
Harlequin RIP™

TIFF/IT-P1 Output Plugin

Version 2.1

February 2005



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GLOBAL GRAPHICS®



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TIFF/IT-P1 Output Plugin

| This document describes the TIFF/IT-P1 output plugin, version 2.1.1, for use with version 6.0 and later of the RIP. The plugin is available for the Harlequin RIP running under Windows NT (Pentium based processors), UNIX, Linux and Macintosh (OS 9 and OS X).

Note to OEMS: This document is presented for inclusion in end-user documentation such as a manual based upon the Harlequin RIP OEM Manual or for use as a supplement to that manual. You may wish to change the introduction to this document to suit the presentation you choose. (Notes like this one are not meant for onward publication to end-users. They give information of interest only to Harlequin and its OEMS.)

1 Introduction

Plugins are a way of extending the capabilities of the Harlequin RIP in a way that does not require any programming or other technical skills from the person installing the plugin. Typical plugins allow the RIP to accept jobs from various sources of input, to process the data in various ways, to report on the progress of rasterizing the image, to provide page images in new formats, and to send the final image to output devices or interface systems.

1.1 Capabilities of the plugin

The TIFF/IT-P1 plugin allows the Harlequin RIP to produce Tag Image File Format for Image Technology–Profile 1 (TIFF/IT-P1) files as specified by the International Standards Organization (ISO) Draft International Standard 12639. The TIFF/IT-P1 format provides a clean interface for proprietary color electronic prepress systems (CEPS) formats such as the Scitex CT/LW format, and TIFF/IT-P1 files are a common method of transferring images for use in advertising.

For more detailed background information on the TIFF/IT-P1 format, see Chapter 8 in the *Harlequin RIP OEM Manual*.

Note to OEMs: This mention of Chapter 8, Configuring Input, may need manual editing in your versions of the Harlequin RIP user manuals. Chapter 8 is correct in Harlequin’s OEM Manual for the Harlequin RIP Version 5.3.

The plugin produces TIFF/IT-P1 files — made up of FP, CT, HC, and LW files — compliant with the ISO Standard 12639. The plugin sends those portions of input jobs that are images, for example, produced by the PostScript-language operators `image` and `colorimage`, to the CT file; it sends all other portions to the LW file. The plugin may or may not produce a HC file, depending on user configuration and the contents of the input job.

It is possible to select non-compliant behavior by choosing not to create empty CT files.

1.2 Restrictions of the plugin

The restrictions on the plugin are largely those of the file format specification in the ISO standard.

For example, LW files do not support more than 256 colors, with one color reserved for transparency. The device configuration dialog box offers options to handle the overflow colors from LW files; for details, see Section 3.2 on page 7.

2 Software installation

The TIFF/IT-P1 plugin is supplied with the Harlequin RIP and distributed on the Harlequin RIP CD-ROM. Install the plugin as follows:

1. The TIFF/IT-P1 plugin requires the Harlequin RIP to be installed on the target machine. If the RIP is not installed then you may add it at the same time as you add the TIFF/IT-P1 plugin.
2. Insert the Harlequin RIP CD-ROM and access its contents. At the top level of the CD run the setup program for the operating system you are running.
3. In the Product Installer window specify the Harlequin RIP installation folder as the destination for the plugin files.
4. From the Package menu choose **Optional Plugins**, and from the Products menu choose **TIFF/IT-P1 Plugin 2.1r1**.
5. Click **Add** to add the plugin to the list of products to install, and click **Install** to begin copying the files from the CD.

If after selecting Install a browser dialog appears, you have selected an invalid or incorrect RIP folder. Use the browser to select the correct RIP folder and click **OK**.

If the message "Selection is not a valid RIP folder" appears, you have again selected an incorrect RIP folder. You are given another opportunity to select the correct folder. When the correct folder is selected, the plugin is installed and the "Installation complete" message appears.

6. After installing the files, close the Product Installer window and start the Harlequin RIP.

If you have correctly installed the plugin, a line similar to the following will appear in the RIP monitor when you next start up the RIP:

```
%! TIFF/IT-P1 - Version 2.1r1 - Copyright (c) 1998-2005 Global
Graphics Software Ltd. All Rights Reserved.
```

7. Before using the plugin, you need to configure the RIP, configure the device, and choose options in the Page Setup dialog box. To configure the RIP, choose **Harlequin RIP > Configure RIP** to display the Configure RIP dialog box.

8. From the **Page buffering** drop-down list, choose **single (if required)**. This option is the most efficient in terms of memory usage. You can use other modes if there is sufficient memory available to the RIP.
9. Click **OK** in the Configure RIP dialog box. You are now ready to configure the device, as described in the following steps.
10. Choose **Harlequin RIP > Page Setup Manager** to display the Page Setup Manager dialog box.
11. Click **New** to display the Page Setup dialog box.
12. From the **Device** drop-down list, choose **TIFF/IT-P1**.

Note: If **TIFF/IT-P1** does not appear as an option in the **Device** drop-down list in the Page Setup dialog box, see Section 2.1. Otherwise, continue with Section 3 on page 5.

2.1 Supplying passwords

If **TIFF/IT-P1** does not appear as an option in the **Device** drop-down list in the Page Setup dialog box, your installation of the Harlequin RIP may require you to enter a password before you can use the plugin. (Note that TIFF 6.0 input is always enabled.) You can enter the password by following this procedure:

1. Contact your supplier to request a password. You may be asked to give the serial number of your RIP which is displayed when starting up, in the form:

Serial number: 1234-56

You must also tell your supplier the platform for which you require the password. The platform is the combination of operating system and processor type; for example, you might specify Windows NT and either the Intel or Alpha processor. There are similar choices for processor type under the UNIX operating system, but the Macintosh operating system and Windows 95 only run on one processor type, so there are no choices.

2. Once you have a password, choose **Harlequin RIP > Configure RIP** to display the Configure RIP dialog box.
3. Click the **Extras** button in the Configure RIP dialog box to display the Configure RIP Extras dialog box.

4. Select **TIFF/IT-P1**, **TIFF/IT-P1**, and click **Add**. (Make sure you do not choose the *input* option **TIFF/IT** by mistake.)
5. In the Enable Feature dialog box, enter the password for this plugin given to you by your supplier, and click **OK**.
6. Click **OK** in each of the Configure RIP Extras and Configure RIP dialog boxes.

3 Device configuration

Once you have installed the plugin, you can configure it to meet your needs by following this procedure:

1. Click **Configure device** to display the TIFF/IT-P1 Configuration dialog box.

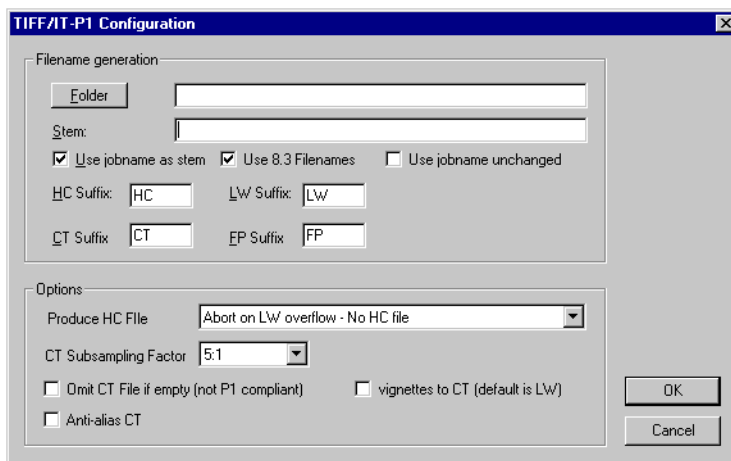


Figure 1 TIFF/IT-P1 Configuration dialog box (Windows version)

The controls in this box fall into the following categories:

- Output filename setup. See Section 3.1.
 - Other options. See Section 3.2 on page 7.
2. Make the settings you wish, then click **OK**.

Now that you have configured the device, you can choose Page Setup settings, as described in Section 4.1.

3.1 Output filename setup

The settings in this section allow you to name output files simply and uniquely.

Folder

Click the button to use a file browser to choose the folder to hold the output file. Alternatively, in the text field, type in the full path to the folder you want to use. This path must specify the disk name and all folders to an *existing* folder.

If you do not choose a folder, the plugin creates the files in the folder holding the `sw` folder of the Harlequin RIP installation that you are using.

Stem and Use jobname as stem

You can use a fixed stem (or start) to the names of output files or use a variable stem based on the job names.

To use a fixed stem, in the **Stem** text field, type a stem for the filename *and* deselect the **Use jobname as stem** check box. For example, if you use the stem `1mb` (and leave the suffixes at their defaults), you can expect to see files named `1mb01.CT`, `1mb01.FP`, and `1mb01.LW`, with subsequent pages or jobs producing files called `1mb02.CT`, `1mb02.FP`, and `1mb02.LW`, and so on.

Alternatively, use the jobname as the filename stem by setting the **Use jobname as stem** check box.

Use 8.3 Filenames

Set this check box to use DOS-compatible short file names. Leave this check box clear to use long file names.

Use jobname unchanged

Set this checkbox to retain non-alphanumeric characters in the output file name. **Use jobname as stem** must also be checked for this option to be implemented.

Note: Be aware that invalid file names can result if the jobname contains characters \ / : * ? " < > which are not allowed in file names.

HC Suffix, CT Suffix, LW Suffix, and FP Suffix

Type text strings to act as suffixes to the filenames into these text boxes. The defaults appear in the text boxes, but you can change them if required by your workflow.

3.2 Other options

The settings in this section allow you to specify the content of the output more precisely.

Produce HC File

From this drop-down list box, choose a method of handling jobs that contain more than 256 colors defining objects that should be sent to the LW file. Note that HC files are optional in the TIFF/IT-P1 specification. The choices are:

Abort on LW overflow - No HC file

This method produces an error when the plugin reaches the limit of 256 colors for the LW file. No output files are produced.

Draw LW overflow in white - No HC file

All new colors after reaching the 256 color limit are treated as white and painted into the LW file.

Note: There is a choice of white or transparent. The right choice may depend on the content of the job or your need to diagnose which element is provoking the overflow.

Draw LW overflow as transparent - No HC file

All new colors after reaching the 256 color limit are treated as transparent and painted into the LW file.

Overflow LW colors into HC file

All new colors after reaching the 256 color limit are treated as transparent and painted into the HC file, but edges are reproduced at the resolution of the CT file.

Note: There is a choice of resolution when using a HC file. The other, higher resolution, choice is to use HC accurate edges.

Overflow LW colors into HC, with HC accurate edges

All new colors after reaching the 256 color limit are treated as transparent and painted into the HC file, at the full resolution of the HC file.

Omit CT File if empty (not P1 compliant)

Set this check box to omit the CT file if it is empty. This makes the output non-compliant with the TIFF/IT-P1 specification but the output may still be usable in some workflows, This setting saves some disk space.

Clear this check box to output the CT file regardless of its contents.

CT Subsampling Factor

The resolution specified in the Page Setup dialog box is the LW resolution; CTs can be lower resolution.

To specify the CT resolution, choose a ratio from this drop-down list box. For example, a ratio of 5:1 means that the CT file has a resolution 5 times lower than the LW file; with this example ratio, if the LW resolution is 2000 dots per inch (dpi) then the CT file has a resolution of 400 dpi.

Vignettes to CT

Set this check box if you need to output vignettes to CT files rather than LW files.

Anti-alias CT

Check this option to apply anti-aliasing to the CT file. This can produce a smoother image.

As a default this option is not selected.

4 Routine use

The remaining controls that you need to consider are in the Page Setup dialog box.

4.1 Page Setup settings

The settings in the **Resolution** panel directly specify the resolution for LW and HC files only. (The device configuration dialog box specifies the CT resolution by defining a ratio between the resolutions of the LW and CT files.)

The **Style** drop-down list box in the **Separations, Screening and Color** panel offers only one option, **CMYK Composite**. Spot colors are not supported; this is a deliberate restriction in the TIFF/IT-P1 specification.

When you have made the settings you want, click **Save As**. In the **Save Setup** dialog box, type a name in the **Save As** text box and click **Save**. The new page setup now appears in the list in the Page Setup Manager dialog box.

4.2 Roaming page buffers

If you are producing output in a mode that allows display of the Output Controller/Monitor, you can select a page buffer and click **Roam** to inspect it. The Roam window displays a normal view of the image with the Roam Option dialog box providing simple control of the CMYK components.

Note: This is a change from earlier versions of the TIFF/IT-P1 output plugin, which produced a different kind of page buffer. Roaming those page buffers displayed multiple layers for each color, including masks which obscured the image until turned **Off**. These masks are no longer required.

5 Troubleshooting

You may see the following messages or symptoms when using the TIFF/IT-P1 output plugin.

```
TIFF/IT-P1: ERROR: Unable to allocate memory for intermediate
buffer
```

This message appears if insufficient memory has been allocated to the RIP in **Memory for RIP** settings. Allocate additional memory in

Harlequin RIP > Configure RIP > Options. Consider adding more RAM to your computer if this error persists.

TIFF/IT-P1: ERROR: Run out of colors in LineWork file

This message appears if the setting **Abort on LW overflow - No HC file** is chosen for the **Produce HC File** option in the device configuration dialog box. This is the default setting.

Note: This message appears when producing the output files, not when producing the page buffer file. If you have set **Disable Output** in the Output Controller/Monitor, the error message may occur after you have prepared several unsuitable page buffers. You may still be able to output these page buffers: select each page buffer, click **Info** then **Configure Device** and use one of the other settings described on page 7.

TIFF/IT-P1: ERROR: Unable to generate unique output filenames

Check that your chosen output folder is not full of similarly named files.

To avoid the problem, do one of the following: move the existing files, choose a different output folder, choose a different filename stem, or clear the **Use 8.3 Filenames** check box

TIFF/IT-P1: ERROR: Cannot write output file (disk is probably full)

Check that your chosen output folder is on a disk with sufficient spare space.

Jagged or fuzzy text or line elements in the output

This may be the result of other elements in the job using all the colors available in the LW file, combined with use of the setting **Overflow LW colors into HC file** for the **Produce HC File** option in the device configuration dialog box.

Try using the setting **Overflow LW colors into HC, with HC accurate edges** but be aware that this may produce large output files.

6 Related documentation

For more details about the TIFF/IT-P1 format, see:

- The International Standards Organization's Draft International Standard (DIS) ISO 12639:1998, "Graphic technology — Prepress digital data exchange — Tag image fill format for image technology (TIFF/IT)".

This specification can be ordered from:

<http://www.iso.ch/>

- The ANSI IT8.8 standard.
- The Aldus TIFF 6.0 standard.

This standard is now maintained by Adobe and is available from Adobe's web site.