPTION

foo2oak-wrapper is a Foomatic compatible printer wrapper for the **foo2oak** printer driver. This script reads a Postscript *ps-file* or standard input and converts it to Oak Technology OAKT printer format for driving the HP Color LaserJet 1500 laser printer, Kyocera KM-1636/KM-2035 copiers, and other OAKT-based printers.

This script can be used in a standalone fashion, but is intended to be called from a printer spooler system which uses the Foomatic printer database.

COMMAND LINE OPTIONS**Normal Options**

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-b *bits* Number of bits per plane (1 or 2) [1].

-c Print in color (else monochrome).

-m *media*

Media code to send to printer [1].

| Media | HP CLJ 1500 -z0 | KM-1635 -z1 |
|--------------|--------------------|----------------|
| autoselect | 0 | 0 |
| plain | 1 | 1 |
| preprinted | 2 | 2 |
| letterhead | 3 | 3 |
| transparency | 4 | 4 |
| prepunched | 5 | 5 |
| labels | 6 | 6 |
| bond | 7 | 7 |
| recycled | 8 | 8 |
| color | 9 | 9 |
| cardstock | 10 | 10 |
| envelope | 11 | 11 |
| light | 13 | na |
| tough | 14 | na |
| vellum | na | 15 |
| rough | na | 16 |
| thick | na | 19 |
| highqual | na | 20 |

-p *paper*

Paper size code to send to printer [1].

| | | | |
|-----|------------|-----|-----------|
| 1 | letter | 3 | ledger |
| 5 | legal | 6 | statement |
| 7 | executive | 8 | A3 |
| 9 | A4 | 11 | A5 |
| 12 | B4 | 13 | B5jis |
| 14 | folio | 19 | env9 |
| 20 | env10 | 27 | envDL |
| 28 | envC5 | 30 | envC4 |
| 37 | envMonarch | 257 | A6 |
| 258 | B6 | 259 | B5iso |
| 260 | env6 | | |

-n *copies*

Number of copies [1].

-r *xresxyres*

Set device resolution in pixels/inch [600x600].

-s *source*

Source (Input Slot) code to send to printer [7].

| | | | |
|---|-------|---|--------|
| 1 | upper | 4 | manual |
| 7 | auto | | |

-2 -3 -4 -5 -6 -8 -9 -10 -12 -14 -15 -16 -18

Print in N-up. Requires the **psutils** package.

-o *orient*

Orientation used for N-up.

| | | |
|-----------|-----|------------------------------------|
| Portrait | -op | (normal) |
| Landscape | -ol | (rotated 90 degrees anticlockwise) |
| Seascape | -os | (rotated 90 degrees clockwise) |

Printer Tweaking Options

These are the options used to customize the operation of **foo2oak** for a particular printer.

-u *xoffxyoff*

Set the offset of the start of the printable region from the upper left corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

-l *xoffxyoff*

Set the offset of the end of the printable region from the lower right corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

-L *mask*

Send the logical clipping values from -u/-l in the OAKT stream. **foo2oak-wrapper** always runs Ghostscript with the ideal page dimensions, so that the scale of the image is correct, regardless whether or not the printer has unprintable regions. This option is used to move the position of the clipped image back to where it belongs on the page. The default is to send the amount which was clipped by -u and -l, and should be good in most cases.

| | |
|---|---|
| 0 | don't send any logical clipping amounts |
| 1 | only send Y clipping amount |
| 2 | only send X clipping amount |
| 3 | send both X and Y clipping amounts |

-z *model*

Model is 0 for the HP Color LaserJet 1500, and 1 for the Kyocera KM-1635/KM-2035 copiers. The default is 0.

Color Tweaking Options

These are the options used to control the quality of color output. Color correction is currently a WORK IN PROGRESS.

-g *gsopts*

Additional options to pass to Ghostscript, such as `-g“-dDITHERPPI=nnn”`, etc. This option may appear more than once.

-G *profile.icm*

Convert *profile.icm* to a Postscript color rendering dictionary (CRD) using **foo2zjs-icc2ps** and adjust the printer colors by using the Postscript **setcolorrendering** operator. (WORK IN PROGRESS).

-G *gamma-file.ps*

Prepend *gamma-file.ps* to the Postscript input to perform color correction using the **setcolortransfer** Postscript operator. For example, the file might contain:
{0.333 exp} {0.333 exp} {0.333 exp} {0.333 exp} setcolortransfer

-I *intent*

Select profile intent from the ICM file. 0=Perceptual, 1=Colorimetric, 2=Saturation, 3=Absolute. Default is 0 (perceptual).

Debugging Options

These options are used for debugging **foo2oak** and its wrapper.

-S *plane*

Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.

- 1 Cyan
- 2 Magenta
- 3 Yellow
- 4 Black

-D *level*

Set Debug level [0].

EXAMPLES

Create a monochrome OAKT stream from a Postscript document, examine it, and then print it using a RAW print queue:

```
foo2oak-wrapper testpage.ps > testpage.oak
oakdecode < testpage.oak
lpr -P raw testpage.oak
```

Create a color OAKT stream from a Postscript document:

```
foo2oak-wrapper -c testpage.ps > testpage.oak
```

FILES

`/usr/bin/foo2oak-wrapper`

SEE ALSO

foo2oak(1), **oak(1)**

AUTHOR

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<http://foo2oak.rkkda.com/>

NAME

foo2oak – Convert Ghostscript pbmraw, pgmraw or bitcmk format into an OAKT printer stream

SYNOPSIS

foo2oak [*options*] <*pbmraw-file*> *OAKT-file*

foo2oak [*options*] <*pgmraw-file*> *OAKT-file*

foo2oak [*options*] <*bitcmk-file*> *OAKT-file*

DESCRIPTION

foo2oak converts Ghostscript pbmraw or bitcmk output formats to monochrome or color OAKT streams, for driving the HP Color LaserJet 1500 laser printer, Kyocera KM-1636/KM-2035 copiers, and other OAKT-based printers.

COMMAND LINE OPTIONS**Normal Options**

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-c Force color mode if autodetect doesn't work.

-g *xpixxypix*
Set page dimensions in pixels [10200x6600].

-m *media*
Media code to send to printer [1].

| Media | Code |
|--------------|------|
| autoselect | 0 |
| plain | 1 |
| preprinted | 2 |
| letterhead | 3 |
| transparency | 4 |
| prepunched | 5 |
| labels | 6 |
| bond | 7 |
| recycled | 8 |
| color | 9 |
| cardstock | 10 |
| envelope | 11 |
| light | 13 |
| tough | 14 |
| vellum | 15 |
| rough | 16 |
| thick | 19 |
| highqual | 20 |

-p *paper*
Paper code to send to printer [1].

| | | | |
|-----|------------|-----|-----------|
| 1 | letter | 3 | ledger |
| 5 | legal | 6 | statement |
| 7 | executive | 8 | A3 |
| 9 | A4 | 11 | A5 |
| 12 | B4 | 13 | B5jis |
| 14 | folio | 19 | env9 |
| 20 | env10 | 27 | envDL |
| 28 | envC5 | 30 | envC4 |
| 37 | envMonarch | 257 | A6 |
| 258 | B6 | 259 | B5iso |
| 260 | env6 | | |

- n** *copies*
Number of copies [1].
- r** *xresxyres*
Set device resolution in pixels/inch [600x600].
- s** *source*
Source (InputSlot) code to send to printer [7].

| | | | |
|---|-------|---|--------|
| 1 | tray1 | 4 | manual |
| 7 | auto | | |
- J** *filename*
Filename string to send to printer.
- U** *username*
Username string to send to printer.

Printer Tweaking Options

These are the options used to customize the operation of **foo2oak** for a particular printer.

- u** *xoffxyoff*
Set the offset of the start of the printable region from the upper left corner, in pixels [0x0].
- l** *xoffxyoff*
Set the offset of the end of the printable region from the lower right corner, in pixels [0x0].
- L** *mask*
Send logical clipping amounts implied by -u/-l in the OAKT stream [3].
 - 0 don't send any logical clipping amounts
 - 1 only send Y clipping amount
 - 2 only send X clipping amount
 - 3 send both X and Y clipping amounts
- A** Turn off: conversion of C=1,M=1,Y=1 to pure black.
- B** Turn off: K=1 forces C,M,Y to 0.
- M** *mirror*
Mirror bytes. Mirror is 0 for Kyocera KM-1635/KM-2035 and 1 for the HP Color LaserJet 1500. The default is 1.

Debugging Options

These options are used for debugging **foo2oak**.

- S** *plane*
Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.
 - 1 Cyan
 - 2 Magenta

- 3 Yellow
- 4 Black

-D level

Set Debug level [0].

EXAMPLES

Create a black and white OAKT stream:

```
gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
-sPAPERSIZE=letter -r600x600 -sDEVICE=pbmraw
-sOutputFile=- - < testpage.ps
| foo2oak -r600x600 -g5100x6600 -p1 >testpage.oak
```

Create a color OAKT stream:

```
gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
-sPAPERSIZE=letter -g5100x6600 -r600x600 -sDEVICE=bitcmk
-sOutputFile=- - < testpage.ps
| foo2oak -r600x600 -g5100x6600 -p1 >testpage.oak
```

FILES

`/usr/bin/foo2oak`

SEE ALSO

`foo2oak-wrapper(1)`, `oakdecode(1)`

AUTHOR

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<http://foo2oak.rkkda.com/>

NAME

oakdecode – Decode an OAKT printer stream into human readable form.

SYNOPSIS

oakdecode [*options*] <*OAKT-file*

DESCRIPTION

oakdecode decodes an OAKT printer stream into human readable form.

An OAKT printer stream is the printer language used by the HP Color LaserJet 1500 and other printers.

COMMAND LINE OPTIONS

These are the options that can appear on the command line.

-d *basename*

Baseline of .pbm file for saving decompressed planes.

-r *basename*

Baseline of .jbg file for saving raw planes

-i Suppress display of image records.

-o Print file offsets.

-D *level*

 Set Debug level [0].

EXAMPLES

Decode an OAKT file created by foo2oak.

```
$ oakdecode < testpage.oak
0d (80) 1 OTHER
0c (64) Wed Nov 05 16:30:50 2003          a07d3    100005    32001e
0a (80) testpage.pdf
14 (16) (no args)
28 (16) Source=Tray1
29 (80) PaperType=0 UNK8=2,0,0,0, blanks(63)
2a (32) Copies=1          UNK=0
2b (32) papercode=25     xwid=4648          ywid=9000          UNK=0
33 (64)
      u0      u1      w      h      resx      resy      nBits
      x0      x0      2128    4300    600      600      x1
15 (16) (no args)
      bih0      w      h      l0      bih5      dlen      plen      unk      yOff      P      subP
3c (64) 00010000 2176 256 256 58030020 1050 1056 000 64 3 0
      DL = 0, D = 0, P = 1, - = 0, XY = 2176 x 256
      L0 = 256, MX = 32, MY = 0
      Order   = 3  ILEAVE SMID
      Options = 88  LRLTWO TPDON TPBON
      1 stripes, 0 layers, 1 planes
3c (64) 00010000 2176 256 256 58030020 3668 3680 000 320 3 0
3c (64) 00010000 2176 256 256 58030020 1463 1472 000 640 3 0
3c (64) 00010000 2176 256 256 58030020 1975 1984 000 896 3 0
3c (64) 00010000 2176 224 224 58030020 2744 2752 000 1152 3 0
3c (64) 00010000 2176 256 256 58030020 988 992 000 1440 3 0
3c (64) 00010000 2176 256 256 58030020 2892 2896 000 1696 3 0
3c (64) 00010000 2176 256 256 58030020 3634 3648 000 1952 3 0
```

```

3c (64) 00010000 2176 256 256 58030020 3236 3248 000 2208 3 0
3c (64) 00010000 2176 256 256 58030020 2279 2288 000 2464 3 0
3c (64) 00010000 2176 256 256 58030020 3746 3760 000 2720 3 0
3c (64) 00010000 2176 200 200 58030020 2404 2416 000 2976 3 0
3c (64) 00010000 2176 256 256 58030020 3114 3120 000 3240 3 0
3c (64) 00010000 2176 96 96 58030020 1142 1152 000 3496 3 0
3c (64) 00010000 2176 256 256 58030020 2094 2112 000 3752 3 0
3c (64) 00010000 2176 256 256 58030020 1319 1328 000 4008 3 0
3c (64) 00010000 2176 36 36 58030020 208 224 000 4264 3 0
17 (16) (no args)
18 (16) UNK=0
0b (16) (no args)

```

FILES

/usr/bin/oakdecode

SEE ALSO

foo2oak-wrapper(1), foo2oak(1), jbg2pbm(1)

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
<http://foo2oak.rkkda.com/>

NAME

foo2hp2600-wrapper – Convert Postscript into a ZJS printer stream

SYNOPSIS

foo2hp2600-wrapper [*options*] [*ps-file*]

DESCRIPTION

foo2hp2600-wrapper is a Foomatic compatible printer wrapper for the **foo2hp** printer driver. This script reads a Postscript *ps-file* or standard input and converts it to Zenographics ZjStream printer format for driving the Hewlett-Packard 2600n color laser printer and other Zenographics-based printers.

This script can be used in a standalone fashion, but is intended to be called from a printer spooler system which uses the Foomatic printer database.

COMMAND LINE OPTIONS**Normal Options**

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-b *bits* Number of bits per plane. 1 or 2. [1].

-c Print in color (else monochrome).

-d *duplex*

Duplex code to send to printer [1].

| 1 off | 2 long edge | 3 short edge

-m *media*

Media code to send to printer [1].

| Media | HPLJ 2600n |
|--------------|------------|
| plain | 1 |
| preprinted | 514 |
| letterhead | 513 |
| transparency | 2 |
| prepunched | 515 |
| labels | 265 |
| bond | 260 |
| recycled | 516 |
| color | 512 |
| tough | 276 |
| envelope | 267 |
| light | 258 |
| heavy | 262 |
| cardstock | 261 |
| lightglossy | 268 |
| glossy | 269 |
| heavyglossy | 270 |
| cover | 277 |
| photo | 278 |

-p *paper*

Paper size code to send to printer [1].

| | | | |
|----|-------------|----|--------|
| 1 | letter | 9 | A4 |
| 5 | legal | 11 | A5 |
| 7 | executive | 13 | B5jis |
| 20 | env #10 | 27 | env DL |
| 28 | env C5 | 34 | env B5 |
| 37 | env Monarch | | |

-n *copies*

Number of copies [1].

-r *xresxyres*

Set device resolution in pixels/inch [1200x600].

-s *source*

Source (Input Slot) code to send to printer [7].

| | | | |
|---|--------|---|---------------|
| 1 | tray 2 | 4 | manual/tray 1 |
| 2 | tray 3 | 7 | auto |

-t Draft mode. Every other pixel is white.**-2 -3 -4 -5 -6 -8 -9 -10 -12 -14 -15 -16 -18**

Print in N-up. Requires the **psutils** package.

-o *orient*

Orientation used for N-up.

Portrait -op (normal)
 Landscape -ol (rotated 90 degrees anticlockwise)
 Seascape -os (rotated 90 degrees clockwise)

Printer Tweaking Options

These are the options used to customize the operation of **foo2hp** for a particular printer.

-u *xoffxyoff*

Set the offset of the start of the printable region from the upper left corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

-l *xoffxyoff*

Set the offset of the end of the printable region from the lower right corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

-L *mask*

Send the logical clipping values from -u/-l in the ZjStream. **foo2hp2600-wrapper** always runs Ghostscript with the ideal page dimensions, so that the scale of the image is correct, regardless whether or not the printer has unprintable regions. This option is used to move the position of the clipped image back to where it belongs on the page. The default is to send the amount which was clipped by -u and -l, and should be good in most cases.

0 don't send any logical clipping amounts
 1 only send Y clipping amount
 2 only send X clipping amount
 3 send both X and Y clipping amounts

-O *parm=val*

Alignment of CMYK. *parm* is c, m, y, or k. *val* is in rows. Multiple options are allowed. The default is "-Oc=0 -Om=0 -Oy=0 -Ok=0".

-P Do not send START_PLANE codes on monochrome output. May be needed by some monochrome-only printers, such as the HP LaserJet 1000.

-X *padlen*

Add extra zero padding to the end of BID segments. The default is 16 bytes. Padding 16 bytes of zeroes is needed for older ZjStream printers, such as the Minolta 2200DL and HP LaserJet 1000, and seems harmless to newer ones, such as the Minolta 2300DL. So the default should be good for all cases.

-z *model*

Model: Model: 0=HP CLJ 1600/2600n; 1=HP CLJ CP1215

Color Tweaking Options

These are the options used to control the quality of color output. Color correction is currently a WORK IN PROGRESS.

-g *gsopts*

Additional options to pass to Ghostscript, such as -g“-dDITHERPPI=nnn”, etc. This option may appear more than once.

-G *profile.icm*

Convert *profile.icm* to a Postscript color rendering dictionary (CRD) using **foo2zjs-icc2ps** and adjust the printer colors by using the Postscript **setcolorrendering** operator. If *profile.icm* is *none.icm*, then prepare for ordering a ICM custom printer profile (i.e. from www.ICCFactory.com).

-G *gamma-file.ps*

Prepend *gamma-file.ps* to the Postscript input to perform color correction using the **setcolortransfer** Postscript operator. For example, the file might contain:
{0.333 exp} {0.333 exp} {0.333 exp} {0.333 exp} setcolortransfer

-I *intent*

Select profile intent from the ICM file. 0=Perceptual, 1=Colorimetric, 2=Saturation, 3=Absolute. Default is 0 (perceptual).

Debugging Options

These options are used for debugging **foo2hp** and its wrapper.

-S *plane*

Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.

- 1 Cyan
- 2 Magenta
- 3 Yellow
- 4 Black

-D *level*

Set Debug level [0].

EXAMPLES

Create a monochrome ZjStream from a Postscript document, examine it, and then print it using a RAW print queue:

```
foo2hp2600-wrapper testpage.ps > testpage.zm
zjsdecode < testpage.zm
lpr -P raw testpage.zm
```

Create a color ZjStream stream from a Postscript document:

```
foo2hp2600-wrapper -c testpage.ps > testpage.zc
```

FILES

/usr/bin/foo2hp2600-wrapper

SEE ALSO

foo2hp(1), zjsdecode(1)

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
<http://foo2hp.rkkda.com/>

NAME

foo2hp – Convert Ghostscript pbmraw or bitcmyk format into a ZJS printer stream

SYNOPSIS

foo2hp [*options*] <*pbmraw-file*> >*zjs-file*

foo2hp [*options*] <*bitcmyk-file*> >*zjs-file*

foo2hp [*options*] <*cups-file*> >*zjs-file*

DESCRIPTION

foo2hp converts Ghostscript pbmraw, bitcmyk, or cups output formats to monochrome or color ZJS streams, for driving the Hewlett-Packard 2600n color laser printer and other Zenographics-based printers.

COMMAND LINE OPTIONS

Normal Options

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-b *bits* Bits per plane if autodetect doesn't work (1 or 2) [1].

-c Force color mode if autodetect doesn't work.

-d *duplex*
Duplex code to send to printer [1].

| 1 off | 2 long edge | 3 short edge

-g *xpixxypix*
Set page dimensions in pixels [10200x6600].

-m *media*
Media code to send to printer [1].

| Media | HPLJ 2600n |
|--------------|------------|
| plain | 1 |
| preprinted | 514 |
| letterhead | 513 |
| transparency | 2 |
| prepunched | 515 |
| labels | 265 |
| bond | 260 |
| recycled | 516 |
| color | 512 |
| tough | 276 |
| envelope | 267 |
| light | 258 |
| heavy | 262 |
| cardstock | 261 |
| lightglossy | 268 |
| glossy | 269 |
| heavyglossy | 270 |
| cover | 277 |
| photo | 278 |

-p *paper*

Paper code to send to printer [1].

| | | | |
|----|-------------|----|--------|
| 1 | letter | 9 | A4 |
| 5 | legal | 11 | A5 |
| 7 | executive | 13 | B5jis |
| 20 | env #10 | 27 | env DL |
| 28 | env C5 | 34 | env B5 |
| 37 | env Monarch | | |

-n *copies*

Number of copies [1].

-r *xresxyres*

Set device resolution in pixels/inch [600x600].

-s *source*

Source (InputSlot) code to send to printer [7].

| | | | |
|---|--------|---|------|
| 1 | tray 2 | 7 | auto |
| 2 | tray 1 | | |

-t Draft mode. Every other pixel is white.

-J *filename*

Filename string to send to printer.

-U *username*

Username string to send to printer.

Printer Tweaking Options

These are the options used to customize the operation of **foo2hp** for a particular printer.

-u *xoffxyoff*

Set the offset of the start of the printable region from the upper left corner, in pixels [0x0].

-l *xoffxyoff*

Set the offset of the end of the printable region from the lower right corner, in pixels [0x0].

-L *mask*

Send logical clipping amounts implied by -u/-l in the ZjStream [3].

- 0 don't send any logical clipping amounts
- 1 only send Y clipping amount
- 2 only send X clipping amount
- 3 send both X and Y clipping amounts

-O *c,m,y,k*

Alignment of CMYK in rows. The default is 0,0,0,0.

-P Do not send START_PLANE codes on monochrome output. May be needed by some black and white only printers, such as the HP LaserJet 1000.

-A AllIsBlack: convert C=1,M=1,Y=1 to just K=1. Works with bitcmyk input only.

-B BlackClears: K=1 forces C,M,Y to 0. Works with bitcmyk input only.

-X *padlen*

Add extra zero padding to the end of BID segments. The default is 16 bytes.

Debugging Options

These options are used for debugging **foo2hp**.

-S *plane*

Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.

- 1 Cyan
- 2 Magenta
- 3 Yellow
- 4 Black

-D level

Set Debug level [0].

EXAMPLES

Create a black and white ZJS stream:

```
gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
-sPAPERSIZE=letter -r600x600 -sDEVICE=pbmraw
-sOutputFile=- - < testpage.ps
| foo2hp -r600x600 -g5100x6600 -p1 >testpage.zm
```

Create a color ZJS stream:

```
gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
-sPAPERSIZE=letter -g5100x6600 -r600x600 -sDEVICE=bitcmyk
-sOutputFile=- - < testpage.ps
| foo2hp -r600x600 -g5100x6600 -p1 >testpage.zc
```

FILES

`/usr/bin/foo2hp`

SEE ALSO

`foo2hp2600-wrapper(1)`, `zjsdecode(1)`

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
<http://foo2hp.rkkda.com/>

NAME

foo2xqx-wrapper – Convert Postscript into a XQX printer stream

SYNOPSIS

foo2xqx-wrapper [*options*] [*ps-file*]

DESCRIPTION

foo2xqx-wrapper is a Foomatic compatible printer wrapper for the **foo2xqx** printer driver. This script reads a Postscript *ps-file* or standard input and converts it to XQX printer format for driving the HP LaserJet P1005/P1006/P1007/P1008, the HP LaserJet P1505, the HP LaserJet P2014, the HP LaserJet M1005 MFP, the HP LaserJet M1120 MFP, and other XQX-based printers.

This script can be used in a standalone fashion, but is intended to be called from a printer spooler system which uses the Foomatic printer database.

COMMAND LINE OPTIONS**Normal Options**

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-d duplex

Duplex code to send to printer [1].

| 1 off | 2 long edge | 3 short edge

-m media

Media code to send to printer [1].

| Media | M1005 |
|--------------|-------|
| standard | 1 |
| transparency | 2 |
| envelope | 257 |
| letterhead | 259 |
| thick | 261 |
| postcard | 262 |
| labels | 263 |

-p paper

Paper size code to send to printer [1].

| | | | |
|----|-------------|----|--------|
| 1 | letter | 9 | A4 |
| 5 | legal | 11 | A5 |
| 7 | executive | 13 | B5 |
| 20 | env #10 | 27 | env DL |
| 28 | env C5 | 34 | env B5 |
| 37 | env Monarch | | |

-n copies

Number of copies [1].

-r xresxyres

Set device resolution in pixels/inch [1200x600].

-s source

Source (Input Slot) code to send to printer [7].

| | | | |
|---|-------|---|--------|
| 1 | upper | 4 | manual |
| 2 | lower | 7 | auto |

- t** Draft mode. Every other pixel is white.
- 2 -3 -4 -5 -6 -8 -9 -10 -12 -14 -15 -16 -18**
Print in N-up. Requires the **psutils** package.
- o orient**
Orientation used for N-up.
 - Portrait -op (normal)
 - Landscape -ol (rotated 90 degrees anticlockwise)
 - Seascape -os (rotated 90 degrees clockwise)

Printer Tweaking Options

These are the options used to customize the operation of **foo2xqx** for a particular printer.

- u xoff xyoff**
Set the offset of the start of the printable region from the upper left corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.
- l xoff xyoff**
Set the offset of the end of the printable region from the lower right corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.
- L mask**
Send the logical clipping values from -u/-l in the ZjStream. **foo2xqx-wrapper** always runs Ghostscript with the ideal page dimensions, so that the scale of the image is correct, regardless whether or not the printer has unprintable regions. This option is used to move the position of the clipped image back to where it belongs on the page. The default is to send the amount which was clipped by -u and -l, and should be good in most cases.
 - 0 don't send any logical clipping amounts
 - 1 only send Y clipping amount
 - 2 only send X clipping amount
 - 3 send both X and Y clipping amounts

Debugging Options

These options are used for debugging **foo2xqx** and its wrapper.

- D level**
Set Debug level [0].

EXAMPLES

Create a monochrome ZjStream from a Postscript document, examine it, and then print it using a RAW print queue:

```
foo2xqx-wrapper testpage.ps > testpage.xqx
xqxdecode < testpage.xqx
lpr -P raw testpage.xqx
```

FILES

/usr/bin/foo2xqx-wrapper

SEE ALSO

foo2xqx(1), **xqxdecode(1)**

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
<http://foo2xqx.rkkda.com/>

NAME

foo2xqx – Convert Ghostscript pbmraw into a XQX printer stream

SYNOPSIS

foo2xqx [*options*] <*pbmraw-file*> *xqx-file*

DESCRIPTION

foo2xqx converts Ghostscript pbmraw to monochrome XQX streams, for driving the HP LaserJet P1005/P1006/P1007/P1008, the HP LaserJet P1505, the HP LaserJet P2014, the HP LaserJet M1005 MFP, the HP LaserJet M1120 MFP, and other XQX-based printers.

COMMAND LINE OPTIONS**Normal Options**

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-d duplex

Duplex code to send to printer [1].

| | | | | | |
|---|-----|---|-----------|---|------------|
| 1 | off | 2 | long edge | 3 | short edge |
|---|-----|---|-----------|---|------------|

-g xpixxypix

Set page dimensions in pixels [10200x6600].

-m media

Media code to send to printer [1].

| Media | M1005 |
|--------------|-------|
| standard | 1 |
| transparency | 2 |
| envelope | 257 |
| letterhead | 259 |
| thick | 261 |
| postcard | 262 |
| labels | 263 |

-p paper

Paper code to send to printer [1].

| | | | |
|----|-------------|----|--------|
| 1 | letter | 9 | A4 |
| 5 | legal | 11 | A5 |
| 7 | executive | 13 | B5 |
| 20 | env #10 | 27 | env DL |
| 28 | env C5 | 34 | env B5 |
| 37 | env Monarch | | |

-n copies

Number of copies [1].

-r xresxyres

Set device resolution in pixels/inch [1200x600].

-s source

Source (InputSlot) code to send to printer [7].

| | | | |
|---|-------|---|--------|
| 1 | upper | 4 | manual |
| 2 | lower | 7 | auto |

- t** Draft mode. Every other pixel is white.
- J** *filename*
Filename string to send to printer.
- U** *username*
Username string to send to printer.

Printer Tweaking Options

These are the options used to customize the operation of **foo2xqx** for a particular printer.

- u** *xoff xyoff*
Set the offset of the start of the printable region from the upper left corner, in pixels [0x0].
- l** *xoff xyoff*
Set the offset of the end of the printable region from the lower right corner, in pixels [0x0].
- L** *mask*
Send logical clipping amounts implied by -u/-l in the ZjStream [3].
 - 0 don't send any logical clipping amounts
 - 1 only send Y clipping amount
 - 2 only send X clipping amount
 - 3 send both X and Y clipping amounts
- A** AllIsBlack: convert C=1,M=1,Y=1 to just K=1. Works with bitcmyk input only.
- B** BlackClears: K=1 forces C,M,Y to 0. Works with bitcmyk input only.

Debugging Options

These options are used for debugging **foo2xqx**.

- S** *plane*
Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.
 - 1 Cyan
 - 2 Magenta
 - 3 Yellow
 - 4 Black
- D** *level*
Set Debug level [0].

EXAMPLES

Create a black and white XQX stream:

```
gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
-sPAPERSIZE=letter -r1200x600 -sDEVICE=pbmraw
-sOutputFile=- - < testpage.ps
| foo2xqx -r1200x600 -g10200x6600 -p1 >testpage.zm
```

FILES

/usr/bin/foo2xqx

SEE ALSO

foo2xqx-wrapper(1), **xqxdecode(1)**

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
<http://foo2xqx.rkkda.com/>

NAME

xqxdecode – Decode a XQX stream into human readable form.

SYNOPSIS

xqxdecode [*options*] <*xqx-file*

DESCRIPTION

xqxdecode decodes a XQX stream into human readable form.

An XQX stream is the printer language used by some HP LaserJet printers, such as the HP LaserJet M1005 (MFP).

COMMAND LINE OPTIONS

These are the options that can appear on the command line.

- d** *basename*
 Basename of .pbm file for saving decompressed planes.
- h** Print hex file offsets.
- o** Print file offsets.
- D** *level*
 Set Debug level [0].

EXAMPLES

Decode an XQX stream file created by foo2xqx.

```
$ xqxdecode -h < testpage.xm
0: \033%-12345X@PJL JOB
12: @PJL SET JAMRECOVERY=OFF
2b: @PJL SET DENSITY=3
3e: @PJL SET ECONOMODE=OFF
55: @PJL SET RET=MEDIUM
69: @PJL INFO STATUS
7a: @PJL USTATUS DEVICE = ON
93: @PJL USTATUS JOB = ON
a9: @PJL USTATUS PAGE = ON
c0: @PJL USTATUS TIMED = 30
10c: @PJL SET JOBATTR="JobAttr4=20061118160242"
10c: XQX_MAGIC, 0x5851582c (,XQX)
110: XQX_START_DOC(1), 7 items
118:           XQX_0x80000000, 84 (0x54)
124:           XQX_0x10000005, 1 (0x1)
130:           XQX_0x10000001, 0 (0x0)
13c:           XQXI_DMDUPLEX, 0 (0x0)
148:           XQX_0x10000000, 0 (0x0)
154:           XQX_0x10000003, 1 (0x1)
160:           XQXI_END, 3735928559 (0xdeadbeef)
16c: XQX_START_PAGE(3), 15 items [Page 1]
174:           XQX_0x80000000, 180 (0xb4)
180:           XQX_0x20000005, 1 (0x1)
18c:           XQXI_DMDEFAULTSOURCE, 7 (0x7)
198:           XQXI_DMEDIATYPE, 1 (0x1)
1a4:           XQX_0x20000007, 1 (0x1)
1b0:           XQXI_RESOLUTION_X, 600 (0x258)
```

```

1bc:      XQXI_RESOLUTION_Y, 600 (0x258)
1c8:      XQXI_RASTER_X, 9856 (0x2680)
1d4:      XQXI_RASTER_Y, 6432 (0x1920)
1e0:      XQXI_VIDEO_BPP, 2 (0x2)
1ec:      XQXI_VIDEO_X, 4923 (0x133b)
1f8:      XQXI_VIDEO_Y, 6432 (0x1920)
204:      XQXI_ECONOMODE, 0 (0x0)
210:      XQX_0x20000001, 1 (0x1)
21c:      XQXI_END, 3735928559 (0xdeadbeef)
228: XQX_START_PLANE(5), 4 items
230:      XQX_0x80000000, 64 (0x40)
23c:      XQX_0x40000000, 0 (0x0)
248:      XQXI_BIH(0x40000002)
          DL = 0, D = 0, P = 1, - = 0, XY = 9856 x 6432
          L0 = 128, MX = 16, MY = 0
          Order = 3 ILEAVE SMID
          Options = 92 LRLTWO TPDON TPBON DPON
          51 stripes, 0 layers, 1 planes

264:      XQXI_END, 3735928559 (0xdeadbeef)
270: XQX_JBIG(7), 110 items
2e6: XQX_END_PLANE(6), 0 items
2ee: XQX_END_PAGE(4), 0 items
2f6: XQX_END_DOC(2), 0 items
Total size: 110 bytes
0: \033%-12345X@PJL EOJ
12: \033%-12345X

```

FILES

`/usr/bin/xqxdecode`

SEE ALSO

`foo2xqx-wrapper(1)`, `foo2xqx(1)`

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
<http://foo2xqx.rkkda.com/>

NAME

foo2lava-wrapper – Convert Postscript into a LAVAFLOW or OPL printer stream

SYNOPSIS

foo2lava-wrapper [*options*] [*ps-file*]

DESCRIPTION

foo2lava-wrapper is a Foomatic compatible printer wrapper for the **foo2lava** printer driver. This script reads a Postscript *ps-file* or standard input and converts it to Zenographics LAVAFLOW printer format for driving the Konica Minolta magicolor 1600W color laser printer, the Konica Minolta magicolor 1680MF/1690MF AIO printer, the Konica Minolta magicolor 2480/2490 MF AIO printer, the Konica Minolta magicolor 2530 DL network color laser printer, and other Zenographics-based LAVAFLOW printers.

This script can be used in a standalone fashion, but is intended to be called from a printer spooler system which uses the Foomatic printer database.

COMMAND LINE OPTIONS**Normal Options**

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-c Print in color (else monochrome).

-C *colormode*

Color correction mode [0].

- 1 Photos (using m2300w CRDs)
- 2 Photos and text (using m2300w CRDs)
- 3 Graphics and text (using m2300w CRDs)
- 10 ICM color profile (using -G *.icm file)

-d *duplex*

Duplex code to send to printer [1].

| 1 off | 2 long edge | 3 short edge

-m *media*

Media code to send to printer [0].

| Media | 2530DL |
|--------------|--------|
| plain | 0 |
| transparency | 4 |
| thick stock | 20 |
| envelope | 22 |
| letterhead | 23 |
| postcard | 25 |
| labels | 26 |
| recycled | 27 |

-p *paper*

Paper size code to send to printer [2].

| | | | |
|-----|-------------|-----|---------------|
| 1 | executive | 25 | A5 |
| 2 | letter | 26 | A4 |
| 3 | legal | 45 | B5jis |
| 80 | env Monarch | 65 | B5iso |
| 81 | env #10 | 90 | env DL |
| 91 | env C5 | 92 | env B5 |
| 835 | 4x6" photo | 837 | 10x15cm photo |

-n *copies*

Number of copies [1].

-r *xresxyres*

Set device resolution in pixels/inch [1200x600].

-s *source*

Source (Input Slot) code to send to printer [255].

| | | | |
|---|--------|-----|------|
| 1 | Tray 1 | 255 | auto |
| 4 | Tray 2 | | |

-t Draft mode. Every other pixel is white.**-2 -3 -4 -5 -6 -8 -9 -10 -12 -14 -15 -16 -18**

Print in N-up. Requires the **psutils** package.

-o *orient*

Orientation used for N-up.

| | | |
|-----------|-----|------------------------------------|
| Portrait | -op | (normal) |
| Landscape | -ol | (rotated 90 degrees anticlockwise) |
| Seascape | -os | (rotated 90 degrees clockwise) |

Printer Tweaking Options

These are the options used to customize the operation of **foo2lava** for a particular printer.

-u *xoffxyoff*

Set the offset of the start of the printable region from the upper left corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

-l *xoffxyoff*

Set the offset of the end of the printable region from the lower right corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

-L *mask*

Send the logical clipping values from -u/-l in the LAVAFLOW stream. **foo2lava-wrapper** always runs Ghostscript with the ideal page dimensions, so that the scale of the image is correct, regardless whether or not the printer has unprintable regions. This option is used to move the position of the clipped image back to where it belongs on the page. The default is to send the amount which was clipped by -u and -l, and should be good in most cases.

| | |
|---|---|
| 0 | don't send any logical clipping amounts |
| 1 | only send Y clipping amount |
| 2 | only send X clipping amount |
| 3 | send both X and Y clipping amounts |

-z *model*

Model. The default is [0].

| model | protocol | Description |
|-------|----------|-------------------|
| 0 | LAVAFLOW | magicolor 2490 MF |

| | | |
|---|----------|-------------------|
| 0 | LAVAFLOW | magicolor 2530 DL |
| 1 | OPL | magicolor 2480 MF |
| 2 | LAVAFLOW | magicolor 1600W |
| 2 | LAVAFLOW | magicolor 1680MF |
| 2 | LAVAFLOW | magicolor 1690MF |

Color Tweaking Options

These are the options used to control the quality of color output. Color correction is currently a WORK IN PROGRESS.

-g *gsopts*

Additional options to pass to Ghostscript, such as -g“-dDITHERPPI=nnn”, etc. This option may appear more than once.

-G *profile.icm*

Convert *profile.icm* to a Postscript color rendering dictionary (CRD) using **foo2zjs-icc2ps** and adjust the printer colors by using the Postscript **setcolorrendering** operator. (WORK IN PROGRESS).

-G *gamma-file.ps*

Prepend *gamma-file.ps* to the Postscript input to perform color correction using the **setcolortransfer** Postscript operator. For example, the file might contain:

```
{0.333 exp} {0.333 exp} {0.333 exp} {0.333 exp} setcolortransfer
```

-I *intent*

Select profile intent from the ICM file. 0=Perceptual, 1=Colorimetric, 2=Saturation, 3=Absolute. Default is 0 (perceptual).

Debugging Options

These options are used for debugging **foo2lava** and its wrapper.

-S *plane*

Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.

- 1 Cyan
- 2 Magenta
- 3 Yellow
- 4 Black

-D *level*

Set Debug level [0].

EXAMPLES

Create a monochrome LAVAFLOW stream from a Postscript document, examine it, and then print it using a RAW print queue:

```
foo2lava-wrapper testpage.ps > testpage.zm
lavadecode < testpage.zm
lpr -P raw testpage.zm
```

Create a color LAVAFLOW stream from a Postscript document:

```
foo2lava-wrapper -c testpage.ps > testpage.zc
```

FILES

/usr/bin/foo2lava-wrapper

SEE ALSO

foo2lava(1), lavadecode(1) opldecode(1)

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
<http://foo2zjs.rkkda.com/>

NAME

foo2lava – Convert Ghostscript pbmraw or bitcmk format into a LAVAFLOW or a OPL printer stream

SYNOPSIS

foo2lava [*options*] <*pbmraw-file*> *lava-file*

foo2lava [*options*] <*bitcmk-file*> *lava-file*

foo2lava [*options*] <*pksmraw-file*> *lava-file*

DESCRIPTION

foo2lava converts Ghostscript pbmraw, bitcmk, or pksmraw output formats to monochrome or color LAVAFLOW or OPL streams, for driving the Konica Minolta magicolor 2530 DL network color laser printer, the Konica Minolta magicolor 2480/2480 MF AIO printer, and other Zenographics-based LAVAFLOW printers.

COMMAND LINE OPTIONS

Normal Options

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-c Force color mode if autodetect doesn't work.

-d duplex
Duplex code to send to printer [1].
| 1 off | 2 long edge | 3 short edge

-g xpixxypix
Set page dimensions in pixels [10200x6600].

-m media
Media code to send to printer [0].

| Media | 2530DL |
|--------------|--------|
| plain | 0 |
| transparency | 4 |
| thick stock | 20 |
| envelope | 22 |
| letterhead | 23 |
| postcard | 25 |
| labels | 26 |
| recycled | 27 |

-p paper
Paper code to send to printer [2].

| | | | |
|-----|-------------|-----|---------------|
| 1 | executive | 25 | A5 |
| 2 | letter | 26 | A4 |
| 3 | legal | 45 | B5jis |
| 80 | env Monarch | 65 | B5iso |
| 81 | env #10 | 90 | env DL |
| 91 | env C5 | 92 | env C6 |
| 835 | 4x6" photo | 837 | 10x15cm photo |

- n** *copies*
Number of copies [1].
- r** *xresxyres*
Set device resolution in pixels/inch [1200x600].
- s** *source*
Source (InputSlot) code to send to printer [255].

| | | | |
|---|--------|-----|------|
| 1 | Tray 1 | 255 | auto |
| 4 | Tray 2 | | |
- t** Draft mode. Every other pixel is white.
- J** *filename*
Filename string to send to printer.
- U** *username*
Username string to send to printer.

Printer Tweaking Options

These are the options used to customize the operation of **foo2lava** for a particular printer.

- u** *xoffxyoff*
Set the offset of the start of the printable region from the upper left corner, in pixels [0x0].
- l** *xoffxyoff*
Set the offset of the end of the printable region from the lower right corner, in pixels [0x0].
- L** *mask*
Send logical clipping amounts implied by -u/-l in the LAVAFLW stream [3].

| | |
|---|---|
| 0 | don't send any logical clipping amounts |
| 1 | only send Y clipping amount |
| 2 | only send X clipping amount |
| 3 | send both X and Y clipping amounts |
- A** AllIsBlack: convert C=1,M=1,Y=1 to just K=1. Works with bitcmyk input only.
- B** BlackClears: K=1 forces C,M,Y to 0. Works with bitcmyk input only.
- z** *model*
Model. The default is [0].

| model | protocol | Description |
|-------|----------|-------------------|
| 0 | LAVAFLW | magicolor 2490 MF |
| 0 | LAVAFLW | magicolor 2530 DL |
| 1 | OPL | magicolor 2480 MF |
| 2 | LAVAFLW | magicolor 1600W |
| 2 | LAVAFLW | magicolor 1680MF |
| 2 | LAVAFLW | magicolor 1690MF |

Debugging Options

These options are used for debugging **foo2lava**.

- S** *plane*
Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.

| | |
|---|---------|
| 1 | Cyan |
| 2 | Magenta |
| 3 | Yellow |
| 4 | Black |

-D *level*
Set Debug level [0].

EXAMPLES

Create a black and white LAVAFLOW stream:

```
gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE  
-sPAPERSIZE=letter -r1200x600 -sDEVICE=pbmraw  
-sOutputFile=- - < testpage.ps  
| foo2lava -r1200x600 -g10200x6600 -p1 >testpage.zm
```

Create a color LAVAFLOW stream:

```
gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE  
-sPAPERSIZE=letter -g10200x6600 -r1200x600 -sDEVICE=bitcmk  
-sOutputFile=- - < testpage.ps  
| foo2lava -r1200x600 -g10200x6600 -p1 >testpage.zc
```

FILES

`/usr/bin/foo2lava`

SEE ALSO

`foo2lava-wrapper(1)`, `lavadecode(1)`

AUTHOR

Rick Richardson <rick.richardson@comcast.com>
<http://foo2zjs.rkkda.com/>

NAME

lavadecode – Decode a LAVAFLOW stream into human readable form.

SYNOPSIS

lavadecode [*options*] <*lavaflow-file*

DESCRIPTION

lavadecode decodes a LAVAFLOW stream into human readable form.

A LAVAFLOW stream is the printer language used by some Konica Minolta printers, such as the KM magicolor 2530 DL.

COMMAND LINE OPTIONS

These are the options that can appear on the command line.

-d *basename*

Basename of .pbm file for saving decompressed planes.

-h Print hex file offsets.

-o Print file offsets.

-D *level*

 Set Debug level [0].

EXAMPLES

Decode an LAVAFLOW stream file created by foo2lava.

```
$ lavadecode -h < testpage.prn
0: \033%-12345X@PJL JOB NAME="stdin"
1f: \033%-12345X@PJL JOB USERNAME=""
3d: \033%-12345X@PJL JOB TIMESTAMP="07/20/2007"
66: \033%-12345X@PJL JOB OSINFO="Linux/2.6.20-1.2316.fc5"
99: \033%-12345X@PJL ENTER LANGUAGE=LAVAFLOW
bf: \033E                              RESET
c1: \033&l10S                          DUPLEX: [off]
c6: \033&l10G
cb: \033&u1200D                        X RESOLUTION: [1200]
d3: \033&l11X                          COPIES: [1]
d8: \033&x1X                          TRANSMIT ONCE COPIES: [1]
dd: \033&l10O                          ORIENTATION: [port]
e2: \033*r1U                          NBIE: [1]
e7: \033*g8W                          BW/COLOR: [8]
                                      fmt=2 np=1
                                      BLACK: X=1200, Y=600, unk=0, #=4(2)
f4: \033*b1234M                        COMPRESSION: [1234]
fc: \033&l12A                          PAGE SIZE: [letter]
101: \033&l1255H                      PAPER SOURCE: [auto]
108: \033&l10M                        MEDIA TYPE: [plain]
10d: \033&l10E                        TOP MARGIN: [0]
112: \033*r9792S                      X RASTER: [9792,0x2640]
11a: \033*r6400T                      Y RASTER: [6400,0x1900]
122: \033&l10U
127: \033&l10Z
12c: \033*p200X                        X OFFSET: [200]
133: \033*p200Y                        Y OFFSET: [200]
```

```

13a: \033*r1A          [Page 1]
13f: \033*b20V        [black]
                        DL = 0, D = 0, P = 1, - = 0, XY = 9792 x 6400
                        L0 = 128, MX = 0, MY = 0
                        Order   = 3   ILEAVE SMID
                        Options = 92   LRLTWO TPDON TPBON DPON
                        50 stripes, 0 layers, 1 planes
159: \033*b65536V      JBIG data (first) [65536,0x10000]
                        ff 02 c2 79 54 3e be e1 a0 de 08 9a b1 d2 c2 59
... ae 88 ef a7 c7 96 d3 96 a6 d7 2c 06 38 75 22 44
10162: \033*b26432W    JBIG data (end) [26432,0x6740]
                        0e 89 66 ce 01 41 41 41 41 41 41 41 41 41 41
... 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
168ab: \033*x3887138K  BLACK DOTS: [3887138]
168b6: \033*x58781662W BLACK WHITEDOTS: [58781662]
168c2: \033*rC         END PAGE
168c6: \033&l0H        PAPER SOURCE: [eject]
168cb: \033E          RESET
168cd: \033%-12345X

```

FILES

/usr/bin/lavadecode

SEE ALSO

foo2lava-wrapper(1), foo2lava(1)

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
http://foo2lava.rkkda.com/

NAME

opldecode – Decode a Raster Object (opl) stream into human readable form.

SYNOPSIS

opldecode [*options*] <*zjs-file*

DESCRIPTION

opldecode decodes a Raster Object (opl) stream into human readable form.

A Raster Object stream is the printer language used by some Konica Minolta printers, such as the KM magicolor 2480 MF.

COMMAND LINE OPTIONS

These are the options that can appear on the command line.

- d** *basename*
 Basename of .pbm file for saving decompressed planes.
- h** Print hex file offsets.
- o** Print file offsets.
- D** *level*
 Set Debug level [0].

EXAMPLES

Decode an Raster Object stream file created by foo2lava-wrapper -z1.

```
$ foo2lava-wrapper -z1 testpage.ps | opldecode -h
 0:      Event=StartOfJob;
11:      OSVersion=WindowsXP;
25:      DrvVersion=2.0.1410.0;
3b:      Resolution=1200x600;
4f:      RasterObject.Compression=JBIG;
6d:      Sides=OneSided;
7c:      MediaSize=custom_size_8.5x11in;
9b:      MediaType=plain;
ab:      MediaInputTrayCheck=top;
c3:      RasterObject.BitsPerPixel=1;
df:      RasterObject.Planes=00FFFF,0,0,0,0,0,0;
106:     RasterObject.Width=9792;
11e:     RasterObject.Height=6400;
137:     RasterObject.Data#20=

                                DL = 0, D = 0, P = 1, - = 0, XY = 9792 x 6400
                                L0 = 128, MX = 0, MY = 0
                                Order   = 3  ILEAVE SMID
                                Options  = 92  LRLTWO TPDON TPBON DPON
                                50 stripes, 0 layers, 1 planes
161:     RasterObject.Data#32768=
817a:    RasterObject.Data#32768=
10193:   RasterObject.Data#3168=
10e0b:   RasterObject.Planes=FF00FF,0,0,0,0,0,0;
10e32:   RasterObject.Width=9792;
10e4a:   RasterObject.Height=6400;
10e63:   RasterObject.Data#20=
```

```

DL = 0, D = 0, P = 1, - = 0, XY = 9792 x 6400
L0 = 128, MX = 0, MY = 0
Order   = 3  ILEAVE SMID
Options = 92  LRLTWO TPDON TPBON DPON
50 stripes, 0 layers, 1 planes
10e8d:  RasterObject.Data#32768=
18ea6:  RasterObject.Data#32768=
20ebf:  RasterObject.Data#19200=
259d8:  RasterObject.Planes=FFFF00,0,0,0,0,0,0;
259ff:  RasterObject.Width=9792;
25a17:  RasterObject.Height=6400;
25a30:  RasterObject.Data#20=

DL = 0, D = 0, P = 1, - = 0, XY = 9792 x 6400
L0 = 128, MX = 0, MY = 0
Order   = 3  ILEAVE SMID
Options = 92  LRLTWO TPDON TPBON DPON
50 stripes, 0 layers, 1 planes
25a5a:  RasterObject.Data#32768=
2da73:  RasterObject.Data#32768=
35a8c:  RasterObject.Data#32768=
3daa5:  RasterObject.Data#7056=
3f64d:  RasterObject.Planes=000000,0,0,0,0,0,0;
3f674:  RasterObject.Width=9792;
3f68c:  RasterObject.Height=6400;
3f6a5:  RasterObject.Data#20=

DL = 0, D = 0, P = 1, - = 0, XY = 9792 x 6400
L0 = 128, MX = 0, MY = 0
Order   = 3  ILEAVE SMID
Options = 92  LRLTWO TPDON TPBON DPON
50 stripes, 0 layers, 1 planes
3f6cf:  RasterObject.Data#32768=
476e8:  RasterObject.Data#17472=
4bb41:  Event=EndOfPage;
4bb51:  Event=EndOfJob;

```

FILES

`/usr/bin/opldecode`

SEE ALSO

`foo2lava-wrapper(1)`, `foo2opl(1)`

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
 \${URLRO}/

NAME

foo2qpdf-wrapper – Convert Postscript into a QPDL printer stream

SYNOPSIS

foo2qpdf-wrapper [*options*] [*ps-file*]

DESCRIPTION

foo2qpdf-wrapper is a Foomatic compatible printer wrapper for the **foo2qpdf** printer driver. This script reads a Postscript *ps-file* or standard input and converts it to Samsung/Xerox QPDL printer format for driving the Samsung CLP-300, CLX-2160, CLX-3160, CLP-315, CLX-3175, CLP-600, CLP-610, and Xerox Phaser 6110 QPDL printers.

This script can be used in a standalone fashion, but is intended to be called from a printer spooler system which uses the Foomatic printer database.

COMMAND LINE OPTIONS**Normal Options**

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-c Print in color (else monochrome).

-C *colormode*

Color correction mode [0].

1 CRD

10 ICM color profile (using -G *.icm file)

-d *duplex*

Duplex code to send to printer [1].

| 1 off | 2 long edge | 3 short edge

-m *media*

Media code to send to printer [0].

| Media | QPDL |
|--------------|------|
| plain | 0 |
| thick | 1 |
| thin | 2 |
| bond | 3 |
| color | 4 |
| card | 5 |
| labels | 6 |
| envelope | 7 |
| preprinted | 8 |
| cotton | 9 |
| recycled | 10 |
| transparency | 11 |
| archive | 12 |

-p *paper*

Paper size code to send to printer [0].

| | | | |
|----|----------|----|-------------|
| 0 | letter | 1 | legal |
| 2 | A4 | 3 | executive |
| 6 | env #10 | 7 | env Monarch |
| 8 | env C5 | 9 | env DL |
| 11 | B5jis | 12 | B5iso |
| 16 | A5 | 17 | A6 |
| 23 | env C6 | 24 | folio |
| 25 | env 6.75 | 26 | env #9 |
| 28 | oficio | | |

-n *copies*

Number of copies [1].

-r *xresxyres*

Set device resolution in pixels/inch [1200x600].

-s *source*

Source (Input Slot) code to send to printer [255].

| | | | |
|---|-------|---|--------|
| 1 | auto | 2 | manual |
| 3 | multi | 4 | tray1 |

-t Draft mode. Every other pixel is white.

-2 -3 -4 -5 -6 -8 -9 -10 -12 -14 -15 -16 -18

Print in N-up. Requires the **psutils** package.

-o *orient*

Orientation used for N-up.

| | | |
|-----------|-----|------------------------------------|
| Portrait | -op | (normal) |
| Landscape | -ol | (rotated 90 degrees anticlockwise) |
| Seascape | -os | (rotated 90 degrees clockwise) |

Printer Tweaking Options

These are the options used to customize the operation of **foo2qpdf** for a particular printer.

-u *xoffxyoff*

Set the offset of the start of the printable region from the upper left corner, in pixels [varies with paper size].

-l *xoffxyoff*

Set the offset of the end of the printable region from the lower right corner, in pixels [varies with paper size].

-L *mask*

Send the logical clipping values from -u/-l in the QPDF stream. **foo2qpdf-wrapper** always runs Ghostscript with the ideal page dimensions, so that the scale of the image is correct, regardless whether or not the printer has unprintable regions. This option is used to move the position of the clipped image back to where it belongs on the page. The default is to send the amount which was clipped by -u and -l, and should be good in most cases.

| | |
|---|---|
| 0 | don't send any logical clipping amounts |
| 1 | only send Y clipping amount |
| 2 | only send X clipping amount |
| 3 | send both X and Y clipping amounts |

-z *model*

Printer model. Model 0 is the default.

| model | Description |
|-------|-----------------------------|
| 0 | CLP-300, CLX-2160, CLX-3160 |

- 1 CLP-600
- 2 CLP-310, CLP-315, CLP-610, CLX-3175

Color Tweaking Options

These are the options used to control the quality of color output. Color correction is currently a WORK IN PROGRESS.

-g *gsopts*

Additional options to pass to Ghostscript, such as `-g“-dDITHERPPI=nnn”`, etc. This option may appear more than once.

-G *profile.icm*

Convert *profile.icm* to a Postscript color rendering dictionary (CRD) using **foo2zjs-icc2ps** and adjust the printer colors by using the Postscript **setcolorrendering** operator. (WORK IN PROGRESS).

-G *gamma-file.ps*

Prepend *gamma-file.ps* to the Postscript input to perform color correction using the **setcolortransfer** Postscript operator. For example, the file might contain:
`{0.333 exp} {0.333 exp} {0.333 exp} {0.333 exp} setcolortransfer`

-I *intent*

Select profile intent from the ICM file. 0=Perceptual, 1=Colorimetric, 2=Saturation, 3=Absolute. Default is 0 (perceptual).

Debugging Options

These options are used for debugging **foo2qpdf** and its wrapper.

-S *plane*

Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.

- 1 Cyan
- 2 Magenta
- 3 Yellow
- 4 Black

-D *level*

Set Debug level [0].

EXAMPLES

Create a monochrome QPDF stream from a Postscript document, examine it, and then print it using a RAW print queue:

```
foo2qpdf-wrapper testpage.ps > testpage.zm
qpdfdecode < testpage.zm
lpr -P raw testpage.zm
```

Create a color QPDF stream from a Postscript document:

```
foo2qpdf-wrapper -c testpage.ps > testpage.zc
```

FILES

`/usr/bin/foo2qpdf-wrapper`

SEE ALSO

foo2qpdf(1), **qpdfdecode(1)**

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
<http://foo2qpdf.rkkda.com/>

NAME

foo2qpd1 – Convert Ghostscript pbmraw or bitcmyk format into a QPDL printer stream

SYNOPSIS

foo2qpd1 [*options*] <*pbmraw-file*> *qpd1-file*

foo2qpd1 [*options*] <*bitcmyk-file*> *qpd1-file*

foo2qpd1 [*options*] <*pksmraw-file*> *qpd1-file*

DESCRIPTION

foo2qpd1 converts Ghostscript pbmraw, bitcmyk, or pksmraw output formats to monochrome or color QPDL streams, for driving the Samsung CLP-300, CLX-2160, CLP-600, CLX-3160, CLP-610 and the Xerox Phaser 6110 QPDL printers.

COMMAND LINE OPTIONS**Normal Options**

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-c Force color mode if autodetect doesn't work.

-d duplex

Duplex code to send to printer [1].

| 1 off | 2 long edge | 3 short edge

-g xpixxypix

Set page dimensions in pixels [10200x6600].

-m media

Media code to send to printer [0].

| Media | QPDL |
|--------------|------|
| plain | 0 |
| thick | 1 |
| thin | 2 |
| bond | 3 |
| color | 4 |
| card | 5 |
| labels | 6 |
| envelope | 7 |
| preprinted | 8 |
| cotton | 9 |
| recycled | 10 |
| transparency | 11 |
| archive | 12 |

-p paper

Paper code to send to printer [0].

| | | | |
|----|----------|----|-------------|
| 0 | letter | 1 | legal |
| 2 | A4 | 3 | executive |
| 6 | env #10 | 7 | env Monarch |
| 8 | env C5 | 9 | env DL |
| 11 | B5jis | 12 | B5iso |
| 16 | A5 | 17 | A6 |
| 23 | env C6 | 24 | folio |
| 25 | env 6.75 | 26 | env #9 |
| 28 | oficio | | |

- n** *copies*
Number of copies [1].
- r** *xresxyres*
Set device resolution in pixels/inch [1200x600].
- s** *source*
Source (InputSlot) code to send to printer [255].

| | | | |
|---|-------|---|--------|
| 1 | auto | 2 | manual |
| 3 | multi | 4 | tray1 |
- t** Draft mode. Every other pixel is white.
- J** *filename*
Filename string to send to printer.
- U** *username*
Username string to send to printer.

Printer Tweaking Options

These are the options used to customize the operation of **foo2qpd1** for a particular printer.

- u** *xoffxyoff*
Set the offset of the start of the printable region from the upper left corner, in pixels [0x0].
- l** *xoffxyoff*
Set the offset of the end of the printable region from the lower right corner, in pixels [0x0].
- L** *mask*
Send logical clipping amounts implied by -u/-l in the QPDL stream [3].
 - 0 don't send any logical clipping amounts
 - 1 only send Y clipping amount
 - 2 only send X clipping amount
 - 3 send both X and Y clipping amounts
- A** AllIsBlack: convert C=1,M=1,Y=1 to just K=1. Works with bitcmk input only.
- B** BlackClears: K=1 forces C,M,Y to 0. Works with bitcmk input only.
- z** *model*
Printer model. Model 0 is the default.

| model | Description |
|-------|-------------------------------------|
| 0 | CLP-300, CLX-2160, CLX-3160 |
| 1 | CLP-600 |
| 2 | CLP-310, CLP-315, CLP-610, CLX-3175 |

Debugging Options

These options are used for debugging **foo2qpd1**.

- S** *plane*
Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.

- 1 Cyan
- 2 Magenta
- 3 Yellow
- 4 Black

-D level

Set Debug level [0].

EXAMPLES

Create a black and white QPDL stream:

```
gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
-sPAPERSIZE=letter -r1200x600 -sDEVICE=pbmraw
-sOutputFile=- - < testpage.ps
| foo2qpd1 -r1200x600 -g10200x6600 -p0 >testpage.zm
```

Create a color QPDL stream:

```
gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
-sPAPERSIZE=letter -g10200x6600 -r1200x600 -sDEVICE=bitcmk
-sOutputFile=- - < testpage.ps
| foo2qpd1 -r1200x600 -g10200x6600 -p0 >testpage.zc
```

FILES

/usr/bin/foo2qpd1

SEE ALSO

foo2qpd1-wrapper(1), **qpd1decode(1)**

AUTHOR

Rick Richardson <rick.richardson@comcast.com>
<http://foo2qpd1.rkkda.com/>

NAME

qpdldcode – Decode a QPDL stream into human readable form.

SYNOPSIS

qpdldcode [*options*] <*qpdld-file*

DESCRIPTION

qpdldcode decodes a QPDL stream into human readable form. Only the JBIG compression format (0x13) is handled.

An QPDL stream is the printer language used by the Samsung CLP-300, CLP-600, CLX-3160 and the Xerox Phaser 6110 printers.

COMMAND LINE OPTIONS

These are the options that can appear on the command line.

- d** *basename*
Basename of .pbm file for saving decompressed planes.
- h** Print hex file offsets.
- o** Print file offsets.
- D** *level*
Set Debug level [0].

EXAMPLES

Decode an QPDL stream file created by foo2qpdld.

```

0:      \033%-12345X@PJL DEFAULT SERVICEDATE=20070212
2c:     @PJL SET USERNAME="Unknown"
49:     @PJL SET JOBNAME="testpage.pdf"
6a:     @PJL SET COLORMODE=COLOR
84:     @PJL SET PAPERTYPE = NORMAL
a1:     @PJL ENTER LANGUAGE = QPDL
bd:     RECTYPE 0x0 len=17
        res=600, copies=1, papersize=letter(0), w=2550, h=3300
        papersource=auto, unk=0, duplex=0:0, unk=0,2, unk=268(0x10c)
ce:     RECTYPE 0xc len=68(0x44)
        stripe=0, WB=1248(0x4e0), H=128(0x80), plane=4, comp=0x13,
        len=56(0x38)
        magic=0x39abcdef, len=20(0x14), unk=0,0,0,0,0,0,
        checksum=0x356
        DL = 0, D = 0, P = 1, - = 0, XY = 9984 x 6400
        L0 = 6400, MX = 0, MY = 0
        Order = 0
        Options = 72 LRLTWO TPBON
        1 stripes, 0 layers, 1 planes
112:    RECTYPE 0xc len=68(0x44)
        stripe=0, WB=1248(0x4e0), H=128(0x80), plane=1, comp=0x13,
        len=56(0x38)
        magic=0x39abcdef, len=20(0x14), unk=0,0,0,0,0,0,
        checksum=0x356
        DL = 0, D = 0, P = 1, - = 0, XY = 9984 x 6400
        L0 = 6400, MX = 0, MY = 0
        Order = 0

```

```

Options = 72  LRLTWO TPBON
1 stripes, 0 layers, 1 planes
156:  RECTYPE 0xc  len=68(0x44)
      stripe=0, WB=1248(0x4e0), H=128(0x80), plane=2, comp=0x13,
      len=56(0x38)
      magic=0x39abcdef, len=20(0x14), unk=0,0,0,0,0,0,
      checksum=0x356
      DL = 0, D = 0, P = 1, - = 0, XY = 9984 x 6400
      L0 = 6400, MX = 0, MY = 0
      Order = 0
      Options = 72  LRLTWO TPBON
      1 stripes, 0 layers, 1 planes
19a:  RECTYPE 0xc  len=68(0x44)
      stripe=0, WB=1248(0x4e0), H=128(0x80), plane=3, comp=0x13,
      len=56(0x38)
      magic=0x39abcdef, len=20(0x14), unk=0,0,0,0,0,0,
      checksum=0x356
      DL = 0, D = 0, P = 1, - = 0, XY = 9984 x 6400
      L0 = 6400, MX = 0, MY = 0
      Order = 0
      Options = 72  LRLTWO TPBON
      1 stripes, 0 layers, 1 planes
1de:  RECTYPE 0xc  len=77488(0x12eb0)
      stripe=1, WB=1248(0x4e0), H=128(0x80), plane=1, comp=0x13,
      len=77476(0x12ea4)
      magic=0x39abcdef, len=77440(0x12e80), unk=2000000,0,0,0,0,0,
      checksum=0x9326d7
1308e:  RECTYPE 0xc  len=77680(0x12f70)
      stripe=1, WB=1248(0x4e0), H=128(0x80), plane=2, comp=0x13,
      len=77668(0x12f64)
      magic=0x39abcdef, len=77632(0x12f40), unk=2000000,0,0,0,0,0,
      checksum=0x9367e5
25ffe:  RECTYPE 0xc  len=69232(0x10e70)
      stripe=1, WB=1248(0x4e0), H=128(0x80), plane=3, comp=0x13,
      len=69220(0x10e64)
      magic=0x39abcdef, len=69184(0x10e40), unk=2000000,0,0,0,0,0,
      checksum=0x83938a
36e6e:  RECTYPE 0xc  len=45616(0xb230)
      stripe=1, WB=1248(0x4e0), H=128(0x80), plane=4, comp=0x13,
      len=45604(0xb224)
      magic=0x39abcdef, len=45568(0xb200), unk=2000000,0,0,0,0,0,
      checksum=0x58015d
4209e:  RECTYPE 0x1  len=3
      copies=1
420a1:  RECTYPE 0x9  len=0
420a2:  \033%-12345X

```

FILES

/usr/bin/qpdldcode

SEE ALSO

foo2qpdld-wrapper(1), foo2qpdld(1)

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
<http://foo2qpd.l.rkkda.com/>

NAME

foo2slx-wrapper – Convert Postscript into a SLX printer stream

SYNOPSIS

foo2slx-wrapper [*options*] [*ps-file*]

DESCRIPTION

foo2slx-wrapper is a Foomatic compatible printer wrapper for the **foo2slx** printer driver. This script reads a Postscript *ps-file* or standard input and converts it to Software Imaging K.K. SLX printer format for driving the Lexmark C500 network color laser printer and other SLX-based printers.

This script can be used in a standalone fashion, but is intended to be called from a printer spooler system which uses the Foomatic printer database.

COMMAND LINE OPTIONS**Normal Options**

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-c Print in color (else monochrome).

-m *media*

Media code to send to printer [0].

| Media | SLX |
|--------------|-----|
| plain | 0 |
| transparency | 1 |
| labels | 2 |
| thick1 | 3 |
| envelope1 | 4 |
| thin | 5 |
| thick2 | 6 |
| envelope2 | 7 |
| middle | 8 |
| special | 9 |

-p *paper*

Paper size code to send to printer [6].

| | | | |
|----|-----------|----|--------|
| 6 | letter | 2 | A4 |
| 9 | legal | 4 | B5 |
| 8 | executive | 5 | B5iso |
| 10 | env #10 | 11 | env DL |

-n *copies*

Number of copies [1].

-r *xresxyres*

Set device resolution in pixels/inch [1200x600].

-s *source*

Source (Input Slot) code to send to printer [0].

| | | | |
|---|------|---|-----------|
| 0 | auto | 1 | cassette1 |
|---|------|---|-----------|

-2 -3 -4 -5 -6 -8 -9 -10 -12 -14 -15 -16 -18

Print in N-up. Requires the **psutils** package.

-o orient

Orientation used for N-up.

| | | |
|-----------|-----|------------------------------------|
| Portrait | -op | (normal) |
| Landscape | -ol | (rotated 90 degrees anticlockwise) |
| Seascape | -os | (rotated 90 degrees clockwise) |

Printer Tweaking Options

These are the options used to customize the operation of **foo2slx** for a particular printer.

-u xoff xyoff

Set the offset of the start of the printable region from the upper left corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

-l xoff xyoff

Set the offset of the end of the printable region from the lower right corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

-L mask

Send the logical clipping values from -u/-l in the ZjStream. **foo2slx-wrapper** always runs Ghostscript with the ideal page dimensions, so that the scale of the image is correct, regardless whether or not the printer has unprintable regions. This option is used to move the position of the clipped image back to where it belongs on the page. The default is to send the amount which was clipped by -u and -l, and should be good in most cases.

| | |
|---|---|
| 0 | don't send any logical clipping amounts |
| 1 | only send Y clipping amount |
| 2 | only send X clipping amount |
| 3 | send both X and Y clipping amounts |

Color Tweaking Options

These are the options used to control the quality of color output. Color correction is currently a WORK IN PROGRESS.

-g gsopts

Additional options to pass to Ghostscript, such as -g“-dDITHERPPI=nnn”, etc. This option may appear more than once.

-G profile.icm

Convert *profile.icm* to a Postscript color rendering dictionary (CRD) using **foo2zjs-icc2ps** and adjust the printer colors by using the Postscript **setcolorrendering** operator. (WORK IN PROGRESS).

-G gamma-file.ps

Prepend *gamma-file.ps* to the Postscript input to perform color correction using the **setcolortransfer** Postscript operator. For example, the file might contain:
{0.333 exp} {0.333 exp} {0.333 exp} {0.333 exp} setcolortransfer

-I intent

Select profile intent from the ICM file. 0=Perceptual, 1=Colorimetric, 2=Saturation, 3=Absolute. Default is 0 (perceptual).

Debugging Options

These options are used for debugging **foo2slx** and its wrapper.

-S plane

Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.

| | |
|---|------|
| 1 | Cyan |
|---|------|

- 2 Magenta
- 3 Yellow
- 4 Black

-D *level*

Set Debug level [0].

EXAMPLES

Create a monochrome ZjStream from a Postscript document, examine it, and then print it using a RAW print queue:

```
foo2slx-wrapper testpage.ps > testpage.zm
slxdecode < testpage.zm
lpr -P raw testpage.zm
```

Create a color ZjStream stream from a Postscript document:

```
foo2slx-wrapper -c testpage.ps > testpage.zc
```

FILES

/usr/bin/foo2slx-wrapper

SEE ALSO

foo2slx(1), **slxdecode(1)**

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
<http://foo2slx.rkkda.com/>

NAME

foo2slx – Convert Ghostscript pbmraw or bitcmk format into a SLX printer stream

SYNOPSIS

foo2slx [*options*] <*pbmraw-file*> *slx-file*

foo2slx [*options*] <*bitcmk-file*> *slx-file*

foo2slx [*options*] <*pksmraw-file*> *slx-file*

DESCRIPTION

foo2slx converts Ghostscript pbmraw, bitcmk, or pksmraw output formats to monochrome or color SLX streams, for driving the Lexmark C500 network color laser printer and other SLZ-based printers. The SLX stream is a variant of ZjStream produced by Software Imaging K.K.

COMMAND LINE OPTIONS**Normal Options**

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-c Force color mode if autodetect doesn't work.

-g *xpixxypix*
Set page dimensions in pixels [10200x6600].

-m *media*
Media code to send to printer [0].

| Media | SLX |
|--------------|-----|
| plain | 0 |
| transparency | 1 |
| labels | 2 |
| thick1 | 3 |
| envelope1 | 4 |
| thin | 5 |
| thick2 | 6 |
| envelope2 | 7 |
| middle | 8 |
| special | 9 |

-p *paper*
Paper code to send to printer [6].

| | | | |
|----|-----------|----|--------|
| 6 | letter | 2 | A4 |
| 9 | legal | 4 | B5 |
| 8 | executive | 5 | B5iso |
| 10 | env #10 | 11 | env DL |

-n *copies*
Number of copies [1].

-r *xresxyres*
Set device resolution in pixels/inch [1200x600].

-s *source*
Source (InputSlot) code to send to printer [0].

| 0 auto | 1 cassette1

Printer Tweaking Options

These are the options used to customize the operation of **foo2slx** for a particular printer.

- u** *xoff* *xyoff*
Set the offset of the start of the printable region from the upper left corner, in pixels [0x0].
- l** *xoff* *xyoff*
Set the offset of the end of the printable region from the lower right corner, in pixels [0x0].
- L** *mask*
Send logical clipping amounts implied by -u/-l in the ZjStream [3].
 - 0 don't send any logical clipping amounts
 - 1 only send Y clipping amount
 - 2 only send X clipping amount
 - 3 send both X and Y clipping amounts
- A** AllIsBlack: convert C=1,M=1,Y=1 to just K=1. Works with bitcmyk input only.
- B** BlackClears: K=1 forces C,M,Y to 0. Works with bitcmyk input only.

Debugging Options

These options are used for debugging **foo2slx**.

- S** *plane*
Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.
 - 1 Cyan
 - 2 Magenta
 - 3 Yellow
 - 4 Black
- D** *level*
Set Debug level [0].

EXAMPLES

Create a black and white SLX stream:

```
gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
-sPAPERSIZE=letter -r1200x600 -sDEVICE=pbmraw
-sOutputFile=- - < testpage.ps
| foo2slx -r1200x600 -g10200x6600 -p1 >testpage.zm
```

Create a color SLX stream:

```
gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
-sPAPERSIZE=letter -g10200x6600 -r1200x600 -sDEVICE=bitcmyk
-sOutputFile=- - < testpage.ps
| foo2slx -r1200x600 -g10200x6600 -p1 >testpage.zc
```

FILES

/usr/bin/foo2slx

SEE ALSO

foo2slx-wrapper(1), **slxdecode(1)**

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
<http://foo2slx.rkkda.com/>

NAME

slxdecode – Decode a SLX stream into human readable form.

SYNOPSIS

slxdecode [*options*] <*slx-file*

DESCRIPTION

slxdecode decodes a SLX stream into human readable form.

A SLX stream is the printer language used by some Lexmark printers, such as the C500.

More information on the Software Imaging K.K. SLX stream can be found at:

<http://softwareimaging.com/products-services/sorcerer/index.asp>

COMMAND LINE OPTIONS

These are the options that can appear on the command line.

-d *basename*

Basename of .pbm file for saving decompressed planes.

-r *basename*

Basename of .jbg file for saving raw planes

-h Print hex file offsets.

-o Print file offsets.

-D *level*

Set Debug level [0].

EXAMPLES

Decode an SLX file created by foo2slx.

```
$ slxdecode < testpage.zm
SLX_MAGIC, 0x584c53a5 (SLX)
SLT_START_DOC, 12 items
    SLI_PAGECOUNT, 4294967295 (0xffffffff)
    SLI_DMDUPLEX, 0 (0x0)
    SLI_DMCOLLATE, 0 (0x0)
    SLI_0x3, 0 (0x0)
    SLI_DISPLAY, 0 (0x0)
    SLI_0x5, 0 (0x0)
    SLI_0x6, 0 (0x0)
    SLI_0x7, 1 (0x1)
    SLI_0x8, 0 (0x0)
    SLI_0x9, 0 (0x0)
    SLI_COUNT, 1 (0x1)
    SLI_DMCOLLATE, 0 (0x0)
SLT_START_PAGE, 16 items [Page 1]
    SLI_DMPAPER, 6 (0x6)
    SLI_CUSTOM_X, 0 (0x0)
    SLI_CUSTOM_Y, 0 (0x0)
    SLI_DMCOPIES, 1 (0x1)
    SLI_DMDEFAULTSOURCE, 0 (0x0)
    SLI_DMEDIATYPE, 0 (0x0)
    SLI_NBIE, 0 (0x0)
    SLI_RESOLUTION_X, 600 (0x258)
```

```
SLI_RESOLUTION_Y, 600 (0x258)
SLI_OFFSET_X, 102 (0x66)
SLI_OFFSET_Y, 102 (0x66)
SLI_RASTER_X, 4896 (0x1320)
SLI_RASTER_Y, 6392 (0x18f8)
SLI_0x10d, 4896 (0x1320)
SLI_0x10e, 6392 (0x18f8)
SLI_0x10f, 1 (0x1)
SLT_JBIG_BIH, 0 items
  Data: 20 bytes
    DL = 0, D = 0, P = 1, - = 0, XY = 4896 x 6392
    L0 = 128, MX = 0, MY = 0
    Order = 0
    Options = 8 TPBON
    50 stripes, 0 layers, 1 planes
SLT_JBIG_BID, 0 items
  Data: 116 bytes
SLT_END_JBIG, 0 items
SLT_END_PAGE, 0 items
SLT_END_DOC, 0 items
```

FILES

`/usr/bin/slxdecode`

SEE ALSO

`foo2slx-wrapper(1)`, `foo2slx(1)`, `jbg2pbm(1)`

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
<http://foo2slx.rkkda.com/>

NAME

foo2hiperc-wrapper – Convert Postscript into a HIPERC printer stream

SYNOPSIS

foo2hiperc-wrapper [*options*] [*ps-file*]

DESCRIPTION

foo2hiperc-wrapper is a Foomatic compatible printer wrapper for the **foo2hiperc** printer driver. This script reads a Postscript *ps-file* or standard input and converts it to the Oki HIPERC printer format for driving the Oki C3100, C3200, C3300n, C3400n, C5100n, C5500n, C5600n and the C5800n HIPERC printers.

This script can be used in a standalone fashion, but is intended to be called from a printer spooler system which uses the Foomatic printer database.

COMMAND LINE OPTIONS**Normal Options**

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-c Print in color (else monochrome).

-C *colormode*

Color correction mode [0].

10 ICM color profile (using -G *.icm file)

-d *duplex*

Duplex code to send to printer [1].

| 1 off | 2 long edge | 3 short edge

-m *media*

Media code to send to printer [0].

| Media | HIPERC |
|--------------|--------|
| plain | 0 |
| labels | 1 |
| transparency | 2 |

-p *paper*

Paper size code to send to printer [2].

| | | | |
|----|---------|----|-------------|
| 1 | A4 | 2 | letter |
| 3 | legal | - | - |
| 5 | A5 | 6 | B5jis |
| 7 | A6 | 8 | env Monarch |
| 9 | env DL | 10 | env C5 |
| 11 | env #10 | 12 | executive |
| 13 | env #9 | - | - |

-n *copies*

Number of copies [1].

-r *xresxyres*

Set device resolution in pixels/inch [600x600].

-s *source*

Source (Input Slot) code to send to printer [0].

| | | | |
|---|-------------|---|--------|
| 0 | auto select | 2 | tray2 |
| 1 | tray1 | 3 | tray3 |
| 3 | multi | 4 | manual |

- t Draft mode. Every other pixel is white.
- 2 -3 -4 -5 -6 -8 -9 -10 -12 -14 -15 -16 -18
Print in N-up. Requires the **psutils** package.
- o *orient*
Orientation used for N-up.
 - Portrait -op (normal)
 - Landscape -ol (rotated 90 degrees anticlockwise)
 - Seascape -os (rotated 90 degrees clockwise)

Printer Tweaking Options

These are the options used to customize the operation of **foo2hiperc** for a particular printer.

- u *xoff* *xyoff*
Set the offset of the start of the printable region from the upper left corner, in pixels [varies with paper size].
- l *xoff* *xyoff*
Set the offset of the end of the printable region from the lower right corner, in pixels [varies with paper size].
- L *mask*
Send the logical clipping values from -u/-l in the HIPERC stream. **foo2hiperc-wrapper** always runs Ghostscript with the ideal page dimensions, so that the scale of the image is correct, regardless whether or not the printer has unprintable regions. This option is used to move the position of the clipped image back to where it belongs on the page. The default is to send the amount which was clipped by -u and -l, and should be good in most cases.
 - 0 don't send any logical clipping amounts
 - 1 only send Y clipping amount
 - 2 only send X clipping amount
 - 3 send both X and Y clipping amounts
- Z *compressed*
Use uncompressed (0) or compressed (1) JBIG data.

Color Tweaking Options

These are the options used to control the quality of color output. Color correction is currently a WORK IN PROGRESS.

- g *gsopts*
Additional options to pass to Ghostscript, such as -g“-dDITHERPPI=nnn”, etc. This option may appear more than once.
- G *profile.icm*
Convert *profile.icm* to a Postscript color rendering dictionary (CRD) using **foo2zjs-icc2ps** and adjust the printer colors by using the Postscript **setcolorrendering** operator. (WORK IN PROGRESS).
- G *gamma-file.ps*
Prepend *gamma-file.ps* to the Postscript input to perform color correction using the **setcolortransfer** Postscript operator. For example, the file might contain:
{0.333 exp} {0.333 exp} {0.333 exp} {0.333 exp} setcolortransfer
- I *intent*
Select profile intent from the ICM file. 0=Perceptual, 1=Colorimetric, 2=Saturation, 3=Absolute. Default is 0 (perceptual).

Debugging Options

These options are used for debugging **foo2hiperc** and its wrapper.

-S *plane*

Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.

- 1 Cyan
- 2 Magenta
- 3 Yellow
- 4 Black

-D *level*

Set Debug level [0].

EXAMPLES

Create a monochrome HIPERC stream from a Postscript document, examine it, and then print it using nc(1) or netcat(1):

```
foo2hiperc-wrapper testpage.ps > testpage.hc
hipercdecode < testpage.hc
nc 192.168.1.NNN 9100 < testpage.hc
```

Create a color HIPERC stream from a Postscript document:

```
foo2hiperc-wrapper -c testpage.ps > testpage.hc
```

FILES

/usr/bin/foo2hiperc-wrapper

SEE ALSO

foo2hiperc(1), **hipercdecode(1)**

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
<http://foo2hiperc.rkkda.com/>

NAME

foo2hiperc – Convert Ghostscript pbmraw or bitcmyk format into a HIPERC printer stream

SYNOPSIS

foo2hiperc [*options*] <*pbmraw-file*> *hiperc-file*

foo2hiperc [*options*] <*bitcmyk-file*> *hiperc-file*

foo2hiperc [*options*] <*pksmraw-file*> *hiperc-file*

DESCRIPTION

foo2hiperc converts Ghostscript pbmraw, bitcmyk, or pksmraw output formats to monochrome or color HIPERC streams, for driving the Oki C3100, C3200, C3300n, C3400n, C5100n, C5500n, C5600n, and the C5800n HIPERC printers.

COMMAND LINE OPTIONS**Normal Options**

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

-c Force color mode if autodetect doesn't work.

-d duplex

Duplex code to send to printer [1].

| 1 off | 2 long edge | 3 short edge

-g xpixxypix

Set page dimensions in pixels [5100x6600].

-m media

Media code to send to printer [0].

| Media | HIPERC |
|--------------|--------|
| plain | 0 |
| labels | 1 |
| transparency | 2 |

-p paper

Paper code to send to printer [2].

| | | | |
|----|---------|----|-------------|
| 1 | A4 | 2 | letter |
| 3 | legal | - | - |
| 5 | A5 | 6 | B5jis |
| 7 | A6 | 8 | env Monarch |
| 9 | env DL | 10 | env C5 |
| 11 | env #10 | 12 | executive |
| 13 | env #9 | - | - |

-n copies

Number of copies [1].

-r xresxyres

Set device resolution in pixels/inch [600x600].

-s source

Source (InputSlot) code to send to printer [0].

| | | | |
|---|-------------|---|--------|
| 0 | auto select | 2 | tray2 |
| 1 | tray1 | 4 | manual |
| 3 | multi | | |

-t Draft mode. Every other pixel is white.

-J *filename*
Filename string to send to printer.

-U *username*
Username string to send to printer.

Printer Tweaking Options

These are the options used to customize the operation of **foo2hiperc** for a particular printer.

-u *xoff xyoff*
Set the offset of the start of the printable region from the upper left corner, in pixels [0x0].

-l *xoff xyoff*
Set the offset of the end of the printable region from the lower right corner, in pixels [0x0].

-L *mask*
Send logical clipping amounts implied by -u/-l in the HIPERC stream [3].

- 0 don't send any logical clipping amounts
- 1 only send Y clipping amount
- 2 only send X clipping amount
- 3 send both X and Y clipping amounts

-A AllIsBlack: convert C=1,M=1,Y=1 to just K=1. Works with bitcmk input only.

-B BlackClears: K=1 forces C,M,Y to 0. Works with bitcmk input only.

-Z *compressed*
Use uncompressed (0) or compressed (1) JBIG data.

Debugging Options

These options are used for debugging **foo2hiperc**.

-S *plane*
Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.

- 1 Cyan
- 2 Magenta
- 3 Yellow
- 4 Black

-D *level*
Set Debug level [0].

EXAMPLES

Create a black and white HIPERC stream:

```
gs -q -dBATCHE -dSAFER -dQUIET -dNOPAUSE
-sPAPERSIZE=letter -r600x600 -sDEVICE=pbmraw
-sOutputFile=- - < testpage.ps
| foo2hiperc -r600x600 -g5100x6600 -p0 >testpage.zm
```

Create a color HIPERC stream:

```
gs -q -dBATCHE -dSAFER -dQUIET -dNOPAUSE
-sPAPERSIZE=letter -g5100x6600 -r600x600 -sDEVICE=bitcmk
-sOutputFile=- - < testpage.ps
```

```
| foo2hiperc -r600x600 -g5100x6600 -p0 >testpage.zc
```

FILES

`/usr/bin/foo2hiperc`

SEE ALSO

`foo2hiperc-wrapper(1)`, `hipercdecode(1)`

AUTHOR

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<http://foo2hiperc.rkkda.com/>

NAME

hipercdecode – Decode a HIPERC stream into human readable form.

SYNOPSIS

hipercdecode [*options*] <*hiperc-file*

DESCRIPTION

hipercdecode decodes a HIPERC stream into human readable form. Uncompressed and JBIG formats are handled.

An HIPERC stream is the printer language used by the Oki Data C3200n, C3300n, C3400n, C5100n, and the C5500n printers.

COMMAND LINE OPTIONS

These are the options that can appear on the command line.

- d** *basename*
 Basename of .pbm file for saving decompressed planes.
- h** Print hex file offsets.
- o** Print file offsets.
- D** *level*
 Set Debug level [0].

EXAMPLES

Decode an HIPERC stream file created by foo2hiperc.

```
$ foo2hiperc-wrapper testpage.ps | hipercdecode -h
0:      \033%-12345X@PjL
f:      @PjL RDYMSG DISPLAY = "Unknown"
30:     @PjL SET OKIJOBACCOUNTJOB USERID="Unknown" JOBNAME="Unknown"
6e:     @PjL SET OKIAUXJOBINFO DATA="DocumentName=Unknown"
a2:     @PjL SET OKIAUXJOBINFO DATA="ComputerName=dual.rkkda.org"
dd:     @PjL SET OKIAUXJOBINFO DATA="ReceptionTime=00:00:00 2008/01/30"
11e:    @PjL SET OKIAUTOTRAYSWITCH=ON
13d:    @PjL SET OKIPAPERSIZECHECK=ENABLE
160:    @PjL SET RESOLUTION=600
179:    @PjL SET PAPER=LETTER
190:    @PjL SET OKITRAYSEQUENCE=PAPERFEEDTRAY
1b8:    @PjL SET OKIPAPERFEED=TRAY1
1d5:    @PjL SET OKIMEDIATYPE = PLAIN
1f4:    @PjL SET LPARM:PCL OKIPRINTMARGIN=INCH1D6
21f:    @PjL SET COPIES=1
232:    @PjL SET QTY=1
242:    @PjL SET HIPERCEFFECTIVEBLOCKSIZE=34799360
26e:    @PjL ENTER LANGUAGE=HIPERC
289:    RECTYPE 0 (len=52,0x34 cnt=1)
291:    BLKNUM 0, nbie=1, pn=3 [black] uc=0,0, wid=4864 ud=0,100
2a5:    BLKNUM 1 (len=20), uncompressed=1, bie:
DL = 48, D = 48, P = 49, - = 48, XY = 4864 x 6816
L0 = 256, MX = 0, MY = 0
Order  = 0
Options = 0
1 stripes, 0 layers, 49 planes
```

```

2bd:      RECTYPE 1 (len=155668,0x26014 cnt=1)
2c5:      BLKNUM 0 (len=4), plane=3, uc=0,0,0
2cd:      BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
262d1:    RECTYPE 1 (len=155668,0x26014 cnt=2)
262d9:    BLKNUM 0 (len=4), plane=3, uc=0,0,0
262e1:    BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
4c2e5:    RECTYPE 1 (len=155668,0x26014 cnt=3)
4c2ed:    BLKNUM 0 (len=4), plane=3, uc=0,0,0
4c2f5:    BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
722f9:    RECTYPE 1 (len=155668,0x26014 cnt=4)
72301:    BLKNUM 0 (len=4), plane=3, uc=0,0,0
72309:    BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
9830d:    RECTYPE 1 (len=155668,0x26014 cnt=5)
98315:    BLKNUM 0 (len=4), plane=3, uc=0,0,0
9831d:    BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
be321:    RECTYPE 1 (len=155668,0x26014 cnt=6)
be329:    BLKNUM 0 (len=4), plane=3, uc=0,0,0
be331:    BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
e4335:    RECTYPE 1 (len=155668,0x26014 cnt=7)
e433d:    BLKNUM 0 (len=4), plane=3, uc=0,0,0
e4345:    BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
10a349:   RECTYPE 1 (len=155668,0x26014 cnt=8)
10a351:   BLKNUM 0 (len=4), plane=3, uc=0,0,0
10a359:   BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
13035d:   RECTYPE 1 (len=155668,0x26014 cnt=9)
130365:   BLKNUM 0 (len=4), plane=3, uc=0,0,0
13036d:   BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
156371:   RECTYPE 1 (len=155668,0x26014 cnt=10)
156379:   BLKNUM 0 (len=4), plane=3, uc=0,0,0
156381:   BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
17c385:   RECTYPE 1 (len=155668,0x26014 cnt=11)
17c38d:   BLKNUM 0 (len=4), plane=3, uc=0,0,0
17c395:   BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
1a2399:   RECTYPE 1 (len=155668,0x26014 cnt=12)
1a23a1:   BLKNUM 0 (len=4), plane=3, uc=0,0,0
1a23a9:   BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
1c83ad:   RECTYPE 1 (len=155668,0x26014 cnt=13)
1c83b5:   BLKNUM 0 (len=4), plane=3, uc=0,0,0
1c83bd:   BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
1ee3c1:   RECTYPE 1 (len=155668,0x26014 cnt=14)
1ee3c9:   BLKNUM 0 (len=4), plane=3, uc=0,0,0
1ee3d1:   BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
2143d5:   RECTYPE 1 (len=155668,0x26014 cnt=15)
2143dd:   BLKNUM 0 (len=4), plane=3, uc=0,0,0
2143e5:   BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
23a3e9:   RECTYPE 1 (len=155668,0x26014 cnt=16)
23a3f1:   BLKNUM 0 (len=4), plane=3, uc=0,0,0
23a3f9:   BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
2603fd:   RECTYPE 1 (len=155668,0x26014 cnt=17)
260405:   BLKNUM 0 (len=4), plane=3, uc=0,0,0
26040d:   BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
286411:   RECTYPE 1 (len=155668,0x26014 cnt=18)
286419:   BLKNUM 0 (len=4), plane=3, uc=0,0,0
286421:   BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...

```

```

2ac425:    RECTYPE 1 (len=155668,0x26014 cnt=19)
2ac42d:    BLKNUM 0 (len=4), plane=3, uc=0,0,0
2ac435:    BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
2d2439:    RECTYPE 1 (len=155668,0x26014 cnt=20)
2d2441:    BLKNUM 0 (len=4), plane=3, uc=0,0,0
2d2449:    BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
2f844d:    RECTYPE 1 (len=155668,0x26014 cnt=21)
2f8455:    BLKNUM 0 (len=4), plane=3, uc=0,0,0
2f845d:    BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
31e461:    RECTYPE 1 (len=155668,0x26014 cnt=22)
31e469:    BLKNUM 0 (len=4), plane=3, uc=0,0,0
31e471:    BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
344475:    RECTYPE 1 (len=155668,0x26014 cnt=23)
34447d:    BLKNUM 0 (len=4), plane=3, uc=0,0,0
344485:    BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
36a489:    RECTYPE 1 (len=155668,0x26014 cnt=24)
36a491:    BLKNUM 0 (len=4), plane=3, uc=0,0,0
36a499:    BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
39049d:    RECTYPE 1 (len=155668,0x26014 cnt=25)
3904a5:    BLKNUM 0 (len=4), plane=3, uc=0,0,0
3904ad:    BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
3b64b1:    RECTYPE 1 (len=155668,0x26014 cnt=26)
3b64b9:    BLKNUM 0 (len=4), plane=3, uc=0,0,0
3b64c1:    BLKNUM 1 (len=155648), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
3dc4c5:    RECTYPE 1 (len=97300,0x17c14 cnt=27)
3dc4cd:    BLKNUM 0 (len=4), plane=3, uc=0,0,0
3dc4d5:    BLKNUM 1 (len=97280), Data=00 00 00 00 00 00 00 00 00 00 00 00 ...
3f40d9:    RECTYPE 255 (len=8,0x8 cnt=28)
3f40e1:    \033%-12345X

```

FILES

`/usr/bin/hipercdecode`

SEE ALSO

`foo2hiperc-wrapper(1)`, `foo2hiperc(1)`

AUTHOR

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<http://foo2hiperc.rkkda.com/>

NAME

foo2zjs-pstops – Add PS code for foo2*-wrapper

SYNOPSIS

foo2zjs-pstops [*options*] [*file*]

DESCRIPTION

Add PS code for foo2zjs-wrapper.

COMMAND LINE OPTIONS

These are the options that can appear on the command line.

- c** CIE Color.
- n** Neuter CUPS cupsPSLevel2
- r** Rotate 90 degrees clockwise.
- w** Accurate screens and Well Tempered Screens code.
- D level**
Set Debug level [0].

FILES

/usr/bin/foo2zjs-pstops

SEE ALSO

foo2hp2600-wrapper(1), **foo2lava-wrapper(1)**, **foo2oak-wrapper(1)**, **foo2qpd-wrapper(1)**, **foo2slx-wrapper(1)**, **foo2xqx-wrapper(1)**, **foo2zjs-wrapper(1)**

AUTHOR

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NAME

arm2hpd1 – Add HP download header/trailer to an ARM ELF binary.

SYNOPSIS

arm2hpd1 [*options*] arm-binary.img > hpd1.dl

DESCRIPTION

arm2hpd1 adds an HP download header/trailer to an ARM ELF binary. If the file already has an HP header, just copy it to stdout.

COMMAND LINE OPTIONS

These are the options that can appear on the command line.

-D *level*

Set Debug level [0].

EXAMPLES

Add an HPDL header to a HP LaserJet 1005.

```
$ arm2hpd1 sihpl005.img > sihpl005.dl
```

FILES

/usr/bin/arm2hpd1, **/usr/share/foozjs*/firmware/**

SEE ALSO

foozjs(1)

AUTHOR

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<http://foozjs.rkkda.com/>

NAME

usb_printerid – prints the ID of the printer on a USB port

SYNOPSIS

usb_printerid [*options*] /dev/usb/lpNNN

DESCRIPTION

usb_printerid prints the identification of the printer on a USB port using the ioctl control **LPIOC_GET_DEVICE_ID**.

EXAMPLES

Print the USB info before and after downloading the firmware.

```
# usb_printerid /dev/usb/lp0
GET_DEVICE_ID string:
MFG:Hewlett-Packard;MDL:HP LaserJet 1020;CMD:ACL;CLS:PRINTER;\
DES:HP LaserJet 1020;

# cp /usr/share/foo2zjs/firmware/sihp1020.dl /dev/usb/lp0

# usb_printerid /dev/usb/lp0
GET_DEVICE_ID string:
MFG:Hewlett-Packard;MDL:HP LaserJet 1020;CMD:ACL;CLS:PRINTER;\
DES:HP LaserJet 1020;FWVER:20050309;
```

FILES

/usr/bin/usb_printerid, /usr/share/foo2*/firmware/*

SEE ALSO

arm2hpdl(1)

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
<http://foo2zjs.rkkda.com/>

NAME

printer-profile – Profile using X-Rite ColorMunki and Argyll CMS

SYNOPSIS

printer-profile [*options*] *manuf* *model* [*rgb|cmyk*] [*patches*] [*ink-limit*]

DESCRIPTION

printer-profile prints a test chart, uses the ColorMunki instrument to scan it in, then computes an ICM profile using the Argyll Color Management System.

Manuf is "sam". Model is "clp-300" or "clp-315".

Manuf is "hp". Model is "2600" or "cp1215".

Manuf is "km". Model is "2300" or "2530".

"rgb" is the usual setting. "patches" is a multiple 196 per page.

Edit the script for additional models.

OPTIONS

-b *l|2* Bits per pixel (1)

-r *XRESxYRES* Resolution. Default="". (.)

-P *rem-print* Remote print (64-bit) machine, or none (amd)

-S *rem-scan* Remote scan (ColorMunki) machine, or none (mac)

-D *lvl* Debug level

EXAMPLES

Profile the Samsung clp-315:

```
$ printer-profile sam 315 rgb 196
```

BUGS

gs 8.64 and before has problems with 32-bit machines and color profile data. Don't use!

You need Argyll_V1.1.0_RC1 or later.

FILES

/usr/bin/printer-profile, /usr/share/foo2*/icm/testing.icm

SEE ALSO

firefox <http://www.xritephoto.com/html/colormunkisplash.htm>

firefox <http://www.argyllcms.com/>

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