



HARLEQUIN® multiRIP™

Installation Manual for
Windows OS

Version 10.1r0

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Installing the Harlequin® MultiRIP™ for Windows

I Introduction

This document describes the procedure for installing the Harlequin® MultiRIP™ (HMR) v10.1r0 Release on Microsoft® Windows. To ensure trouble free installation of the Harlequin MultiRIP, follow these instructions carefully. After installing, you may want to test the RIP is working correctly by previewing a few fonts on screen. “[Testing the Harlequin RIP](#)” on page 19 describes how to do this.

Please note the following items about the Harlequin MultiRIP v10.1r0 Release:

- The NONE, TIFF and PDFRaster output plugins are installed at the same time as the Harlequin MultiRIP. Other output plugins such as CIP3, OKI and TIFF/IT and the NTPipe input plugin are supplied with their own installer. See “[Installing plugins](#)” on page 23 and the documentation supplied with the plugin for more details.
- The Harlequin MultiRIP v10.1r0 is supplied as a 64-bit and 32-bit application.
- You are provided with the option to choose either Sentinel LDK security or Harlequin License Server (HLS) security with either software or hardware (dongle) licensing.
- When using Sentinel LDK security the Sentinel LDK Runtime Environment is installed at the same time as the Harlequin MultiRIP.
- When using HLS the License Server is installed at the same time as the Harlequin MultiRIP. The Harlequin MultiRIP v10.1r0 release must use v5.0r1 of the Harlequin License Server. For more information, see “[Harlequin License Server](#)” on page 4.
- When using HLS the Harlequin License Manager application is provided to help manage your licenses, and to allow the addition of extra permits. See “[The License Manager](#)” on page 17.
- When using HLS a Try Before You Buy option is available for RIP upgrades. For more information, see “[Try Before You Buy licenses—HLS only](#)” on page 19.

Note: Plugins created for Harlequin Server RIP v9.x will work with 32-bit builds of HMR.

2 MultiRIP security

Global Graphics (GGSL) is replacing its RIP security application, the Harlequin License Server (HLS), with a security system called the Sentinel License Development Kit (LDK) from SafeNet Inc. The advantage of this system allows GGSL and OEMs to:

- Provide a more robust security model, from a specialist security company.
- Enable a more timely and efficient delivery of RIP licenses to you, allowing flexibility and immediate onward delivery without requiring that you hold large inventories.
- Allow GGSL to offer security variations as requested by some customers.

For new OEMs Sentinel LDK security is the recommended option, and HLS will be withdrawn in a future version. A cross-over period from HLS to LDK is available to help with upgrades.

The Sentinel LDK can use either software or hardware protection. Software protection assigns the product key to the machine running the RIP. Hardware protection assigns the product key to a hardware dongle.

2.1 Dongles

The supported dongles for the Harlequin MultiRIP v10.1r0 Release are SuperPro (USB or Parallel).

Note: A 64-bit RIP will run with a 32-bit dongle, but a 32-bit RIP will not run with a 64-bit dongle.

2.2 Harlequin License Server

The Harlequin License Server is installed at the same time as the Harlequin MultiRIP. The Harlequin MultiRIP v10.1r0 release must use v5.0r1 of the HLS. Installation of the HLS is not an option and is performed automatically. It is important that the dongle is plugged in before any attempt is made to start the HLS. The HLS service automatically starts up when the computer boots up, and when the Harlequin MultiRIP is started. You can, if you wish, manually start and stop the service. If the HLS service is stopped, the RIP will not work.

If you have a supported dongle type, the License Server will read the dongle ID, ascertain that it is valid, and give the RIP permission to run, by creating a valid “permit” which the RIP checks when it starts up.

Note: A 64-bit RIP will run with a 32-bit dongle, but a 32-bit RIP will not run with a 64-bit dongle.

If you attempt to install an older version of the RIP after installing and using a v10.1r0 RIP, the v10.1r0 RIP will no longer work. This is because installing the older version of the RIP also replaces the License Server. The v10.1r0 RIP requires the v5.0r1 License Server to work.

For more information, see [“The Harlequin License Server” on page 14](#).

Note to OEM: The following sections (2.3, 2.3.1 and 2.3.2) describe the Licensing and installment plan which you may want to remove or amend according to your licensing model.

2.3 License model

The license model is extended to allow RIP customers to spread the cost of a RIP purchase over a period (such as one year), and to be able to use it immediately while providing OEMs with the ability to enforce regular payment. Once the full RIP price has been paid (after a year), the OEM can easily enable the RIP to run from then on.

This licensing model is achieved by the use of a *Licensing and installment plan* which provides a combination of a recurring license period and a date at which the RIP customer gains an indefinite licence. The length and number of recurring periods and the period before an indefinite licence is provided (if ever), can be varied by the OEM.

Provision of the Licensing and installment plan option is subject to appropriate commercial agreements.

The RIP customer is automatically warned when the current license period gets close to expiry.

In addition, the RIP customer can enable layered options and install encrypted fonts in the RIP running under an installment plan or leased licence.

If the lease or installment plan agreement for the RIP is terminated, all layered options are terminated at the same time. The OEM does not need to enable leasing of layered options separately from the RIP.

It is possible to upgrade the RIP used under a lease licence without swapping out the dongle. It is not necessary to swap out a dongle or any other hardware component for every license period.

OEMs will be charged the full cost of the RIP when the dongle/licence is initially delivered to them.

The solution provided allows OEMs (and dealers) to carry an inventory of any element that needs physical shipping (such as dongles).

2.3.1 Try Before You Buy upgrades—HLS only

When using Sentinel LDK security you can order a Timed product key allowing you to try layered options before buying. For HLS security a Try Before You Buy option is provided.

A RIP customer with a RIP running under a *Licensing and installment plan* can evaluate layered options under a TBYY license. It is not necessary to swap a dongle for every license period.

In addition, The RIP customer can return to their older RIP without requiring replacement of hardware or re-configuration of the older RIP.

The RIP customer can build on the configuration applied in the upgrade version installed for the TBYY as and when a permanent upgrade is purchased. The TBYY option is only provided for upgrades on sites which are already running the RIP using a USB dongle. RIP customers with older dongles (for example, parallel) should obtain a new dongle from their OEM.

Provision of the TBYY solution is subject to appropriate commercial agreements.

2.3.2 Demo dongles

Evaluation dongles for the Harlequin MultiRIP require permits to operate. 3, 6 month or 1 year time-limited permits are available, and apply to all demonstration dongles already shipped. That is, demonstration dongles will not work with v10.1r0 without a new permit.

Permits are available to OEMs who provide a list of demonstration dongles that are in active and legal use.

The RIP customer is warned as the time remaining on the permit approaches expiry.

2.4 Changing the clock

Before installing the Harlequin MultiRIP together with the HLS, you must ensure the computer clock is correctly set. Any change made to the computer clock after installation, specifically turning the clock backwards so that the date is changed, may prevent the HLS from using permits. Launching and running a dongled RIP will not be affected, but any function enabled through a permit may fail.

Note: Changes made to the clock to correct for small amounts of “drifting” and for daylight saving will not affect the HLS.

2.5 Passwords

To get new passwords please contact either:

sales-admin-uk@globalgraphics.com
sales-admin-us@globalgraphics.com

You will need to provide the following information:

- Password, layered option, and name (from the Extra’s dialog box).
- Serial number from RIP monitor on launch (Example: Serial number: 8373-46).
- Part number from dongle label (Example: PS1-N-21-0BD-A7).

Alternatively, if you are registered to use the eKey system you can obtain your password using the online facility.

3 System requirements

For optimum RIP performance, it is important for the computer running the Harlequin RIP to have a good system specification, with plenty of free disk space, a powerful processor and ample system memory. Refer to [Table 1](#) for the minimum system specifications for running the Harlequin RIP. Also, you should not run other processor/memory intensive applications when the RIP is processing jobs, as they could slow down the performance of the RIP.

The *Harlequin RIP OEM Manual for Windows operating systems* describes the features of the RIP that can affect throughput and shows how you can improve performance. See Chapter 2, “Running the Harlequin RIP” in the Harlequin RIP manual for details.

Note to OEMs: The mention of Chapter 2, “Running the Harlequin RIP”, may need manual editing in your versions of the installation guide.

Component	Recommended and minimum requirements (R or M)	
Processor	Any core-I processor at 2 GHz or faster, or AMD equivalent	R
Operating system	32-bit HMR is supported on: <ul style="list-style-type: none"> • Windows 7 SP1 (excludes Starter edition) • Windows 8.1 (excludes Windows RT) 64-bit HMR is supported on: <ul style="list-style-type: none"> • Windows 7 SP1 (excludes Starter edition) • Windows 8.1 (excludes Windows RT) • Windows Server 2008 R2 (requires SP1, Standard edition only, excludes Server Core configuration) • Windows Sever 2012 R2 (Standard edition only, excludes Server Core configuration) 	
Hard drive	32 GiB or larger, preferably 7200 RPM or higher	M
System requirements	4 GiB RAM if not using TrapPro; 8 GiB RAM when using TrapPro. Note: The use of more than 4 GiB RAM implies a 64-bit RIP build Note: You may want to amend this value to account for your particular plugin requirements	R
Port	Parallel / USB port for the Sentinel security dongle unless using the LDK Note: Amend the port type depending on which dongle you supply	M
Network	Access via wired connection or WiFi for job submission and licence activation	R
Minimum monitor specification	1280 x 1024 or higher resolution	M

Table 1 Harlequin MultiRIP recommended and minimum requirements

Component	Recommended and minimum requirements (R or M)	
Sentinel LDK	The LDK Admin Control Centre (ACC) requires a web browser:	M
	<ul style="list-style-type: none"> • Internet Explorer 8.0 or later • Mozilla Firefox latest version 	

Table 1 Harlequin MultiRIP recommended and minimum requirements

Note: HMR v10.1r0 (or later) is not supported on Windows XP, Windows 8 and Windows Server 2012.

Note: HMR v10.0r0 (or later) is not supported on Mac OS X or Linux.

Note: For output devices running at higher resolutions, larger formats, more colorants, or those that run at high speed, more RAM, more disk space and a higher specification CPUs is highly recommended.

Note: You should increase the band memory size, using the **Configure RIP Options > Band memory per thread** value, when core halftone modules are installed. That is, when the screening is done in OEM code as a plugin.

3.1 Special notes

This section contains useful information you should note before installing the RIP.

3.1.1 Memory considerations

When using a 32-bit version of the Harlequin MultiRIP on Windows XP or Windows 7 you must add the `/3GB` switch to the `Boot.ini` file if you want the machine to make use of memory greater than 2 GiB.

Use the following process:

1. Make sure you remove the read-only attribute of `boot.ini` (if there is one) before editing the file.
2. Add `/3GB /USERVA = 3030` to the end of the line that begins:

```
multi (0)disk(0) .....
```

3. Reboot the machine.

If the RIP has been started prior to adding the `/3GB` switch, the size of the available address space stored in `SW/Config/ConfigureRIP` will be incorrect. To reset the RIP's memory size after adding the `/3GB` switch, you should change the `/MaxAddressSpaceSize` value to 0; the RIP will then determine the new size automatically.

4. Edit `/MaxAddressSpaceSize` in the file `SW/Config/ConfigureRIP` to read:

```
/MaxAddressSpace Size 0
```

5. Start the RIP. Check the Memory Statistics. You should be seeing more than 2 GiB under "Memory Available for RIP".

If you require more information about the `Boot.ini` file, an article titled "Reviewing and Correcting `Boot.ini` Settings on x86-based Systems" is available on www.microsoft.com.

Similarly, If you downgrade from a 3 GiB capable OS to a 2 GiB OS (for example, by removing the `/3GB` switch), the memory size information in the RIP configuration will be wrong and will cause problems. Manually edit `SW/Config/ConfigureRIP` to set the `/MaxAddressSpaceSize` value to 0; this will cause the RIP to redetermine the address space size.

Using Migrate will reset the `/MaxAddressSpaceSize` value to 0 (zero).

4 Installation

This section describes how to install the Harlequin RIP and its associated products on Windows operating systems. Close all other applications before installing the Harlequin RIP.

When using the Sentinel LDK the summary of the installation procedure is:

1. When installing a new RIP make sure you have your product key.
2. If you are upgrading your RIP and have previously installed using the Sentinel LDK security and your product key is still valid your RIP will detect this and will automatically be enabled.
3. Previous installations of the Harlequin MultiRIP and any application using the LDK must be shutdown before attempting to install a new RIP.
4. Run the InstallAnywhere package, and install the RIP, plus any other plugins you need. See [“Installation procedure” on page 8](#).

Note: If you are using Sentinel LDK security with a dongle note that the dongle drivers are loaded along with the LDK.

5. Make sure the LDK is installed.

When using the Harlequin License Server the summary of the installation procedure is:

1. Make sure the dongles are unplugged before commencing the driver installation.
2. Previous installations of the Harlequin MultiRIP and any application using the HLS must be shutdown before attempting to install a new RIP.
3. Make sure the computer clock is set correctly. See [“Changing the clock” on page 5](#) for the reason.
4. The HLS must be stopped before attempting to install a new RIP. See [“Starting and stopping HLS” on page 16](#) for more information. On Windows platforms the HLS is automatically shut down by the installer.
5. Run the InstallAnywhere package, and install the RIP and dongle drivers, plus any other plugins you need. See [“Installation procedure” on page 8](#).
6. Load the dongle drivers. See [“Loading the dongle drivers—HLS only” on page 10](#).
7. Start the HLS service. On Windows platforms the HLS is automatically started by the RIP.
8. Start the RIP. See [“Starting the Harlequin RIP” on page 18](#).

4.1 Installation procedure

When installing it is recommended that you:

- Install the RIP as an Administrator.
- Run the RIP as a User.
- To do this, the relevant read, write and execute permissions need to be set for a designated *group*, whose members are able to run the RIP.

This is a manual operation which involves setting up *groups* and adding users as members to those groups, then changing the permissions of the RIP directories accordingly.

For example:

1. Use Computer Management to create a new user group called, for example, *RIPusers*.
If necessary, refer to the System Help for details on how to create a new user group.

2. Add the Administrator and any RIP users as members of that group.
3. Install the RIP as Administrator (see below for details).
4. As Administrator still, change the top-level directory of the Harlequin RIP (and all enclosed files and directories) to have read, write and execute permissions for the group called *RIPusers*.

Any user belonging to the *RIPUsers* group will be able to run the RIP.

Once you have set up a user group as described above, you can install the Harlequin RIP.

Double-click **install_HMR_winXX.exe** (where **XX** is either 64 or 32) to load the InstallAnywhere product installer, which allows you to easily install the Harlequin MultiRIP products. There is usually a pause after double-clicking the .exe before any dialog is displayed. This is because a Java virtual machine is installed as part of the installation process.

1. To ensure you have the necessary privileges for installing the Harlequin RIP, log on as *System Administrator* or right-click the installer and select **Run as administrator**.

Note: If a User Account Control message appears ensure that the program is the Harlequin MultiRIP installer and select **Yes**. Otherwise select **No**.

2. Follow the InstallAnywhere screen instructions. Select the **Next** button to move onto the next screen and the **Previous** button to return to a previous screen. Note that each screen of the install procedure is labelled both above and at the left side of the window.
3. In the “Select Product” screen choose either **Harlequin MultiRIP using Sentinel LDK** or **Harlequin MultiRIP using Harlequin Licence Server**.
- 4a. If you have chosen to install the RIP with licensing performed using the Sentinel LDK you are presented with the following options:

RIP and LDK together

Use this option to install both the RIP and the LDK.

RIP only (will use a remote LDK)

Use this option to install only the RIP components. Licensing is performed using an LDK installed on another machine on the network.

LDK only (for use with remote RIP)

Use this option to install only the Sentinel LDK components. In this case the RIP is installed on another machine on the network and this machine is providing the licensing capabilities.

- 4b. If you have chosen to install the RIP with licensing performed using the Harlequin License Server you are presented with the following options:

RIP and HLS together

Use this option to install both the RIP and the HLS along with an option to install the dongle driver. It is recommended that you leave this option checked. If you choose not to install the dongle drivers at this time you must do so before attempting to use the RIP. For more information see [“Loading the dongle drivers—HLS only” on page 10](#).

RIP only (will use an existing HLS)

Use this option to install only the RIP components. Licensing is performed using an existing HLS installation.

HLS only (RIP will be installed separately)

Use this option to install only the HLS components. In this case the RIP is installed separately.

5. Use the “Choose Install Folder” screen to select an installation folder.
If you wish you can choose a different install folder to the default. Click **Choose...** and navigate to the required folder. If at any time you wish to restore the default location click **Restore Default Folder**. Click **Next** to install in the desired location and move onto the next stage.
6. Use the “Choose Shortcut Folder” screen to create any icons or Start menu options.
Note: If you have chosen to install the RIP in a different directory to the default directory, you will not be able to create icons in this directory unless you have created it before starting the installation. When this is done click **Next**.
7. The “Pre-Installation Summary” screen allows you to examine your installation choices. If required, use the **Previous** button to return to earlier screens and modify your selections, otherwise click **Install** to proceed with the installation.
- 8a. If you are using the HLS a warning dialog may be displayed at this point. Any products on your system that use the Harlequin License Server should be stopped before continuing with the installation. Click **Continue** to move ahead with the installation. Previous versions of the HLS will now be removed.
- 8b. If you are using the LDK a dialog is displayed allowing you to enter the product key or to skip that step. If you have previously entered a product key and it is still valid, skip this step and your RIP will run without the need to re-enter the key. For the product key to be registered the Sentinel LDK runtime environment must be installed on the RIP computer. This is done automatically as part of the RIP installation. If you do choose to enter your product key the LDK tool appears. See [“Using the LDK licensing tool” on page 12](#) for the full procedure.
9. The installation will now continue. This may take some minutes. The time taken depends on the number of options to be installed. A progress indicator is displayed at the bottom of the dialog box.
10. The “Install Complete” screen indicates that the installer has finished. If any errors have occurred a message will be displayed. Click **Done** to exit from the installer. You can view the details of the errors by opening the `xx_InstallLog.xml` file which is located in the installation folder. The install log file is created even if the installation is error free.
Note: This log file is only created after **Done** is clicked—but the message to examine that file is displayed in the “Install Complete” dialog—so it is possible to navigate to the directory and not find the logfile (if **Done** has not been clicked first).
You can search for installation errors in this document by searching for the word “warning”.

4.2 Loading the dongle drivers—HLS only

If you are using the Harlequin License Server and you chose not to install the dongle drivers as part of the installation procedure you must manually load the dongle drivers. This section describes how to load the required dongle drivers.

Harlequin MultiRIP v10.1r0 must use version 7.5.7 of the Sentinel dongle driver.

1. The security dongle supplied with the Harlequin RIP has its own set of drivers. These *must* be installed and loaded if the dongle is to allow the RIP to load successfully. If you have not already done so, add them from the drivers package (as described in [“Installation procedure” on page 8](#)) and proceed as follows:

2. If, following the installation procedure you decide to unload the dongle drivers, you will find the **SentinelSystem Driver Installer XXX.exe** file (where XXX is the version) in the `sentinel` folder within the Harlequin RIP installation.
3. If you decided not to unload the dongle drivers, you can either go back and rerun the `.exe` installer to add the drivers. Alternatively, you will find the dongle driver installer located within the `sentinel` folder.
4. After installing the RIP and unloading the dongle drivers you should do a complete install of the Sentinel drivers using the **Sentinel System Driver Installer XXX.exe** file in `\sentinel`.
5. Restart your computer after installing the drivers.

You must now enable your RIP and features using your chosen security option. See [“Sentinel LDK Security” on page 11](#) or [“The Harlequin License Server” on page 14](#).

4.3 Security preferences

A `SW\secprefs` file is created during the installation, and it informs the RIP which security option to use when both LDK and HLS are installed on a system. This could happen if the machine is being used with other GGSL products. In this situation the `SW\secprefs` file can be edited so that either LDK or HLS is used.

To use LDK security the `SW\secprefs` file contents should be:

```
method
ldk
```

To use HLS security the `SW\secprefs` file contents should be:

```
method
hls
```

Note: When migrating from HMR 10.x with HLS to HMR 10.x with LDK, if you don't re-install the RIP, you must change the `SW\secprefs` file to indicate that the RIP should use LDK instead of HLS after the migration. The `SW\secprefs` file is created during the installation, and it informs the RIP which security option to use when both LDK and HLS are installed on a system.

4.4 Transition from HLS to LDK

When performing the transition from HMR 10.x with HLS to HMR 10.x with LDK the LDK runtime and components must be installed and the `SW\secprefs` file must be changed. Therefore, it is recommended that you perform a new install in a new location and select LDK for the security. You can then use the backup configuration and fonts tools to move data across from a pre-existing RIP.

If, however, you wish to transition your current installation, that is replace HMR 10.x with HLS with HMR 10.x with LDK on the same RIP, you must install the LDK runtime and components using the installer and change the `SW\secprefs` file to indicate that the RIP should use LDK security instead of HLS after the transition. The `SW\secprefs` file is created during the installation, and it informs the RIP which security option to use when both LDK and HLS are installed on a system.

5 Sentinel LDK Security

For details on Sentinel LDK security see the FAQ document entitled *LDK Security for Harlequin MultiRIP 10*. For more information on the LDK utilities see *Technical note HQN091*.

5.1 Using the LDK licensing tool

The LDK licensing tool is a straight-forward utility for licensing, upgrading and transferring your RIP licenses. The following information is provided:

5.2 License a new RIP—software protection

1. Make sure you have received your product key from Global Graphics.
2. Make sure you have an internet connection.
3. Install the Harlequin MultiRIP using the normal installer.

Note: The Sentinel LDK runtime environment should be installed on the RIP computer before generating a fingerprint or transfer recipient file for it.

Note: If RIP machine does not have web access you must copy the `ldktool.exe` located at `<HarlequinMultiRIP_XXX>\ldk\utils\` onto a machine with web access. The LDK tool provides various options which enable product activation and upgrade and is available as an easy to follow graphical user interface.

4. To display the LDK tool select LDK registration from the Start menu. Or assuming a default install, go to `users\<name>\<HarlequinMultiRIP_XXX>\ldk\utils\` and double-click `ldktool.exe`.

Where `<HarlequinMultiRIP_XXX>` is your HMR name:

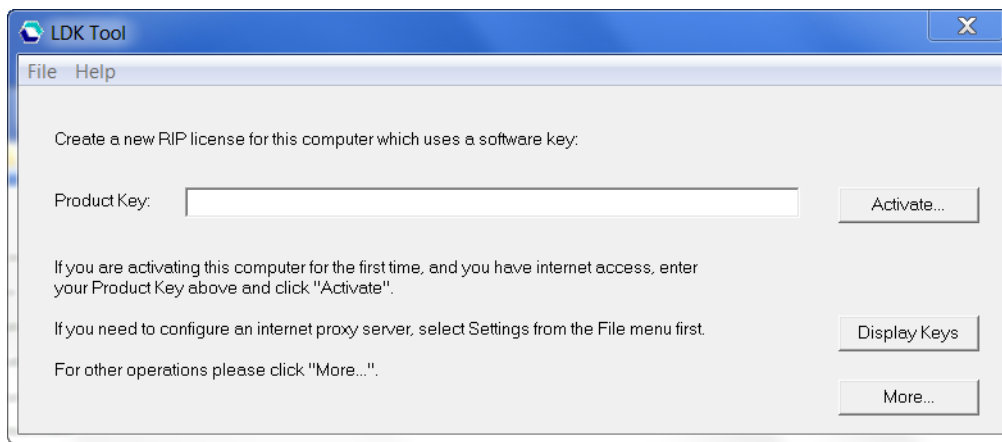


Figure 1 LDK (new RIP) tool

- 5a. If this machine running the RIP has web access, select **Have internet access**.

Copy and paste the product key into the Product Key field and select **Activate**. An “Are you Sure...” message appears.

If you are sure click **Yes**. If you are not sure select **No**.

This creates a local key assigning your products to the machine.

- 5b. If this machine running the RIP does not have web access select **More > New License > License this computer > No internet access**. You are prompted to create a fingerprint file (C2V) for this computer.

Select **Create**. A browser opens allowing you to Save a file called `<machine name>.fingerprint.c2v`. When the file is saved click **OK** in the dialog. A dialog with a **Locate** option is displayed. Leave this dialog open and move the `<machine name>.fingerprint.c2v` file, using a network or memory stick, to a machine with web access.

On the machine with web access start the LDK tool and select **New License** followed by **License a different computer**. Paste your key into the **Product Key** field and click **Activate**. This displays a browser allowing you to select the previously created fingerprint file.

On selection of the fingerprint file another browser opens allowing you to save a **<machine name>.license.v2c** file. Select this file and select **Save**.

Move the **<machine name>.license.v2c** file to machine running the RIP. That is, the machine with the dialog displaying the **Locate** button. Select the **Locate** option. A browser appears. Select the **<machine name>.license.v2c** file. Otherwise click **Cancel**.

6. When completed an “Activation successful” message appears.
7. To open the Sentinel Admin Control Center double-click the shortcut located in **<HarlequinMultiRIP_XXX>\ldk\utils**. Alternatively, start your browser and enter:

```
http://localhost:1947
```

The Sentinel Admin Control Center tool provides useful administration and control capabilities.

5.3 Upgrade your RIP and add new options

If you are upgrading you RIP and want to add a new option:

1. Make sure you have received your product key from Global Graphics.
2. Make sure you have an internet connection.
3. Install the Harlequin MultiRIP using the normal installer.
4. To display the LDK tool select **LDK registration** from the Start menu. Or assuming a default install, go to **\users\<name>\<HarlequinMultiRIP_XXX>\ldk\utils** and double-click **ldktool.exe**.

Where **<HarlequinMultiRIP_XXX>** is your HMR name:

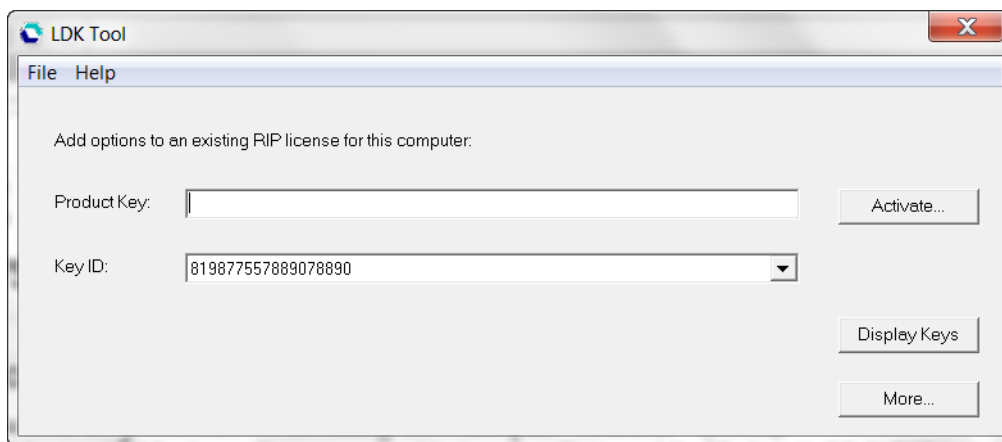


Figure 2 LDK (add options) tool

5. If you have a new key to add new options to your RIP for this computer enter it into the **Product Key** window and click **Activate**. (You can select another **Key ID** using the down-arrow in **Key ID** window.)

Note: Select **More...** to display extra LDK tool options.

5.4 License a new RIP—hardware protection

1. Make sure you have received your product key from Global Graphics.
2. Make sure the dongle is plugged into the computer running the RIP.
3. Install the Harlequin RIP using the normal installer.

Note: The Sentinel LDK runtime environment should be installed on the RIP computer before generating a fingerprint or transfer recipient file for it.

4. Go to <HarlequinMultiRIP_XXX>\ldk\utils\ and double-click ldktool.exe. Where <HarlequinMultiRIP_XXX> is your RIP name.
5. Copy and paste the product key into the Product Key field and select **Activate**. An “Are you Sure...” message appears.

If you are sure click **Yes**. If you are not sure select **No**.

This creates a local key assigning your products to the dongle.

5.5 Location of the Sentinel LDK components

After installation, the LDK components can be found in the following locations:

haspdinst.exe	Installer for the Sentinel LDK runtime environment.	\C:\Users\<>name>\HMR_10_X_XXXX\ldk\
ldktool.exe	Sentinel LDK tool with a graphic user interface.	C:\Users\<>name>\HMR_10_X_XXXX\ldk\utils
ldkutil.exe	LDK command line utility.	C:\Users\<>name>\HMR_10_X_XXXX\ldk\utils
Sentinel Admin Control Center	Shortcut for starting the Sentinel Admin Control Center.	C:\Users\<>name>\HMR_10_X_XXXX\ldk\utils

Table 2 Sentinel LDK components

5.6 Sentinel LDK notes

When you install a new RIP using the LDK and you activate your product key, the RIP will run.

If you uninstall the RIP and remove the LDK runtime and then re-install the RIP and LDK runtime using the “skip this step...” option when prompted to enter the key, the RIP should run because the SL key should still be present.

If, however, the RIP does not run, claiming that no licenses are available, you should re-start the Sentinel Local License Manager service. To do this, right-click **Computer** and select **Manage**. Select **Services and Applications** in the left windows followed by double-clicking **Services** in the right window. This displays all the available services. Scroll down and select **Sentinel Local License Manager** followed by **Restart**.

Generally, if you have a problem with the RIP not starting and you have already activated your product key, restart the Sentinel Local License Manager service.

6 The Harlequin License Server

This section describes how to add new permit files and how to start and stop the HLS (Harlequin License Server) service. For more information on adding permit files, see [“Adding a permit file to HLS” on page 17](#). The easiest way to start the service is to restart the machine. However, if this is not convenient, alternative methods exist and these are described in [“The removal of the RIP will commence. When the “Uninstall Complete” message appears click the Done button.” on page 18](#).

6.1 Permit files and licenses

The Harlequin MultiRIP can be enabled in either of two ways:

- Using a dongle (and optionally a permit) for a Harlequin Server RIP 8.2 or earlier release, with an appropriate upgrade password installed into every RIP instance.
- Using a dongle (and optionally a permit) specifically created for the Harlequin MultiRIP v3.0.

Global Graphics' products are certified to run by licenses. Licenses are provided via permit files or by dongles. Without a license the product is not permitted to start, resulting in the following typical error messages:

```
License Server failure (OxC8001005): permit for this software not available  
License Server failure (OxC8001006): no free licenses available.
```

6.2 About permit files and licenses

Permit files may contain multiple licenses. Each license allows one instance of the product to start. For example, if a permit contains two licenses for a product, two instances of that product are allowed to run concurrently.

For the Harlequin RIP, if you have a supported dongle type, the License Server will read the dongle ID, ascertain that it is valid, and give the RIP permission to run, by creating a valid "permit" which the RIP checks when it starts up. That is, the dongle provides a permit containing a single license for one RIP. All other RIP instances require a permit file containing the required number of licenses.

Note: Permit files and licenses do not enable additional Harlequin MultiRIP options like TrapPro, ColorPro and printer plugins. These features are enabled in the RIP by entering a valid password in the Configure RIP Extras dialog box.

6.2.1 How authorization works

Product authorization is obtained from the dongle attached to the computer.

Every permit file issued by Global Graphics is "keyed" to a specific HLS host server or servers. These servers are identified in the permit files, using the IP address, dongle number and/or machine ID of the HLS host. A permit file may not therefore be used on any machine whose dongle, ID or IP address is not known.

Permits generally have a very long expiry date. However, 30-day permits exist which are used to limit the life span of Try Before You Buy features in the Harlequin RIP.

Note to OEM: For more information on these options, see the document: *Ordering RIP Products Including Try Before You Buy Options - Technical Note Hqn 059*.

Note: If you change the dongle on a machine, it changes the HLS unique ID. Thus, if you have any permit files keyed to the unique ID of the previous dongle, those permit files will not be valid with the new dongle. So, if you have for example a JDF Enabler permit file keyed to dongle1, that would not be valid for use with dongle2. Swapping to dongle2 would prevent your JDF Enabler from working.

6.2.2 Re-using licenses

Licenses are released and are available for re-issue when a product is closed or after an abnormal program termination occurs. If the product and HLS are running on the same machine, the license is immediately available for re-issue when a product is closed. However, in cases where HLS and the product are installed on different machines, the license may not be available for up to two minutes after a product is closed.

6.2.3 More information

For information on the HLS, you can examine the `hls.log` file. See [Table 3](#) for more details.

6.2.4 Location of the Harlequin License Server components

After installation, the HLS components can be found in the following locations:

HLS program	\Program Files\Common Files\Global Graphics Software\Harlequin License Server\
License Manager	\Program Files\Common Files\Global Graphics Software\License Manager
Permit files	\Program Files\Common Files\Global Graphics Software\Harlequin License Server Permits
Log file	\Program Files\Common Files\Global Graphics Software\hls.log

Table 3 HLS components

6.3 Starting and stopping HLS

The HLS service (`HarlequinLicenseServer`) starts automatically when Windows loads and when the RIP is started. To start and stop the service manually, do the following:

1. In Windows, open **Control Panel > Administrative Tools > Services**. The Services window opens showing all your services.
2. From the list, right-click **Harlequin License Server** and select **Start** or **Stop** from the shortcut menu that opens. The Service Control window appears briefly as the service is started or stopped.
3. Close all open windows to finish the procedure.

Alternatively, the HLS can be started and stopped from the command line:

1. To start the HLS open a command prompt window and enter:

```
net start "HarlequinLicenceServer"
```

The following message will appear:

```
The Harlequin License Server service is starting...
The Harlequin License Server service was started successfully.
```

1. To stop the HLS open a command prompt window and enter:

```
net stop "HarlequinLicenceServer"
```

The following message will appear:

```
The Harlequin License Server service is stopping...
The Harlequin License Server service was stopped successfully.
```


If you move `hqn_lsd.exe` from its original installation folder, the Harlequin License Server service will be prevented from starting and stopping. To resolve this problem you must remove the service with the command:

```
\<path to HLS>\hqn_lsd -remove
```

and then install it with the command:

```
\<path to HLS>\hqn_lsd -install
```

After doing this, you may start and stop the HLS service as described above.

Note: The `-install` option may be useful if you think you have installed the HLS, but it does not appear as a Service within the Administrative Tools. Using the `-install` command will make the service appear.

6.4 The License Manager

The License Manager allows you to view license information, and to see which of your HLS host machines are running, both locally and on the network. You can also use the License Manager to add new permit files and to open the HLS log file.

For the License Manager to work the Harlequin License Server must be running. See [“The removal of the RIP will commence. When the “Uninstall Complete” message appears click the Done button.”](#) on page 18 for more information.

6.4.1 Starting the License Manager

To start the License Manager:

Select Start > All Programs > Global Graphics > <RIP Version> > License Manager.

After a slight delay, during which time the application searches for the HLS hosts, the application window opens.

6.4.2 Obtaining your machine identity

The Harlequin License Manager displays the ID and IP address of a machine (in the Host Info window) as well as the dongle security number, OEM customer number and the products enabled by the dongle (in the Dongle Info window).

Note: If you are running a Harlequin MultiRIP, you can also find the ID of the dongle by looking at the Harlequin RIP > Configure RIP > Extras dialog box. The number you require is displayed in the Trial code field.

6.4.3 Adding a permit file to HLS

You can use the License Manager utility to add new permit files to the HLS host that is running on the same machine. The License Manager does not allow you to add permits to HLS hosts running on remotely connected servers.

To add a new permit file, select the local server in the Server list and click the Add Permit button, and then select the permit file you wish to add. After adding a new permit file, HLS automatically re-initializes itself and updates the license information for the new permit file you have just added.

The License Manager displays the currently available permit files. See [“Location of the Harlequin License Server components”](#) on page 16 for the location of the permit files.

7 Uninstall procedure

This section describes how to uninstall the Harlequin MultiRIP.

7.1 Uninstalling the RIP

Before uninstalling ensure you have the necessary privileges by logging on as *System Administrator*.

1. Navigate to:

`<install directory>\Uninstall_Harlequin MultiRIP 10.XrX (Generic)`

2. Double click on the uninstall icon, or right-click and select **Run as administrator**. The Uninstall dialog box will be displayed. Click **Uninstall** to complete the process. Note that the Uninstall process will not remove any folders or files created after the installation.

Note: If a User Account Control message appears ensure that the program is the Harlequin MultiRIP uninstaller and select **Yes**. Otherwise select **No**.

3. The removal of the RIP will commence. When the “Uninstall Complete” message appears click the **Done** button.

8 Using the Harlequin RIP

After installing the Harlequin RIP, and loading the dongle drivers, you may start the RIP and start to process print jobs.

Note: Immediately after installation and before attempting to use the RIP you should ensure that the dongle is attached.

8.1 Starting the Harlequin RIP

To start the Harlequin RIP:

1. If the security dongle is not attached to the computer, you should make sure it is attached.
2. To start the RIP, select:

Start > All Programs > Global Graphics > Harlequin RIP X.X <customer name> > License Server MT RIP

or

Start > All Programs > <OEM name> > <RIP name> > <RIP.exe name>

depending on the installation.

- If it is the first time the RIP has been loaded, the Select User Interface Language window opens, as shown in [Figure 3](#). From the list choose the user interface language to use for dialog screens, messages and menus in the RIP. If your preferred language is not enabled, click **Enable** and enter the password when prompted (your supplier can provide you with a password if you do not have one).

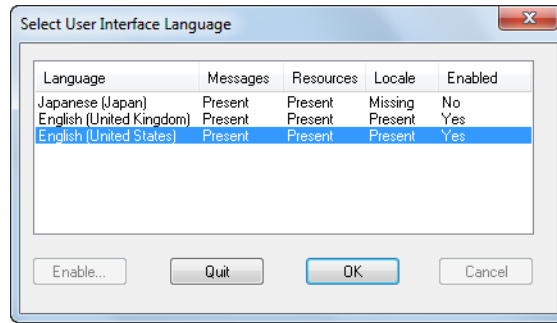


Figure 3 Select user-interface language

- Click **OK** after choosing the language. The RIP loads and is now ready for use.

9 Testing the Harlequin RIP

To confirm the Harlequin RIP is installed and working correctly, we suggest that you proof some fonts on screen. The following procedure describes how to do this:

- In the Harlequin RIP choose **Fonts > Proof Fonts**. The Proof Highlighted Fonts window opens.
- From the list, select four or five fonts (using the **Ctrl** key) and then click **Proof**. The fonts are rasterized and the results are displayed on screen, as shown in [Figure 4](#).

Palatino-Italic

abcdefghijklmnopqrstuvwxy
ABCDEFGHIJKLMN
 1234567890-!@#%&^&*()_

Figure 4 Proof fonts

If this test completes satisfactorily the Harlequin RIP is working correctly.

10 Try Before You Buy licenses—HLS only

When using Sentinel LDK security you can order a Timed product key allowing you to try layered options before buying. For HLS security a Try Before You Buy option is provided.

If you would like to make use of a Try Before You Buy feature, you should contact your supplier and request a license. You will be asked to provide the following information:

- Serial number of your dongle. This is a five digit number.
- Security number of your dongle. This is a four or five digit number with a two digit checksum written on your dongle. It is also displayed in your Harlequin RIP monitor during start-up.

- Trial code. This code is displayed in the Harlequin RIP > Configure RIP > Extras dialog box in the Trial code field.

See “[Obtaining your machine identity](#)” on page 17 for more information on how to obtain these numbers.

After you have provided this information, a .tbyb file will be sent to you.

10.1 Installing Try Before You Buy licenses

Use the following procedure if you have a v8.0 dongle (for example) and want to use a Try Before You Buy license for a RIP upgrade to a MultiRIP version:

1. Click Try... in the Revision Password dialog.
2. Select the Try Before You Buy installation file. Once selected the Try Before You Buy permit is installed, HLS is restarted and the revision password is displayed in the Revision Password dialog.
3. Click OK to start the RIP. Any other passwords in the Try Before You Buy installation file are read as the RIP starts up and a confirmation dialog is displayed.

The following procedure describes how to install a Try Before You Buy license in the Harlequin RIP.

1. In the RIP, open the Configure RIP Extras dialog box ([Figure 5](#)) by clicking Harlequin RIP > Configure RIP > Extras.

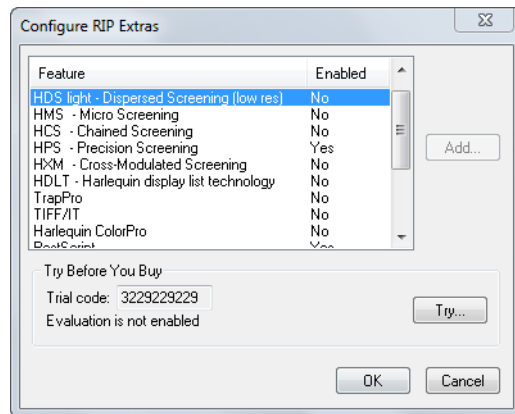


Figure 5 The Configure RIP Extras dialog box

2. Click the Try button and navigate to your Try Before You Buy license (<file name>.tbyb) that has been e-mailed to you. If the Try button is not available, see “[Manually installing a Try Before You Buy license](#)” on page 21.
3. Select the .tbyb file. If the installation is successful the following message appears:

```
Try Before You Buy installed successfully
```

Click **OK** to remove the message. The enabled trial options now show **Trial** in the **Enabled** column.

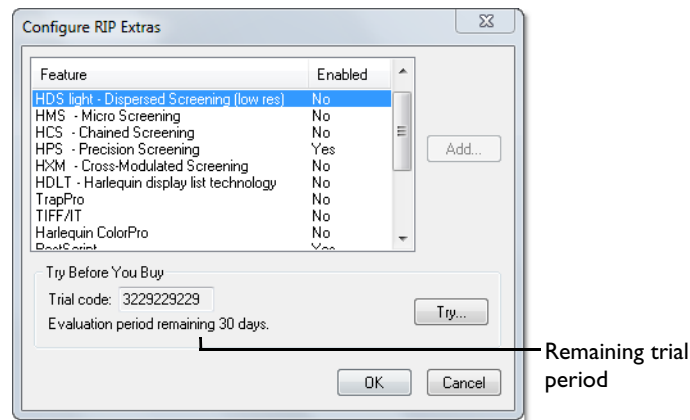


Figure 6 Configure RIP Extras dialog box showing trial features

4. Click **OK** until all open dialog boxes are closed to complete the procedure.
5. Restart your RIP.

The remaining period for the trial options is shown in the monitor window when the RIP starts and in the Configure RIP Extras dialog box.

When you install a TBYB file, two things occur:

- a permit is added to the License Server
- passwords are set

Therefore, if you decide to select **Cancel** in any of the dialogs displayed after the **Extras** dialogs, the Trial will not be enabled. Cancelling will un-set the passwords, but the License Server will still have the permit. In this case, TBYB is still enabled but you are, in effect, evaluating *no* features, hence the message:

```
Evaluation period will expire in <n> days
```

where *<n>* is the number of days.

10.2 Manually installing a Try Before You Buy license

The following instructions describe how to manually install a Try Before You Buy license in the RIP. You may have to do this if the **Try** button in the Configure RIP Extras dialog box is unavailable, which occurs when the RIP and the Harlequin License Server (HLS) are installed on different machines.

To install a Try Before You Buy license manually, do the following:

1. Open the Try Before You Buy license in a text editor.
2. Copy the information between `<Permit data starts>` and `<Permit data ends>` into a new text file. Save the new text file with the name called `TBYB.hqn.permit`.
3. Copy the information between `<Password data starts>` and `<Password data ends>` into a new text file. Save the new text file with the name `TBYB.pwd`.
4. On the machine where HLS is installed, open your HLS permits folder, or create the folder if it does not already exist. The folder is located in the following place:

```
\Program Files\Common Files\Global Graphics Software\Harlequin License Server  
Permits\
```

5. Place the file `TBYB.hqn.permit` in the permits folder and then restart the computer.
6. On the machine where the RIP is installed, open the RIP passwords folder:

```
<Harlequin RIP install folder>\SW\Passwords
```

and add the file `TBYB.pwd`.

7. Restart the RIP.

The Try Before You Buy features are now enabled in the RIP. The remaining evaluation period for the trial features is displayed in the RIP monitor window when the RIP loads, and in the Configure RIP Extras dialog box.

10.3 Post installation Try Before You Buy RIP messages

After installing a Try Before You Buy license, the Harlequin MultiRIP monitor displays the following helpful messages:

```
Try Before You Buy evaluation period will expire in <n> days
```

On the day the license is due to expire:

```
Try Before You Buy evaluation period expires today
```

And after the license has expired:

```
Try Before You Buy evaluation period has expired
```

10.4 Removing Try Before You Buy options

If you need to remove the Try Before You Buy options from a RIP, you can do this using the following procedure:

1. Shutdown the RIP.
2. Stop the License Server. See [“The removal of the RIP will commence. When the “Uninstall Complete” message appears click the Done button.”](#) on page 18.
3. Move the files labeled `tbyb.installed.hqn.permit` files from the following folder to a safe location:

```
\Program Files\Common Files\Global Graphics Software\Harlequin License Server  
Permits\
```

4. Move the files of the form: `xxxxx-tbyb.installed.004` from the following folder to a safe location:

```
<installation folder>\SW\Passwords
```

5. Restart the License Server, see [“The removal of the RIP will commence. When the “Uninstall Complete” message appears click the Done button.”](#) on page 18.
6. Restart the RIP. Check in the Harlequin MultiRIP > Configure RIP > Extras dialog, and the Trial options will no longer be displayed.

If you need to re-enable the trial options within the time frame of the trial period, you may place the password and permit files back into the folders from which they came.

11 Expiring licenses

The HLS governs when a license is considered to be expiring according to the following rules:

- if in its last 7 days for durations of up to 70 days
- if in its last 14 days for durations up to 140 days
- if in its last 31 days for longer durations.

As an aid the following messages are displayed in an Expiring Licenses dialog when the RIP is first started:

```
RIP license will expire in 7 days,RIP license will expire in 6 days, and so on.
```

```
RIP license expires tomorrow
```

```
RIP license expires today
```

```
RIP license has expired.
```

Similar messages will appear for Try Before You Buy permits.

12 Installing plugins

A separate installer is provided for a number of plugins.

To run the installer:

1. Double-click `Install_Plugins_win32.exe` or `Install_Plugins_win64.exe` depending on your platform.
2. Click **Next** to move onto the next screen or **Previous** to return to a previous screen.
3. With the Choose Install Folder window displayed use the **Choose** button to select the RIP to which you want to add the plugins. If required, click **Restore Default Folder** to re-display the default location. when the folder is selected click **Next**.

Note: If you select an incorrect folder, have already installed the plugin or the RIP in the selected folder is running, an error message is displayed.

4. In the Choose Plugins screen click the check box of the plugins you want to install. The output plugins available are CIP3, OKI C9650, OKI C931, OKI C941 and TIFF/IT. The NTPrint input plugin allows Open Prepress Interface (OPI) servers or other applications to supply data to the Harlequin MultiRIP via named pipes. When you have made your selections click **Next**.
5. In the Output Plugin License Agreement screen read the agreement. If you accept the terms select that option followed by **Next**.
6. The Pre-Installation Summary screen shows your selected options. Use the **Previous** option to make amendments to your selections. When your selections are correct click **Install** to start the installation.
7. The progress of the installation is indicated with a progress bar. On completion click **Done**.



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Installing the Harlequin MultiRIP for Windows

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HMR-OEM-Win

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