

Media-Based User Preferences

Overview

The Codonics NP-1660 Direct Thermal and Dye Sublimation Printer allows users to print on both classic Dye Diffusion paper and ribbon, and new DirectVista™ Film and Paper. This breakthrough technology necessitated creating a media handling scheme in order to give users greater control over image processing. Users can customize settings for each of the four media types, and may instruct the printer to preserve jobs until the proper media is loaded. While job settings provide the most control over printing, (see the “Job Preferences” technical brief) the media-based preferences described in this section will be sufficient for many printer installations.

Front Panel Settings

The default user settings for the printer are set in the front panel IMAGE menu. These settings apply to any user who does not submit a “user settings file,” discussed below, or who log into the printer as **root**. There is a sub-menu of parameters for each of the four supported media types: ChromaVista™ Paper (CVPAPER), ChromaVista™ Transparency (CVTRANS), DirectVista™ Paper (DVPAPER), and DirectVista™ Film (DVFILM). The following table lists the parameters available for each media type. Please refer to the Front Panel Menu Hierarchy document as well.

Media Type	Parameter Name	Parameter Value
CVPAPER & CVTRANS	TCR	0 - 100
	GAMMA	0.1 -10.0
	CONTRAST	-100 to +100
	MCM	0 - 17 & OEM assigned
	ROTATE	AUTO, NEVER, ALWAYS
	ANTIALIAS	NONE, BETTER, BEST
	SCALE	BILINEAR, MITCHELL, BICUBIC, LANCZOS, BOX
DVPAPER & DVFILM	GAMMA	0.1-10.0
	CONTRAST	-100 to +100
	ROTATE	AUTO, NEVER, ALWAYS
	ANTIALIAS	NONE, BETTER, BEST
	SCALE	BILINEAR, MITCHELL, BICUBIC, LANCZOS, BOX

Selecting and Setting Parameters

With the front panel displaying READY, press the <Setup> key. Press the <Down-arrow> until the IMAGE menu is displayed, and then press <Setup>. Scroll to the desired media type using the <Up-arrow> and <Down-arrow> keys, then press <Setup> again. Scroll to the desired parameter, and select it with <Setup>. Use the <Up-arrow> and <Down-arrow> keys to display the desired value, and save it using <Setup>.

At any time while in the printer setup menu, select the UP menu item to go up one level in the menu hierarchy, and EXIT to leave setup and return to READY.

User Settings Files

To establish personal user settings, a user logs into the printer and sends a file to device 0. The file contains information detailed below. The printer will save the settings in / data/tmp/system under the username and media type.

To change the default settings without using the front panel, log in as **root** and send the settings file.

User Settings File Format

A job settings file is an ASCII text file containing parameter names and values. The general form of the file is as follows:

```
{[mediatype]}  
{param_name}    {param_value}  
...  
{param_name}    {param_value}
```

Mediatype is either DEFAULT, CVPAPER, CVTRANS, DVPAPER, or DVFILM.

See the previous table in “Front Panel Menu Settings” for a list of parameter names and values. All entries are case-insensitive. Values need only have as many characters as required to ensure uniqueness.

An example user settings file might contain the following:

```
[DEFAULT]  
ROTATE    AUTO  
ANTIALIAS BEST  
SCALE     BILINEAR  
[CVPAPER]  
GAMMA     2.0  
CONTRAST  0
```

```

[CVTRANS]
GAMMA 2.2
CONTRAST 5
MCM 12
[DVPAPER]
GAMMA 2.5
CONTRAST 0
[DVFILM]
GAMMA 2.75
CONTRAST 10

```

In this example all prints will be auto-rotated, will use 'best' antialiasing and 'bilinear' scaling. There are unique Gamma and Contrast settings for each media type.

The [DEFAULT] tag is optional. Any parameters that appear without a preceding media type tag are considered to be default parameters. See the "Rules for Processing User Settings Files" section in this document for more information on default parameters.

As with all settings files sent to an NP Series printer, job settings must be ASCII text files. Word processors often embed control characters and other non-ASCII bytes in the files, making the files unreadable to the printer. The **vi** command on UNIX systems, **edit** on MS-DOS and Windows systems, or WordPad (and save as text) for Windows 95 and NT 4.0 systems will work nicely. For Macintosh systems, use the text editor provided on the Apple Laserwriter 8.1.1 Driver and NP-1660 PPD File diskette, or download a text editor from ftp.codonics.com/pub/mac.

Submitting a User Settings File

Either FTP or LPR can be used to send a settings file to logical device 0. For LPR, the printer picks up the username from the host system, and for FTP it uses the username specified during FTP login.

```

ftp myprinter
Connected to myprinter.
220 np1660 FTP server ready.
Name (myprinter:username): jsmith
331 Use printer # [0-2, 8, 9, 10, 11-99, 100-104, 135,
300] for password.
Password: 0          Note: Password will not display
230 User jsmith logged in on System device.
ftp> bin
200 Type set to I.
ftp> put mysettings.txt
200 PORT command successful.
150 Opening BINARY mode data connection for myset-
tings.txt.
226 Transfer complete.
local: mysettings.txt remote: mysettings.txt
199 bytes sent in 0.00049 seconds (3.9e+02 Kbytes/s)
ftp> quit

```

Note: The file must be transferred in binary mode when using FTP. This may seem unusual because the file is ASCII text, but the FTP server in the printer is designed to only accept files in binary mode to prevent any data from being changed during transfer.

Rules for Processing User Settings Files

Once received, a user settings file is processed and the contents are saved on the printer. Certain rules for processing the file are applied:

1. All invalid lines are ignored.
2. Default list parameters (i.e. those preceded by no media type tag, or by the [DEFAULT] tag) are applied to all media types.
3. Parameters in the media type list take precedence over parameters in the default list.
4. Parameters are saved only for the media types indicated.
5. Newly-saved parameters for a specific media type *completely* replace previously saved parameters. Specify all of the parameters for a given media type unless using system defaults for some parameters.

Determining the Media Type and Size

Information about a job's media size comes from one of two places:

1. The associated job settings.
2. The currently loaded media.

If the print job has job settings specifying a media associated with it, the printer will process the job for that media. See the "Job Preferences" Technical Brief for details.

The loaded media size must not change for jobs with unspecified sizes, i.e. don't send a print while A-sized paper is loaded, then change to 8x10 while the job is processing. If the media type changes, i.e. from CV paper to CV transparency, the incorrect image processing parameters may be applied.

Once media type and size are determined they are permanently associated with the print job and are printed accordingly. See the "Advanced Queuing" technical brief for an in-depth discussion.

Determining Processing Parameters

The image processing parameters for the assigned media type are used to process the job. These parameters may come from the system defaults, the user-specific settings for the username associated with the job, or a combination of the two.

User-specific settings are used if available. If the username is **root** or there are no user-specific settings, the system, i.e. front panel, defaults are used. When the user settings are incomplete the omitted parameters are inherited from the system defaults.

For example, a user submits a job for printing on Chroma-Vista™ Paper. The user settings file they had previously sent to Logical Device 0 contained the following:

```
[CVPAPER]
ROTATE    AUTO
ANTIALIAS BEST
SCALE     BILINEAR
GAMMA     2.0
CONTRAST  0
```

The rotate, antialias, scale, gamma, and contrast values are taken from the user-specific settings (as shown in the file). But, since MCM and TCR were not specified in the file, their values are inherited from the system defaults.

Querying User Settings

All user settings (including system defaults) can be queried using the **stat** command on the printer.

To check status with the **stat** command do the following:

1. telnet to printer's *hostname* or *IP Address*
2. login as **root**
3. at prompt, type **stat user-id**

When a username is not specified the printer's default settings are displayed. If a username is specified, the settings for that user are displayed. Values inherited from the system defaults are indicated with an asterisk (*).

Users without root access may retrieve the printer defaults:

1. telnet to printer's *hostname* or *IP Address*
2. login as **status**

As mentioned in "Front Panel Settings," the printer's default settings are listed in the front panel IMAGE menu under the various media types.

ImageWeb also permits users to check status by going to the "Check Printer Status" option from the opening page. Please see the "ImageWeb" section of the user's manual for more information.

Get it all with just one call
1-800-444-1198



CODONICS

We bring the future into focus

17991 Englewood Drive
Middleburg Heights, OH 44130 USA
440/243-1198
440/243-1334 Fax
Email info@codonics.com