

HISPEED.HYPER

COLLABORATORS

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Chapter 1

HISPEED.HYPER

1.1 main

HiSpeed is a printing utility for DeskJet/LaserJet printers. ←

It

has been inspired by Matt Melcher's HDPrint program ("4 pages of text to one A4 side"): Output is reduced to a few pages by using small typefaces. It is fast - about 4 pages/minute if you own a DeskJet Plus. A LaserJet 4L will print a 65 pages document in 8 minutes, thus running at 8 pages per minute.

- o Amiga, OS2.04 or better, PCL printer (DeskJet, Laser, ...)
- o the 'reqtools.library' by Nico François (©1991-1993)
- o xpk.library (by U. Dominik Müller, Bryan Ford, ...)

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book

features

cover

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1.2 HARDWARE REQUIREMENTS

HARDWARE REQUIREMENTS

Amiga, at least 512K, OS2.04, DeskJet/Laser. You'll need a softfont cartridge (a RAM expansion card) for your DeskJet if you want to use all functions of this program - otherwise you are limited to the printer's ROM fonts.

1.3 FEATURES

FEATURES

Easy-to-use workbench interface (but shell interface & ARexx port are available as well)

Single or double sided printing; stack of paper has to be turned only once (if at all).

Landscape or portrait printing. Free layout (e.g. four pages on one A4 sheet or two columns). Portrait & landscape printing are available. Book mode.

Blocks are separated by lines (optional)

Important ESC-sequences are supported: Italics, LQ/EDV, Tabs, Underlines, FF (ANSI sequences, device independent). Linefeed can be set to one of eight values. HiSpeed mode: ESC sequences are

recognized and removed. Output is performed as fast as possible.

You can print more than one file ("job") simultaneously - just set up the job list

Prescan/Preview available (WYSIWYG)

Several fonts available for output (number depends on your printer); softfonts are supported

Sleep mode: HiSpeed's window is replaced by a small AppIcon on the workbench screen. Drag icons over it to have them printed.

Optional page headers are possible as well as numbering of lines

Automatic index generation. Appendix generation.

1.4 CONFIGURATION

CONFIGURATION

HiSpeed has to be configured according to your printer - just choose your model from the list of supported printers. Set the RAM gadget to 'RAM' if your printer is equipped with a RAM expansion cartridge (DeskJet) or doesn't require additional RAM in order to use softfonts. The number of available typefaces depends on Printer/RAM selection - while a standard DeskJet without RAM is limited to one typeface, a DeskJet 550C with RAM will offer 4 portrait fonts and 3 landscape fonts. If your printer is not supported by HiSpeed so far, you'll have to use the SetUp option to register your printer with HiSpeed:

HiSpeed may be adjusted to any PCL printer and its fonts. If your printer supports softfonts (DeskJet printers don't unless they are equipped with an additional RAM cartridge) you may use your own fonts with HiSpeed, too. Unfortunately setup isn't that easy. You should have read your printer's manual at least once. You have to be familiar with the use of PCL ESC codes. A bad setup will cause TROUBLE.

Example session

Select the SETUP gadget. The setup requester will appear, giving you the opportunity to set up a printer and its fonts. On the left side available printers are listed. Select NEW (next to the list of printers) if your model isn't available so far: A new printer 'unnamed' will be added to the list. Use the string gadget below the list to change this name to whatever you like. Toggle the 'DeskJet tray' gadget to ON if your printer's paper tray looks like that of a DeskJet (HiSpeed will use this information to give you some hints if it asks you to reinsert ejected pages). Toggle the 'faces down' gadget to ON if the sheets are ejected faces down by your printer. Some printers (especially laser printers) are not able to use the first 5 to 7

mm of a page for output - turn OFFSET HEADER on in these cases. Finally you should select a file pattern used when selecting cover files (e.g. if you don't want HiSpeed to list color files). A pattern like '#?' would display all files while "~(#?.CYMK)" would suppress cover files made for the DeskJet 550C. The following extensions are supported:

```
CYM files (color, used by DJ500C/DJ550C)..... #?.CYM
CYMK files (color, used by DJ550C) ..... #?.CYMK
B&W files (PCL level 3) ..... no suffix
```

After having selected a printer, its fonts are displayed in the font listview on the right side. This list initially is empty if you have added a new printer. Use NEW (next to the font list) to add a new font (i.e. to register one of the printer's font with HiSpeed). New fonts are named 'unnamed'; use the string gadget below the list to edit the name. Having done this you have to enter a description of the font - HiSpeed needs to know the font's basic characteristics (e.g. its size). Only fixed width fonts are supported. Have a look at your printer's manual to determine all required values. Example:

If you own a DeskJet 550C, look for a manual section called 'Specifications'. There you'll find a list of available fonts supported by your printer. Among many other entries a 'LetterGothic' font with a font size of 6 points is described. According to the manual this fixed width font is available in portrait/landscape mode. Spacing is 24 cpi (characters per inch):

```
Typeface: LetterGothic
Point size: 6p
Spacing: 24 cpi (fixed width)
Orientation: portrait or landscape
```

Use these specifications to set up HiSpeed's font entry: Toggle the type gadget to 'any direction' since portrait as well as landscape mode are supported. The HMI gadget is used to set the font's spacing. Units are 1/1200", so you would enter 50 (1200/24 = 50). Specify the LPI (lines per inch) value for single linefeeds using the LPI gadget. Suggestion: Set the LPI value to 72/<point size> (e.g. 72/6 = 12). While the HMI value has to be chosen as precisely as possible, the LPI may be set more roughly. If your font isn't a built-in one but a softfont file, enter the file name(s) using the NORM/ITAL gadgets (upright respectively italics version). Leave these gadgets empty if the font is a ROM font. Softfonts have to use the ECMA latin character set; the printer will refuse your fonts if they use a different character set (e.g. PC8). Finally we have to provide a PCL ESC sequence used by HiSpeed to activate the font. Have a look at your printer's documentation as far as PCL sequences (PCL = printer command language) are concerned. The sequence will have to set typeface, spacing and character height (point size). It mustn't set any other attribute. Example:

```
ESC(s6v24h6T
```

ESC introduces a PCL sequence. The last character of a PCL

command has to be uppercase ('T') while all other characters (except ESC) have to be lowercase. The font height is set to 6 points by '(s6v'. '24h' sets spacing to 24 cpi. Finally '6T' selects a typeface called LetterGothic. Don't use spaces within PCL sequences. Pay attention to case.

1.5 PAGE HEADER

PAGE HEADER

It is possible to change the text (or the style) of page headers using the setup requester, too. The header text is not printed directly. Instead, it is interpreted before output: after scanning it for keywords (like \DATE), found keywords are replaced by their 'current value' (e.g. the date). Put a text into quotation marks if you don't want to have it interpreted. HiSpeed does support the following keywords:

keyword	example	description
"<Text>"	"Hi!"	print quoted text
\DATE	"Date: " \DATE	insert date
\TIME	"Time: " \TIME	insert time
\NAME	"File: " \NAME	insert file name
\PATH	"Path: " \PATH	insert fully qualified name
\PAGE	"Page: " \PAGE	insert page number
\$<name>	\$USER	insert environment variable (*)

(*): see AmigaDos manual (SETENV command)

1.6 PRINTING

PRINTING

The files ("jobs") to be printed are displayed as "job list" (bottom left). Scroll through that list using the arrow gadgets. Use 'Add' to add new jobs. A file requester will appear. You may add more than one file at once by holding down the shift key during selection. There are other methods to add files to the job list, too: Just drag a file's icon over the HiSpeed window. Or set up a file via Arexx. Or let a file drop on HiSpeed's sleep icon (however, if you do so, it will be printed at once but not included into the job list).

Use job <menu/clear list> to clear the complete list respectively the 'del' gadget to remove a single file. Select "SORT A" if you want to have the list sorted alphabetically. Use "sort #" to sort by size.

Start printing by clicking at the print gadget. Jobs are

processed from top to bottom. If none has been set up so far, you will be asked for a file. You may stop printing by closing the progress window (HiSpeed will ask for confirmation). Download mustn't be interrupted for this would confuse the printer.

It is possible to print single sheets, too, using the 'page' gadget. This option is useful to reprint some lost passages of a large job (e.g. if ink cartridge went empty during printing).

If you want a page header (file name, page number), activate "PAGE HEADER". See 'SetUp' on how to set up the header text (for example it is possible to have time/date strings or environment variables inserted). If you print more than one file, you might want an index: switch to header & index.

1.7 SETTINGS & UNITS

SETTINGS & UNITS

Usually you won't have to change paper dimensions. Default settings are valid for output to A4. The left border should be sufficient for perforating. Paper dimension settings offered by the main window of HiSpeed only describe the area used for printing (e.g. if you want to restrict output to the upper half of a sheet, do it here). The actual physical paper size is set by a different requester (setup requester): usually to A4 in Europe respectively to US-Letter/US-Legal in the US.

Hit "RESET ALL" go get the defaults. All settings are written to HiSpeed's configuration file by <project menu/save config>. Be careful as far as the dimensions setup is concerned - wrong values (especially insufficient borders) will confuse HiSpeed.

HiSpeed v5.0 or better does write its configuration file to "ENVARC:HISPEED" unless a different directory is specified. Former releases used to write to 's:' or directly to 'envarc:'. Those files should be removed.

Units are 'mm' with exception of the block size display - which uses [characters] to display text block dimensions. The block size depends on border/paper settings as well as font selection (font width).

1.8 LAYOUT

LAYOUT

Layout definition (the number/arrangement of text blocks on a page) is of great importance for a pleasing result: The more block columns you order, the less characters will fit into a block line. If the block width is too small, lines have to be

splitted.

Block width depends on the selected font, too. If you select Courier 6 (this is the only font offered by the standard DeskJet), no more than 75 characters will fit into a single line provided you use a layout of two columns. In generally 75 characters is not enough. You might use the Adjust-LF option in this case: It will remove LF (line feed) codes. However, don't use this option with formatted data (tables or source codes).

Edit contents of the dx/dy gadgets to set the distance between columns/rows. Enable the 'separate' option if you want to have a line drawn between two block rows. Blocks are linked from left to right and from top to bottom.

1.9 PREVIEW

PREVIEW

HiSpeed offers two ways of quality/volume precalculation without having to waste a single page of paper: Use 'preview' to order a WYSIWYG preview. Or use 'scan' to get some statistics (e.g. required number of sheets). While scanning is faster than a preview, the latter is more useful to get a general impression of the output. Use the cursor keys to flip through pages in preview mode. Use the help key to open the statistics requester.

The distortions value of the statistics display is related to text lines that were too long to fit into a single block line (i.e. lines that had to be splitted). Possible values are from 0% to 100%. This value should be as low as possible since splitted lines don't look that well. Decide for a smaller font, use less columns or decrease margins to avoid distortions.

1.10 FILES

FILES

HiSpeed has been designed to process ASCII files with or without ANSI codes. Lines have to be terminated by LF codes. Additional CR codes (used by MS-DOS software) are recognized and removed. Turn the MS-DOS option ON if you want to print MS-DOS files (maybe received from a BBS system) - HiSpeed will use a different character set to cope with these files. Softfonts are not available in MS-DOS mode because they have been developed with the Amiga character set (ecma latin) in mind.

1.11 ESC-SEQUENCES

ESC-SEQUENCES

Switch to HiSpeed mode or turn PERFORM ESC off if you want to have ESC-Sequences ignored (and thus speed up output). If you enable FFs (form feeds), every detected FF-code (12 dez) results in a new text block. You better have a prescan to estimate paper needs - some files (especially library manuals using the AutoDoc format) send FF codes after each paragraphe.

HiSpeed mode does imply draft printing/normal stroke. Other modes use LQ printing, EDV printing or bold printing. These settings stay valid until they are turned off by appropriate ANSI ESC sequences being part of the file(s) to print. They are not affected by ESC sequences if 'perform ESC' is off.

1.12 CHARACTER HEIGHT

CHARACTER HEIGHT

Several fonts are available (number depends on your printer model), e.g. LinePrinter-5, LinePrinter-6, Courier-6 and LetterGothic-5. You should use LinePrinter-5 or L Gothic-6, if the average line width of your text files is greater than 80 characters. LinePrinter-6 looks better but block width might become too small (e.g. 80 characters if you choose a layout of two columns). Courier-6 is the worst choice: no more than about 75 characters will fit into a line if you decide for a layout of two columns.

1.13 LANDSCAPE

LANDSCAPE

All DeskJet models apart from the original DeskJet do support landscape printing. The number of fonts available in landscape mode depends on your printer model.

1.14 BOOK

BOOK

If you enable book mode output is sorted in a way to support manual creation: simply fold printed sheets to get A5 manuals. HiSpeed relies on the user's settings: if you set the block width to 120 columns but the actual (average) line width of a text is

60 characters, output won't look good (columns are not centered). Simply run the AdjustBook macro after switching to book mode to have the layout adjusted automatically. Since book mode usually implies landscape printing (not supported by the original DeskJet), this mode should only be used with a DeskJet+ or better.

1.15 COVER

COVER

Select 'cover' to order printing of A5 covers. Several templates are available. Quality of cover printing depends on the LQ/NLQ gadget. This function requires the XPK library. Coverfiles actually are PCL files (i.e. files ususally sent to a printer). They have been chrunched using xDrop of the XPK package. Recommended file extension for color files is *.CYM (DeskJet 500C) or *.CYMK (DeskJet 550C). Have a look at the templates directory if you are looking for the PageStream documents used to create the original HS cover files.

1.16 SINGLE/DOUBLESIDED

SINGLE/DOUBLESIDED

Single sided as well as double sided printing is available. Don't get confused if HiSpeed appears to eject empty pages in double sided mode - those pages are required by the second pass of printing.

```
*****
Take care of HiSpeed's advice if the program asks you to reinsert
ejected pages in order to print the backsides. Handling depends
on printing mode !
*****
```

1.17 PERFORATE

PERFORATE

Enable 'perforate' if you want to have perforation considered during double-sided output, i.e. to make HiSpeed swap left/right borders if necessary to ensure a sufficient left margin.

1.18 OUTPUT DEVICE

OUTPUT DEVICE

Use the port gadget to select desired output device respectively output file. If output goes to a file, HiSpeed will create two files (even/odd pages) using file extension 1 respectively 2. File 1 has to be sent to your printer before file 2 later on since (only) this file will keep softfont data.

1.19 SHELL INTERFACE

SHELL INTERFACE

HiSpeed can be used from a shell. Or by any program providing a shell startup like Stefan Becker's ToolManager. Supported arguments are according to the template scheme used by the AmigaDos manual (the following options perform the same action as the gadgets of HiSpeed's GUI, so please have a look at the explanations above for details):

FILE/M, S=SLEEP/S, D=DOUBLE/K, RESET/S, H=HEADER/K, N=NUMBER/K, H=HISPEED/K, P=PREVIEW/S, C=SCAN/S, L=LANDSCAPE/K, B=BOOK/K, F=FEED/N, I=INDEX/S, LQ/S, EDV/S, BOLD/S, ADJUSTLF/K, SORTNAME/S, SORTSIZE/S, ASL/S, SCREEN/K, PERFORATE/K, CMDFILE/K, MSDOS/K, UNI/K, ANSI/K, PARSEFF/K, FILTER/K, PAR:/S, SER:/S

Characters after a slash describe the option's type (e.g. /S would mean 'switch'). Characters followed by '=' are shortcuts (e.g. H is a shortcut of HEADER). The following option types are available:

K Keyword assignment. Example: HISPEED DOUBLE=TRUE. The '=' may be omitted. Valid arguments are ON or OFF.

S Switch. These Options set a special mode/perform some action *IF* they are specified. No argument (like ON) expected.

N These options introduce numerical values

M Introduces list of files. Example usage:
HiSpeed FILE s:user-startup s:startup-sequence

1.20 AREXX PORT

AREXX PORT

HiSpeed offers an ARexx port. Using ARexx it is possible to add headers to files before printing them, to format a text, to generate an appendix, to move HiSpeed to a different (public)

screen, Usually, you can operate the program from WB & ARexx simultaneously. The ARexx commands of HiSpeed fall into three groups:

- functions to read variables/settings (Type QUERY)
- functions to set these variables (Type SET)
- and finally subroutine calls

A. Introduction

You can access the ARexx port of HiSpeed either directly from the shell (e.g. RX "ADDRESS HISPEED QUIT") or from any ARexx script file - some examples:

1. /* all ARexx scripts begin with a comment */

```
address HISPEED          /* talk to Hispeed          */
'REQUESTFILE'           /* ask for a file          */
'SET QUALITY HISPEED'   /* switch to hispeed mode */
'SET DOUBLE'            /* order double sided printing */
'SET HEADER ON'        /* ask for page headers    */
'PRINT'                 /* ... and start printing  */
```

2. /* ask for current font */

```
address HISPEED          /* talk to HiSpeed          */
options results         /* we want results ...     */
'QUERY QUALITY'         /* query font               */
say RESULT              /* show result              */
```

1.21 ARexx commands

ARexx commands

Group 1 - set variables (SET); Syntax: SET <variable> <value>

```
SET LAYOUTX <columns>..... set columns
SET LAYOUTY <rows>..... set rows
SET LEFT <mm>..... left border
SET RIGHT <mm>..... right border
SET TOP <mm>..... top border
SET BOTTOM <mm>..... bottom border
SET DX <mm>..... space between columns
SET DY <mm>..... space between rows
SET COPIES <number>..... copies (max. 99)
SET FEED <0...12>..... linefeed
SET PORT '<PAR:'|'SER:'|FILE>..... output port
SET OUTFILE '<full path>'..... output file
SET QUALITY <HISPEED|LQ|EDV|BOLD|BOLDEDV>... style
SET FILE '<full path>' ..... add file to list
SET PERFORMESC [ON|OFF] ..... perform ESC codes ?
SET PERFORMFF [ON|OFF] ..... perform FF codes ?
SET NUMBER [ON|OFF] ..... number lines ?
SET HEADER [OFF|NOHEADER|ON|INDEX] ..... header type
```

SET SIZE <Fontname> font
 SET DOUBLE [ON|OFF] double sided ?
 SET SINGLE [ON|OFF] dito.
 SET SEPARATE [ON|OFF] draw lines ?
 SET ADJUSTLF [ON|OFF] ignore LF ?
 SET KEEPLF [ON|OFF] perform LF ?
 SET REQUESTER [ON|OFF] no requesters ? (1)
 SET ASK '<Text>' show YES/NO requester
 SET WARN '<Text>' show I SEE requester
 SET BOOK [ON|OFF] toggle book mode
 SET COVER <coverfile> print a cover
 SET KEYLIST <file> keyword file (*)
 SET KEYCODE <character|OFF> set keyword qualifier
 SET PAPERX set paper width
 SET PAPERY set paper height
 SET PERFORATE [ON|OFF] prepare perforation ?
 SET ORIENTATION <PORTRAIT|LANDSCAPE> paper orientation
 SET MSDOS [ON|OFF] toggle MS-DOS mode
 SET UNIDIR [ON|OFF] uni/bidirectional
 SET SCREEN <PubScreenName> select a screen

Group 2 - subroutines

QUIT quit HiSpeed
 SLEEP iconify
 OPENWIN open main window
 SORTNAME sort jobs by name
 SORTSIZE sort jobs by size
 NEW clear job list
 CLR dito.
 REQUESTFILE ask for files
 PRINT print jobs
 SCAN scan jobs
 VSCAN dito. (visualize)
 RESET get default settings
 INFO show scan results
 SAVECONFIG save settings

Group 3 - read variables (QUERY)

Syntax: QUERY <variable> [<qualifier>] (result is placed in RESULT)

QUERY LAYOUTX layout (columns)
 QUERY LAYOUTY layout (rows)
 QUERY LEFT left border
 QUERY RIGHT right border
 QUERY TOP top border
 QUERY BOTTOM bottom border
 QUERY DX space between columns
 QUERY DY space between rows
 QUERY COPIES number of copies
 QUERY FEED linefeed
 QUERY PORT port
 QUERY OUTFILE output file (port=FILE)
 QUERY QUALITY style of printing
 QUERY PERFORMESC perform ESC codes ?
 QUERY PERFORMFF perform FF codes ?

```

QUERY NUMBER ..... number lines ?
QUERY HEADER ..... header type
QUERY SIZE ..... font
QUERY DOUBLE ..... printing mode
QUERY SINGLE ..... dito.
QUERY SEPARATE ..... draw lines ?
QUERY ADJUSTLF ..... adjust-LF setting
QUERY KEEPLF ..... dito.
QUERY BLOCKX ..... characters/line
QUERY BLOCKY ..... lines/block
QUERY PAGES ..... required pages (*)
QUERY SHEETS ..... required sheets (*)
QUERY DISTORTIONS ..... get distortions (*)
QUERY BYTES ..... output size [bytes]
QUERY JOBS ..... # of files to print
QUERY VERSION ..... get version string
QUERY JOBNAME <slot> ..... get a job's name
QUERY STATE ..... read HiSpeed's state
QUERY JOBPAGE <slot> ..... get job's page (*)
QUERY BOOK ..... book mode set ?
QUERY MAXLINE ..... longest line (*)
QUERY KEYCODE ..... keyword qualifier
QUERY PERFORATE ..... border handling
QUERY ORIENTATION ..... paper orientation
QUERY MSDOS ..... MS-DOS mode ?
QUERY UNIDIR ..... uni/bidirectional ?

```

(1) supported only within ARexx scripts

(*) these variables become valid after a SCAN (or VSCAN)

1.22 MACROS

MACROS

ARexx macros found within the HISPEED/AREXX directory during startup are gathered as MACRO menu. Please read the 'ARexxEDoc' manual for more details about ARexx.

1.23 FILTER

FILTER

Toggle 'FILTER' ON if you want the '@' character to be regarded as keyword qualifier. It will be removed before output. Have a look at the MakeAppendix macro.

1.24 SLEEP-ICON

SLEEP-ICON

Use the 'Zzz' gadget to iconify HiSpeed. You may drag files over the icon to have them printed - it's an AppIcon. Doubleclick the icon to wake HiSpeed up again. Since the Amiga OS does not support reading AppIcon coordinates, HiSpeed won't be able to remember the icon position after you have moved it to another location. Nevertheless it is possible to snapshot the preferred position: Open the 'prefs/env-archive/hispeed' directory. Move the 'AppIcon' icon from within that directory to desired location, than snapshot it (icon menu of workbench). Finally move the icon back to its drawer. HiSpeed will read the new position the next time it is evoked.

1.25 GoldED

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