

Serendipity Megarip



**Product Manual
Version 9.1**

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Serendipity Megarip Manual

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support@serendipity-software.com.au

Further information, tutorials and how-to documents are available within the Serendipity Software Knowledge Base:

<https://skb.serendipity-software.com.au>

Product Overview

Serendipity Megarip is a high speed raster image processor (RIP) capable of accepting a variety of file formats, such as Postscript Level 3, PDF, TIFF, JPEG, PNG, Scitex CT and EPS. It is used to proof post-RIP data to either an output device, such as an Inkjet printer or to a file format, such as PDF.

Serendipity Megarip runs in a Server and Client configuration. The Server runs on a computer on the network and is protected by a USB dongle. The dongle licenses the level of software and the input drivers and output drivers purchased.

The Client can run on the same computer on the network, whether it is local (LAN) or remote (WAN). The Client connects to the Server using the standard network protocol TCP/IP and is used as the configuration tool and monitoring application to the Server. The Client is not licensed and can be run multiple times on the network.

Jobs are sent to Serendipity Megarip in a variety of ways to suit your workflows. Printers can be published on the network in order for jobs to be printed from your usual desktop applications. Hot folders (Drop Folders) can be shared, where files can be copied or saved for processing. Files can also be submitted directly from the Client or drop zones can be created for dragging and dropping files in. Once a file is submitted it is spooled into the system, the file type is detected and it is passed on for processing.

Imaging is the first process to take place. Imaging interprets the file format and samples the job's resolution to change it to that of the configured output format. By doing so, an intermediate file is generated, called the Imaged file. The Imaged File can be viewed using the SoftProof utility. The file format maintains all the plates associated with the job and is viewed at the full output resolution. The Imaged File can also be re-submitted at any time for processing to the same or a different output. There is no need to spool and interpret the job again. *

After the imaging process has completed, the job is passed to the rendering engine. This takes the Imaged File and creates the file ready for output. The process includes applying any output characteristics such as orientation, cropping, colour management (ICC Profiles) and creation of the configured format, whether for an Inkjet printer or a file format, such as PDF.

The Imaged File can be rendered as many times as desired. Each time, any of the output characteristics can be changed prior to rendering.

Once the job is rendered, it is submitted for printing to the output device or file format. Multiple output queues can be created and multiple devices can be printed to simultaneously. Most of the output devices supported use a direct printer driver and therefore the Server has more control of options, such as, selecting specific media and printing directions.

The Client monitors the whole process from start to finish, showing a jobs progress in a QueueManager and QueueStatus window. Jobs can be managed separately by placing a job on hold, releasing a job, cancelling or promoting as desired. The processes (queues) can be paused at any time, holding all jobs from spooling, imaging, rendering or printing. If a job fails, the error can be examined, rectified and the job retried. There are logs reporting all Server and Client functionality and job information from first detection on the RIP to final output. The logs can be searched, filtered or saved to a file.

The system creates a database of all configurations, calibration curves and other settings. This database can be backed- up on demand or automatically, so a working copy is always available. It can be copied to any other Serendipity Megarip as a whole database or as individual items.

*This applies to any output characteristics.

Installation - DVD

The installation section described the process for each operating system in turn.

The software is supplied on one DVD for macOS, Windows and Linux versions. All versions come with a dongle and require a dongle driver be installed. Existing installations of the software are given the opportunity to upgrade, preserving any existing configurations.

What's on the DVD?

The DVD contains all elements required to run Serendipity Megarip and associated programs. They are divided into directories:

- **Docs** – Contains all documentation.
- **Dongle** – Contains the dongle drivers for all supported operating systems.
- **Drivers** – Contains the Megarip PPDs for all supported operating systems.
- **Extras** – Contains additional components loaded as part of the install process.
- **HTML** – Contains the information required for the web browser install. This automatically launches the default browser for installation to begin.
- **Linux** – Contains the Serendipity Megarip installation packages for Linux.
- **Macosx** – Contains the Serendipity Megarip installation package for macOS.
- **Serendipity Client** – Contains the Serendipity Client application for all supported operating systems.
- **Testprn** – Contains Serendipity internal test print files.
- **Windows** – Contains the Serendipity Megarip installation package for Windows.

Windows Installation - DVD

Administrator rights are required to install Serendipity Megarip. If upgrading from an existing installation to version 9.1, see the “**Upgrading to Version 9.1**” section within this manual.

Important Note: Version 9.1 installations using a **Serendipity Dongle** do not require a dongle driver installation.

Installing the Dongle Driver (**Sentinel SuperPro USB Dongles Only**)

The first step is to install the dongle driver.
To install:

1. Remove all USB dongles from the computer.
2. On the DVD, navigate to the dongle/windows folder.
3. Double-click the **Sentinel Protection Installer.exe** file to launch the application.
4. Follow any onscreen instructions to complete the installation.
5. Restart the computer when finished.

Installing Serendipity Megarip

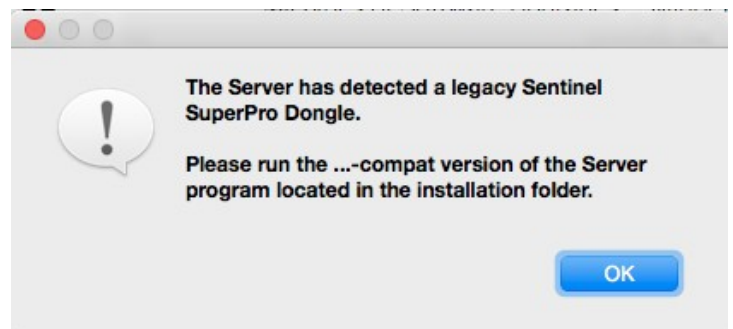
The next step is to install Serendipity Megarip. Select the appropriate file for your system to install.

1. Either select and run the Megarip installer by clicking the link on the browser page (if it pops up as Autoplay when the DVD is inserted), or go to the DVD and navigate to the Windows directory to run the file **megarip64.msi**.
2. Follow the onscreen instructions to complete the installation.

Note: You can type your own path and the installation program will make the folder for you, provided the chosen location has valid permissions. Use back slashes (\) to separate directories.

Sentinel SuperPro Dongle Users Only – If a desktop icon is created as a shortcut to launch the Megarip Server, this needs to be adjusted to run the “**...-compat**” executable. This file is located in the installation directory.

The following message will appear if you fail to run the correct Server executable for the Sentinel SuperPro dongle:



Installing the Stand-alone Serendipity Client (for Windows)

If additional computers on your network require access to Megarip, the stand-alone Serendipity Client can be installed on those machines.

Note: Download the Serendipity Client installer/s appropriate to the operating system of the additional machine/s. See the relevant OS instructions if not installing on Windows.

To install the Client:

1. Download the Serendipity Client Windows Installer file from the Serendipity website.
2. Double-click the ***serendipity_client_9_1_windows_64bit.msi*** file to begin installation.
3. Follow any onscreen instructions to continue. The installer will install additional Windows components if required, and place a Serendipity Client icon on the Desktop.

Once the installation has finished, proceed to the “**Running the Software**” section of this manual.

macOS Installation - DVD

Administrator rights are required to install Serendipity Megarip. If upgrading from an existing installation to version 9.1, see the “ **Upgrading to Version 9.1**” section within this manual.

Important Note: Version 9.1 installations using a **Serendipity Driverless Dongle** do not require a dongle driver installation.

macOS 11 Big Sur and higher require a Serendipity Driverless USB Dongle for the software to function. Legacy Sentinel SuperPro USB dongles are only compatible with macOS 10.15 and below.

Installing the Dongle Driver (**Sentinel SuperPro USB Dongles Only**)

The first step is to install the dongle driver.

To install:

1. Remove all USB dongles.
2. On the DVD, navigate to the dongle/macosex folder.
3. Double-click the **Sentinel System Driver.pkg** file to launch the installer.
4. Follow the onscreen instructions to complete the installation.
5. Restart the computer when finished.

Installing the Serendipity Printer Drivers

The Serendipity Printer Drivers are used when setting up a Published Pagesetup for printing from a third party application (e.g. Photoshop) directly to Megarip.

The installation package is located on the installation DVD:

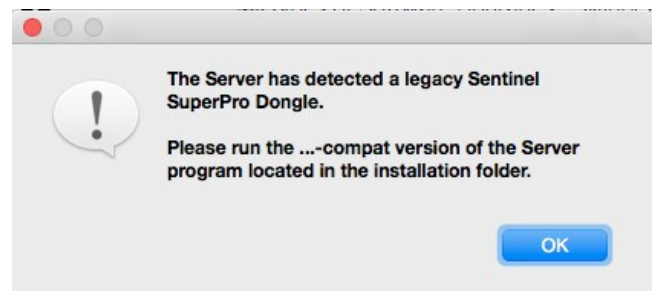
1. Navigate to the /drivers/mac/ folder and run the file **Serendipity Printer Drivers.pkg**
2. An installer window will appear. Follow the prompts to complete the installation of the drivers. The installer will require administrator access privileges.

Installing Serendipity Megarip

1. Go to the macosex folder on the installation DVD.
2. Double-click the file **Serendipity Megarip Package.pkg** to launch the installer.
3. Follow the onscreen instructions to complete the installation.

Sentinel SuperPro Dongle Users Only – If a desktop icon is created as a shortcut to launch the Megarip Server, this needs to be adjusted to run the “**...-compat**” executable. This file is located in the installation directory.

The following message will appear if you fail to run the correct Server executable for the Sentinel SuperPro dongle:



Installing the Stand-alone Serendipity Client (for macOS)

If additional computers on your network require access to Megarip, the stand-alone Serendipity Client can be installed on those machines.

Note: Download the Serendipity Client installer/s appropriate to the operating system of the additional machine/s. See the relevant OS instructions if not installing on macOS.

To install the Client:

1. Download the Serendipity Client macOS zip file from the Serendipity website.
2. Unzip the serendipity_client_9_1_macosx.zip file.
3. Double-click the Serendipity Client.pkg file to begin installation.
4. Follow any onscreen instructions to complete the installation.

Once the installation has completed, proceed to the “**Running the Software**” section of this manual.

Linux Installation – DVD

Important Note: Version 9.1 Linux installations require a Serendipity Driverless Dongle. If you are using a Sentinel SuperPro dongle, contact Serendipity or your dealer before upgrading.

Installing Serendipity Megarip

Two sets of installers are available for Linux:

AlmaLinux, CentOS 9, and Rocky Linux™ Platforms

- `serendipity-megarip-9.1-1.x86_64.rpm` – installs the 64-bit Megarip Server and native Serendipity Client
- `serendipity-client-9.1-1.x86_64.rpm` – installs a 64-bit standalone Serendipity Client
- `serendipity-c5-9.1-1.x86_64.rpm` – installs a 64-bit standalone C5 Client

Debian and Ubuntu Platforms

- `serendipity-megarip_9.1-1_amd64.deb` – installs the 64-bit Megarip Server and native Serendipity Client
- `serendipity-client_9.1-1_amd64.deb` – installs a 64-bit standalone Serendipity Client
- `serendipity-c5_9.1-1_amd64.deb` – installs a 64-bit standalone C5 Client

File Locations (DVD)

linux directory:

`serendipity-megarip-9.1-1.x86_64.rpm`
`serendipity-megarip_9.1-1_amd64.deb`

Serendipity Client/Linux directory:

`serendipity-client-9.1-1.x86_64.rpm`
`serendipity-client_9.1-1_amd64.deb`
`serendipity-c5-9.1-1.x86_64.rpm`
`serendipity-c5_9.1-1_amd64.deb`

See the following pages for installation instructions.

AlmaLinux, CentOS 9, or Rocky Linux™ Installations

Before Megarip installation (for AlmaLinux, CentOS 9, and Rocky Linux™):

1. Open a terminal window.
2. At the prompt, type the following command: `sudo dnf install epel-release -y`

For CentOS 9 Only:

1. At the terminal window type the following command: `sudo crb enable`
2. Once done, continue with the Megarip installation.

To install Megarip:

1. Open a terminal window.
2. Navigate to the Linux directory on the DVD, or the folder containing the downloaded rpm installer file.
3. At the prompt, type the following command:
`sudo dnf install ./serendipity-megarip-9.1-1.x86_64.rpm`
4. Type “y” at the prompt to install the package.
5. Next, any user login accounts that will be using Megarip need to be added to “serendipity” group. At the prompt type the following command:
`sudo gpasswd --add username serendipity`
6. For the new serendipity user group user/s to be applied, it is now necessary to restart the computer.
7. If a standalone Serendipity or C5 Client is required, follow the above steps for the appropriate file installation.

Ubuntu or Debian Installations

1. Open a terminal window.
2. Navigate to the Linux directory on the DVD, or the folder containing the downloaded deb installer file.
3. At the prompt, type the following command:

Ubuntu: `sudo apt-get install ./serendipity-blackmagic_9.1-1_amd64.deb`
Debian: `su`

`apt-get install ./serendipity-blackmagic_9.1-1_amd64.deb`
4. Type “y” at the prompt to install the package.
5. Next, any user login accounts that will be using Megarip need to be added to “serendipity” group. At the prompt type the following command:

Ubuntu: `sudo gpasswd --add username serendipity`
Debian: `su`

`gpasswd --add username serendipity`
6. For the new serendipity user group user/s to be applied, it is now necessary to restart the computer.
7. If a standalone Serendipity or C5 Client is required, follow the above steps for the appropriate file installation.

Installing the Stand-alone Serendipity Client (for Linux)

If additional computers on your network require access to Megarip, the stand-alone Serendipity Client can be installed on those machines.

Note: Download the Serendipity Client installer/s appropriate to the operating system of the additional machine/s. See the relevant OS instructions if not installing on Linux.

Before installation (for AlmaLinux, CentOS 9, and Rocky Linux™):

1. Open a terminal window.
2. At the prompt, type the following command: `sudo dnf install epel-release -y`

For CentOS 9 Only:

1. At the terminal window type the following command: `sudo crb enable`

Once done, continue with the Megarip installation.

To install the Client:

1. Open a terminal window. Navigate to the location of the installation file. At the prompt type the following command:

AlmaLinux: `sudo dnf install ./serendipity-client-9.1-1.x86_64.rpm`

CentOS: `sudo dnf install ./serendipity-client-9.1-1.x86_64.rpm`

Rocky Linux™: `sudo dnf install ./serendipity-client-9.1-1.x86_64.rpm`

Ubuntu: `sudo apt-get install ./serendipity-client_9.1-1_amd64.deb`

Debian: `su`

`apt-get install ./serendipity-client_9.1-1_amd64.deb`

2. Enter "Y" at the prompt to install the package.

Stand-alone Serendipity Client user logins do NOT need to be added to a group as per the Megarip installation instructions above.

Once the Linux installation has completed, proceed to the “**Running the Software**” section of this manual.

Installation – File Download via Website

The software is downloaded from the Serendipity website. There are files for macOS, Windows and Linux versions.

Note: All installation files are 64-bit.

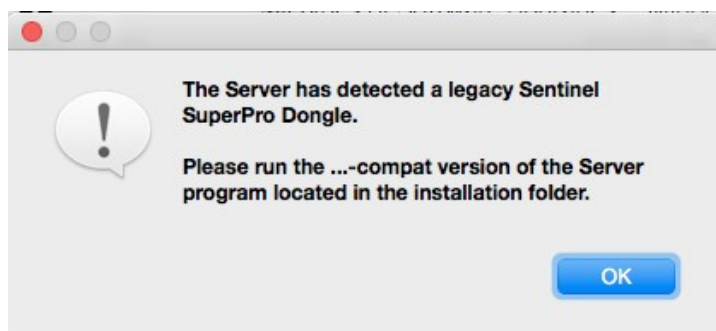
Windows Installation – File Download

1. Download the Megarip Windows Installer file from the Serendipity website.
2. Double-click the ***serendipity_megarip_9_1_windows_64bit.msi*** file to begin installation.
3. Follow any onscreen instructions to continue. The installer will install additional Windows components if required.

Note: The Windows (.msi) file installs both the Megarip Server and Serendipity Client.

Sentinel SuperPro Dongle Users Only – If a desktop icon is created as a shortcut to launch the Megarip Server, this needs to be adjusted to run the “***...-compat***” executable. This file is located in the installation directory.

The following message will appear if you fail to run the correct Server executable for the Sentinel SuperPro dongle:



Installing the Stand-alone Serendipity Client (for Windows)

If additional computers on your network require access to Megarip, the stand-alone Serendipity Client can be installed on those machines.

Note: Download the Serendipity Client installer/s appropriate to the operating system of the additional machine/s. See the relevant OS instructions if not installing on Windows.

To install the Client:

1. Download the Serendipity Client Windows Installer file from the Serendipity website.
2. Double-click the ***serendipity_client_9_1_windows_64bit.msi*** file to begin installation.
3. Follow any onscreen instructions to continue. The installer will install additional Windows components if required, and place a Serendipity Client icon on the Desktop.

Once the Windows installation has completed, proceed to the “**Running the Software**” section of this manual.

macOS Installation – File Download

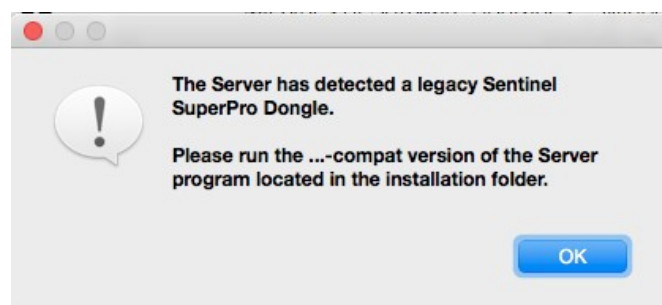
1. Download the .zip file containing the Megarip macOS Installer package from the Serendipity website.
2. Unzip the folder then double-click the Serendipity_Megarip.pkg file to begin installation.
3. Follow any instructions to continue.

Note: The macOS Installer Package (.pkg) installs both the Megarip Server and Serendipity Client.

Important Note: macOS 11 Big Sur and higher require a Serendipity Driverless USB Dongle for the software to function. Legacy Sentinel SuperPro USB dongles are only compatible with macOS 10.15 and below.

Sentinel SuperPro Dongle Users Only – If a desktop icon is created as a shortcut to launch the Megarip Server, this needs to be adjusted to run the “*...-compat*” executable. This file is located in the installation directory.

The following message will appear if you fail to run the correct Server executable for the Sentinel SuperPro dongle:



Installing the Stand-alone Serendipity Client (for macOS)

If additional computers on your network require access to Megarip, the stand-alone Serendipity Client can be installed on those machines.

Note: Download the Serendipity Client installer/s appropriate to the operating system of the additional machine/s. See the relevant OS instructions if not installing on macOS.

To install the Client:

1. Download the Serendipity Client macOS zip file from the Serendipity website.
2. Unzip the ***serendipity_client_9_1_macosx.zip*** file.
3. Double-click the ***Serendipity Client.pkg*** file to begin installation.
4. Follow the onscreen instructions to complete the installation.

Once the macOS installation has completed, proceed to the “**Running the Software**” section of this manual.

Linux Installation – File Download

Important Note: Version 9.1 Linux installations require a Serendipity Driverless Dongle. If you are using a Sentinel SuperPro dongle, contact Serendipity or your dealer before upgrading.

AlmaLinux, CentOS 9 Stream, or Rocky Linux™ Installations

Before Megarip installation (for AlmaLinux, CentOS 9, and Rocky Linux™):

1. Open a terminal window.
2. At the prompt, type the following command: `sudo dnf install epel-release -y`

For CentOS 9 Only:

1. At the terminal window type the following command: `sudo crb enable`
2. Once done, continue with the Megarip installation.

To install Megarip:

1. Navigate to the Linux directory containing the downloaded rpm installer file.
2. At the prompt, type the following command:
`sudo dnf install ./serendipity-megarip-9.1-1.x86_64.rpm`
3. Type “y” at the prompt to install the package.
4. Next, any user login accounts that will be using Megarip need to be added to “serendipity” group. At the prompt type the following command:
`sudo gpasswd --add username serendipity`
5. For the new serendipity user group user/s to be applied, it is now necessary to restart the computer.
6. If a standalone Serendipity or C5 Client is required, follow the above steps for the appropriate file installation.

Ubuntu or Debian Installations

1. Download the appropriate file for your operating system from the Serendipity Downloads page.
2. Open a terminal window. At the prompt type the following command:

Ubuntu: `sudo apt-get install ./serendipity-megarip_9.1-1_amd64.deb`
Debian: `su`
`apt-get install ./serendipity-megarip_9.1-1_amd64.deb`
3. Enter “Y” at the prompt to install the package.
4. Once installed, any user login accounts that will be using Megarip need to be added to “serendipity” group. Open a Terminal window. At the prompt type the following command:

Ubuntu: `sudo gpasswd --add username serendipity`
Debian: `su`
`gpasswd --add username serendipity`
5. For the new serendipity group user/s to be applied, it is now necessary to restart the machine.

Installing the Stand-alone Serendipity Client (for Linux)

If additional computers on your network require access to Megarip, the stand-alone Serendipity Client can be installed on those machines.

Note: Download the Serendipity Client installer/s appropriate to the operating system of the additional machine/s. See the relevant OS instructions if not installing on Linux.

Before installation (for AlmaLinux, CentOS 9, and Rocky Linux™):

1. Open a terminal window.
2. At the prompt, type the following command: `sudo dnf install epel-release -y`

For CentOS 9 Only:

1. At the terminal window type the following command: `sudo crb enable`

Once done, continue with the Serendipity Client installation.

To install the Client via Terminal:

1. Open a terminal window. At the prompt type the following command:

AlmaLinux: `sudo dnf install ./serendipity-client-9.1-1.x86_64.rpm`
CentOS: `sudo dnf install ./serendipity-client-9.1-1.x86_64.rpm`
Rocky Linux™: `sudo dnf install ./serendipity-client-9.1-1.x86_64.rpm`
Ubuntu: `sudo apt-get install ./serendipity-client_9.1-1_amd64.deb`
Debian: `su`

`apt-get install ./serendipity-client_9.1-1_amd64.deb`

2. Enter "Y" at the prompt to install the package.

Stand-alone Serendipity Client user logins do NOT need to be added to a group as per the Megarip installation instructions above.

Once the Linux installation has completed, proceed to the “**Running the Software**” section of this manual.

Upgrading to Version 9.1

This section details upgrading an existing Megarip installation to version 9.1. The installer automatically upgrades the existing database to the current version 9.1 format.

As a precaution, before upgrading it is recommended that the Megarip database, license, and ICC profiles are backed-up using the Archives application (see *Windows Upgrade* or *macOS Upgrade* sections for details), or by copying the database directories (see *Copying the Database and ICC Folders* section for details).

A complete Server and Client backup can also be performed using the Server Help menu > Backup Server option, and the Serendipity Client Help menu > Backup Client Preferences option.

Important Note: Pagesetups imported from version 5 (and below) archives will be automatically split into Jobticket, Media and Pagesetup data types but remain functionally linked. Version 9.1 archives cannot be opened or imported into previous versions of Megarip.

Windows – Upgrading to Version 9.1

Archiving Current Installations

To archive a database:

1. Run the existing Megarip Server and Serendipity Client.
2. Go to the Client Application menu > Archives (or Archiver in earlier versions).
3. Select File menu > Perform Full Backup.
4. Alternatively, select Edit menu > Add to Archive (all) and add all database items to the archive file, or right-click in the Archives window and select Add to Archive (all) > Everything from the contextual menu.
5. Once all database items have appeared in the Archives window, select File menu > Save Archive to save the .sdb archive file to a chosen location.
6. Close the Archives application when finished.

Alternatively, a complete Server and Client backup can also be performed using the Server Help menu > Backup Server option, and the Serendipity Client Help menu > Backup Client Preferences option.

Important Note: Version 9.1 installations using a **Serendipity Driverless Dongle** do not require a dongle driver installation.

Installing the Dongle Driver Update (**Sentinel SuperPro USB Dongles Only**)

Version 9.1 dongles (new or upgraded) require an up-to-date Safenet dongle driver in order to function.

To upgrade:

1. Make sure the Megarip Server and Client are not running and remove any USB dongles (Megarip or any other) from the computer.
2. On the installation DVD, navigate to the dongle/windows directory and run the **Sentinel Protection Installer.exe** file.
3. Run the Sentinel Installer.
4. Select Upgrade and Next.
5. Follow the onscreen instructions to complete the upgrade.
6. Restart the computer when finished.

Installing the Megarip Version 9.1 Upgrade

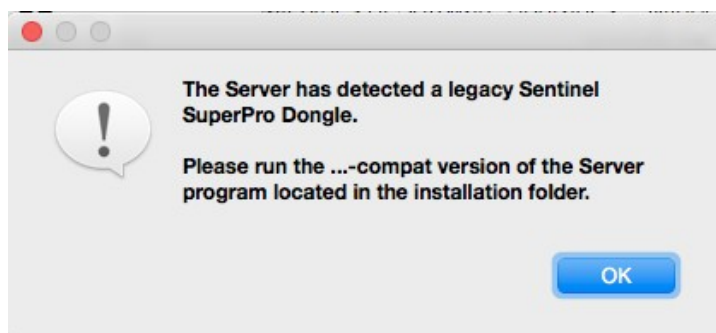
Current Windows file/folder security and permissions makes it necessary to install Megarip v9.1 in the root directory of the hard drive, e.g., C:\Serendipity\ rather than Program Files, where earlier versions of Megarip were installed.

To upgrade:

1. Navigate to the windows directory on the installation DVD, or to the location of the downloaded file.
2. Run the **megarip64.msi** (64-bit) file.
3. If necessary, change the installation directory to the root directory of the hard drive, e.g., C:\Serendipity\ and click Next.
4. Follow the onscreen instructions to complete the upgrade.
5. Plug the Megarip dongle into an available USB port.
6. Start the Megarip v9.1 Server and the Serendipity Client.

Sentinel SuperPro Dongle Users Only – If a desktop icon is created as a shortcut to launch the Megarip Server, this needs to be adjusted to run the “**...-compat**” executable. This file is located in the installation directory.

The following message will appear if you fail to run the correct Server executable for the Sentinel SuperPro dongle:



If the installation location did not require changing, the existing database should appear once the Server and Client have restarted, reformatted and intact in the Workbench application. The Client should open with the previous version configurations.

If the installation location changed, or in the event the existing database is not complete, the database backup needs to be imported using the Archives application.

To import an existing database backup:

1. Open the Archives application from the Serendipity Client > Application menu.
2. In Archives, select File menu > Open Archive.
3. Navigate to and select the saved backup archive **.sdb** file. Click Open. The archive will open in the Archives window and display all database items from the previously backed-up configuration.
4. Once the archive has loaded select Edit menu > Add to Database > Whole Archive. This will import the entire database.
5. Alternatively, choose individual items to import from the list and select Edit > Add to Database> Selected Nodes.
6. The database items will be imported and appear in the Workbench for use.

For further information on archives and backing-up databases, see the “**Archives**” section within this manual.

macOS – Upgrading to Version 9.1

Archiving Current Installations

To archive a database:

1. Run the existing Megarip Server and Serendipity Client.
2. Go to the Client Application menu > Archives (or Archiver in earlier versions).
3. Select File menu > Perform Full Backup.
4. Alternatively, select Edit menu > Add to Archive (all) and add all database items to the archive file, or right-click in the Archives window and select Add to Archive (all) > Everything from the contextual menu.
5. Once all database items have appeared in the Archives window, select File menu > Save Archive to save the .sdb archive file to a chosen location.
6. Close the Archives application when finished.

Alternatively, a complete Server and Client backup can also be performed using the Server Help menu > Backup Server option, and the Serendipity Client Help menu > Backup Client Preferences option.

Important Note: Version 9.1 installations using a **Serendipity Driverless Dongle** do not require a dongle driver installation.

Installing the Dongle Driver (**Sentinel SuperPro USB Dongles Only**)

The first step is to install the dongle driver.

1. Remove all USB dongles from the computer.
2. Navigate to the dongle/macosx directory.
3. Double-click the **Sentinel System Driver.pkg** file to launch the installer.
4. Follow the onscreen instructions to complete the installation.
5. Restart the computer when finished.

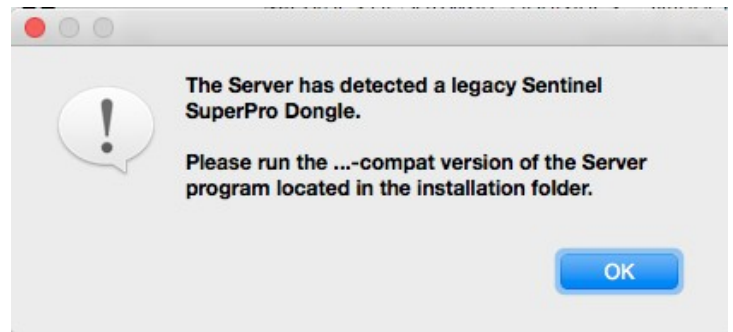
Installing the Megarip Version 9.1 Upgrade

To upgrade:

1. Navigate to the macosx directory on the DVD, or to the location of the downloaded file.
2. Run the **Serendipity Megarip.pkg** file.
3. Select the drive and location to install the software. The installer will choose the current installation location by default, which in most cases is /Applications/Serendipity.
4. Follow the onscreen instructions to complete the upgrade.
5. Plug the Megarip dongle in to an available USB port.
6. Start the Megarip v9.1 Server and the Serendipity Client.

Sentinel SuperPro Dongle Users Only – If a desktop icon is created as a shortcut to launch the Megarip Server, this needs to be adjusted to run the “**...-compat**” executable. This file is located in the installation directory.

The following message will appear if you fail to run the correct Server executable for the Sentinel SuperPro dongle:



If the installation location was not changed, the existing database should appear once the Server and Client have restarted, reformatted and intact in the Workbench. The Client should open with the previous version configurations.

If the installation location changed, or in the event the existing database is not complete, the database backup needs to be imported using the Archives application.

To import an existing database:

1. Open the Archives application from the Serendipity Client > Application menu.
2. In Archives, select File menu > Open Archive.
3. Navigate to and select the saved backup archive .sdb file. Click Open. The archive will open in the Archives window and display all database items from the previously backed-up configuration.
4. Once the archive has loaded, select Edit menu > Add to Database > Whole Archive. This will import the entire database.
5. Alternatively, choose individual items to import from the list and select Edit > Add to Database > Selected Nodes.

The database items will be imported and appear in the Workbench for use.

Linux – Upgrading to Version 9.1

Archiving Current Installations

To archive a database:

1. Run the existing Megarip Server and Serendipity Client.
2. Go to the Client Application menu > Archives (or Archiver in earlier versions).
3. Select File menu > Perform Full Backup.
4. Alternatively, select Edit menu > Add to Archive (all) and add all database items to the archive file, or right-click in the Archives window and select Add to Archive (all) > Everything from the contextual menu.
5. Once all database items have appeared in the Archives window, select File menu > Save Archive to save the .sdb archive file to a chosen location.
6. Close the Archives application when finished.

Alternatively, a complete Server and Client backup can also be performed using the Server Help menu > Backup Server option, and the Serendipity Client Help menu > Backup Client Preferences option.

Important Note: Version 9.1 installations require a **Serendipity Driverless Dongle**. If you are using a Sentinel SuperPro dongle, contact Serendipity or your dealer before upgrading.

Installing the Megarip Version 9.1 Upgrade

To upgrade:

1. Follow the instructions as per the **Linux Installation** section for the operating system being used as outlined in this manual.

If the installation location was not changed, the existing database should appear once the Server and Client have restarted, reformatted and intact in the Workbench. The Client should open with the previous version configurations.

If the installation location changed, or in the event the existing database is not complete, the database backup needs to be imported using the Archives application.

To import an existing database:

1. Open the Archives application from the Serendipity Client > Application menu.
2. In Archives, select File menu > Open Archive.
3. Navigate to and select the saved backup archive .sdb file. Click Open. The archive will open in the Archives window and display all database items from the previously backed-up configuration.
4. Once the archive has loaded, select Edit menu > Add to Database > Whole Archive. This will import the entire database.
5. Alternatively, choose individual items to import from the list and select Edit > Add to Database > Selected Nodes.

The database items will be imported and appear in the Workbench for use.

Saving/Restoring the Megarip Database and ICC Profiles using the File System

An alternate method for backing up the existing database and ICC profiles is to copy the relevant file folders from Megarip to another location **before** upgrading to version 9.1.

Important Note: The below folders can all be automatically backed-up using the *Backup Server* menu option. This is the preferred and recommended method of backup.

The **database** items are held in a **folder called defaultss.dbd** in the following locations:

macOS	<Megarip installation directory>/lib/defaultss.dbd/
Windows	<Megarip installation directory>\lib\defaultss.dbd\
Linux/Sun/SGI	<Megarip installation directory>\lib\defaultss.dbd\

The **ICC Profiles** are stored in a folder called **ICC** in the following locations:

macOS	<Megarip installation directory>/lib/ICC/
Windows	<Megarip installation directory>\lib\icc\
Linux/Sun/SGI	<Megarip installation directory>\lib\ICC\

The **dongle licenses** are stored in a folder called **license** in the following locations. The folder may appear as empty, but it still requires copying:

macOS	<Megarip installation directory>/lib/license/
Windows	<Megarip installation directory>\lib\license\
Linux/Sun/SGI	<Megarip installation directory>\lib\license\

To restore the database and ICC profiles to an upgraded Megarip

1. Ensure the Megarip Server and Serendipity Client are shutdown.
2. Copy and replace the backed-up **defaultss.dbd**, **license**, and **ICC** folders into the relevant locations (as listed above) for the installation.
3. Start the Server and Client. All previous database items should now appear in the Workbench.

Important Note: Pagesetups imported from older archives will be automatically split into Jobticket, Media and Pagesetup data types, but remain functionally linked. Version 9.1 archives cannot be opened or imported into previous versions of Megarip.

Running the Software

Once the software has been installed, launch the Server and Client application to begin configuration. The Server should be started first and allowed to complete its initialisation process before the Client is launched. If the Client is started first, it will attempt to connect to an active Server. If none are present, a Connect to Server window will open, waiting for an active Server to appear on the Network.

Important Note for macOS Apple silicon (ARM) machine users

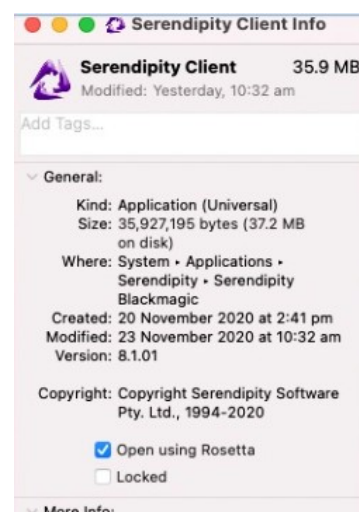
Many spectrophotometer and printer's screening (HTM) drivers have yet to be updated by their manufacturers to be compatible with ARM architecture. As such, users will find that these device drivers are unavailable if Megarip is run in its default mode on an Apple silicon (ARM-based) Mac.

Users installing on Apple silicon Macs will need to run Megarip, Serendipity Client and/or C5 in 'Rosetta' Intel emulation mode to maintain access to these device drivers.

Before running the Megarip Server or Serendipity Client, follow the steps below to enable Rosetta mode for your software:

Before starting the Server and Client

1. Open a Finder window.
2. Navigate to the Applications/Serendipity/Serendipity Megarip folder.
3. Highlight the **Serendipity Client** application and select *CMD+I* or right-click and select *Get Info* from the menu.
4. Tick the checkbox to enable *Open Using Rosetta* mode.
5. Repeat the above steps for the **Serendipity Megarip**, or **C5 Client** application if necessary.

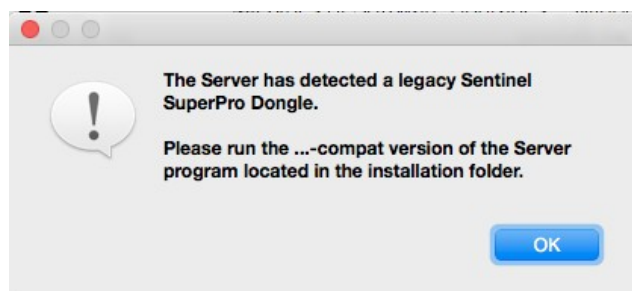


Starting the Megarip Server (Dongle)

1. Plug the dongle in to an available USB port.
2. Launch the Server by double-clicking the Serendipity Megarip file in the installation directory, or the shortcut icon on the desktop/dock.

Sentinel SuperPro Dongle Users Only – If a desktop icon is created as a shortcut to launch the Megarip Server, this needs to be adjusted to run the “*...-compat*” executable. This file is located in the installation directory.

The following message will appear if you fail to run the correct Server executable for the Sentinel SuperPro dongle:



The Server window will appear, showing information about the Server software and initialisation process will begin.

Note: The Server will not initialise if a recognised dongle is not present on the computer from which it is run. If the dongle is removed at any point while the Server is running, all job processing will cease and the Server will stop shortly afterwards. Once the dongle is reconnected, close and restart the Server.

Starting the Megarip Server (Software Dongle License)

Note: In order to use this method, an internet connection is required and you must have a valid product license linked to your registered email address.

1. Run the Megarip Server application.
2. Activate the Software Dongle:
 - a) In the Server window, select the File menu > Activate Software Dongle option.
 - b) Enter your Serendipity registered email address and password in the login screen.

If you have multiple Megarip products available, a dropdown will appear for you to select which one to use after successfully logging in.

Once you are logged in the Server window will appear with information about the Server and the option to start is available (if auto-start is not configured).

Starting the Megarip Server (Subscription)

Note: In order to use this method, an internet connection is required and you must have a valid product license linked to your registered email address.

1. Run the Megarip Server application.
2. Activate the Subscription:
 - a) In the Server window, select the File menu > Activate Subscription option.
 - b) Enter your Serendipity registered email address and password in the login screen.

If you have multiple Megarip products available, a dropdown will appear for you to select which one to use after successfully logging in.

Once you are logged in the Server window will appear with information about the Server and the option to start is available (if auto-start is not configured).

Starting the Serendipity Client

Once the Server has completed initialisation, launch the Client by double-clicking the Serendipity Client file in the installation directory or the desktop/dock icon, or by selecting the Launch menu > Serendipity Client option in the Server window.

The Client will connect to the active Server and display the default monitoring system – Jobs – on the screen. From this point, configuration of the system or loading a pre-configured setup can be done.

Serendipity Client Configuration

The Serendipity Client application is used as the configuration tool and monitoring application for the Server. It can be run on the same machine, or on another locally (LAN) or remotely (WAN) networked computer. The Client connects to the Server via standard TCP/IP network protocol and is not licensed, so it can be run multiple times on the network.

There are two (2) methods of configuration – using a pre-configured setup, or manually creating each item.

Using a pre-configured Media setup

In order to begin processing jobs a Media, an Output, and a Pagesetup will need to be created.

- A *Media* controls the settings for output, colour correction, ICC profiles, screen printing and output screening.
- An *Output* determines where any processed jobs are sent, either to a printer, a file location, or a remote destination.
- A *Pagesetup* is where the Output and Media are assigned.

Media Catalogue is an integrated application that allows users to access Serendipity's online database of Media configurations. Media can be downloaded and added to the Workbench database automatically, so you can begin proofing and printing straight away.

1. Open Media Catalogue from the Serendipity Client Help menu.
2. Select Create New to configure an Output, Media and Pagesetup combination.
3. In the top of the window click the Output Driver button and select your driver (printer).
4. In the left Media column you will see any available Media appear for your selected driver.
5. Select the Media you would like to setup. All details will appear on the right side of the window.
6. Click Next to continue.
7. The Setup for Media window will appear. You can edit any of the available name fields here if required.
8. As you are creating a new Output, leave the option on Create New.
9. If you are connecting to the output via Bonjour, set up access via the dropdown. If not, click "Select Later" and configure the connection method in the next step (see For Non-Bonjour Connections below).
10. Click Create to continue. The selected combination will automatically be added to the Workbench. Close the Media Catalogue when finished.

For Non-Bonjour Connections:

1. Go to the Workbench application. If this is not open, in the Serendipity Client window select Application menu > Workbench.
2. On the left you will see a list of datatypes in a column. Select Output.
3. A list of available Output items will appear. Select the Output you just created with the Media Catalogue.
4. On the right a configuration panel will appear. Select Connection.
5. Click the Destination Driver button. From the popup, choose your connection method, for e.g., FTP or TCP/IP.
6. Enter any relevant information and save the changes (File menu > Save).

You are now able to submit jobs or a test print to confirm the connection.

Manual Client Configuration

This section will explain how to setup a basic configuration in order to print a file to a printer and monitor the job throughout the process. For detailed information on specific modules/applications mentioned, see the relevant sections of this manual.

The default monitoring application – Jobs – opens with a factory standard layout, including the QueueManager, Thumbnail and QueueStatus modules. System queues (Image, Render, Asset, Spool and AutoDetect) will be displayed in the QueueManager. Specific queues will need to be configured for the above-mentioned process.

There are four (4) sections within the Client that require configuration in order to begin processing jobs from the RIP to the printer. These are (in no particular order):

- A **Pagesetup** and **Media** where jobs are processed.
- An **Output** where the print job will be sent.
- An optional **Jobticket**, where any custom processing requirements are set.

Note: Each Pagesetup must be linked to a valid Media and Output, so it is recommended to create those first before the Pagesetup is created.

To begin configuration:

1. Select Application menu > Workbench. The Workbench application is where all configuration takes place.

Output Configuration

1. Select **Output** from the Data Types list on the left and create a new one by selecting File menu > New.
2. The Output name “Untitled” will appear in the items list, highlighted for renaming. This is the name of the Output that will appear in the Pagesetup. Select the item.
3. In the **Queue panel** of the grey configuration area, click the Output button and select the appropriate driver for your printer from the list.
4. In the **Destination panel**, select a destination driver (connection method) for the printer and enter the appropriate information, e.g., the IP address of the printer. If USB or Bonjour/Zeroconf is selected, click the Edit button to select the correct device/service from the Custom Settings popup window.
5. Configure any Collating or Nesting requirements as needed. See the Workbench > Output section of this manual for further details on this option.
6. **OPTIONAL** – After a Media is created, it can be assigned to the Output via the Change Media button. Assigning a Media to the Output will only allow jobs submitted to that Media to print. See the Media section of this manual for further information.
7. **Save** the Output configuration when finished by selecting File menu > Save.

Media Configuration

1. Select **Media** from the Data Types list on the left and create a new Media by selecting File menu > New.
2. The Media name “Untitled” will appear in the items list, highlighted for renaming. This is the name of the Media that will appear in the Output and Pagesetup. Rename and select the item.

3. In the **Output panel** of the grey configuration area, click the Output button and select the appropriate driver for your printer from the list. This should be the same driver as was used for the previous Output configuration.
4. Configure the print resolution to be used (if applicable), and the print colourspace (RGB/CMYK etc).
5. Select any custom settings for the printer. Click the Edit button to select any options from the popup settings window. These may include paper type, print mode, cutting options, light ink usage. Click Accept to close the window.
6. Set the **Output ICC profile** via the Choose ICC Profile button. In most cases for a new install this will be the Standard SWOP (CMYK) profile. Optionally, load your own profile by selecting the Upload File button and navigating to the file location.
7. **Save** the Media when finished by selecting File menu > Save.

Note: This Media configuration is the minimal setup required to get your proof/print workflow functioning. For proofing work, the Media will need to be correctly calibrated. For a complete HowTo guide for configuring a calibrated Pagesetup/Media/Output, refer to the Serendipity Software Knowledge Base (<https://skb.serendipity-software.com.au>)

Pagesetup Configuration

1. Select **Pagesetup** from the Data Types list and create a new Pagesetup by selecting File menu > New.
2. The name “Untitled” will appear in the list, highlighted for renaming. Rename and press Enter. Select the item.
3. Assign the Output created previously to the Pagesetup via the **Change Output button**. A popup will appear to select the Output. Click OK when done.
4. Assign the Media created previously to the Pagesetup via the **Change Media button**. Select the Media in the popup window that appears and click OK. Jobs will be printed using this Media unless another is selected when submitting a job to print.
5. A **Jobticket** (if required) can also be assigned to the Pagesetup here. This will process any jobs with the Jobticket properties if sent to this Pagesetup.
6. Set any flow control or configure a DropFolder via the Publish & Flow Control panel.
7. **Save** the Pagesetup configuration when finished by selecting File menu > Save.

Jobticket Configuration (Optional)

1. Select **Jobticket** from the Data Types list and create a new Jobticket by selecting File menu > New.
2. Rename if required and press Enter.
3. If the RGB and Press Input profiles for processing the job are different to those in the System Settings, adjust them via the Colour Management tab.
4. Adjust any rendering intent if required.
5. Configure any other sheet, effects, rotation, or other options as required and **save** the Jobticket via File menu > Save.
6. If desired, the Jobticket can be assigned to the Pagesetup created previously. See the Pagesetup instructions above for where to assign the Jobticket. Any jobs will be automatically processed with these configured options (if it is assigned to the Pagesetup) when submitted.

This completes the basic configuration of Megarip.

Monitoring Jobs – Configuration

Once the base configuration is complete, a monitoring application needs to be configured so jobs can be managed throughout the system.

There are two (2) types available – Jobs (default) or Monitor.

Jobs

This is the default application, launched when the Client is started for the first time.

The Jobs application has a pre-configured set of tabs available for monitoring various processes throughout the entire workflow. The default tab layout includes the QueueManager, Thumbnail, and QueueStatus modules. See the “Jobs” application section within this manual for further information.

Any Output items created in the earlier “**Manual Configuration**” will automatically appear in the QueueManager module.

To add additional tab layouts:

1. In the Jobs application, select the Tabs menu > Add Tabs option.
2. A window will appear with various factory default layouts available for use.
3. Select the required tab layout from the list. A preview example screen will be displayed to the right.
4. Click Add. The new tab will appear in the Jobs window.

Additional pre-configured tabs may be added to the Jobs application as required. See the “**Jobs**” application section of this manual for further information.

Monitor

The Monitor application performs the same workflow monitoring functions as the Jobs application and was the default application in previous versions of the software, before the Jobs application was introduced. Monitor allows the user to customise the size and layout of tabs and job management modules.

1. Select Application menu > Monitor to open a Monitor window. The default view will include a Queues tab and a Logs tab.
2. The Queues tab contains the QueueManager, Thumbnail, and QueueStatus modules. The Logs tab contains the ClientLog and ServerLog modules.
3. If you would prefer to have any new Output queues automatically added to the QueueManager for future use, enable the Auto Queue Order checkbox via the Toolbar (spanner icon).

The module windows may be resized and positioned by selecting the Layout menu > Edit.

1. Select the window corner with the mouse and resize it by dragging the mouse to the desired size.
2. Select Layout menu > Use when done to lock the module window position.

Additional tabs and modules may be added to the Monitor as required.

- Tabs are created via the Tabs menu > New Tab option.
- Modules are added via the Layout Menu and selecting the appropriate module to add from the list.

Submitting Jobs

There are various methods available for submitting files for printing when using the Serendipity Client.

The Submit Menu

Selecting Submit > Files will present the file choose window to select the file for processing.

Once a file is selected, the option to choose which Pagesetup/Media/Jobticket combination will be used is displayed. Flow control can be enabled to hold jobs after imaging or rendering, along with number of copies and publication options. For complete information on the Submit menu, see the *Serendipity Client Menu Items* section of this manual.

DropFolders

DropFolders can be created via the Pagesetup in the Workbench application.

A dropfolder is an allocated folder where files can be dropped into it for automatic processing. A Pagesetup will need to be published in order to access its dropfolder.

Important Note: Any files dropped into a DropFolder should be copies, not originals, as they will be auto-deleted from the folder once sent for processing.

For further information on the configuration of a DropFolder, see the *Pagesetup* section of this manual.

Third Party Applications

Supported file types can be submitted to the Serendipity Client for processing directly from third party applications, like Adobe Illustrator or Photoshop.

The Pagesetup will need to be published as a print destination, allowing the design application to see it and print to it directly. For the configuration of a published Pagesetup printer, see the *Pagesetup* and/or *Publishing a Pagesetup* sections of this manual.

Studio

The Studio application allows for the manual placement and nesting of files.

Once a job layout has been created, it is submitted for printing via the Studio menu. The option to select the Pagesetup/Media/Jobticket combination will be displayed before the job is sent for processing.

For complete details on the Studio application, see the *Studio* section of this manual.

Desktop Submit

There is a further option when submitting an image to Megarip, available via the right-click (contextual) menu. Selecting an image file from the desktop or Finder (Mac) / Window Explorer (Win) and right-clicking will display the following menu options:

- Open With > Serendipity Client – Opens the selected file in the Client using the SoftProof application.

The following will appear in the Services menu option for macOS, standard right-click menu for Windows:

- Submit Asset (Serendipity Client) – Sends the selected file to Megarip as an Asset for use in Studio.
- Submit (Serendipity Client) – Sends the selected file to Megarip for processing. The submit window will appear to select the Pagesetup/Media/Jobticket processing combination.
- Preview (Serendipity Client) – Open the selected file in the Client using the SoftProof application.

The Serendipity Megarip Server

The Megarip Server runs on the machine where the dongle is installed. The Server handles the processing of all jobs through the system and must be started before the Client is launched.

As the Server starts, it checks to ensure either a valid dongle is installed on the machine and which modules are enabled (licensed). The Server calculates the speed of the machine it is running on and checks the integrity of the database before loading it.

Once the Server is up and running, a clock keeps track of the duration the Server is operational.

Server Options

The window displays the Server information and various options once it is running.

The main window will display the product and version, software build dates, dongle serial number, and a Maintenance end date (optional). The maintenance end date will only be shown if the dongle has a valid maintenance contract.

Serendipity Megarip Menu Options

- About – Shows information about the Server.
 - Server tab – Displays information about the Server including the version, build date, dongle type and serial number, and the highest version of software available to the dongle. Warranty information is displayed, and if the dongle also has a maintenance contract, the expiry date will be listed.
 - Licensed Drivers tab – Displays a list of enabled RIP, Output and Destination drivers. Select from the dropdown menu to display the available drivers.
 - Installed Updates tab – Displays a list of all software updates installed for the Server.
 - Connected Clients – Displays a list of all Serendipity Client or C5 Client connections to the Server.
- Quit – Quit the Server application.

File Menu

- Stop Server – Stop the Server from running without quitting Serendipity Megarip.
- Start Server – Start the Server if it is in a stopped state.
- Restart Server – Restarts the Server.
- Activate Software Dongle – Select this login option if you have an active Software Dongle License. A further popup window will appear to Login. Once logged in, the Server can be started. This is only available for software dongle licensed users. Changes to Deactivate Software Dongle when logged in.
- Activate Subscription – Select this login option if you have an active Subscription. A further popup window will appear to Login. Once logged in, the Server can be started. This is only available for subscription users. Changes to Deactivate Subscription when logged in.
- Update Dongle – Allow users/administrators to update the dongle with activation codes to enable various input and output licenses. See the Dongle Updater section for further information. This is only available for dongle-based licenses.
- Close – Close the window. If the Server is running, a warning will appear to confirm Server shutdown.

Launch Menu

- Serendipity Client – Open the Serendipity Client application. This option is not available for Megarip C5 product users.
- C5 Client – Open the C5 Client application.

Startup Options

- Start Server on Launch – The Server will start once the application is launched.
- Restart Server on Crash – The Server will restart automatically after a crash.
- Start as Cluster Node – Start the Server as a cluster node (slave) to be used by another Megarip Server for imaging and rendering tasks. Do not use this option before reading further information in the Applications > Clustering section of this manual.
- Start in Safe Mode – Start the Server but cease all job processing. Safe mode is used for maintenance in the event a Pagesetup or other database item is corrupted, or is functioning incorrectly. Once maintenance is complete, the Server will need to be restarted in normal mode.
- Theme – This dropdown menu allows the selection of an overall visual theme for the Server window. The available options are:
 - Light – Server appears in the standard Light Mode. The option matches how the Server appeared in previous versions of the software.
 - Dark – Server appears in Dark Mode, appearing predominantly in black/grey tones with white text.
 - System – Optional item depending on operating system. Server matches the light/dark appearance configured for applications in the operating system settings. This is the default Theme setting.

Help Menu

- Knowledge Base – Open the Serendipity Knowledge Base website (<https://skb.serendipity-software.com.au>) in the operating system's default web browser.
- Troubleshoot Dongle – Open a Troubleshooting Dongles article in the Serendipity Knowledge Base (link). The article includes useful links to help diagnose dongle and server function issues for new installations, or when moving an installation and dongle to a new machine.
- Update Options – Configure a time for Megarip to periodically check for software updates.
- Check for Updates – Immediately check for any software updates.
- Install Local Updates – Manually update the software package by downloading (.pax) package files. See the Installing Manual Updates section for further information.
- Install Additional Software – Open the Serendipity Updater application on the Additional Software tab, listing any new and uninstalled software components and/or printer screening drivers. Each item can be ticked for installation.
- Rebuild Additional Software – This option is normally only to be use upon request by Serendipity Software support. This will run a fresh software scan that may require components to be downloaded and installed.
- Clear Updates Cache – All updates applied by the Serendipity Updater application are stored locally. This option will clear the folder of all files. This does not affect any installed updates.
- Backup Server – Perform a complete backup of the Server, including the Workbench database (defaultss.dbd, license, and ICC folders), Calcheck History database (databases folder), plus Server settings and preferences.

- Restore Server – Import settings from a previously saved Server backup (.backup or .ssb) file.

Note – Server Backup (.ssb) files created using Blackmagic 9.1+, can be opened for a Restore by double-clicking on the file, or by selecting the file on the desktop then choosing the Restore Backup (Serendipity Server) option from the file's contextual (right-click) menu.

Older pre-9.1 .backup files must be opened via the Restore Server menu option above.

For further information on the automatic software update functions, see the **Serendipity Updater** section of this manual.

Media Catalogue

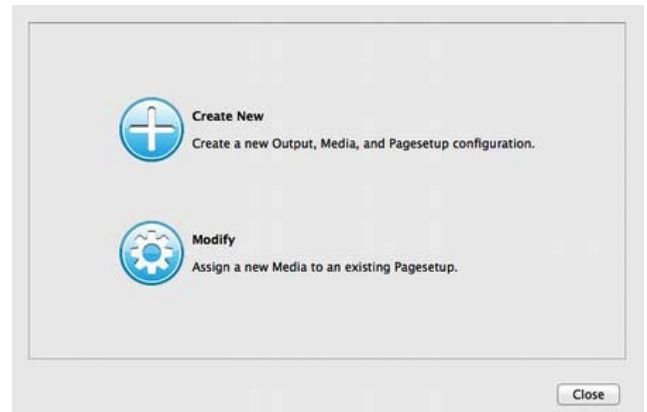
The Media Catalogue is a built-in feature designed to assist in the creation of new Pagesetup, Media and Output configurations, as well as allow for modification of existing Pagesetup and Media configurations.

The Media Catalogue accesses the Serendipity Software website in order to download and install Media configurations for use within the Serendipity Client.

Write access to the Workbench is required in order to use Media Catalogue, along with access to a Megarip Server and the internet.

The application has two (2) options when opened:

- Create New – Create a new Pagesetup, Media, and Output combination for use in the Serendipity Client.
- Modify – Modify an existing Pagesetup and Media combination.



Create New

- Add a Pagesetup, Media, and Output to the Workbench.
- Printer Driver – Select the output driver to use. A dropdown menu will display a list of available drivers.
- Media Window – Once a driver is selected, any available Medias for download will be displayed. Clicking on the name will display the properties of the configuration to the right.
- Back – Go back to the previous screen.
- Next – Continue to the next configuration screen.
- Close – Close the Media Catalogue.

Setup for Media Window (Create New)

- Pagesetup – The name of the Pagesetup being created. Rename as required. If the name already exists, a red cross will appear next to the field on the right.
- Media – The name of the Media selected as per the previous screen.
- Output – Use an existing Output from the Workbench or create new.
- Use Existing – Select the Output to use from the dropdown menu. This will overwrite the current configuration.
- Create New – Enter a name for the Output. If the name already exists, a red cross will appear next to the field on the right.
- Select Bonjour Printer – Displays a list of available Bonjour printers to assign to the Output.
- Select Later – Create the Output with no destination set. This should be configured in the Workbench in order to send jobs to a printer.
- Create – Create the Pagesetup, Media, and Output in the Workbench. Confirmation will appear when done.

Modify

- Modify an existing Pagesetup and Media configuration. A Pagesetup with an Output using the driver to be modified must exist in the Workbench in order to make changes to the configuration.
- Printer Driver – Select the output driver to modify. A dropdown menu will display a list of available drivers.
- Media Window – Once a driver is selected, any available Medias for download will be displayed. Clicking on the name will display the properties of the configuration to the right.
- Back – Go back to the previous screen.
- Next – Continue to the next configuration screen.
- Close – Close the Media Catalogue.

Setup for Media Window (Modify)

- Pagesetup – The name of the Pagesetup being modified. Select from the dropdown menu. Only Pagesetups relevant to the selected printer driver will appear in the list. If a Pagesetup does not exist, a red cross will appear next to the field on the right.
- Media – The Media selected from the previous screen that will be assigned to the Pagesetup. This is a read-only field. If a Media exists with the same name, a yellow warning will appear to the right. The option to rename (if required) will appear once the Modify button has been pressed.
- Back – Go back to the previous screen.
- Close – Close the Media Catalogue.
- Modify – Modify the selected Pagesetup with the Media. Warning messages will appear if there are any duplications with names. These may be edited or overwritten as required.

If there are no current Media configurations available for the selected output driver, a message will appear onscreen.

The Serendipity Updater

The Serendipity Updater provides a simple and convenient way of updating Serendipity Megarip and standalone Serendipity Client applications.

The Updater tracks the current software installation status and automatically checks for available software updates, bug fixes, maintenance patches, and new drivers.

New updates are listed along with release notes, previously installed updates are logged in the Updater, and notes can be viewed at any time.

Note: The Serendipity Updater requires access to the internet to function. Updates are not downloaded or installed until initiated by the user, as the Server and/or Client are shutdown as part of the update process.

The following update functions are available in the Help menu of the Megarip Server application and/or the Help menu of the standalone Serendipity Client.

- Update Options – Configure a time for Megarip to periodically check for software updates.
- Never – The software will not check for updates.
- When (Time/Day) – Configure a time/day to automatically check for any software updates.
- Notify When Updates are Available – A message will appear onscreen when updates are available to install.
- Check for Updates – Immediately check for any software updates.

When configuring a time/day for checking for updates via the Server Help menu, a restart of the Server is required for any changes to take effect.

Additional Software Tab

This section will list any uninstalled or new drivers, or components that have not been installed. Items can be selected and installed individually as required.

Note: The Serendipity Client installed on the Megarip Server machine is updated as part of Server updates and does not gain access to the “Check for Updates” Help menu option. If Secure Mode is active, users can be configured to receive an email when software updates are available. See the Accounts Admin section of this manual for further information on email configuration.

The Megarip Dongle Updater

The Megarip dongle licenses the level (version) of software and enables any input drivers (RIPs) and output drivers that have been purchased. If any additional licenses are activated, the dongle will require updating in order to access them.

The Dongle Updater is a built-in application, accessed via the Server File menu > Update Dongle option.

To avoid misuse of the software license, activation codes are unique to each dongle serial number. Any updating should be completed by a Server administrator.

Important Note: Before updating any dongles, ensure the Server is in Stop mode.

BEFORE UPDATING

There are two (2) versions of the Dongle Updater, depending on the type of dongle being used:

1. **Serendipity Driverless Dongle;** or
2. **Sentinel SuperPro USB Dongle** (legacy).

Follow the instructions relative to the type of dongle installed. If you have any questions regarding the dongle and updating, contact Serendipity Software Support.

Method 1 – Serendipity Driverless Dongle

Updating the Dongle

Before activating or updating the dongle, be sure to have access to the dongle code (update string).

One (1) code is required in order to update the dongle, referred to as the *Update String*(on screen), or the *Dongle Reprogram String* (in the email).

The encrypted string is very long and appears like this **(Example Only)**:

-----BEGIN SERENDIPITY LICENSE-----

```
AAABABWM4I+am0j+p82g2eLX+JyR1xuY90/2ANYATtoPpYhw7SXMCHPEN50Kd/e5kSmBQXjHMko1kO/De9go
PhpOalBTbjq4XyKr7vVmqi90GEXLN6Qc97x3G51QISiBiSVoI9wbO7jDRK+n2o4zmCDWDmNHnRqPjIABc9os
Xz17X1UQELSPz+2d0YrAcKP5I9OZUSjI0Cu1xbzyXOmMXOM8hHeDOnBUNxeYssMrHP96gOX8qAhvRoDzsaNg
XBn/I9GetaLPDWt26pcArky2jXyzUJKByEWSbjZcoqL891bwnbsOvRNiuJZuymhWolhwMcbNHPXod+JEiTzV
A5LfrU/sN4q8Ve2blf09mKQG80+ujn54oqqmW6Ax43SZRS/CUV0ohxEBDogTGHpymLTCYPnSNHdi1fSiVVC3
QbDAvtP5DLwaW7uyCiKlavlOk5FcB7Ckm75Tuijy04zmHDr4ZXb1LdswBhA5n1a3v6u19W5cJBjwibor6Q1y
W79gMmEvLYt8S79IYYLfGqXmNGpvFIMjkTDBUzb90k5VqPbT7urBZfLHXdraef8xaLwrOdZ/K1WGmAQgPKi
915sx4vpTA+v9yH/6kegpuhw12uCoVGkum5cj/CzqqLXwWroPEXpc5GBGbwXvVHy1zwTQ/nDakpIlr74=
```

-----END SERENDIPITY LICENSE-----

To Update the Serendipity Driverless Dongle

1. Plug the Serendipity dongle in to the computer and run the Server application.
2. Select the Server File menu > Update Dongle. The Server will stop. If there are any Client applications open, a Connect to Server window and/or disconnection message will appear.
3. A window will open for the Dongle Updater application.
4. Enter the entire update code (including the Begin and End lines) into the available field. It is best practice to copy and paste the code to avoid any keying errors.
5. Once the code has been entered correctly, the Update Dongle button will be enabled. Click it.

6. A confirmation message will appear after the dongle has successfully updated and a Server quit and restart is required.
7. Quit the Server application and restart. The dongle is now updated and any new filters and/or drivers will appear in the Serendipity Client for use.

The code can also be loaded via the *Load from File* button, allowing the code to be imported directly from a stored txt file. The update code must exist in this document in its entirety. Incomplete or partial codes are not accepted by the Updater.

Method 2 – Sentinel SuperPro USB Dongle

Updating the Dongle

Before activating or updating the dongle, be sure to have access to the dongle codes. Codes are sent from Serendipity Software directly, or via your Dealer on purchase of the software.

Two (2) codes are required in order to update the dongle, referred to as **Key Code 1** and **Key Code 2**.

The codes are located in the “*Dongle reprogram string*” field of the email and are separated by a space.

The first, long string is Key Code 1. The second shorter string is Key Code 2.

For example:

If the string reads “*cc81b1c62047f2adf14836466d4722df707c0f1ba887c23b 3180e9c3bd17776602*”

Key Code 1 would be: *cc81b1c62047f2adf14836466d4722df707c0f1ba887c23b*

Key Code 2 would be: *3180e9c3bd17776602*

To Update the Sentinel SuperPro Dongle

1. Plug the current USB dongle in to the computer and run the Server application.
2. Select the Server File menu > Update Dongle. The Server will stop. If there are any Client applications open, a Connect to Server window and/or disconnection message will appear.
3. A window will open for the Dongle Updater application.
4. Enter Key Codes 1 and 2 into the relevant fields. It is best practice to copy and paste the codes to avoid any keying errors. **DO NOT COPY THE SPACE BETWEEN THE CODES.**
5. Once the codes have been entered correctly, the Update Dongle button will be enabled. Click it.
6. A confirmation message will appear after the dongle has successfully updated and a Server restart is required.
7. Quit the Server application and restart. The dongle is now updated and any new filters and/or drivers will appear in the Serendipity Client for use.

When updating from Version 3 or below, before restarting the Server:

1. Go to the installation directory for Megarip on the computer.
2. Open the **lib** folder.
3. Open the **printers** folder.
4. Sort the files by date.
5. Delete all old files ending in ***v.so**
6. Once the files have been deleted, the Megarip Server can be restarted.

Note: Failure to remove the old files from the printers folder will noticeably slow down the Server when it is restarting.

Rescuing a Serendipity Driverless Dongle

In the event the Serendipity driverless dongle has been compromised, or the *license* installation directory has been deleted or has not been correctly recovered from an update, the following procedure is available to recover the Serendipity dongle information. **This is not available for any Sentinel SuperPro USB dongles.**

Important Note: To avoid any problems, Serendipity Software always recommend a complete Server and Client backup. The *license* folder (including contents) will be saved when a Server backup is run. The Server backup can be accessed via the Server menu > Help > Backup Server.

If a Server backup has been done for Version 9.1 (**Serendipity Driverless Dongle Only**), the dongle can be rescued by restoring the backup.

To Restore a Version 9.1 Backup:

1. Plug the Serendipity driverless dongle into an available USB port.
2. Run the Megarip Server application.
3. Select the Server Help menu > Restore Server option.
4. A message will appear to confirm the restore. Click Yes.
5. A message will appear stating the Server will need to be shutdown to continue. Click Yes.
6. Navigate to the Server backup file location and click Open to restore from the backup. This can take a few minutes to complete. Do not close any applications during the restore process.
7. Once successful, a message will appear to confirm the restore. Click OK.
8. Restart the Server. The dongle should now be restored and licenses available for use with the Serendipity Client application.

To Rescue a Serendipity Driverless Dongle:

1. Plug the Serendipity dongle into an available USB port.
2. Run the Megarip Server application.
3. A message window will appear with the following message:

“No useable dongle found. If you have a valid license string you can enter rescue mode and repair a damaged dongle. Enter rescue mode? Yes/No.”

4. Click Yes to continue. You must have a rescue **dongle license string** from Serendipity Software to continue. This is **NOT** the same as a dongle update string. If you do not have a license string, contact Serendipity Software Support to arrange. An email will be sent with the relevant information.
5. Once the correct dongle license string has been entered, the *Rescue Dongle* button will be available. Click when ready.
6. A confirmation message will appear to state the dongle has successfully been rescued. Click OK.
7. Quit the Megarip Server and restart.
8. If the *license* directory was deleted (or not recovered with a Server backup file), an update string will be required to reactivate the dongle. To confirm if a dongle has been activated:
9. Click the Serendipity Megarip Menu (Mac) or the File menu (Win).
10. Select About.
11. In the About window, select the More/Less button to view the enabled licenses for the dongle.
12. If this is blank, the dongle requires activation. If input and/or output drivers are listed as per your purchase, the dongle does not require further activation.

To Activate the Serendipity Dongle

1. Run the Server application.
2. Select the Server File menu > Update Dongle. The Server will stop.
3. A window will open for the Dongle Updater application.
4. Enter the entire update code (including the Begin and End lines) into the available field. It is best practice to copy and paste the code to avoid any keying errors. The update code is referred to as the “ *Dongle Reprogram String*” in any email correspondence from Serendipity Software.
Note: If you do not have the dongle update code, contact Serendipity Software Support for assistance.
5. Once the code has been entered correctly, the *Update Dongle* button will be enabled. Click it.
6. A confirmation message will appear after the dongle has successfully updated and a Server quit and restart is required.
7. Quit the Server application and restart. The dongle is now updated and any input drivers and/or output drivers will appear in the Serendipity Client for use.

The code can also be loaded via the *Load from File* button, allowing the code to be imported directly from a stored txt file. The update code must exist in this document in its entirety. Incomplete or partial codes are not accepted by the Updater.

The Serendipity Client

The Serendipity Client is a graphic user interface (GUI) used for configuration, maintenance, and monitoring the Megarip Server.

The Client can be installed and run locally on the same machine, or from any supported computer on the network using TCP/IP protocol. There is no limit to the number of Client connections to the Server, and each Client will have its own settings specific to the user.

Once installed, the Client connects to a Megarip Server and loads the settings into the Client interface. Any Client can access the job management information and view the current status. The configuration can be open to all users, or protected via Secure Mode, which allocates specific access for created users and user groups.

For more information on how to setup secure access, see the Secure Mode section of this manual.

Look and Feel

There is a common theme and functionality to the Client, with many ways to complete the same task, such as configuring a Pagesetup from the QueueManager. Various options are available using the right-click menu to bring up other contextual menu options. This will vary depending upon the section of the Client interface being used.

Anywhere there is a chooser to select an item from the database, a search field will be indicated by a magnifying glass. Entering text in the search field filters the list, showing only the matching items. The search can be inverted with CMD+SHIFT+I (Mac) or CTRL+SHIFT+I (Win) to hide the matching items. The search box will turn black to indicate inverse searching. Pressing ESC will dismiss the search.

There are two (2) main sections to the Client – the **Workbench** and the **Jobs** application.

- The **Workbench** is used to configure the various parts of the Server. This is used to create queues, setup input paths and various calibration functions.
- The **Jobs** application is used for managing and viewing jobs as they pass through the system.

The **Applications** and **Modules** add functionality and provide tools for managing the Server and jobs passing through it. There are also menu options containing system utilities and preferences.

Workbench

The Workbench is where the main software configuration takes place. Medias, Pagesetups, Jobtickets, Output paths and correction curves can all be set up here.

When items are created or changed in the Workbench, they are saved to a database read by the Server each time at startup. The database can be backed-up and copied to other (Version 9.1) Megarip Servers.

The Workbench is a split window. The Data Types list displays the database item categories that can be selected for creation or editing. The items list shows the available database items within each category. The grey area shows the settings and options for each item.

The Data Types section has two (2) views – Browse and Search. Browse allows the user to view and select any of the items for display. The tab containing the magnifying glass flips to a search window, which acts like a filter showing any items containing the search text.

Workbench Menu Options

Application

Access all available applications via this menu. Each application will open in its own separate window.

- System Settings (Windows OS) – Access the System Settings (Preferences) for the Serendipity Client. This option is available under the Serendipity Client Menu for macOS users.
- Quit (Windows OS) – Quit the Serendipity Client application. This option is available under the Serendipity Client Menu for macOS users.

Submit

- Files – Select files to submit to a Pagesetup/Media/Jobticket combination for processing.
- Files as Asset – Select files to send to the Studio asset queue. Assets will appear in the QueueManager queue as thumbnails but are not processed until submitted for printing from the Studio application.
- ICC Target – This is the standard option that should be used when calibrating a printer Media and submitting an ICC target to generate an output ICC profile. Files submitted using this option utilise the Paper Profile, Linearisation LUT, and Correction LUT in the Media but are not ICC corrected.

Note: This is the standard option for submitting an EPS or TIFF ICC chart used for creating an output ICC profile when calibrating a printer Media.

- ICC Target without Colour Correction – Submit an ICC target to a selected Pagesetup/Media/Jobticket combination. All ICC options and colour correction curves are disabled. A message will appear to confirm the option before submitting.
- Test Prints – Submit one or more internal test prints.
- Test Prints as ICC Target – Submit one or more internal test images as an ICC target. This allows users to store a commonly used ICC target chart in the “lib/testprints” folder for easy access when calibrating Media.

File

- New – Create a new item in the database.
- Save – Save changes made in the database.
- Duplicate – Make a copy of the currently selected item.
- Revert – Reload the last saved version of the selected item.
- Delete – Delete the currently selected item.
- Print – Print the details of the selected item.
- Get Info – Open a popup window displaying General and Ownership information for the selected item. The General panel displays the type, created, and modified timestamps for the item. The Ownership panel displays the User and Group permissions for the item.

Note: The User and Group will be listed as “admin” for normal installations. If secure mode is active, a user with sufficient privileges can make changes to the item permissions with respect to other users. When in secure mode, the admin user login is able to change the user or group to which the item belongs. If multiple items are selected, the admin user can make a mass change to the permissions of all items.

- Add to Archive – Add the selected items into a new Archive window. See the Archives section for further information.

- Database Utility – Opens the Database Utility to show and optionally delete unused Workbench items; Undelete items; repair broken items; and perform database maintenance. See below for further information on this function.
- Export as C5 Pack – Export Media files from the Workbench to a specific location for use with the C5 Client.
- Export/Import Folders – Export or import the folder structure used within the Workbench. It will not import or export the contents.

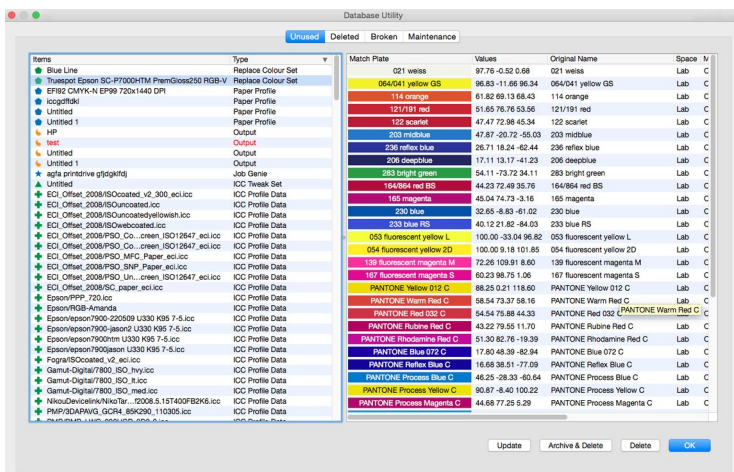
Database Utility

In addition to the database backup provided by the Archives application and Server Backup function, the Workbench keeps its own backup and item version storage to maintain database integrity for day-to-day use.

The Database Utility provides a simple interface enabling users to verify and maintain the health of the configurations integral to Megarip colour management, print, and proofing workflows.

The utility is accessed via the File menu, or right-click contextual menu when highlighting an item in the Workbench datatypes list.

The interface has four (4) tabs: Unused, Deleted, Broken, and Maintenance.



Unused Tab

This tab displays the list of Workbench database items and ICC profiles not currently referenced by any other item, i.e., not assigned or used as part of a functioning proof / print configuration.

The left panel lists the items, item type, and the last time the item was modified. Right-click in the column headers to change the displayed columns. When an item is selected, the right panel shows detailed item information.

Options:

- Update – Update the data displayed in the Unused tab to reflect any changes made to the database since the Database Utility was opened.
- Archive & Delete – Add and save the selected unused items to an (.sdb) archive via the Archive application, then Delete it from the Workbench database. The operation will then close the Database Utility.
- Delete – Delete the selected unused item/s from the Workbench database.
- OK – Close the Database Utility.

Deleted Tab

This tab displays items that have been deleted from the Workbench, item type, the last time the item was modified, the time it was deleted, and the time the item expires. Right-click in the column headers to change the displayed columns.

Deleted items are held by the database for a period of 90 days, after which they expire and are permanently deleted. Until then, deleted items can be restored to the Workbench at any time manually, or as part of a database repair operation (see below).

Options:

- Update – Update the data displayed in the Deleted tab to reflect any changes made to the database since the Database Utility was opened.
- Undelete – Restore the selected item to the Workbench database.
- OK – Close the Database Utility.

Broken Tab

This tab displays corrupt database items, and “broken” items that no longer function because one or more other database items they were referencing are corrupt, or have been deleted.

The list shows the broken items, item type, and the last time the item was modified. Right-click in the column headers to change the displayed columns.

Options:

- Update – Update the data displayed in the Broken tab to reflect any changes made to the database since the Database Utility was opened.
- Repair – Perform a repair on the selected broken item, retrieving missing or deleted items from the internal backup if they are available, re-assigning them to the broken item, then restoring the item to the Workbench database.
- Edit – Open an edit window for the selected broken item, allowing it to be manually repaired. Missing elements of the item will be displayed in red italics.
- OK – Close the Database Utility.

Note: The Broken tab will rarely contain items. The Server performs a database integrity check on start, automatically repairing any damaged or broken items using data from the internal backup. If the Server cannot be restarted because it is being used in an active workflow, a database integrity check can be performed manually using the Verify Database option in the Maintenance tab (below).

Maintenance Tab

This tab is used for database maintenance, integrity checks and repair.

The tab displays a standard Server Log window for error tracking if required (refer to the Modules > Server Log section of this manual).

Options:

- Verify Database – Manually run an integrity check on the existing Workbench database, automatically repairing any damaged or broken database items using data from the internal backup. This function is the recommended method for repairing the Workbench database.
- Verify Rolling Backup – Manually run an integrity check on the Workbench internal rolling backup, ensuring all items and item versions have been correctly backed up.
- OK – Close the Database Utility.

Edit

- Undo – Undo the last change. There are multiple undo options configured via the Client Settings section.

- Redo – Redo the last undone change. There are multiple redo options, depending on the undo status and configuration in the Client Settings.
- Find – Open a text box at the bottom of the Workbench panel to locate the search text on the screen.

View

- Split Vertical/Horizontal – Change the view to either vertical or horizontal split on the screen.
- Show Type Column – Used in conjunction with Show Usage to display the type of data listed.
- Show Modified Time Column – Display the last modified time for the time items listed.
- Show Usage – Display the items within the database that the currently selected item uses (e.g., a Pagesetup would show the Media and Output it uses).
- Reverse Usage – Reverses the usage shown (was called Show Referrers in previous versions).
- Organise Data Types – Organise data types in the Workbench list into related categories. This is the default view.

Modules

Access all available modules via this menu. A floating window will appear for each separate module opened. For further information, see the Modules section of this manual.

Server

- Server Settings – Access the system settings or preferences for the Megarip Server. For more information, see the Server Settings section of this manual.
- Connect to Server – Select a Megarip Server to connect to on the available network.
- Resume/Pause Processing – Pause or resume all job processing and print queues. Queues pause after completion of the current task.
- Accounts Admin – An authorised administrator can create, modify, and manage user accounts and groups.
- Chatterbox – Chat to other users connected to the same Server. The Chatterbox window will display the Clients connected to the Server. A nickname can be entered in the Client Settings, otherwise the machine name is used. If the users name cannot be selected, the user has selected the Away option and is not available.
- Broadcast Message – Send messages to all users connected with a Client to the same Server. Selecting the Broadcast option displays a message window to type into and send. The message is displayed on the users screen for a short time and will automatically dismiss if it is not acknowledged by clicking OK.
- Download PPD – Download the Megarip PPD from the Server to the desired location. Use the PPD when installing a local printer. When installed, the PPD (postscript printer description) is selected as the printer driver when setting up a Megarip Published Pagesetup as a print destination for third-party applications.

Window

- Bring All to Front – Shows any open window of the Client and can be selected to bring it to the front.
- Cycle Through Windows (CMD+` or CTRL+`) – Cycle through the open windows within the Client.

Help

- Server Info – Provides information about the Server including version, platform, speed, processors, hostname, IP, product, and vendor.
- What's This – Select and click on any part of the interface to display a short help description.
- User Manual – Open a PDF of the Megarip manual.
- Knowledge Base – Open the Serendipity Knowledge Base website (<https://skb.serendipity-software.com.au>) in the operating system's default web browser.
- Media Catalogue – Open the Media Catalogue application to download and install Pagesetup/Media/Output configurations in the Workbench. See the Media Catalogue section of this manual for further information.
- The following three (3) options will appear when using the standalone Serendipity Client:
 - Update Options – Configure a time for Megarip to periodically check for software updates.
 - Check for Updates – Immediately check for any software updates.
 - Install Local Updates – Manually update the Serendipity software package by downloading (.pax) package files. See the Installing Manual Updates section for further information.
- Backup Client Preferences – Perform a backup of the Client settings. A window will appear to choose a location to save the file. The backup will save Client preferences, folder structure within the Workbench, and Client layouts. This does not save jobs, database items or ICC profiles.
- Restore Client Preferences – Import settings from a previously saved Client backup (.backup or .scb) file.

Note – Client Backup (.scb) files created using Megarip 9.1+, can be opened for a Restore by double-clicking on the file, or by selecting the file on the desktop then choosing the Preview (Serendipity Client) option from the file's contextual (right-click) menu.

Older pre-9.1 .backup files must be opened via the Restore Client Preferences menu option above.

Contextual Menu (Right-Click)

In addition to selected File menu options listed above, the following are available via the contextual (right-click) menu:

- New Folder – Folders are a great way to organise the data types list items. Folders are client based, meaning each user can have their own folder configuration if required.
- New Folder with Selection – Place any selected items into a new folder.
- Remove Folder – Remove the selected folder, placing items within the folder back in the general items list.
- Open/Close Selected Folders – Expand or collapse the selected folders to show or hide the items within.

Note: Folders in the items list are internal to the Serendipity Client, used to organise database items. They are not operating system file folders.

Workbench Data Types

The following data types (databases) within the Workbench are used to accurately process jobs.

- **Calcheck Chart** – Provide a validation check for a hardcopy proof or a monitor.
- **Camera** – Set up a camera ICC profile for use with the SoftProof application when viewing RGB images.
- **Gradation Curve** – Adjust colour in a job by applying a curve to the individual process colours.
- **ICC Tweak Set** – Build up a library of colours that need “tweaking” for accurate output.
- **Jobticket** – Controls the input screening, resampling, ICC matching, rendering intents, effects, fitting or scaling, and other options applied to incoming jobs.
- **Media** – Control configuration settings for output, colour correction, ICC profiles, screen printing, and output screening.
- **Output** – Determine where processed jobs are to be output as files, to a printer, or to a remote location.
- **Pagesetup** – Where the desired output, media, and alternative job submission methods are assigned.
- **Pagesetup Pool** – Print to one or more Pagesetups.
- **Paper Profile** – Define the paper and ink characteristics of the Media being used by the output driver/device.
- **Press** – Contains the colour and dotgain attributes of a press. Used by the SoftProof application to show to effects of printing a job on a particular press.

Calcheck Chart

The calcheck chart data type is where charts are configured and stored for use in colour validation checks. The charts are comprised of user-created or imported colour patches, along with target standards and tolerances. These items are saved to the database and can be used or adjusted at any time. The calcheck chart is then used in conjunction with the Calcheck application to provide a validation check for a hardcopy proof or a monitor.

Once the chart is setup it normally never needs to be changed; the standards to be used are saved with the chart. When reading the chart with the Calcheck application, simply load it and measure. If you wanted to use a different standard, this is done in the chart and not the Calcheck application.

The chart can be attached to a job as it passes through the Jobticket and Pagesetup, or printed from the Calcheck application.

The window shows a list of the patches on the right and colour information on the left. For each patch selected its Lab values, delta tolerance and patch type can be adjusted. The overall target preferences are specified in the lower half of the panel.

Toolbar Options

The following options are available via the toolbar at the top of the panel:

- New Colour – Create a new colour in the list with default* values. Values and colour names can be adjusted.
- Delete Colours – Delete the selected colours from the list.
- Duplicate Colours – Make copies of the selected colours. Use shift or ctrl keys for multi-selection.
- Rename Colours – Change the name of one or more colours.
- Import Patches from Files* - Import a patch set from a colour data file, such as those of colour standards or ICC profile makers.
- Reorder Patches – Reorder the patches. Selecting this will display another window to select one or more colours and drag them into a new order. Use the up and down arrow keys and shift or control to multi-select.
- Generate Patches from ICC – Select an ICC profile from which to create a set of patches. Selecting this option displays a file chooser to select an ICC profile. A prompt will appear for the number of patches to generate. The minimum number is 16, maximum is 512.
- Add Colours from Library – Add colours to the chart from a special colour set.

***Note:** When creating or importing new colours they are stored with the default tolerance settings. This is user configurable and should be set before the patch set is created.

Patch Definition

On the left are a series of controls used to define each patch. Selecting a patch from the list will load the colour into the colour match box at the top, and load the Lab/CMYK/RGB values into the respective fields. To change the value, simply type the new number into the relevant field.

- Lab (or CMYK/RGB) – The Lab (or CMYK/RGB) value for the selected colour.
- ΔE tolerance – Set the maximum ΔE value for the selected colour.
- ΔH tolerance – Set the maximum ΔH value for the selected colour.
- ΔCh tolerance – Set the maximum ΔCh value for the selected colour.

- Patch Type – Identify important patch types from the set. The options are:
 - Paper – Select the patch that represents the paper being checked.
 - Cyan/Magenta/Yellow/Black – Identify a patch for each colour from your set.
 - Gray – Used to identify gray patches in the chart.
 - Generic – Most patches are generic and are classified as generic if they don't fall into one of the above types.

Note: When generating patches from an ICC profile, the patches are automatically assigned the correct type.

Target Standards

There are three (3) standards that can be used to compare against a proof. These are ΔE , ΔH , and ΔCh .

The first standard, ΔE , is always enabled. The other two standards must be enabled for the results to appear on the calcheck. To enable, select the tab and tick the Target checkbox.

For each standard, specify the limits used for a pass and fail status. For ΔE , also choose which of the ΔE standards are to be used – deltaE, CIE94, CIE2000, CMC(1:1), or CMC(1:2).

Important Note: The correct standard to be tested must be selected and saved with the chart. Only that standard will be tested for a pass or fail. If you are checking another standard, change it here and save again. For example, if you are checking deltaE and you want CIE2000 you will need to change it, save, and re-measure.

The limits are:

- Average – For all the patches in the chart that will be measured by Calcheck, the average must be below this value for a pass.
- Maximum – This is the default value used when creating or importing patches. This value is only used for assigning the maximum tolerance for the import. When the target is measured, the tolerance set per patch is the one used to determine a pass or fail status.
- 95th Percentile – 95% of measured $\Delta E/H/Ch$ patches are expected to have a delta of less than or equal to the entered value. A value of 0 disables the metric.
- Standard (Std) Deviation – The standard deviation across all the patches must not exceed this value.

The Calcheck will only report a pass for a proof or monitor if all patches in the target chart are within tolerance.

- Patches Per Strip – Specify how many patches are printed per line, allowing the use of existing target standards, such as the Fogra Media Wedge.

Spectrophotometer

- Spectrophotometer – Choose a supported spectrophotometer to read colour values directly into the Calcheck Chart.
- Configure – Select the measurement condition and/or other options available to the connected instrument. This option is only available to instruments with configuration options.

To measure colours:

1. Select an instrument from the dropdown menu and click Activate. The device must be connected and turned on.

2. Follow the onscreen instructions, as some devices require calibration before measuring.
3. When complete, click the Turn Off button.
4. If the Lab text option is chosen, a prompt will appear to select a file to import. The format must be Lab values, space, or tab delimited, and no header information.

Note: If importing characterisation data from one of the ICC profile packages or colour standards, use the Import Patches From Files option.

Patches

This section of the window displays the patches in the set. Each patch shows its respective colour, name, and Lab values. There is also a patch type and the tolerances for each standard. The tolerances are assigned when the patches are created or imported and are based on the settings on the left.

A tolerance setting can be altered by selecting the colour and entering a new value in the relevant box.

Chart type – Select from Lab (default), CMYK, RGB, or N-Colour (Multi-channel) colour spaces to define the patch colour values.

Press ICC Profile (button) – Opens a popup ICC chooser window to select and assign a Press ICC profile to define the values for device colour (non-Lab) chart types.

Search

Above the patches list is a search box. Enter a string to filter out any patches not required and locate those that are. All fields within the panel are searched. The search can be inverted using CMD+SHIFT+i (Mac) or CTRL+SHIFT+i (Win). The box will appear black when the inverted search is enabled.

Camera

The camera data type is used to define an RGB (or camera) ICC profile colourspace for use when viewing RGB images in the SoftProof application.

Users can configure whether the default camera profile or image embedded ICC profile is automatically selected and applied to an RGB image when opened in SoftProof. See Applications > SoftProof > SoftProof Settings for further details.

Colour Management

- Profile – Select the Camera ICC profile to assign.
- Rendering Intent – Select the rendering intent to be used.
- Black Point Compensation – Enable or disable black point compensation.
- Calcheck Chart – Assign a calcheck chart for camera colour verification checks using the Displays application.

Gradation Curve

A gradation curve is used to adjust colour in a job by applying a curve to the individual process colours. The gradation curve can be applied to a Media, either as a linearisation curve or as a correction curve. A linearisation curve is normally applied as part of the early calibration stage and is recommended. A correction curve is applied if a small amount of fine-tuning is required after normal calibration procedures.

Toolbar Options

- Trace Saved Curve – A green line appears, showing where the curve was last saved and where the curve has been edited.
- Invert Curve – Invert the selected curve.
- Gradation Table – Enter values manually to adjust or create a curve.
- Preview Curves – Displays a window with all curves in their respective colours so they can be assessed in relation to each other. This is updated dynamically as changes are made.
- View Linearisation – Load a linearisation curve directly into the Lineariser application.

ICC Tweak Set

Build up a library of colours that need tweaking (adjusting) for accurate output with the ICC Tweak Set data type. A tweak set alters colours during the ICC mapping stage from input to output profile and is selected on a per Media basis. The ICC profiles are not edited in any way and the tweak set can be selected as desired. Each colour requiring alteration is selected and adjusted by adding to or subtracting process colours from it, or making it lighter or darker. An accurate visual representation is shown onscreen and the point in the colourspace can also be viewed. Colours can be created manually or by entering CMYK or Lab values, or input automatically using a spectrophotometer.

The interface is split into two parts – the left side shows the input values and the right side shows where any adjustments (tweaks) have been made.

Options

- Colourspace – Select between Input Profile or Lab input. If the profile selected is RGB, the sliders will change to RGB. If CMYK, the sliders will change accordingly.
- Influence – Choose the area around the specified colours to be affected. This is determined as a scale from 1 to 5, with 1 being the least influence and 5 the greatest.
- Tweak Value – Use the CMY sliders to add or subtract from the colour being adjusted.
- Rendering Intent – Select the rendering intent that the colour is to be altered in from either perceptual, colourimetric, or saturation. This must match the rendering intent of the Jobticket for the mapping to work.
- New Tweak – Create a new tweak in the rendering intent selected.
- Copy – Available via the right-click menu. Copy the selected tweak.
- Paste – Available via the right-click menu once an item has been copied. Paste the copied tweak from the clipboard to the rendering intent selected.
- Change White Point – Change the white point of the paper. Select the button and enter the X,Y,Z points. If a spectrophotometer is connected, the white point can be measured directly into the system.
- Zoom – Zoom in and out of the Lab colourspace to see the point being tweaked in relation to the whole space.
- L-value – Move up and down the L-value to see the point being tweak in relation to the lightness. Reset the value by clicking the ReCentre button.
- ICC Profiles – Select the input and output profiles being used to tweak. These must match the ones selected in the Media, as they are stored with the tweak set and are used during the mapping process.
- Spectrophotometer – Select an online spectrophotometer to read values directly into the tweak set. Once selected, press the Activate button to connect and take measurements. If the device is being used by another application (including a Serendipity application), it will fail to connect. Quit or disconnect all others first.

Jobticket

The Jobticket consists of configurable options used to manipulate an incoming job for the desired output. A Jobticket can be linked to a specific Pagesetup configuration or created on-the-fly via the submit dialog window.

Colour Management Panel

Manage

- **Always Use ICC** – Enable to always use the assigned ICC profile for jobs submitted to the Jobticket, Pagesetup and media combination. If this is not enabled, the ICC profiles selected are only used in colourspace conversion. This is the default option for any new Jobtickets created.
- **Honour Embedded ICC Profiles** – Enable to use an ICC profile embedded in a submitted TIFF, JPEG, or EPS file as the input match profile. When enabled, the embedded file profiles will always take precedence over any match ICC assigned.
- **Process Grayscale as Black** – When enabled, this option converts and processes grayscale PDS, JPEG, BMG, TIFF, and PNG files submitted to the Jobticket as process black (K).

Note: The TIFF Image output driver has an option to embed an ICC profile into TIFF files that are output by Megarip.

- **Black Point Compensation** – Designed for use when processing input from large gamut sources such as photographs and RGB images. Black Point Compensation enhances shadow details in these images; assists when viewing shadowed areas in non-ideal or everyday lighting conditions; and prevents flooding in CMY gray areas.

This setting only functions when using colourimetric rendering intent and when Always Use ICC is enabled. Black point compensation should not be used for normal CMYK proofing jobs which are generally well within the gamut of an output device (inkjet printer).

- **Retain Pure Black** – When ICC profiles are used, all colours – even solids – are made up of a mix of different colours. Selecting this option uses only black for areas containing just black. When enabled, the following options become available:
 - **All** – Uses black ink only in areas defined as black.
 - **Text** – Uses black ink only in elements defined as black text. This can improve the clarity and sharpness of the text.

Note: This option is not always suitable for use with printers using light black inks, as many of these inks tend to have a non-black hue.

- **RGB Input Profile** – Select an RGB input ICC profile. This is used to convert data input from an RGB source to Lab for colour management.
- **RGB Input Rendering Intent** – Select the rendering intent to use. Options include:
 - **Perceptual** – All colours are moved proportionally to each other so the eye perceives the colours to be correct (i.e., colours out of gamut move into gamut, and those in gamut move proportionally to those out of gamut).
 - **Relative Colourimetric** – Those colours out of gamut are moved into gamut, and those in gamut are left untouched.
 - **Absolute Colourimetric** – The colours are left alone so those out of gamut cannot be reproduced. Adjusts the white point of the media to match that in the input ICC profile.

- Saturation – Those colours out of gamut move into gamut, but all colours increase in saturation as a result.
- Press Input – Select a press profile. This is a match ICC profile and is used to convert input data from CMYK to Lab. This can be a multicolour profile or CMYK.
- Inks – Define a press ink set for a multicolour press ICC profile if the selected profile does not contain process ink names. Selecting this option displays a special colour set chooser to select a pre-defined press ink set, or to create a new set.

Important Note: For multicolour profiles to work, you must create the same colour names used in the ICC and have them in the same order. The order for the ICC is specified during ICC creation. This is independent of the actual press order. Change the order by dragging the colours around the set. The order is specified as the colour (left column), order descending.

- Press Input Rendering Intent – Select the rendering intent to use. Options include:
 - Perceptual – All colours are moved proportionally to each other so the eye perceives the colours to be correct (i.e., colours out of gamut move into gamut, and those in gamut move proportionally to those out of gamut).
 - Relative Colourimetric – Those colours out of gamut are moved into gamut, and those in gamut are left untouched.
 - Absolute Colourimetric – The colours are left alone so those out of gamut cannot be reproduced. Adjusts the white point of the media to match that in the input ICC profile.
 - Saturation – Those colours out of gamut move into gamut, but all colours increase in saturation as a result.
- Press Inks Preview – When a colour set is chosen via the Inks button, a preview of the colour swatches will appear.
- Upload ICC – If the ICC profile is located somewhere other than the default ICC folders, use this function to upload it to the Server ICC folders in order for it to be used. As this is a Client-side option, use this function for moving ICC profiles from the machine they were created on to the Server. This can be either on the LAN or WAN as a remote machine.

Verify

- Print Calcheck – Attach a calibration strip to every job passing through this Jobticket. The calcheck results (green pass, red fail) will change the colour of the job information shown in the QueueManager when the job is processed.
- Chart – Select the chart to use from the popup window.
- Device – Select the instrument to be used to measure the chart. The chart will be printed in the correct format for the selected device.

Note: The Calcheck Chart is a data type in the Workbench. This is where the chart is created. Use the Calcheck application to measure and verify the printed chart. Printer embedded spectro charts are measured immediately after printing and the results are stored within the Job Info in the QueueManager.

Process & Resampling Panel

Processing

- Resolution – Select either 8-bit or 16-bit processing for any incoming jobs.

Note: Megarip V9.1 is able to accept files submitted in a 16-bit format. The files are normally processed and rendered in standard 8-bit colour, which for many workflows is sufficient for proofing. 16-bit processing improves render quality and can be useful for finding artifacts within a job. When 16-bit is enabled, files submitted to the Jobticket in 8-bit are upscaled to 16-bit for processing. 16-bit mode requires more system memory for imaging/rendering jobs and produces larger output files.

Resampling

Configure the method for sampling incoming data and changing the resolution from the input to that of the output. The options are:

- Nearest Neighbour – The fastest method but less accurate. Choices are made as the closest pixels from input to output and can result in jagged edges or stepping effects.
- Bilinear – A medium quality sampling method and can take longer than Nearest Neighbour. Bilinear takes the weighted average of 4 pixels from input to output. Best for use with screened data.
- Bicubic – High quality sampling method which takes longer to calculate than Bilinear. Bicubic uses the weighted average of 16 pixels from input to output.
- Filtered – Serendipity's own sampling method, giving the highest quality. It takes longer to process than Bicubic, and uses an averaged area from input to output. This setting provides better resampling for contone data, such as postscript and PDF. Filtered is the default setting.
- Antialiasing – Choose from 2x2, 3x3, 4x4, or None. Antialiasing is designed to smooth jagged edges and is used when the output does not have sufficient resolution to display edges smoothly. The values increase the amount of pixels used for antialiasing. The default setting is None.

Fit & Rotate Panel

Fitting

- None – Fitting method is disabled.
- Fit Width/Height/Width & Height – Shrinks jobs to fit within the set dimensions; proportions are maintained.
- Scale Factor – Scales jobs by the amount specified.
- Tiles – Tiles a job that is larger than the width & height specified. If required, an overlap can also be entered. Useful for large posters or billboards.
- Best Fit Width/Height/Width & Height – As Fit (above) but will shrink or enlarge jobs to fit/fill dimensions entered while maintaining proportions.
- Stretch Fit Width & Height – Stretch or shrink the width and height of the job to the dimensions specified, ignoring the native proportions.

Note: If the Fit or Best Fit options are chosen and the width & height fields are left at 0, the fit will default to the media width and height as defined in the assigned Media, adjusted by the printer Hardware Margins (see Media for details).

- Override Media Size – When enabled, values entered in the width and height fields will override the Media width and height settings when the job is processed (see Workbench > Media).

Rotation

Method (dropdown) – All jobs submitted via the Jobticket are rotated by the selected angle. Options include:

- None – Rotation is turned off. Jobs are processed at the orientation of the file.
- Auto – Jobs are rotated to use the least amount of media, e.g. portrait jobs will be turned to be landscape. It is recommended that a Media Width be defined when using this setting to prevent jobs that will not fit across the media from being rotated, cutting off part of the job when printed.
- 90 / 180 / 270° - Jobs are rotated by the selected angle.
- Angle – Jobs are rotated by the positive or negative angle (###.##°) entered in the Angle field.

Note: Auto rotation is very useful for saving media, but if a job is rotated it takes longer to process – the larger the job, the longer the process time. Rotation takes place at the beginning of the rendering phase and will affect cropping, margins and so on. If auto-rotating when nesting, it is advisable to have Sheet Auto Rotation turned off, otherwise the job rotation will be calculated twice, again increasing the process time. Increasing system memory can also improve processing times.

Step and Repeat

Copy and place the submitted job horizontally and/or vertically below the original, separated by a distance equal to the spacing field. The horizontal and vertical fields are multipliers. Optionally add cropmarks to each image.

Step and Repeat will repeat a single image only. If multiple files are submitted at the same time, each will result in its own step and repeat job with the configured settings.

- Enable Step and Repeat – Checkbox to enable the function.
 - Horizontal Repeat – The number of times to repeat the image horizontally.
 - Vertical Repeat – The number of times to repeat the image vertically.
 - Spacing – The space between each image.
 - Cropmarks – Select from None, Default, Paper-saving, Border.
- Studio Template – This button opens the Studio Template chooser window, allowing a template to be attached to the Jobticket. When Step and Repeat is enabled, and a template is selected, all jobs submitted via the Jobticket will be placed into all template frames, at the pre-configured size, proportions and scaling for each.

This feature replaces the standard Jobticket Step and Repeat feature when used, disabling it. To cease using a Studio Template and re-enable Step and Repeat, press the button then select None at the bottom of the chooser window.

Note: Only text boxes and normal frames are honoured when using a Studio Template in Jobticket. All other frame types such as canvas wrap, frame with border, and markers are ignored and will not be printed.

Centre & Size Correction Panel

Centring

- Centre – Select these options to centre a job vertically or horizontally on the printer Media. Centring is automatically adjusted for printer Hardware Margins (see Media for details).
- Override Media Size – When enabled, values entered in the width and height fields will override the Media width and height settings when the job is processed (see Workbench > Media).

Size Correction

- Enable Size Correction – When enabled, enter a width and height factor to compensate for media stretch or paper feed errors by specifying a correction amount. An article outlining how to calculate the correction amount can be found on the Serendipity Software Knowledge Base: <https://skb.serendipity-software.com.au/calculate-size-correction-6-0-1968/>

Crop & Pad Panel

Cropping

Imaging

- Auto Trim Whitespace – When enabled this feature automatically crops white space around the image, stopping at the first coloured pixel encountered on each side.

Note: When both Auto Trim Whitespace and specific cropping values are enabled, each image side will be cropped by the larger of the two values. The values are not cumulative.

Rendering

- Left/Top/Right/Bottom – Apply cropping to the submitted job during rendering phase to select or all sides of a job.

Padding

Add whitespace to a submitted job by entering values in the Left/Top/Right/Bottom fields. Any padding will be applied to the job after the imaging and rendering cropping effects (if any).

Padding will increase the overall size of the final job when output.

Effects Panel

Rendering Effects

Various effects can be applied to jobs passing through the Jobticket. Effects are applied in order of appearance. Some effects have separate attributes for customisation and can be edited once they are in the Applied Effects column.

The effects are:

- Barcode (JobID) – Place a barcode containing the JobID outside a job.
- Bleedmarks – Place bleed marks around a job. Line width, length, bleed and clearance can be specified.
- Border – Place a border around the job. Line width and colour can be specified.
- Centring – Centre the job in the specified page area.
- Convolution Matrix – Design a filter effect according to a pre-defined mathematical operation known as convolution.
- Cropmarks – Place crop marks around a job. Line width, length and clearance can be specified.
- Edge Detect – Remove all content and just leave the edges.
- Fotoba Cut Marks – Print user-configurable cut marks around jobs for subsequent cutting/trimming by Fotoba Digital Print Cutter devices.

- **Image Overlay** – When enabled this effect allows a Blackmagic Image, JPEG, PNG, PPM, Photoshop, or TIFF file to be placed anywhere on the job. Settings include width, height, and opacity for the overlaid image plus options to allow it to stretch and rotate with the job.
- **Lines** – Draw a line(s) at the top, bottom, left, or right of a job. Define the line thickness and colour, clearance from the job. A 'Draw around the original imaged page' option is available, which measures line Clearance from the submitted job edges, ignoring the placement of other render effects.
- **Margins** – Specify margins around the job.
- **Mirror** – Mirror the job.
- **Negative** – Render the job as a negative.
- **Pagenumber** – Place the page number in the middle of the page as a watermark. Scale factor and opacity can be configured, and choose between page number of the job or the page number of the signature (when using de- imposition).
- **Rectangle** – Draw a rectangle around the job inset at the desired distance, line width, and colour.
- **Registration Marks** – Add registration marks at each corner of the submitted job. Line width, inner and outer radius are all configurable. This is not available when using the Studio application.
- **Slugline** – Place job information on the job. There are a number of options available via the Edit button. If using a narrow format paper and the full slugline doesn't fit, select Custom Slugline and turn all options on. This will show an item per line. Within custom, fields selected will only be printed if they are relevant to the job. The slugline can also be mirrored, a useful option when printing to film using a white ink printer.
- **ThruBlack** – Set a black threshold level above which black areas are removed from an image during rendering. This is useful when printing an image containing black onto a black surface.
- **Unsharp Mask** – Apply an unsharp mask to the job. The unsharp mask effects the edges within an image and can be controlled with the available parameters. The radius determines how large an area to affect around the edges. The larger the radius, the greater the effect and the longer it takes to process. If the preview resolution is high, a given radius will have less effect than if the resolution is lower. If the detail is quite fine, a smaller radius should be used. Higher radius values can also cause halos at the edges. The threshold gives a level that should be affected where 0 affects more of the image and 255 very little. The amount states the size of the change, where a higher value is a greater change at the edges.
- **Watermark** – Place a watermark across a job. The scale of the watermark is proportional to the size of the job. 100% represents the same size as the job in the smallest direction. If the stretch option is selected, horizontal and vertical sides are stretched to the scale amount. The watermark will be scaled in an anamorphic manner. EPS files only.

Logo

Position a company logo, sign-off slugline, or colour bar for checking consistency anywhere around the job. The logo passes through the same colour management as the job and can therefore be verified. The file is not rotated during output (except if Auto Rotate when Nesting is enabled in the Output). If the logo file is positioned along the left or right sides, the EPS file should be created in the appropriate orientation.

- **Enable Logo** – Turn the logo effect on or off.
- **Dimensions** – Enter the print dimensions of the logo.
- **Logo File** – Select to choose a logo file.

Imaging Effects

Any checked effects will be applied to the job during the imaging phase of processing, before any rendering effects are applied.

- Mirror – Mirror the job.
- Negative – Invert the job colours producing a negative of the image.
- Discard Alpha – Discard any alpha channels in the file when processed.

Postscript/PDF Options Panel

The following options are only used for incoming postscript data.

- Use Bounding Box for Page Size – Some postscript jobs do not place a page size in the job information. Checking this will use the bounding box as the page size.
- Fail on RGB Images – Causes a job to fail if it contains RGB images. If this is not checked, the jobs will process but RGB images will be ignored and not printed.
- Antialiased Subsampling – Used to assist in the rendering of some fonts.
- Disable PDF Autoseparation – Turn off autoseparation for PDF files.
- Render in RGB – Allow postscript file data to be processed in an RGB rendering mode, with a wide gamut suitable for digital photographic proofs/prints.
- Honour Embedded Screening – Screen and LPI angles are extracted from Adobe separated postscript files (only) and used, overriding Media configured halftone output screening LPI and angles.
- Use CMYK Simulation from PDF for Unknown Colours – Allow the CMYK simulations from PDF files to be substituted for unknown spot colours. This is the default option for any new Jobtickets.
- Use PDF filename as jobname – When submitting PDF files, the filename can be used as the Jobname instead of the Title tag.

Media

The Media data type contains all of the settings controlling the output of jobs as they pass through the Megarip colour management system for proofing. Settings configured here are those directly related to the output device, colour correction, ICC profiles, screen printing, and output screening.

A media can be one of several assigned to a Pagesetup, with an additional Jobticket which controls the input screening, resampling, rendering effects and intents for incoming jobs. All jobs are submitted to a combination of Jobticket, Pagesetup, and media destinations. When submitting, the user selects the Pagesetup to be used, at which point a list of compatible, user- created output Media types in the database become available for selection.

A default media is assigned to a Pagesetup, so if a job is submitted without a specifically chosen Media, the job will output to the default Media settings. An output data type can optionally have a Media type assigned to it, in which case only jobs submitted to the output using the assigned Media will be printed. All other jobs are held in the QueueManager until the assigned Media is removed from the output, or the held jobs Media type is assigned to the output.

Important Note: Older version Pagesetups when opened in version 9.1 are automatically split into Jobticket, Pagesetup, and Media types. Version 9.1 archives cannot be back ported.

Output Driver Panel

- Output Driver – Select the output driver from the popup window. Those available will depend on what options are enabled for the dongle. Click the Edit button for configuring any custom settings.

Print & Media Settings Panel

- Resolution – Select or enter the desired resolution (dpi). If the output is a printer only the supported resolutions are available. If it is a file format, any value can be entered.
- Colourspace – Select the output colourspace as desired. Selections will change depending on the driver selected.
- Override Hardware Margins – Optionally set the Top / Left / Bottom / Right margins for the selected printer. These values should be the hardware margins of the printer, defining the maximum limit of printable area. The margins are utilised by Megarip when functions such as image placement and centring are used.

The fields are auto-populated with the printer default margins when the information is available from the driver.

- Media Width/Length – Set the width and length of the media. Only jobs submitted with a width and length equal to or less than the assigned values will be printed. Jobs of greater size will be held in the QueueManager until an appropriate Media or new values are assigned.

Note: Media Width/Length values override the width/length settings in the Nesting section of the Output, meaning jobs will not nest or print until within the width/length settings of the Media they were submitted to.

- Cut Sheet – Enable this if the Media being printed to is cut sheet. The Media to be used is selected from the dropdown menu.
 - Manage Custom Sizes – Create and manage custom page dimensions for use. Any page sizes created here will also appear in the Studio application > Media panel > Page Size section.

Note: Borderless Printing – If available to the printer model, users can choose borderless printing in the custom settings. If selected, media width (and the image fit setting) needs to be set to 6mm wider than the actual paper width. When using borderless printing, up to 3mm of the image will be lost from the left and right sides of the image, and 1mm lost from the top and bottom of the image.

- **Total Sheets** – Enter the number of cut sheets loaded in the printer. Jobs will stop printing to the Media and be held in the QueueManager when MediaStatus has tracked that the assigned number of sheets has been used. A total sheets value of zero assumes an unlimited sheet availability for tracking. Sheet count is reset using the Reset Counter button in the Usage panel.

Colour Management Panel

ICC Profiles

ICC profiles are used to match colours from one device to another, for example, a press to an inkjet. It does this by mapping an input to an output colour.

- **Output ICC Profile** – Select an output profile. This is the printer or other output profile and is used to convert Lab data to the output colourspace. This output could be RGB, CMYK, CMYKOG, or N- colour, depending on the output device and the selected colourspace.
- **Output ICC Tweak Set** – Select a tweak set from the available list. Lists can be previewed, edited, or new ones created.
- **Device Link Profile** – Select a device link profile. If the job passing through does not match the colourspace of the device link profile, the standard input and output profiles selected will be applied.

Upload ICC – This option is available on all of the ICC profile choosers, and is used to upload an ICC profile from a local or network folder to the internal Megarip ICC folder.

To upload an ICC profile:

1. Click the Upload File button.
2. Browse to the location of the ICC file.
3. Open the file.
4. Select the location to save the file (lib/icc is the default).
5. Click OK.
6. Save the setup once the file has been uploaded.

Colour Correction

There are three (3) options for use to manipulate or fine-tune the colour to achieve the desired results:

- **Paper Profile** – Select a paper profile to be applied. If the output is to a printer, this is also part of the standard calibration process.
- **Linearisation LUT** – Select a linearisation LUT to be applied in the form of a gradation curve. This is normally done as part of the standard calibration process with the use of the Lineariser. Preview, edit, or create new curves.
- **Correction LUT** – Select a correction LUT to be applied in the form of a gradation curve. Preview, edit, or create new curves.

Output Screening Panel

Apply screening to the output file if desired. This is only available if the output driver selected supports screening.

- Method – There are two (2) methods available – FM Screening, or Halftone.

FM Screening

FM Type

- Stochastic – Standard stochastic screening.
- Stochastic-2 and 3 – Stochastic screening with progressively increasing amounts of noise mixed in. This is done to overcome some artifacts caused by inkjet printers.
- Stochastic Fast – A fast version of the stochastic screening mode. Slightly lower quality than stochastic.
- Error Diffusion – May enhance edges within images.
- Ordered Dither – Applies a threshold map on the pixels displayed, causing some of the pixels to be rendered at a different colour.

Note: When Screen Print Mode is enabled, Stochastic is the only FM screening type available for use.

Plates List

The list on the left of the panel displays the process colour plates and special plates (8 by default) available.

The number of special plates available for use can be configured in the Colour Tab of Client Preferences (see the System Settings > Client Settings section of this manual).

Defaults

- Plates Column – Lists the plates that have been selected for screening.
- Type – Lists the selected screening FM type for the plate.
- Dot Scale - Size (Microns) – Lists the plate dot scale and corresponding dot size (in Microns) as configured via the Edit button.
- Edit – Edit screening options for the selected plate. Double-clicking on the plate in the list will also open the edit options window.
 - Exclude Plate – Enable to exclude the selected plate from separations. Excluded plates are indicated in red.
 - FM Options:
 - Dot Scale x (1-10) – Sets the scale factor for FM screen dot size (higher number = coarser screen, larger dots). The dot size (in microns) is inversely related to the printing resolution (dpi). Default is 1.
 - Dot Size: Shows the resulting dot size in microns for the chosen Dot Scale at the current output resolution.

Halftone Screening (Traditional Rosette Dot)

- Dotshape – Choose the dot shape to suit requirements from round, inverted round, elliptical, inverted elliptical, diamond, euclidean, or line. This is applied to all plates in the Defaults panel and can only be edited via the Output Screening Overrides section.

Defaults

- Plates Column – Lists the plates that have been selected for screening.
- Type – Lists the selected screening (Halftone) type and the set angle & frequency for the plate.

Halftone Options

- SuperCell – Choose SuperCell screening instead of standard halftone. Produces a much better quality output than standard halftone. This is the default option for halftone screening when enabled.
- Defaults – Use this to select the default values based on the output resolution.

Edit Button – Select this to manually enter values.

- Exclude Plate – Enable to exclude the selected plate from separations. Excluded plates are indicated in red.
- Angle, Degrees – Enter the desired angle for each plate.
- Screen, LPI – Enter the desired screen ruling for each plate.

Output Screening Overrides

Screen one or more colour plates for any incoming jobs using different methods or with different characteristics than the defaults configured in the Output Screening panel.

Plates List

The list on the left of the panel displays the process colour plates and special plates (8 by default) available for screening override.

The number of special plates available for use can be configured in the Colour Tab of Client Preferences (see the System Settings > Client Settings section of this manual).

Override List

- Plates Column – Lists the plates that have been selected for screening override.
- Type – Lists the selected screening type for the listed plate, along with details such as screening angle, LPI, dot shape, and dot scale if applicable.
- Remove – Remove the selected plates from the override list, reverting them to the default output screening option.
- Edit – Edit screening options for the selected plate. Options are detailed in the Output Screening sections above. Double-clicking on the plate in the override list will also open the edit options window.

Screen Printing Panel

The screen printing mode separates a job into single plates and prints them as black. This is designed to print with a halftone dot onto a clear film media. To increase the density of the output, choose a combination of inks. This option can be used to produce films for use in screen printing or inkjet CTP (computer to plate).

- Enable Screen Print Mode – Turn the screen print mode on or off.

Note: In screen printing mode, all jobs are separated into individual channels and must use a paper profile where only one dot for each colour is turned on.

- Simulate Screening – When enabled, this option simulates halftone screening for output from Media using HTM or Printer's Screening (contone) printer drivers. Usable in both CMYK and RGB print modes. Only available when an appropriate printer driver is selected.

Note: When using simulated screening, only halftone screening may be used. If stochastic screening is selected as part of an Output Screening Override, the submitted job will fail.

- Ink Combination – Select the inks to be combined for a single separation output.

Note: When simulated screening is enabled in RGB print mode, Red, Green, and Blue “inks” will be available for selection. If these are left unchecked (recommended) all channels are used by default to produce black print output. In CMYK mode, ink(s) may be selected as normal.

Media Status Panel

Usage

The Usage panel shows the amount of media used, based on the values entered for Media Length.

- Usage Meter – Bar showing the amount of media used. Text under the bar shows the exact amount as “Used x Units of Total Units” (Percentage %).
- Logged Period – Time period (date and time, from and to) the Media has been tracked since the last reset.
- Printed – Number of jobs and total printed area of jobs tracked since the last reset.
- Reset Counter – Reset the usage count for the Media.

Calcheck Info

A Media can have its calibration status checked using the Check Media option within the Calcheck application.

The panel displays the current calcheck calibration status of the Media, with the following information displayed:

- Chart – The calcheck chart used for calibration.
- Date – The date and time of the calcheck.
- Score – An internal calcheck rating from 1 to 100.

ΔE , ΔH , and ΔCh tabs show the following data for each of the standards (if measured):

- $\Delta Cyan$, $\Delta Magenta$, $\Delta Yellow$, $\Delta Black$, $\Delta Gray$, $\Delta Paper$.
- Pass or Fail – As designated by a green tick or a red cross.
- $\Delta Average$, $\Delta Maximum$, $\Delta Standard Deviation$.

Output

The Output data type determines the output format of processed jobs and where they are sent for printing (or file output).

Printer & Media Panel

- **Output Driver** – Select the output driver from the popup chooser window. Driver availability will depend on the options enabled on the dongle. The selected driver affects the options in a Jobticket and Media pointing to it.
- **Monitor Printer Status** – Allow a QueueStatus module to display current status, ink levels, warnings and error messages for the output printer via the Show Printer Monitor Status option. Available to compatible printer drivers only.
- **Media** – Optional. Select this to assign a Media to the Output. A chooser window will appear with Media displayed matching the output driver type. The options as set in the selected Media are displayed for view, can be edited, or a new one can be created.

Note: The Change Media option is used as both a safeguard against paper waste and a workflow control method. If a Media type is assigned to the Output, only jobs submitted to the Output using the same Media will be printed. All other jobs are held in the QueueManager until the Media they were submitted to is assigned. If no Media is assigned, all jobs sent to the Output are printed.

Connection Panel

- **Destination Driver**

The destination determines the method of delivery of the output job to the final destination. Depending on the driver selected, there may be some additional options available.

A popup window will appear to select the destination. Options include:

- **Bonjour/Zeroconf** – Output to a Bonjour/zeroconf network destination. The local network is polled for Bonjour/zeroconf devices. Choose Edit and select the appropriate destination from the list.
- **Command/Script** – Select a script or command to be run once a job has completed.
- **Epson FireWire (macOS only)** – Windows users should use the Local Print Queue option and print to an installed printer, configured to use FireWire.
- **FTP** – Send a completed job to a remote machine using FTP.
- **Local Device** – If a printer is connected as a serial or parallel printer, send a file directly to the device with this option.
- **Local Folder** – Choose a local folder to send the output file to. Enter the path or select Choose to browse and select a folder. The folder must exist and have write permissions.
- **Local Print Queue** – Print to a local print queue. Use this to print to a Windows printer on another machine. In the path location, enter \\machine\printer where “machine” is the name of the Windows machine with the printer attached, and “printer” is the exact name of the printer. The printer must be shared.
- **LPR Port** – Use LPR to print jobs to printers accepting it. Enter the hostname/IP address of the printer and the path. Not all devices require a path to be entered. This is a good option for Epson printers with a network card. This method is faster than TCP/IP printing for these devices.
- **Nowhere** – Used for internal testing or for softproofing workflows. Files created by the print driver are not sent anywhere, they are left in the default raster location. A print time for simulation can be entered.

- Secure FTP (sftp) – Send the job to a secure server using FTP.
- TCP/IP Port – Print to a networked device over TCP/IP.
- USB Printer – Print to a printer connected via USB.

Queue Control Panel

- Status – Choose whether an output queue is active (available to print/output), or inactive (paused). This can also be controlled from a QueueStatus module.
- AutoPause – Select a time duration the queue should pause after processing a job. Used for double-sided plotters so there is a pause in sending the next job, giving the plotter time to turn a sheet ready for the back side to be printed, or time to load another sheet.
- AutoClean – Automatically delete printed jobs from the output queue based on times and/or number of completed jobs in the queue. Auto-cleaning is performed the next time a job is submitted after an auto-cleaning condition has been met. Options include:
 - Keep Most Recent – Set a number of jobs. Megarip will keep that number of most recent printed jobs in the output queue, automatically deleting any excess jobs.

Note: If this is enabled and the number of jobs is set to zero, jobs will be deleted from the queue immediately after printing.

 - Keep Jobs Newer Than – Megarip looks at the time signature of printed jobs and deletes any jobs in the queue older than the specified (days/hours/min) time.

Nest / Duplex Panel

Nest

There are two methods of collating available, depending on the output driver selected. If a driver that supports duplexing is selected, the additional duplexing collation method becomes available. If not, the only option is nesting.

- Enable Automatic Nesting – Set the queue to nest jobs automatically when the configured conditions (such as maximum wait time) are met.
 - Auto Rotate when Nesting – Enable auto rotation when nesting occurs. If this is enabled, make sure the option in the Jobticket is set to None. There is no need to spend processing time rotating a job if it is rotated at nesting time.
 - Minimise Cuts – When automatic nesting is active, this option will align the nested jobs in a way that minimises the number of horizontal and vertical cuts required to separate the individual jobs after printing.
- Note:** This option may use more media (paper) when nesting.

Options include:

- None - Minimise Cuts is inactive, and not used for nesting calculation.
- Horizontal - Standard Minimise Cuts option. Jobs are nested as described above.
- Horizontal (Automatic Cutter) - Jobs are nested into rows with top edges aligned. Compatible with the use of automatic digital cutters. If nested jobs are of the same height, cut marks can be placed along the bottom edge of jobs for a clean automated cut of each row.
- XY (Automatic Cutter) - Nesting is arranged into rows comprised of jobs of the same height, and where possible into columns where jobs also share the same width. Suitable for use with automated horizontal or horizontal/vertical (XY) cutters.

- **Group by Publication** – When active, a special nesting option is applied to jobs / pages submitted as part of a publication. This includes: multi-page postscript / PDF documents; jobs submitted via a Pagesetup with the Auto Publication Name option active.

Pages are nested on the output Media in numerical order, in rows from left to right, down the media. All other nesting parameters are respected, except Auto Rotate and Minimise Cuts, which are disabled for this purpose. Nesting is delayed, as in Duplexing, until all publication pages have finished rendering.

- **Copies** – Specify the number of copies for nesting. For example, if there are 7 jobs making up a nest, and 5 entered in the copies field, 5 copies of the 7 jobs will be nested and printed.
- **Maximum Wait Time** – Specify how long to wait before nesting begins. Once reached, nesting will begin and any job waiting to nest will be nested into a single job. The start time is determined by the first job that appears waiting to nest.
- **Minimum Paper Coverage** – Specify the minimum paper coverage to be reached by jobs waiting to nest before nesting will begin. Once reached, any waiting jobs will be nested into a single job.
- **Maximum Jobs** – Specify the number of jobs in a nest. If there are more jobs in the queue than the number specified, that number of jobs will nest and the remaining jobs will stay waiting to nest until the criteria is met again.
- **Media Width** – Specify the media (paper) width. This is required for nesting to work.
- **Gap Between Jobs** – Enter the size of the gap between jobs in the nest.
- **Minimum Total Height** – Specify the minimum total height of a nest i.e., if the combined height of the jobs waiting to nest reaches this value, nesting will begin.
- **Maximum Total Height** – Specify the maximum total height of a nest i.e., if the combined height of the jobs waiting to nest reaches this value, nesting will begin.

Note: If a maximum height is set, the nesting algorithm will look at all the jobs waiting to nest and fit the most jobs between the minimum and maximum heights. If the available jobs can not cover the defined paper coverage (if set) of paper without exceeding the maximum height, jobs will not nest. If no paper coverage minimum is set, any job that would make the nest exceed the maximum height will be left in the queue – the other jobs will be nested. Any single job exceeding the maximum height will also not print. If a job is too large, the nesting parameters and/or the printer media must be changed. This makes it possible to effectively and efficiently nest using cut sheet media.

Duplex

Duplex jobs with multiple pages to form double-sided printing. This is only available for printers supporting duplexing modes.

- **Add Separator Page** – Add a blank page between duplexed sets. This is useful when duplexing perfect bound jobs. A blank page is inserted after the maximum jobs is reached for duplexing to begin.
- **Top Page** – Determine if the top page is an odd or even number.
- **Maximum Wait Time** – Set the time to wait before duplexing begins. If the maximum wait time is reached and the back side of the pages has not yet been processed, the queue will begin to duplex any available pages. This will result in single pages where the backs are not yet completed.
- **Maximum Jobs** – Set the maximum number of jobs for duplexing. If this value is reached, duplexing will begin.

Maintenance Panel

The maintenance panel allows Megarip to be configured to automatically perform printer maintenance functions. This is not available for all printer drivers. Maintenance functions can be performed at regular intervals; after a set number of print jobs; or after printing linearisation charts and ICC targets.

Time-based

- When – Select Every from the dropdown menu to activate time- based maintenance, with configurable time and day fields. Multiple days of the week can be selected.
 - Perform Actions:
 - Calcheck – The printer will print a calcheck chart as specified.
 - Clean Print Head – The printer will clean the print head.
 - Print Nozzle Pattern – The printer will print a nozzle check pattern to verify all print nozzles are clean and functioning.
 - Nozzle Check – The printer will perform a nozzle check.

Job-based

- Every – Enter a number in the field or use the arrows to set the selected maintenance to be performed after the defined amount of print jobs.
 - Perform Actions:
 - Calcheck – The printer will print a calcheck chart as specified.
 - Clean Print Head – The printer will clean the print head.
 - Print Nozzle Pattern – The printer will print a nozzle check pattern to verify all print nozzles are clean and functioning.
 - Nozzle Check – The printer will perform a nozzle check.

Calibration-based

- After Printing:
 - Linearisation Chart – The printer will print a nozzle check pattern immediately after printing a linearisation chart. If the pattern is incomplete, the print head will need to be cleaned and the chart reprinted.
 - ICC Chart – The printer will print a nozzle check pattern immediately after printing an ICC target chart. If the pattern is incomplete, the print head will need to be cleaned and the chart reprinted.

Calcheck Settings

- Chart – Specify the calcheck chart to be printed when the above Calcheck option is selected.

Note: The calcheck chart will only print if there is a valid Media attached to the Output via the Change Media button. If the calcheck fails, the output will be made inactive automatically.

- Pagesetup – Select the Pagesetup to use when processing the calcheck chart maintenance option.

Manual

- Command - Select a command from the dropdown menu to manually perform the maintenance function on the selected Output device. This will only appear for any printer drivers with this capability. Only commands supported by the specific printer driver will be shown.
 - Refresh Media Library – This feature allows immediate retrieval of updated driver media library information from the printer, without waiting for the scheduled 24-hour update check.
- Execute – Initiate the selected printer maintenance function or print.

Pagesetup

A Pagesetup is where the desired Output, Media, and alternative job submission methods are assigned.

Output Options Panel

- Output – Select the output method and assign its configured properties to the Pagesetup.
- Media – Select the default media settings and assign its properties to the Pagesetup. If a job is submitted to the Pagesetup without the specific Media, the job will output using these default settings.
- Jobticket – Select the default Jobticket settings and assign its properties to the Pagesetup.

Options

- Priority – Assign a priority to a Pagesetup. All jobs submitted via the Pagesetup have this Priority assigned to them. Priority ranges from -100 (highest) to (100) lowest, with 0 being the default. As jobs pass through each queue – Imaging, Rendering and Output – they are processed in order of priority, highest to lowest. Job priority can be changed during processing using the Change Priority and/or Rush Jobs options. (See Modules > QueueManager for further details).
- Auto Publication Name – Create unique publication names for each job passing through the Pagesetup. Use this feature for duplexing from PDF or PS files. Submitting a multi-page document as one job will allocate all pages with the same publication name.

Publish Panel

This section allows a Pagesetup to be published on a network as a DropFolder, or as a network print destination for printing from a third-party application. To publish a Pagesetup it is necessary for the Serendipity Megarip PPD to be installed on the same system as the Megarip Server (Server menu > Download PPD).

- Publish DropFolder – Allocate a folder where files can be dropped for processing. Valid file types include postscript, PDF, JPEG, TIFF Image, Serendipity Blackmagic Image, EPS, PNG, PSD.
- Location – Set a folder as a DropFolder location. The folder must exist and have read/write permissions.
- Default – Reset the DropFolder location to the default, i.e., Serendipity Megarip installation directory/drop/"Pagesetup Name".
- Parse filenames for metadata – When enabled, this function parses files placed in the DropFolder, searching for certain defined metadata strings appended to the end of the filenames. Each string automatically applies one of three (3) submit window functions to the file. Any combination of the three (3) strings can be added to a job filename. The useable strings are:
 - #rotate - which rotates the file 90 degrees for printing.
 - #copies=X - where X is the number of copies of the file to be printed.
 - #pages=X-Y - where X and Y are the lower and upper pages in a page range to be printed within a multi-page job.
 - #media=media name - where 'media name' is the Item name of a specific compatible Media, allowing the job to be printed using defined Media, rather than the Pagesetup default.
 - #jobticket=jobticket name - where 'jobticket name' is the Item name of a specific Jobticket, allowing the job to be printed using defined Jobticket, rather than the Pagesetup default.

Examples of renaming a file named Testfile.pdf prior to placing it in the Dropfolder are as follows:

Testfile.pdf#rotate

Testfile.pdf#copies=4

Testfile.pdf#pages=2-5

Testfile.pdf#rotate#copies=5#pages=3-4

Testfile.pdf#media=SatinPhoto260

Testfile.pdf#jobticket=A1poster

Testfile.pdf#jobticket=A1poster#media=SatinPhoto260#rotate

- **Printer** – Publish the Pagesetup as a network print destination, allowing third-party applications to print directly to it.
 - **Mac** – Publish the Pagesetup as a bonjour/zeroconf network destination for macOS and Linux.
Note: When adding a new printer through System Preferences on macOS, select the bonjour address (Pagesetup name@computer name) as the printer and Serendipity Megarip PPD as the driver.
 - **Windows** – Publish the Pagesetup as a Windows local printer port destination.
 - **TCP Port** – Publish the Pagesetup to a TCP port, allowing it to be setup as an IP printer destination, or as a destination for other Serendipity Megarip Servers.
 - **Port Number** – Enter the TCP port number the Pagesetup will publish to. It is necessary for the port number to be 10000 or above, and for each Pagesetup to have a unique port.

Note: When adding a new printer through System Preferences on macOS, select IP printer, HP Jetdirect-socket for the protocol. The address should be in this form: computername:10063. Select Serendipity Megarip as the driver.

When adding a new printer through Windows:

1. Select Create a new Port – Standard TCP/IP port.
2. Enter the computer network name in the Host ID field.
3. When Windows requests additional info for the port, select Custom Settings.
4. Rename the port if required.
5. Set the Protocol to Raw and the Port Number to match the one set in the Pagesetup to be published.
6. Select Serendipity Megarip as the driver. If the driver is not already installed, choose Have Disk and get the driver (megarip.inf) from the Serendipity installation DVD, win\OS Version" directory.

Flow Control – Select whether to hold the submitted file after imaging or rendering in order to prioritise jobs, make rendering attribute changes before releasing, or nest jobs. Flow Control options are only applied to jobs submitted via a DropFolder, a Published network destination, or a DropSpot.

Options include:

- **Hold After Imaging** – Hold jobs submitted to the published Pagesetup after imaging has completed. Held jobs can be released to continue processing via the QueueManager toolbar or right-click menu.
- **Hold After Rendering** – Hold jobs submitted to the published Pagesetup after rendering has completed. Held jobs can be released to continue processing via the QueueManager toolbar or right-click menu.
- **Nest** – Nest jobs submitted to the published Pagesetup according to the criteria defined in the output used by the Pagesetup/Media.

Note: The nest function only requires that the output used has nesting configured. The output itself can have nesting disabled for normal use. This makes it possible to create multiple nesting or non-nesting published Pagesetups to print via the same output.

- Duplex – Duplex jobs submitted to the published Pagesetup using the settings configured in the Outputs used by the Pagesetup/Media.

Note: The Next and Duplex functions only require that the Output used has nesting and/or duplexing (if available) configured. The Output itself can have nesting or duplexing disabled for normal use. This makes it possible to create multiple nesting/duplexing or non-nesting/duplexing published Pagesetups to print via the same Output.

Options

- Default Copies – Enter the default number of copies to be output for each job submitted via a DropFolder or Published network print destination.

Asset Queue as a Published Pagesetup

The asset queue automatically publishes itself on the network in multiple ways:

- Drop Folder – Files placed in the Asset dropfolder are automatically placed in the Asset queue. The drop location is /Serendipity Megarip/drop/asset drop.
- Printer – The Asset queue is published as a bonjour/zeroconf network destination address (asset drop@computername). Jobs printed to this bonjour destination are placed in the Asset queue.
- TCP Port – The Asset queue publishes itself to TCP port number 9104. Jobs printed to this TCP port are placed in the Asset queue.

Pagesetup Pool

The Pagesetup Pool data type is used for printing to one or more Pagesetups. Load balance between multiple Pagesetups, or print to multiple Pagesetups simultaneously. These can be published in the same way as an individual Pagesetup.

Pagesetups Panel

Display all Pagesetups configured in the system. The sort columns show the Output, Jobticket, and Media used by each Pagesetup. Tickboxes are available to select which Pagesetup will be included in the pool. A right-click, context menu for each Pagesetup in the list allows the user to edit any or all selections of the highlighted Pagesetup, its assigned output or Media.

Load Balancing Panel

Load balancing is ideal for printing to multiple printers of equal quality, using the same Media with the priority being to proof jobs to the next available printer. Each printer is calibrated separately to ensure quality.

“By Print Area” is more efficient, as the larger the print area the longer it will take to image, render, and print. Queue loading is determined at the time of imaging. If a print queue is paused, jobs will be sent to active queues.

- Load Balance by Print Area – Calculate the area of each job and the queue with the least amount of print area queued is sent the next job.
- Load Balance by Job Count – The queue with the least number of jobs is sent the next job.
- Print to All Pagesetups – Print to all Pagesetups selected in the pool.

This option is ideal to print a job locally and remotely. One Pagesetup can be configured to drive a local printer and another can create a JPEG image and transmit it to a remote Serendipity Megarip. Alternatively, create a PDF file to send to a customer at the same time as printing a hardcopy.

- Pool Priority – Assign a priority to a Pagesetup pool. The lower the number the higher the priority. Numbers can be negative for a higher priority. The default is 0. Jobs waiting to image or render will be processed by a higher priority Pagesetup pool over jobs submitted to lower priority pools.

Publish Panel

Publish Pagesetup pools on a network as a dropfolder or as a network print destination for printing from a third-party application. To publish a Pagesetup pool it is necessary for the Serendipity Megarip PPD to be installed on the same computer as the Megarip Server runs.

- Publish DropFolder – Allocate a folder where files can be dropped for processing. Valid file types include postscript, PDF, JPEG, TIFF Image, Serendipity Blackmagic Image, EPS, PNG, PSD.
 - Location – Set a folder as a DropFolder location. The folder must exist and have read/write permissions.
 - Default – Reset the DropFolder location to the default, i.e., Serendipity Megarip installation directory/drop/“Pagesetup Pool Name”.
- Parse filenames for metadata – When enabled, this function parses files placed in the DropFolder, searching for certain defined metadata strings appended to the end of the filenames. Each string automatically applies one of three (3) submit window functions to the file. Any combination of the three (3) strings can be added to a job filename. The useable strings are:
 - #rotate - which rotates the file 90 degrees for printing.

- #copies=X - where X is the number of copies of the file to be printed.
- #pages=X-Y - where X and Y are the lower and upper pages in a page range to be printed within a multi-page job.

Examples of renaming a file named Testfile.pdf prior to placing it in the Dropfolder are as follows:

Testfile.pdf#rotate

Testfile.pdf#copies=4

Testfile.pdf#pages=2-5

Testfile.pdf#rotate#copies=5#pages=3-4

Publish As

- **Printer** – Publish the Pagesetup pool as a network print destination, allowing third-party applications to print directly to it.
 - **Mac** – Publish the Pagesetup pool as a Bonjour/zeroconf network destination for macOS and Linux.
- **Windows** – Publish the Pagesetup pool as a Windows local printer port destination.
- **TCP Port** – Publish the Pagesetup pool to a TCP port, allowing it to be setup as an IP printer destination, or as a destination for other Serendipity Megarip Servers.
 - **Port Number** – Enter the TCP port number the Pagesetup pool will publish to. It is necessary for the port number to be 10000 or above, and for each Pagesetup pool to have a unique port.

Note: When adding a new printer through System Preferences on macOS, select the Bonjour address (Pagesetup pool name@computer name) as the printer and Serendipity Megarip PPD as the driver.

When adding a new printer through Windows:

1. Select Create a new Port – Standard TCP/IP port.
2. Enter the computer network name in the Host ID field.
3. When Windows requests additional info for the port, select Custom Settings.
4. Rename the port if required.
5. Set the Protocol to Raw and the Port Number to match the one set in the Pagesetup Pool to be published.
6. Select Serendipity Megarip as the driver. If the driver is not already installed, choose Have Disk and get the driver (megarip.inf) from the Serendipity installation DVD, win\“OS Version” directory.

Flow Control – Select whether to hold the submitted file after imaging or rendering in order to prioritise jobs, make rendering attribute changes before releasing, or nest jobs. Flow Control options are only applied to jobs submitted via a DropFolder, a Published network destination, or a DropSpot.

Options include:

- **Hold After Imaging** – Hold jobs submitted to the published Pagesetup pool after imaging has completed. Held jobs can be released to continue processing via the QueueManager toolbar or right-click menu.
- **Hold After Rendering** – Hold jobs submitted to the published Pagesetup pool after rendering has completed. Held jobs can be released to continue processing via the QueueManager toolbar or right-click menu.
- **Nest** – Nest jobs submitted to the published Pagesetup pool according to the criteria defined in the output used by the Pagesetup/Media.

Note: The nest function only requires that the output used has nesting configured. The output itself can have nesting disabled for normal use. This makes it possible to create multiple nesting or non-nesting published Pagesetup pools to print via the same output.

- Duplex – Duplex jobs submitted to the published Pagesetup using the settings configured in the Outputs used by the Pagesetup/Media.

Note: The Next and Duplex functions only require that the Output used has nesting and/or duplexing (if available) configured. The Output itself can have nesting or duplexing disabled for normal use. This makes it possible to create multiple nesting/duplexing or non-nesting/duplexing published Pagesetups to print via the same Output.

Options

- Default Copies – Enter the default number of copies to be output for each job submitted via a DropFolder or Published network print destination.

Paper Profile

Configuring a paper profile is a fundamental part of calibrating a printer for optimum colour output.

The profile is assigned to a Media and matches paper and ink characteristics to the output driver, resolution, colourspace, and custom settings of the Media.

The user interface for paper profile comprises of a toolbar containing options and functions to assist in creating the profile; and a tabbed panel where the printers dot sizes (density patches), ink limits, and separation control (if available) are configured.

Toolbar Options

The following options are available via the toolbar at the top of the panel (Spanner icon hides/shows the toolbar).

Any option can be shown or hidden by tick/unticking it in the right-click menu within the toolbar. The Configure Toolbar option in the menu also allows the order of the buttons to be set.

- **Measure Patches** – Measure a printed density chart using a supported spectrophotometer. After selecting, choose an online instrument via the popup list. When the device is ready the measuring window becomes available. If instructed, calibrate the instrument and begin patch measurement.
- **Change Media** – Change the Media currently assigned to the paper profile.
- **Print Density Chart** – Print a density chart containing the patches currently turned on. There will be a space on the printed chart where any patches are turned off.
- **Print Density Chart (All Patches)** – Print a density chart containing all patches irrespective of their on/off status.
- **Print Inklimit Chart** – Print an ink density chart containing all enabled limits as one job to the selected Media and Pagesetup.
- **Print Inklimit Chart (Separate Jobs)** – Print an ink density chart for each enabled ink limit colour combination as a separate job using the Media and Pagesetup selected.
- **Configure Inklimit Chart** – Configures the combinations of inks to be tested for ink limits. Select which colours will be printed, the start and end ink percentage points, and step increments.

Note: If a combination is selected, but insufficient patches to fill the row, an empty chart will be printed. For example, a selection to print 3 ink limit and have 2 colours selected, only the chart border will be printed.

- **Preview Graph** – A graph of the patches currently turned on.
- **Channel Info** – Show or hide the channel info sidebar.
- **Reorder Inks** – Change the order of the inks in the paper profile to match the order used in the ICC profile. Often used for n-colour profiles. Highlight the ink channel in the list and move using the up and down arrows, or drag and drop inks to the required position.
- **Configure Ncolour** – Available for n-colour paper profiles. Access the Ncolour Ink Configuration interface to customise a printer ink set. This allows the user to profile printers loaded with non-standard replacement ink sets.
- **Upgrade** – Upgrade a legacy (pre version 9.1) paper profile to the current version.

Contextual Menu (right-click) Options

All of the above options are available via the right-click menu, including:

- Downgrade – Downgrade the paper profile to allow compatibility with earlier software versions (v3, v4.0.01, v5.1, v5.2-5.4, 6.0.01).

Density Patches

This area displays the patches making up the paper profile. Each patch represents a dot size or combination of dots available to the printer being profiled.

The number of ink channels shown and the number of patches shown for each channel will vary, depending on whether the printer has variable dot capability; if it has light inks; and if the light inks are configured to be treated as separate or combined channels. These options are selected in the output and custom settings of the Media when creating the paper profile.

Before densities have been measured, all patches will be turned on and will have default (L-value) densities. These are updated by data input from the Measure Patches option.

- Patches can be turned on or off by clicking on the top half of the patch.
- Click the lower half of the patch to manually enter L-value densities for that patch number. Pressing Enter or TAB stores the value and moves to the next patch for entry.
- Hovering the mouse over the patch number displays a tooltip, providing information about the patch including default or measure Lab values.

Sift and Sort Options

Sift and sort options for each channel allow users to set the maximum ink coverage for the channel and display the channel name. For legacy paper profiles created in previous versions of Megarip using patches with density values rather than Lab values, this option also allows users to set the patch order and sift for the optimal combination of dots for the ink channel.

- Sift – This is a legacy option, available to older paper profiles created in previous versions of Megarip. Sift uses one of several intelligent algorithms to select a suitable dot combination based on the density readings taken and the output device selected. When used, the popup dotsieve algorithm selector presents the available device/ink sift options. The sift selected patches can be switched off or changed if alternative patches are more appropriate.
- Maximum Ink – Set an ink coverage limit for the ink channel by introducing white space into areas of coverage higher than the set limit. The default setting is 100% (no limiting). Maximum ink is a “low level” setting applied during screening.
- Sort Order – This is a legacy option available to older paper profiles created in previous versions of Megarip. Options include:
 - Patch Number – Sort the patches in patch number order.
 - Colour Density – Sort by the density of the colour, sometimes called real density. It is the colour content of the patch.
 - Visual Density – Sort by how dark the colour is, i.e., how much light the colour is absorbing, measured as black. This sort option is not available for black, where colour and visual density are the same.

Note: Turning off an Ink Channel

When “Treat Light Inks as Separate Channels” or n-colour options are enabled, the user has the option to turn off one or more of the printer ink channels. Some inks, often cyan and magenta, produce patches with a high colour density while not being very dense visually. During the process of calibrating a printer, if you find that even the small dot (patch 2) of an ink has a colour density too high to enable that colour to pass a calibration standard, turn off that ink channel by de-selecting all the density patches for that ink. This should only be done where multiple inks of a particular colour are available. For example, if patch 2 of cyan is still colour dense, switch cyan off and use only light cyan.

Switching off an ink channel will have effects through the calibration process, in particular when configuring ink limits. When configuring the ink limit chart, the number of available inks will need to be reduced and the disabled ink channel should not be used in any combination on the ink limit chart.

Ink Limits

The ink limits tab has controls for limiting the ink mix of the channels applied in the paper profile. The number of ink channels varies depending on whether the printer has light inks, and whether they are being treated as separate or combined channels. The window to the right displays a summary of the driver configuration from the selected Media.

Options

- Yule Nielsen Number - Set the YN number for the paper being profiled (if known). The default is 2.
- Ink Limits – Set the ink limits for the paper profile. These are determined after printing a chart and observing the percentage of coverage at which the mixture of inks causes problems. Enter the value for each ink combination.
- Algorithm – Choose the type of ink limiting from:
 - Standard – Simple ink limiting based on ink percentages.
 - Enhanced – Like Standard, but optimised for variable dot printers. It uses intelligence to calculate the ink limits based on dots used.
 - Linear 3.0 – Add the ink coverage for any area, then proportionally limit according to the ink limit range it falls within. For example, with 3-ink set to 300% and 4-ink set to 400%, if a 6-ink area of an image has a coverage of 320% it will limit the area according to the 3-4 ink range.
 - Linear 4.0 (default) – Limit inks based on the number of inks being used for an area. For example, if 5-ink is set to 390%, any time 5 inks are laid down their coverage will be limited to 390%.
 - Linear, favour Black – As more ink is laid down and a colour area approaches black, this method limits CMY proportionally more than black, preventing wetness and inversion in shadowed areas.
 - Lowpass – No limiting is imposed until the coverage for combined number of inks reaches the set limit, at which point any higher ink coverage is clipped to the ink limit.
 - Lowpass, favour Black – The same as Lowpass, but favouring black, limiting it proportionally less than CMY as colours approach black.
- Media Information – This side of the screen displays information about the driver and Media configuration important to the paper profile.

Separation Control

The separation control tab displays a graph describing the interaction of light and standard inks within the process CMYK ink channels. The graph shows the proportion of each ink used at ink coverage levels, ink start points, and crossover within each colour channel.

Ink separation control is available when the paper profile is linked to a printer Media with the “Use Light Inks” and “Treat Light Inks as Separate Channels” options enabled. To view individual inks on the graph, click the colour box at the bottom of the screen. Double-click an ink to toggle all graphs on and off. Shift+click to display multiple selected graphs.

The inks for which separation control is enabled are listed on the left of the panel. Fields beside each ink allow the user to adjust the influence each ink has within its colour channel (e.g. the light cyan and cyan inks within the cyan channel). These numbers are set to 0 by default, in which case the separation control is controlled automatically.

Increasing the influence of a **light ink** increases the amount of light ink used at higher coverage levels, and pushes up the start (and crossover) point of the standard ink.

Increasing the influence of a **standard ink** increases the amount of ink used at lower coverage levels, lowering its start (and crossover) point, and pushes down the end point of the light ink.

Ncolour Ink Configuration

The ncolour ink configuration interface is used to customise a printer ink set, change ink names, define ink colours, light inks, and device spot inks.

Used in conjunction with the *Reorder Inks* function, this option allows the user to profile printers loaded with non-standard replacement ink sets.

The interface contains two panels – the Ink List Panel, and the Ink Configuration Panel. Ink List Panel

The ink list panel displays a list of the inks available for customisation in the n-colour paper profile. Each of the printers inks is defined in three columns:

- Name – The user-defined name for the ink channel. This defaults to the original name. Click in the text field to rename the ink.
- Original – The name of the standard ink channel for that ink slot.
- Type – The process, light, or custom (n-colour) ink channel type the ink occupies for the purpose of creating an ICC output profile for the printer.

Contextual Menu Options:

- Revert All – Revert all ink channels to the printer defaults.
- Revert Channel – Revert the currently selected ink channel to the printer default.

Ink Configuration Panel

The ink configuration panel is used to display and edit the properties of each of the printer ink channels for the n-colour paper profile. Click on each ink to view or edit.

The upper part of the panel has two dropdown menus, allowing the user to select what channel the ink occupies for ICC profiling the printer. The lower half is a colour picker panel, allowing the ink display colour to be defined.

- Colour is a... - This is a dropdown menu to select the ink type from Cyan, Magenta, Yellow, Black, Custom (n-colour), Light, Light Light, and Device Spot Colour.

- **Light Ink** – This dropdown menu activates when a light ink option is selected in *Colour is a...* Select an ink from the list.
- **Spot Generation** – This dropdown menu activates when *Device Spot Colour* is selected in *Colour is a...* Select a generation mode for the printer device spot channel from Fill, Auto (Opaque Media), Auto (Transparent Media), None.

Colour Picker Panel

This section is used to change the colour of the ink channel as it is displayed in the Serendipity Client interface. Altering the ink colour to one closer to the custom ink in the printer aids in identifying the ink when measuring patches for the paper profile; when linearising; or when examining ink channels in the SoftProof window.

Select from Lab, CMYK, or RGB colourspaces. Use the sliders or type in the number fields to define the ink colour. Double-click in the colour swatch to select a colour from a special colour set.

RGB has the option of using the *Pick from Screen* button, allowing the user to click a colour anywhere on the display to define the ink colour.

Note: Device Spot Colours and Spot Colour Mapping

Some printers (or custom ink sets) feature inks such as metallic and white, intended for signage and display; to replicate a press process or substrate; to act as a primer; or for printing on transparent media. These device spot inks are handled outside the normal colour management process and are not included in the output ICC colourspace for printing. These colours are printed in one of two ways:

1. Automatically, according to the spot generation method assigned to them in the dropdown menu; or
2. As a spot colour mapped to a plate in an incoming job.

Mapped plates will always override the automatic spot generation method when printing, i.e., a job with a spot colour configured in Media to be remapped as “white” will only print white in the areas defined by the spot plate. N-colour mode allows any ink in the printer to be assigned and printed as a device spot colour.

Paper Profile Graph

The graph shows the dots selected for each colour. The position on the graph gives a proportional representation showing where the dot starts to turn on or off, and their relative proximity to other dots.

Turn the individual colour graph plots on or off by checking the tick boxes under the graph. Hovering the mouse over a point on the graph displays a tooltip with information about the dot.

If a colour is not shown on the graph but the check box is ticked, the dots selected are most likely a poor choice and may not be valid; or the ink channel has been turned off by not choosing any of its dots (separate ink channels only).

Press

The Press data type is used to emulate the properties of a press for softproofing. Each press configuration can be assigned a press ICC profile, press sheet dimensions, the number of ink keys, and ink and paper characteristics, all combining to produce accurate onscreen soft proofs.

The press can be switched on-the-fly while softproofing to instantly show how a job will look if printed on a different press or on different stock.

Press Standard Panel

Press Colours

- Press ICC Profile – Select a press ICC. This can be one created on the press or a printing standard ICC used as the target or match profile.
- Paper Colour – Three options are available:
 - None – Do not change the paper colour.
 - ICC Profile – Use the white point from the press ICC profile and apply as the paper colour.
 - Custom – Enter a value for the paper colour. Use a spectrophotometer to measure the paper white directly into the configuration.
- Spectrophotometer – Select a supported spectrophotometer or file format to read, or import a measured custom paper value.
 - Configure – Select the measurement condition and/or other options available to the connected instrument. This option is only available to instruments with configuration options.

Verify

- Calcheck Chart – Select a chart to verify the SoftProof application's calibration status.

Press Sheet Panel

Dimensions

Enter the size of the printable sheet area of the press and its number of ink keys. The key width is calculated from these values.

Ink and Paper

Configure the ink and paper properties of the press to simulate their effects on the screen in the SoftProof application.

- Maximum Ink Weight – Enter a value for the maximum ink weight. This value is used by the InkKeyViewer to show excess ink.
- Stretch Factor – Enter a compensation factor to allow for stretch. It can be used for distortion simulation or anamorphic scaling, where one direction will distort more than the other.

Note: The easiest way to calculate stretch is to draw a rectangle 1m x 1m and print it. Measure the rectangle and enter the value. If the size is 98cm, enter 0.98. If the size is 102cm, enter 1.02.

- Back Page Opacity – Enter a value between 0 and 100%. This controls the amount of show-through of the back page through the front page when reverse page viewing in SoftProof.
- Back Page DotGain Curve – Select a dotgain curve to apply to the back page when using the *Show Back Page* option in SoftProof.

- Back Page Rotation – Select the relative orientation of back page when using *Show Back Page* in SoftProof.
- Top Page – Choose Even or Odd. This is used to determine which page backs onto which, so the correct back page is shown when requested.

Screen Printing

The screen printing functionality within the Media data type is designed for printing film separations on an inkjet printer. Files submitted for processing are separated into individual plates. Each plate is printed as a black separation with a halftone dot applied at the colours respective screen angle.

Printing to film generally requires the output density to be higher than that for normal proofing. Higher densities are achieved by increasing the print resolution, or by assigning one or more inks to be laid over the black dots.

Configuration

The configuration is very similar to a standard setup to print to a device. The Output configuration is the same and the appropriate Media and Jobticket are created to control the page parameters. A very basic Paper Profile and Linearisation are also created to complete the setup.

Output Configuration

1. Assign an Output Driver.
2. Select a Destination Driver and configure settings.
3. Enable Collating options if required.
4. Save the configuration.

Media Configuration

1. Assign an Output Driver (same as setup in the Output) for the screenprinting configuration.
2. Select an appropriate Resolution. A higher density can be achieved with a higher resolution however, it is slower to process and print. A lower density may produce sufficient density depending on the printer and media used.
3. Select CMYK colourspace. If using the Black Ink Combination only, choose Gray as the colourspace as this may result in slightly faster processing. However, in this mode inks cannot be mixed to produce a denser output. Selecting CMYK and configuring a Paper Profile will allow the choice to use black only of a mix of colours at a later stage, without having to recreate a Paper Profile.
4. Select the appropriate media in Custom Settings, Uni or Bi-directional and turn the Use Light Inks option OFF.

Bi-directional is faster but may produce slight banding, or may not be as dense as printing Uni-directionally. Using light inks will affect the patches in the Paper Profile. In screen printing mode, only one patch can be on per colour.

5. Enable Screen Print Mode and select Black for the Ink Combination (and any others required).

Once this option is selected, jobs submitted to this Media will always be separated and printed using the selected colours. One or more inks must be selected from the available choices. If Gray is selected as the colourspace, only black will be shown as a choice.

6. Select Halftone output screening and tick the SuperCell option. Choose the preferred dot shape and enter the screen angles and rulings.

SuperCell gives a better-shaped dot and the round dot tends to be more commonly used. The default angles of 15, 45, 75, and 90 are shown by clicking the Defaults button, however, these can sometimes produce undesirable effects, mostly caused by the yellow plate. To counteract this, offset all angles by 7.5 degrees to

make them: Cyan (22.5 degrees), Magenta (82.5 degrees), Yellow (97.5 degrees), Black (52.5 degrees), Special (52.5 degrees).

Paper Profile Configuration

In Screen Print mode only one patch can be turned on per colour. The value for the patch does not matter, which one chosen does.

For a variable dot printer, when the *Use Light Inks* option is turned off, there will be four (4) patches for each colour. The first patch represents the media and the other three the dot sizes (small, medium, and large). A dot size for each colour must be chosen.

If the colourspace is Gray, black will be the only available ink.

There is no need to measure the value for the patches, the defaults are sufficient. Comparative densities are not relevant when only using one dot (patch).

In testing, it was found that a combination of large black (patch 4) and small magenta (patch 2) produced good results. If too much is used, for example, large black+large cyan+large magenta, the result is wet output and the dots tend to “fill in” the shadow area. Large dots of a colour like cyan will produce film looking blue instead of black. Black should always be the dominant colour.

Ink Limiting

There is no need to enter any ink limiting as the plates are separated, so there is no mixing of 2, 3, and 4 inks.

Linearisation

As screen printing mode prints only black separations, the creation of a simple linearisation (gradation) curve to be applied to the Media is all that is required.

The linearisation curve can be created in one of two ways:

Method 1 – Using the Lineariser application and a supported spectrophotometer.

1. Open the Lineariser application.
2. Select the Media used for screen printing and print a chart for the spectrophotometer to read. Only the black channel patches will be printed and measured.
3. Measure the values using a connected instrument and save the chart.
4. The linearisation curve will be automatically assigned to the selected Media. Check this by viewing the Media in the Workbench to make sure the curve is assigned to the configuration.

Method 2 – Manually Creating a Linearisation Curve.

1. Select the Gradation Curve data type in the Workbench item list.
2. Create a new curve, selecting the screen printing Media to be used.
3. Edit the curve by selecting the black curve. Click on the curve and drag it to the desired shape, adding more curve points if required.
4. Save the curve.
5. Select the screen printing Media in the Workbench item list and assign the Gradation Curve using the Linearisation LUT button in the Colour Correction panel.

Summary

The above is a guide to configure a setup to print film separations for use in the Screen Printing industry.

Run some test jobs to choose the most suitable patches, ink combination and resolution for the device and media being used. If a different resolution or colourspace is selected or the light inks are used, a new Paper Profile will need to be created. Trying different dot sizes will mean adjustment of the Paper Profile – changing which patch is turned on in each channel.

During the testing period many combinations of ink (colours), dot sizes and resolution were tried. Different output devices and media will produce varying results, so a combination of patches and ink mixing may work better.

The higher resolution (1440dpi) produced the most dense output at around 4.18D, but takes longer to RIP and print. By running at a lower resolution (720dpi), the jobs processed quicker but the density drops to just under 3 at around 2.8D. This is often acceptable for many applications, but will vary depending on the media and device used. Testing will prove the most suitable setup.

The most commonly used settings were CMYK colourspace, with an ink combination of black and magenta. This used the large black (dot 4) and the small magenta (dot 2) in the Paper Profile and gave a slight reddish tinge to the black, which is desirable in the Screen Printing industry.

Modules

Modules are informational windows used for managing jobs as they pass through the system and to monitor Server and Client activity.

Modules are arranged and utilised in a pre-configured format in the Jobs application; are able to be added and configured to a tabbed window as part of a Monitor layout via the Layout menu; or started up individually as standalone windows from the Module menu.

The following modules are available:

- **ClientLog** – Displays a log of Client messages that may be generated during normal Client operations.
- **ClusterStatus** – Monitors the progress of Imaging and Rendering tasks on the Server and any active Cluster Nodes.
- **DropZone** – A place to drag and drop files for processing.
- **MediaStatus** – A window showing the current calibration status of a Media data type and a progress bar showing the amount of media (e.g. Paper) used.
- **QueueManager** – View and manage jobs after they have been submitted for processing.
- **QueueStatus** – A progress meter showing the current status of active jobs on the selected queue.
- **ServerLog** – Displays any system, error and polling messages from the Server.
- **Status** – Shows the disk status (usage) of the Server processing areas.
- **Thumbnail** – Displays a thumbnail of jobs as they image or render.

ClientLog

The ClientLog displays any messages that pop up during normal Client operation. There are different levels of message, from informative to serious errors. All messages are held for a user-determined length of time.

- Fetch Back Log – Display the log for the time specified.
- Trim Older Lines – Trim the log based on the time selected in Fetch Back Log. If this is set to 60 minutes, the log is trimmed so only the last 60 minutes remain.
- Export – Export the log to a file.

Note: When exporting the log file you can choose to export everything in view or select entries to export. Use the filtering options and Fetch Back Log choice to limit the view before exporting. Selecting Export displays a chooser, to enter a name and select the location to save the file. Choose to save the file as html or as a tab delimited text file.

Filtering Options

Choose which messages to display in the log and which to hide by ticking checkboxes for one or more of the following filters. All messages are saved to the log, even if filtered.

- Question – Used for messages that ask questions, for e.g., “Job contains unassigned colours. Do you want to add them to VirtualPress.”
- Information – Used for messages that tell you something, for e.g., “Job has a duplicate plate.”
- Warning – Used where the message has a higher importance and (usually) the Client failed to do something, but operation can continue, for e.g., “Failed to save new password. Old password will continue to be used.”
- Critical – Used for serious errors that will most likely affect operation, for e.g., “Failed to load rendering .dll.” You will normally be required to take action to rectify these errors before continuing.
- Search – You can search the log for jobs or messages. Enter the text of characters you want to search for and the ClientLog only displays the lines that match the search.

Display Options

The following sort columns can be selected using the right-click menu on the sort column header bar in the log:

- Type – The level of the message reported. For e.g., Question; Information; Warning or Critical.
- Date – The time the message was reported.
- Source – The module or application that reported the message.
- Summary – A summary of the message that was reported.
- Message – Displays the log entry message text inline.
- Command – Internal command used to communicate messages to and from the Server by the Client.
- Error – An error code reported by the Server. This is useful for de-bugging problems.
- Action – The action taken by the user relating to the message. For e.g., the button pressed when the message popped up.

The order of the columns can be changed by clicking and dragging them to the desired position, or by using the Configure Headers option under the contextual (right click) menu. The columns can be manually resized by dragging the header divider bar to the desired width, or resized to fit content by double-clicking the divider bar.

ClusterStatus

The ClusterStatus is a monitor allowing you to see the current imaging and rendering status of jobs on any active Master Servers or Cluster Nodes. A contextual (right-click) menu has the following options:

- Clustering – Open the Clustering application to manage the Cluster.
- Refresh – Update the status.
- Increase Inset (+) – Increases the gap between the list items.
- Decrease Inset (-) – Decreases the gap between the list items.
- Font Options – Allows you to change the size of the text.

DropZone

A DropZone is a place where you can drag and drop files for processing. The user selects Pagesetups with Media and Jobticket information, Pagesetup Pools or the Studio application Asset queue to add to the DropZone as a DropSpot.

These DropSpots accept the same file formats as the DropFolder (Postscript, PDF, JPEG, TIFF Image, Serendipity Blackmagic Image, EPS, PNG, PSD). The available contextual menu options are:

- Add DropSpot – Select one or more Pagesetups/Media to add to the DropZone. Selecting this displays a chooser window, showing all available Pagesetups/Media.
- Add Asset DropSpot – Adds a DropSpot for the Asset queue. Assets are then manually laid out, nested and printed using the Studio application (See Applications – Studio for more information).
- Reorder DropSpots – Displays a reorder window. Select one or more DropSpots in the list and drag them to a new location, or use the up and down arrow keys to move the position. Click OK when finished.
- Increase DropSpot Inset (+) – Increases the size of the DropSpot.
- Decrease DropSpot Inset (-) – Decreases the size of the DropSpot.
- Font Options – Allows you to change the size of the text.

Additional contextual menu options are available for individual DropSpots:

- Remove DropSpot – Remove the selected DropSpot.
- Edit Pagesetup – Edit a section of the selected Pagesetup, all sections or create a new one.
- Edit Media – Edit a section of the selected Media, all sections or create a new one.
- Edit Jobticket – Edit a section of the selected Jobticket, all sections, or create a new one.
- Change DropSpot – Allows you to change an existing DropSpot.
- Set Copies – Set the number of copies for every job dropped on the DropSpot.

Note: This feature can also be accessed by double-clicking on the DropSpot.

- Set Colour – Select a colour from the list for the currently selected DropSpot.

MediaStatus

The MediaStatus module has two (2) functions:

1. To show the current calibration status of a selected Media data type. For the calibration status to be shown or updated for a Media, it must have been calchecked using the Calcheck Media menu option (see below) or the Check Media option in the Calcheck application.
2. To show how much of the media (e.g. Paper) has been used. A meter is displayed graphically, detailing the percentage used. For the Usage meter to function, values for the Media Length or the number of sheets loaded must be entered in the Output section of the Media data type.

Each Media displayed in the MediaStatus window has the following information:

- Media Name.
- Calcheck Status – Toggled via the Calcheck Info option (see below). Displayed as one or more Ticks/Crosses to the right of the Media name, showing a Calcheck Pass or Fail against the user-defined ΔE , ΔH , or ΔCh . Hover the mouse over each to show a tooltip displaying the ΔMax and ΔAvg values.
- Usage Meter – Bar showing the amount of media used. Text under the bar states the exact amount used as a percentage of the total units.
- Reset Counter – Resets the usage count for the Media.
- Logged Period – Time period (date and time, from and to) the Media has been tracked since the last reset. This information is shown/hidden using the Show Extended Info option.
- Printed – Number of jobs and total printed area of jobs tracked since the last reset.
- Calcheck Info – Displays the complete Calcheck summary information for the selected Media resulting from the last Calcheck. Includes the Calcheck Chart used, internal Calcheck score, Date/Time of Calcheck and Δ values.

A contextual (right click) menu has the following options:

- Change Media – Change the selected Media for display in the status window.
- Edit Media – Edit all or part of the selected Media. Copy it, or create a new one.
- Calcheck Media – Opens the Calcheck application. Once a chart has been printed and measured, the results are saved to the Media and the Calcheck Info for the Media is updated in the MediaStatus window.
- Media Order – Allows you to configure which queues are viewed by the MediaStatus window. Move Media between the Available and Showing columns in the popup chooser.
- Show Extended Info – Show/Hide the Logged Period and Printed information for the selected Media.
- Show Calcheck Info – Show/Hide the full Calcheck Info summary for the selected Media.
- Metric Units – Toggle between Metric or Imperial units for measurements shown in the MediaStatus window. This is enabled by default.
- Increase /Decrease Status Width – Increase or Decrease the width of all Media panels in the window.
- Font Options – Allows you to change the size of the text in the window.

QueueManager

The QueueManager displays information about submitted jobs and the jobs' current status. Queues can be viewed simultaneously, showing job progress through *Imaging* (where the incoming file is interpreted and its resolution sampled for conversion to the print resolution); *Rendering* (where colour management, cropping, rotation and effects are applied for printing); and *Printing* (output).

The QueueManager also allows jobs to be manipulated in a number of ways, such as holding, promoting, deleting and reprinting.

View Options

The following sort columns can be selected using the contextual (right click) menu on the column header bar in the QueueManager display panel when in **Jobs** view:

Name – Job name	Thumbnail – Show a thumbnail of the job.
Process Time – Time taken to run the last process on the job.	Job ID – The internal Blackmagic ID number for the job.
Status – The jobs current status.	Node – The Server or Cluster node the job was processed on.
Source – The source of the submitted job.	Page – The page number of the job.
Date – The date and time the job was processed.	Publication – The publication name.
Jobticket – The Jobticket used to process the job.	Notes – The number of notes saved with the job.
Media – The Media used to process the job.	Section – The section of the publication.
Pagesetup – The Pagesetup used to process the job.	Comment – Indicates by displaying a speech bubble whether a job has an attached comment.
Queue – The output queue the job was sent to for processing.	Edition – The edition of the publication.
Size – The size of the job (disk space used).	Copies Printed – The total number of times the job has been printed.
Width – The width of the job.	Copies – When multiple copies of a job are sent for printing, this column counts down the number of jobs left to print.
Height – The height of the job.	Priority – Displays the current priority assigned to the queued job.
DPI – The imaged resolution of the job.	Imaging Time - The time it takes for the job to be imaged.
Output Colourspace – The colourspace of the output file.	Rendering Time - The time it takes for the job to be rendered.
Screening – The screening applied to the job.	

The columns can be manually resized by dragging the header divider bar to the desired width, or resized to fit content by double-clicking the divider bar.

Toolbar Options

The following options are available via the Toolbar at the top of the panel. Any option can be shown or hidden by ticking/unticking it in the contextual (right-click) menu within the Toolbar. The Configure Toolbar option in the menu also allows the order of the buttons/options to be set.

- Queue Order – Allows you to configure which queues are viewed by the QueueManager – Available & Showing.
- Render Queue Thumbnails – Enable or disable thumbnails for the Render Queue in the Thumbnails view of the QueueManager.
- Show Idle Queues – Show/Hide entries in the QueueManager for idle processing queues.
- Group by Queue – Enable/Disable the grouping of jobs by Queue before other column sorting is applied.
- Queue Icons – Display the pre-Output queue to which the job currently belongs. These include Autodetect, Spooling, Imaging, Rendering, Wait and Asset.

There are a number of actions that can be performed on a job. Options become available when one or more jobs are selected. Only actions valid for the job status are shown. For example, the action to Nest Now is only available if the job has a status of Waiting to Nest.

The following are available in the Toolbar or by selecting job(s) and right clicking to access the context menu:

- Job Info – Shows information about the currently selected job (or jobs). The Job Info contains all details of how the job was processed and displays a thumbnail preview of the job and its configuration. A dropdown toolbar at the top of the Job Info window has the following options: Print Portrait, Print Landscape, Print to PDF Portrait, Print to PDF Landscape. Prev/Next buttons at the bottom of the Job Info window are used to display the info for the previous or next job in the QueueManager.

Note: Job Info & thumbnail can also be displayed by double clicking on the job. If multiple jobs are selected, double clicking will display info about all in the window. Holding the control key (Win) or command key (Mac) will allow the font size to be adjusted via the mouse wheel for easier viewing.

- Job Ownership – Opens a popup window displaying General and Ownership information for the selected job. The General panel displays created and modified timestamps for the job. The Ownership panel displays its User and Group permissions.

Note: The User and Group will be listed as “admin” for normal installations. If Secure Mode is active (see Server Settings and Accounts Admin), a user with sufficient privileges can make changes to the job permissions with respect to other users. When in Secure Mode, the admin user login is able to change the user or group to which a job belongs. If multiple jobs are selected, the admin user can make a mass change to the permissions of all jobs.

- Modify – Allows various attributes of the job to be modified. These include:
 - Name – Change the name of the job.
 - Publication Name – Change or add a publication name.
 - Page Number – Change the page number of the job.
 - Copies – Change the number of copies of a job.
 - Change Media – Change or assign a Media associated with the job.
- Render with new Jobticket – Resubmit a job with status “Done” to be rendered again using a different Jobticket configuration.
- Comment – Opens a popup window allowing the user to enter comments about the job. When the Comments sort column has been selected in the View options, a speech bubble in the column indicates the job has a comment. Opening the Job Info will display the comment directly below the thumbnails.

- Reprint – Displays a window to reprint a job or jobs.
- Cancel – Cancels the currently processing jobs.
- Delete – Deletes the currently selected jobs.
- Hold – Holds the currently selected job. Only available when the status is “Waiting”.
- Release – Releases a currently selected Held job.
- Retry – Retries a failed job.
- View Errors – Views the errors of the selected job if the status is listed as Failed.
- Rush Jobs – Changes the assigned priority of the selected job(s) to -99, effectively giving the job first (highest) priority in its current queue and all subsequent processing queues. Multiple “rushed” jobs will be processed in timestamp order as normal.
- Change Priority – Opens a pop-up Change Job Priority window allowing the priority of the selected job(s) to be changed mid-processing.
- View Original – Views the Original/Imaged file for selected jobs in the SoftProof application.
- View Printed – Views the Printed/Rendered file for selected jobs in the SoftProof application.
- Render Again – Submits the selected jobs to the rendering queue for processing. Only available when the status is “Done”.
- Move to Pagesetup – Moves the selected jobs to another Pagesetup. This will send the jobs to the rendering queue again with the attributes of the selected Pagesetup. View the Pagesetup, edit it, or create a new one prior to submitting the job.
- Copy to Pagesetup – Copies the selected jobs to another Pagesetup. This will send the jobs to the rendering queue again with the attributes of the selected Pagesetup. View the Pagesetup, edit it, or create a new one prior to submitting the job.
- Move to Queue – Move a job with a “Done” or “Waiting to Print” status to another output queue with the same print driver.
- Nest Jobs – Submits the selected jobs to be nested. This sends the job to the rendering queue to re-render for a nest. The Collating section of the Output is used for the nesting parameters.
- Nest Now – This is available when the selected job has a status of Waiting to Nest. Only one job needs to be selected and all jobs with a Waiting to Nest status will be nested.
- Duplex Now – Duplexes any job that has a status of Waiting to Duplex. Only one job needs to be selected and all jobs with a Waiting to Duplex status will be duplexed.
- View FlipBook – Opens the selected job or publication in FlipBook. If the selected job is part of a publication, all pages will be shown.
- Select Publication – Selects all the pages/jobs in the QueueManager belonging to the same Publication as the selected job.
- Refresh All Queues – Updates the queues.
- Export – Allows you to export data from the selected job. The available formats are:
 - CIP3 – Exports job information to a file in CIP3 format at the selected resolution. You can also select the orientation before exporting. Further options are:
 - Version 2.1
 - Version 3.0

- Rotations
- Surface – Choose front or back.
- Compress Preview – Choose if the preview should be compressed. Some presses are unable to handle files in compressed format.
- PDF – Exports the selected job in PDF at the resolution entered. Further options are:
 - Compressions – JPEG, ZIP or LZW. For JPEG and ZIP you also have control on the level and quality of compression.
- Photoshop – Exports the selected job as an Photoshop (.psd) file at the resolution entered with an option of Packbits or no compression.
- Postscript (separated) – Exports the current job as a separated PS file.
- Tiff Multichannel – Exports the current file as a multichannel Tiff.
- Calcheck Job – Launches the Calcheck application to check a job's calibration status. The jobname is stored and the results can be exported or printed. Measurement results from the Calcheck are stored in the Job Info. The Job information shown in the Queue will change colour to match with the result of the Calcheck once completed (green pass, red fail).
- Calculate Ink Weight – Displays the Ink Weights window with the selected jobs ink weights and coverage shown.
- Pause/Resume Printing/Processing – Pause or Resume the output queue of the selected job at their current stage of processing or printing (Imaging, Rendering, Nesting or Printing). Incomplete jobs in paused queues will display in red.
- Change Output Media – Change the Media assigned to the output queue for the selected job. Once re-assigned, all jobs held awaiting the new Media will begin processing.

Configuration Options

The following options are available from the right click (contextual) menu within the QueueManager window:

- Queue Colour – Select a colour for the currently selected Queue for easy identification.
- Queue Order – Allows you to organise the queues into your preferred order, or adjust any settings.
- Joblist View – View the queue in Joblist mode. This is the same as selecting Show > Jobs.
- Publication View – View any publications in the queue. This is the same as selecting Show > Publications.
- PrintGallery View – View the jobs as thumbnails. This is the same as selecting Show > Thumbnails.
- Edit Output – Allows you to edit the Output and not the job. For changes to be effective, resubmit the job for printing or rendering, depending on the attribute changed.
- Edit Media – Allows you to edit the Media the job was processed with. For changes to be effective, resubmit the job for imaging or rendering, depending on the attribute changed.
- Edit Pagesetup – Allows you to edit the Pagesetup the job was processed with. For changes to be effective, resubmit the job for imaging or rendering, depending on the attribute changed.
- Edit Jobticket – Allows you to edit the Jobticket the job was processed with. For changes to be effective, resubmit the job for imaging or rendering, depending on the attribute changed.
- Auto Queue Order – When this option is enabled, the QueueManager displays jobs for all existing process and output queues. Any new queues created will be shown automatically.

Important Note: When editing any of the items from here, it is editing the queue for all future jobs, not just the currently selected job.

The bottom of the screen contains the following options:

- Show – Show certain jobs in the QueueManager. Select any or all of the options to filter jobs. Choose from:
- Jobs – Display all jobs as text line entries.
- Thumbnails – Display all jobs as thumbnails. This is the same as the Print Gallery mode.
- Publications – Displays any publications to which jobs belong. When viewing in this mode the bottom of the QueueManager list panel displays a Page Index (See SoftProof > Page Index Panel for more information).

For any of the above display modes, further filtering is available:

- Active – Jobs currently processing.
- Waiting – Jobs with a status of Waiting.
- Done – Completed jobs.

Search – Find jobs that are in the queue. All jobs matching the search text will be displayed. All elements of the jobs are searched against, not just the name, so this can be a useful filtering tool. The search can be inverted with cmd+shift+I (Mac) or ctrl+shift+I (Win). The search box will turn black to indicate when the inverse search is selected.

QueueStatus

The QueueStatus module is a progress meter that shows the current status of active jobs on the selected queue. The Printer Status Monitor option is also available within the QueueStatus module for specific printers.

Note: Not all options listed are available on all QueueStatus windows. Some are only available while the job is in progress.

- Cancel Job – Cancels the currently active job and is only available when a job is active.
- Job Info – Displays info about the currently active job.
- Pause Printing/Processing – Pauses the queue so no further jobs will process. Any job currently active in the queue will finish. The text in the window changes to red, showing the paused state.
- Resume Printing/Processing – Takes a queue out of a paused state. Any waiting jobs will now be processed.

Note: The Pause/Resume function can be toggled using the tick box to the left of the progress bar. This function also affects the Output for the queue, changing the status to Active/Inactive. Inactive Output's are displayed in red in the Workbench > Output > Items list.

- Change Output Media – Change the Media assigned to the Output using a chooser window listing compatible Media. Options for each Media are displayed for view, can be edited, or a new Media can be created. Only jobs sent via the selected Media will print. Other jobs will be held in the QueueManager with a status of "Waiting for Correct Media" until their Media is selected. If No Media is assigned – the "None" option - all jobs sent to Output are printed.
- Change Queue – Allows you to choose which queue the status window will show.
- Edit Output – Allows you to edit the output or create a new one. You can only edit if the queue is showing an output. If the queue is set to Spooling, Auto Detect, Imaging or Rendering you can only make a new output.
- Thumbnail – Turns on/off a mini thumbnail on the printer queues only, which gives an indication as to how much of the current job has printed.
- Show Printer Status Monitor – Displays the printer status, ink levels, warning and error messages for the selected queue. Printer status is checked and the QueueStatus is updated:
 - Every 60 seconds – Printer Idle.
 - Every 15 seconds – Printer Busy (Printing).
 - Every 5 minutes until connection restored – Printer disconnected from network or turned off.

Note: This feature is only available to compatible printer drivers and when the "Monitor Printer Status" option in the Output is enabled.

- Font Options – Allows you to change the size of the text.
- Queue Order – Select which queues you wish to view. Selecting this presents you with a chooser window showing two lists – The Available queues on the left and the Showing queues on the right. To move queues between lists, select one or more and drag from one list to another. Alternatively, double click to move between lists. The order of the queues in the Showing list determines the order of display. Queue Order can be used to show multiple Queues in a single QueueStatus window.
- Increase/Decrease Indent – Increases or decreases the size of the QueueStatus in view.

ServerLog

The ServerLog shows messages from the Server.

- **Fetch Back Log** – Displays the log for the time specified, e.g., it retrieves and displays the last 4 hours of messages. Choose the time period from the dropdown list.
- **Loglevel:** - Choose the level of log messages to be displayed from the dropdown list, in order of priority from Fatal (most critical) through to Debug (all log messages). Fatal and Error messages appear in red in the ServerLog, Warning messages appear in gold.
- **Trim Older Lines** – Trims the log based on the time selected in Fetch back log. If this is set to 60 minutes, the log file is trimmed back so only the last 60 minutes remain.
- **Export** – Export the log to a file. Selecting this displays a window with further options as detailed below:
 - **Destination File** – Choose the filename and location where the file is to be saved. Use the Browse button to navigate to the preferred location.
 - **Message Lines** – Choose to save all messages in the log window or only those that are highlighted.
 - **Format** – Choose the format to save the file in, either html or plain text. The plain text file is saved with tab characters between the columns.
 - **Cancel** – Revert to the Server window without saving any changes.
 - **Save** – Save the file based on the settings selected.
- **Configure Filter** – You can filter messages in the log. Choose between the following options:
 - **Completed Jobs** – Shows messages about completed jobs.
 - **Polled Jobs** – Shows messages about polled jobs.
 - **Errors** – Shows errors from the Server.
- **Search** – Search the log for messages. Enter the text of characters to search for and the ServerLog will only show lines matching the search.

Display Options

The following sort columns can be selected using the contextual (right click) menu on the column header bar in the ServerLog:

- **Module** – The Server function that generated the message.
- **Routine** – The operation within the Server function.
- **Date** – The time the Server called the module.
- **Message** – The message resulting from the routine.
- **Loglevel** – The severity level of the log message, from critical (Fatal) through to general operational messages (Debug).

Status

Status shows the current disk status (usage) of the Server processing areas, such as spooling, temporary directories and DropFolders. Editing the ss.conf file in the installation directory (in the **etc** folder) can change disk locations.

Options are:

- Update – Check the disks and update the view.
- Preferences – Set the Status window preferences. A further option available is:
 - Update Interval – Set the time between updates.
- Colour Scheme – Changes the colour of the Status window.
- Font Options – Change the size of the text.

Thumbnail

This module displays a thumbnail of jobs as they are imaging and rendering. Thumbnail progress is updated at the same time as the Imaging or Rendering QueueStatus is updated.

The following options are available from the contextual menu (right click):

- Show Imaging – Show the Imaging thumbnail, denoted by “gears” in each inset.
- Show Rendering – Show the Rendering thumbnail, denoted by a “paintbrush” in each inset.
- Normal Thumbnail – Displays the default size thumbnail.
- Large Thumbnail – Displays a large thumbnail.
- Small Thumbnail – Displays a small thumbnail.

Applications

The applications available within Serendipity Megarip add functionality to the Client and provide additional tools for managing the Server and your jobs.

All are accessible via the Applications menu in the Client. Some, such as Calcheck, can be launched via other Applications or Modules.

The available Applications are listed here with further details on each following:

- **Archives** – Make partial or complete backups of your Workbench configurations.
- **Calcheck** – Verify the calibration status of a printer.
- **Clustering** – Allocate and manage Imaging and Rendering tasks across multiple computers and networks.
- **Densitometer** – Measure and display density readings taken with a Densitometer or Spectrophotometer.
- **Displays** – Create ICC profiles for system monitors for accurate onscreen colour softproofing.
- **FlipBook** – Display a publication as a 2D or 3D virtual book.
- **Jobs** – Display jobs before, after and during processing and allows users to manage jobs through the system to plot their progress with a pre-configured user-interface.
- **Lineariser** – Create a Linearisation curve for use with a Jobticket or Media.
- **Monitor** – Display and manage jobs as they pass through Megarip (see the “Monitor” section for more information).
- **SoftProof** – Proof jobs onscreen.
- **Spectro** – Display, compare and/or save colours measured using a Spectrophotometer.
- **Studio** – Designed for the manual nesting or tiling of jobs.
- **Workbench** – The principal configuration tool for Megarip (see the “Workbench” section for more information).

Archives

The Archives application allows you to make backups or archives of your Workbench configurations. Individual items or complete systems can be archived for safekeeping. Stored items can be loaded for adding to the Megarip database. This can be used for copying a database to another Server, or for recovery from failure or corrupt configurations. You can configure the Archives app to automatically backup your settings on a regular basis.

Important Note: Archives cannot be back-ported to previous versions, i.e., version 9.1 archives cannot be used with version 6. Version 6 archives can be used with Version 9.1 however, and will be automatically allocated to their respective databases when loaded.

File Menu Options

- Open Archive – Open a previously saved archive. A chooser window allows you to browse and select an archive (.sdb) file.

An archive can also be opened:

- By dragging the .sdb file into an open Archives application.
- Double-clicking an .sdb file.
- Right-clicking on an .sdb file and selecting Open with > Serendipity Client; or the Preview (Serendipity Client) option.
- Save Archive – Saves the archive to a compressed (.sdb) file.
- Close Archive – Closes the currently opened Archive.
- Perform Full Backup – Adds all Workbench data types to a new Archives window. Once done, you are prompted to choose a name and location to save the file. Once saved, the Archives window is dismissed.
- Automatic Backup Preferences – Allows you to configure the frequency, time and location that a system backup is performed. The options are:
 - What Day – Choose a day of the week, every day, every number of days or never.
 - What Time – Choose the time the backup is performed.
 - Location – Choose the location the archive should be saved to.

A check is performed when the Client is first started and every hour afterwards to see if a backup should be performed. The Client must be running for a backup to take place. The table gives a guide as to when a backup would occur in different scenarios:

Auto Backup Time	Client Started	Client Quit	Time Backup Performed
Mon 2am	Mon 9am	No	When Client is started – 9am
Tues 12:10pm	Tues 9am	No	Tues 12:30pm
Everyday Midnight	Tues 8:20am	No	When Client is started – 12:20am each day
Wed 11pm	Thurs 8:30am	No	The following Wed at 11:30pm
Sun 10pm	Mon 8am	Fri 8pm	Never

Edit Menu (and contextual menu) Options

- Add to Archive (All) – Select everything or all of a particular data type, for e.g., All Pagesetups.
- Add to Archive (Selection) – Allows you to select individual items from the database to add to the Archive. Selecting the type, for e.g., Gradation Curves, displays a chooser with all the Gradation Curves allowing you to choose one or more to add to the Archive.
- Add to Database – Choose to add items from the Archive to the database. You can add the whole Archive or selected items.
- Remove from Archive – Remove the selected items from the Archive.
- Collapse – Collapses the selected items if they are expanded.
- Expand – Expands selected items if the item contains references (denoted by a '+'). For example, a Pagesetup will contain at least a Media and an output. Expanding the Pagesetup will display the other items connected with it.
- Open/Save/Close Archive – Open, save or Close the Archive as mentioned previously.
- Export C5 Media Pack – Export the archive for use with the C5 Client.

Calcheck

The Calcheck application is used to verify the calibration status of a printer, ensuring proofs are printed accurately. Calcheck Charts are generated by either manually defining or importing Lab or CMYK values. Each chart represents print/press standards against which the printer and media are to be checked (see the Workbench > Calcheck Chart section for more information).

The selected Calcheck Chart is printed from the Calcheck application to the Pagesetup and Media being used to proof jobs. Alternatively, the chart can be assigned to a Jobticket to print with each proofing job. The chart is then measured, using a supported Spectrophotometer.

After measuring the chart, the results are displayed in the Calcheck window. A pass (green tick) or fail (red cross) is determined by whether the measured patches fall inside the tolerances defined in the Calcheck Chart. The results can be printed as a label or a complete report to a system printer. If a Media or job was loaded into Calcheck before measuring, the results will be saved to the Media Calcheck Info, or stored in the job's Job Info (see below). The Calcheck application is made up of a Summary Panel, Measurements Panel, optional Info and Calcheck History panels, and a Device/Spectrophotometer dropdown menu.

Summary Panel

This panel is viewed by selecting the (left) cross/tick button at the top right of the Calcheck window. It displays Summary information about the completed Calcheck. This information is also available for view within the MediaStatus module, the Calcheck Info section of a Media, or the Job Info window of jobs that have been calchecked. The following information is displayed:

- The panel title bar shows the Calcheck Chart used for the check.
- Δ All / Δ e / Δ H / Δ Ch – These buttons switch between summaries of the respective Δ standards. The buttons available depend on which Δ standards are defined in the chart for the Calcheck. The Δ e summary values listed are CIE76 by default. This can be changed to CIE94, CIE2000, CMC(1:1) or CMC(2:1) by setting the measurement standard in the Calcheck Chart.
- Job / Media – The Job or Media being calchecked. The field displays N/A if a Calcheck is done without assigning a Job or Media to it.
- Date – The date and time the Calcheck was completed.
- Δ Cyan / Δ Magenta / Δ Yellow / Δ Black / Δ Gray / Δ Paper – The Δ values for the significant CMYK process, gray and paper (substrate) patches are displayed here.
- Pass / Fail – Displays a green tick (pass) if all the measured patches fall within the Δ tolerances as defined in the Calcheck Chart. A red cross (fail) is displayed if any patches measure outside the defined tolerances.
- Δ Average – The average delta of the patches measured in the Calcheck.
- Δ Maximum – The maximum delta measured for any patch in the Calcheck.
- $\Delta\sigma$ – The standard deviation of the patches (from the Δ Average).
- Score – The relative quality of the printed Calcheck as compared to the reference values. Rated from 1-100.

Measurements Panel

The Measurements panel contains the detailed reference and measurement data for each colour patch in the Calcheck Chart used for the check. Colour patches that pass are shown in black, those that fail are shown in red.

The following sort columns are available, depending on the Δ standards defined in the Calcheck Chart:

- Name – The name of the colour patch.
- Colour (ref) – A colour swatch of the reference colour in the Calcheck Chart.
- Colour (meas) – A colour swatch of the measured colour.
- Lab (ref) – The reference Lab values of the colour patch in the Calcheck Chart.
- Lab (meas) – The measured Lab values of the colour patch.
- Δe max – The maximum Δe (CIE76, CIE94, CIE2000, CMC(1:1), CMC(2:1)) tolerance value for the patch as defined in the Calcheck Chart.
- Δe – The measured Δe (CIE76) of the colour patch.
- CIE94 – The measured Δe (CIE94) of the colour patch.
- CIE2000 – The measured Δe (CIE2000) of the colour patch.
- CMC(1:1) – The measured Δe (CMC(1:1)) of the colour patch.
- CMC(2:1) – The measured Δe (CMC(2:1)) of the colour patch.
- ΔH max – The maximum ΔH tolerance value for the patch as defined in the Calcheck Chart.
- ΔH – The measured ΔH of the colour patch.
- ΔCh max – The maximum ΔCh tolerance value for the patch as defined in the Calcheck Chart.
- ΔCh – The measured ΔCh of the colour patch.

Device/Spectrophotometer Panel

This panel allows you to choose which measuring instrument is to be used.

- Spectrophotometer – Select the spectrophotometer to be used for measurement from a list of supported instruments.
- Configure – Select the measurement condition and/or other options available to the connected instrument. This option is only available to instruments with configuration options.
- Measure – Initialises the chosen instrument and opens a popup window to select which Calcheck Chart is to be measured. Measurement begins after the chart is selected. The data from a chart measured by a third party software package can be loaded for a Calcheck by selecting CGATS/ISO12642 file from the instrument list. The file must have been saved in an appropriate format.
- Print Chart – Opens a chooser window to select the Calcheck Chart for printing, and the Pagesetup, Media and Jobticket combination to submit the chart to. The chart will be printed in a configuration suitable for reading by the chosen instrument.

History Panel

When Calcheck History is enabled in Server Settings, the History panel can be accessed via the hourglass button in the top right of the Calcheck application window. This panel displays all Job and Media Calcheck results stored in the historical database. Calcheck measurements that passed verification are displayed in green, those that failed are shown in red. Calcheck histories can be exported as .csv files for use in reporting.

Options

- Back – Returns the application to the Summary, Measurement, or Info panel (the last panel viewed).
- Refresh – Refreshes the History panel, updating the listed items to reflect recently added items or a changed date range.
- Job/Media – Drop down toggle. Switches the History panel between Job and Media History views.
- Time Period – Drop down menu. Choose the time period – Today, 1 week, 1 month, or Date Range – of Calcheck results to display in the History panel. If Date Range is selected “from” and “to” date fields will become available.
- Search – Enter text to search for specific history items from those currently displayed.

The following sort columns can be selected using the contextual (right-click) menu on the column header bar in the History item list:

Job View Only

- Job ID – An internally assigned ID number of the job.
- Job Done Date – Date and time the job was printed.
- Pagesetup, Media, Jobticket and Output – Database items used to print the job.

Media View Only

- Media – The Media for which the calcheck was performed.
- Output Driver – The output driver used to print the calcheck chart.

Job and Media View

- ID – Calcheck record number.
- Calcheck Date – Date and time the calcheck was performed.
- Chart – The calcheck chart against which the Job/Media was measured.
- Score – Calcheck score (from 0-100).
- Pass – the pass or fail status of the Job/Media.
- Δe Type – the Δe formula used in the Calcheck chart (Delta E, CIE94, CIE2000, CMC(1:1), CMC(2:1))
- Δe Cyan / Δe Magenta / Δe Yellow / Δe Black / Δe Gray / Δe Paper / Δe Average / Δe Max / Δe σ (std deviation)
- ΔH Cyan / ΔH Magenta / ΔH Yellow / ΔH Black / ΔH Gray / ΔH Paper / ΔH Average / ΔH Max / ΔH σ (std deviation)

- Δ Ch Cyan / Δ Ch Magenta / Δ Ch Yellow / Δ Ch Black / Δ Ch Gray / Δ Ch Paper / Δ Ch Average / Δ Ch Max / Δ Ch σ (std deviation)

The bottom of the History panel has the following options:

- – (Delete item) – Deletes the currently selected item(s). A warning message will appear to confirm as deletion from the database is permanent.
- Load – Loads the details of the history item, switching the view to the last selected panel (Summary, Measurements or Info). Double-clicking on a job will also load details.
- Export All / Export Selection – Export all or selected history items from those currently displayed to a .csv file. A Choose Columns window will pop-up to select which of the available columns to export, followed by a file window to name and save the file.

Backing up Calcheck History

Important Note: The calcheck history database is backed-up as part of the Backup Server operation (Server window > Help menu > Backup Server). It is not included in (.sdb) backups performed using the Archives application.

Info Panel

When Calcheck History is enabled in Server Settings, an Info panel can be accessed via a button at the top right of the Calcheck window.

When Job details are loaded from Calcheck History, this panel displays the complete Job Info (see QueueManager) for the job. If the job still exists in the QueueManager, imaged and rendered thumbnails are also shown.

If Media details are loaded, relevant details of the Media database item are displayed.

Menu Options

The following options are available from the Calcheck menu or the contextual menu (right click) from within the Calcheck application:

- Load Media – Select a Media to load into Calcheck. Any Media that have been calchecked previously will display complete results of their last Calcheck. A new chart can be printed and/or new measurements taken and the results updated to the Media.
- Check Media – Select a Media to be measured. This option assumes a Calcheck Chart for the Media has been printed. It immediately opens a window to select the chart for measuring and initiates measurement on the selected Spectrophotometer. On completion, results are saved to the Media and previously calchecked Media will be updated.
- Load Job – Select from a list of previously calchecked Jobs sitting in the QueueManager. Once loaded, complete results of the job's last Calcheck are displayed. A new chart can be printed and/or new measurements taken and the results updated to the Job Info.
- Check Job – Select any job currently in the QueueManager to be measured. This option assumes a Calcheck Chart for the job has been printed. It immediately opens a window to select the chart for measuring and initiates measurement on the selected Spectrophotometer. On completion, results are saved to the Job Info and previously calchecked jobs will be updated.
- Print Label – Print a summary label of the currently displayed Calcheck results to a system printer.

- **Print Report** – Print a Calcheck report on the job / media, or choose to save as a PDF.
- **Page Setup** – Allows the user to configure the label printing properties for the Print Label option above.
- **Show Graph** – Displays a representational graph of the Δe for each patch of the currently loaded Calcheck result. Checkboxes toggle pass/fail views. Results can be displayed in one of three formats, selected via dropdown menu:
 - **Show Error Bars** – Shows two (2) coloured spheres, joined by a bar for each patch positioned in a 3D Lab colourspace. The dull sphere represents the reference value for the patch; the shiny sphere is positioned based on its Lab values in the colourspace. The relative distance between spheres shows the Δe between them.
 - **Error Plane** – Shows a line of coloured spheres representing each patch, lined up in order. The larger the sphere, the higher the Δe .
 - **Error Spheres** – Shows a coloured sphere for each patch position in a 3D Lab colourspace. The larger the sphere, the higher the Δe .
- **Export Calcheck as SVF** – Exports the Calcheck information as an SVF file. Any additional tags added to the file may not be supported.
- **Export Calcheck as standard SVF** – Exports the Calcheck information as a standard SVF file (as per spec) with no extra tags added.
- **Export Calcheck as ISO28178** – Exports the Calcheck information as an ISO 28178 xml file.
- **Export Calcheck** – Opens an Export Swatches as...? pop-up window. Select from one of the following file formats in which to export Calcheck reference and measurement data:
 - **ISO12642** – Exports the patch data as CGATS text file, able to be imported into ICC profiling software.
 - **Tab Delimited** – Exports the patch data as a generic tab delimited text file.
 - **X-Rite CxF** – Exports the patch data as a CxF file. Note: When exporting non-Lab colour swatches, measurements are added as additional patches in the file.
- **Show History** – When Calcheck History is enabled this toggles to the History panel of the Calcheck window application.

Contextual Menu Options

- **Export** – Export the colour patch data from the display panel to a text file.
- **Import** – Import colour patch data into the Calcheck application from an exported text file.

Clustering

Clustering is the ability to share the workload of processing jobs across multiple devices. Slaves or cluster nodes can be installed on other machines on the network and jobs can be sent to them from the Master for processing. The Clustering application allows you to add and manage these cluster nodes. They can be enabled for use in imaging, rendering or both.

As a node device starts up, its speed is calculated. When a job is submitted for processing, the Master machine has priority as no network traffic is required. If the Master is busy processing another job, the job can be sent to the fastest available node. The node processes the job and once completed, sends it back to the Master. It is then ready to accept another job. Nodes can be installed on any machine on the network.

Running a Cluster Node requires a separate Megarip dongle. If you have extra Megarip dongles, any Server can act as a node if it is started as a Cluster Node (see “The Megarip Server” section for more information).

Note: In this mode, the Server can only be used as a Node (slave) for another Server. It is recommended that the database be backed-up and job queues cleared before a Megarip Server is started as a Cluster Node. This avoids any conflicts with existing job IDs or settings.

Master Panel

This panel displays information about the Master Server machine.

- Product – The Serendipity Megarip software in use.
- Version – The Server software version.
- Hostname – The network name of the Master Server.
- IP Address – The network IP address of the Server.
- Speed – The relative speed of the Server, calculated by Megarip.
- Processors – The number of CPUs in the Server machine.
- Platform – The operating system/kernel version of the software.
- Process Imaging/Rendering/Schedule Last – Check whether the Master Server is to perform any Imaging or Rendering Jobs. The Schedule Last option allows nodes to have priority over the Master when jobs are processing. This is advantageous when polling large RIPS, as it allows the Master to concentrate on gathering the list of jobs and displaying them.

Cluster Nodes

This list shows nodes that are available and running on the network. Information about each node is displayed in the window. Online nodes are displayed in green; offline nodes in red.

The following sort columns can be selected using the contextual (right click) menu on the column header bar in the Cluster Node panel. Columns can be reordered by dragging and dropping them into the desired order, or by using the Configure Headers option in the contextual menu. The sort options are:

- IP address – The network IP address of the Node. Checkboxes become available to enable the node and select if it is to be used for Imaging and/or Rendering tasks. Once enabled, the Master handles the clustering in the most efficient manner possible.
- Hostname – The network name of the Node.
- Speed – The relative speed of the Node calculated by Megarip.

- Platform – The operating system/kernel version of the Node machine.
- CPUs – The number of CPUs in the Server machine.
- Product – The Serendipity Megarip software being used for the Node.
- Version – The Server software version of the Node.
- Processing Pool – Optionally choose a Pagesetup Pool (see the Workbench – Pagesetup Pool section) for which the Node will perform image and render tasks.
- Image – Shows the number of simultaneous Imaging tasks that can be performed by the Node. Click on the field to change the number.
- Render – Shows the number of simultaneous Rendering tasks that can be performed by the Node. Click on the field to change the number (see the Server Settings for details on Imaging and Rendering task settings).
- Refresh – The Refresh button polls the network for active Nodes and registers any Nodes in the list that are offline.

Cluster Node activity can be monitored in the ClusterStatus module (see the Modules – ClusterStatus section for more information).

Menu Options

The following options are available from a contextual (right click) menu within the Cluster Node panel:

- Add Node – Add a Cluster Node that cannot be seen. Sometimes Nodes on subnets cannot be detected. Selecting this allows you to enter the hostname or IP address of the Node and add it to the list manually. The Node to be added must be running.
- Add Processing Pool – Select, change or remove the current Pagesetup Pool for which the Node performs Image and Render tasks.
- Remove All Offline Slaves (Nodes) – Remove a Node from the list that has gone offline.
- Remove Node – Available for offline Nodes only. This option removes the selected Node from the list.

Densitometer

The Densitometer application allows you to measure and display density readings with a supported Spectrophotometer. When measuring a patch, the densities of all four process CMYK colours making up the patch are read.

The Last Measured panel in the top half of the application window shows the density and dot percentage values for the dominant process colour of the measured patch, with the values of the other three colours to the right. The values can be recorded and saved to a file if desired.

Note: The Densitometer application is a utility allowing you to use a Densitometer or Spectrophotometer that does not have a display to read values. This can be as a one-off reading to compare densities, or you may want to read values and export them for plotting on a graph. There is no requirement to use this for the normal operation of Serendipity Megarip.

Densitometer/Measurement/Paper Options

- Yule Nielsen Number – Enter the YN number for the paper you are reading (if known). The default is 2.0.
- Densitometer – Choose one of the supported instruments from the available list.
- Instrument Default Density Standard – Select your desired density standard from the available list.
- Activate/Deactivate – Connect or disconnect the chosen device.
- Add – Add the measured values to the list. This appears after the Densitometer has successfully connected.

To begin measuring:

1. Select a Densitometer from the dropdown list and click the Activate button.
2. The status field is shown when the device connects without error.
3. Follow any instructions when prompted – Calibrate, Measure Cyan Solid, etc.

Measure Targets

In order to read percentage tint values of any plate, you must first read the paper white and the solid density value for that colour. The Measure Targets menu or contextual (right click) menu allows you to measure the solid reference densities for the process colours and the paper white. With these values stored, colour percentages can be calculated and displayed. You can measure or update an individual Solid density or Measure All Targets.

Colour List

This is a list of readings taken if the Add is enabled. Each reading is appended to the list and the values measured are displayed. The columns can be resized or reordered as required by dragging the header to the preferred position. The columns are:

- Name – The name of the colour read. Defaults to “Untitled” but can be changed by selecting the name and entering a new one.
- Colour – Shows the dominant colour read, i.e., the one with the highest density value. This may not be the colour you perceive it to be, but the contents making up the colour are recorded and the colour is calculated and shown.

- Density – The density value for the colour. This is the highest density read from C, M, Y and K. It shows the density of the colour stated in the Colour column.
- Cd/Md/Yd/Kd – The C, M, Y and K densities of the colour read.
- Dot% – The dot percentage of the colour shown in the Colour column.
- C%/M%/Y%/K% – The C, M, Y and K percentage values for the colour measured. If any of the % columns are blank, the reference paper white or solid density for that colour has not been measured.

Export

You can export the values from the Colour List to a file. The available options are:

- All – Saves all entries in the list.
- Selected – Save the selected entries in the list only.

Selecting either of these options displays a window allowing you to choose the values to be saved. The choices are:

- Name – Save the name of the colour.
- Colour Density – The highest density reading regardless of colour.
- Cyan/Magenta/Yellow/Black Density – The density reading of the chosen colour. For e.g., if Cyan is selected, the Cyan density for each reading is taken. This is the value displayed in the Cd column of the list.
- Colour Percentage – The percentage reading of the highest density read as displayed in the Dot% column.
- Cyan/Magenta/Yellow/Black Percentage – The percentage reading of the chosen colour. For e.g., if Cyan is selected, the percentage of Cyan for each reading is taken. This is the value displayed in the C% column of the list.

The percentage values must be present for the values to be exported. If they are not, the exported file will show a 1% value in place of the reading.

- Order Values – Choose whether to export the file in CMYK or KCMY order.
- Separate Values With – Choose to separate the values with either a tab character or a space.
- Cancel – Cancels the Export action.
- Export – Displays a file chooser allowing you to enter a name and select a location to save the file to.

Displays

The Displays application uses a supported Spectrophotometer to calibrate and create an ICC profile for a selected monitor or light booth. Suitable graphics monitors can be calibrated to match a chosen print gamut, allowing colour accurate softproofing of print material and can be verified at any time to ensure correct colour output.

Creation of a profile is very simple, requiring a supported instrument and a few minutes of time. The Spectrophotometer is placed on the screen to be calibrated. A series of adjustments are made to the screen gamma, white point and brightness (if available). Measurements are taken, from which an ICC profile is created and saved in Megarip and the operating system as the native display ICC profile.

Note: The Displays application creates a profile for use with the Match ICC profile assigned to the monitor in Server Settings. Ensure the correct match profile is set before creating the monitor profile (see the Server Settings – Colour section for details).

The Displays interface comprises of a function list (left) and a multi-purpose display area (right) that will change depending on the function selected.

The function list is made up of the following selectable items:

- Calibration – Lists each connected display available for calibration.
- Calcheck – Lists each connected display available to calcheck.
- History – Lists the calcheck history (reference only) of each connected display.
- Ambient – Measure the ambient and white point of the light source.
- Light Booth – Appears only when a light booth is connected and will list each connected device.

Calibration

The Calibration function displays currently connected monitors and their calibration status.

By clicking on the Calibration header, each connected monitor shows the following details:

- The name of the Display, viewable screen dimensions in mm x mm, and its identification number (in a multi-display environment).
- Pixels (width/height).
- Resolution (DPI).
- ICC profile.
- Calcheck Status.
- Last Calibrated (time).
- Calibration Expires (time period).
- Hardware Calibration (supported or not for the particular display).

By clicking on the Display name, calibration options and settings available for the monitor are shown. These include:

- Brightness – Only available if hardware calibration is supported and selected for the monitor (see below). Choose to set the brightness level in either:
 - Candela – Brightness in cd/m2.
 - Set the level from 0-100%.

- Calibration Tolerance – Enter a value in this field or use the slider to set the tolerance (in cd/m2) for monitor or light booth brightness calibration.
- Measure – Click to use a connected Spectrophotometer to measure and display the brightness (cd/m2) and white point (K) of the monitor. Follow any onscreen instructions for the selected instrument. The reading is constantly updated, allowing the user to manually adjust the brightness using the monitor's own controls. This option is only available if the Use Software Calibration option is selected or is the only mode available (see below).
- White Point – Select the white point temperature for the monitor. Choose from:
 - Custom – Type in the field provided or use the slider to enter a custom temperature in Kelvin (K).
 - D50 – Sets the white point to D50 (5003 K/Horizon Light).
 - D65 – Sets the white point to D65 (6504 K/Noon Light).
 - Native – Sets the Displays application to use the monitors native white point.
- Gamma – Select the gamma correction to be used for the monitor.
- Custom – Type in the field provided or use the slider to enter a custom gamma value between 1.0 and 2.6. The Custom button will auto-select if a non-standard gamma setting is chosen. Note: If either 1.8 or 2.2 are chosen, the 1.8 or 2.2 buttons will auto-select.
 - 1.8 – Select this to set the gamma correction value to 1.8. This button will auto-select if 1.8 is chosen via the Custom field/slider option.
 - 2.2 – Select this to set the gamma correction value to 2.2. This button will auto-select if 2.2 is chosen via the Custom field/slider option.

Options

- Use Hardware Calibration – When supported, this option uses the monitors own internal hardware for calibration, allowing the screen brightness to be adjusted automatically.
- Use Self Calibration – Available on some high-end graphics monitors. Uses the monitor's own internal hardware and calibration routines for calibration.
- Use Software Calibration – Calibration is performed using the Displays application software.
- Instrument (offline/online) / Instrument Name – Displays the currently activated instrument.
- Instrument – Select from the list of supported Spectrophotometers to use for display calibration.
- Display Type – Select the type of display being calibrated from LCD, CRT or RAW.
- Monitor Identification Number – Click to popup an identification number in the centre of the screen for the display to be calibrated.
- Calibrate – Click this button to start calibrating the selected display to the chosen settings and create the display ICC profile. Follow any onscreen instructions for your instrument. When calibration is complete, a file chooser will popup to name and save the ICC profile. The profile will be saved as the operating system native ICC profile for the display and will appear as the Native Profile in Serendipity Client Preferences > Colour Management (see System Settings for more information).
- Save Profile – Opens a file chooser (as above) to save or rename the ICC profile.
- Information Panel – Appears while the ICC profile is being generated, showing the progress and final results of the calibration process.

Calcheck

The Calcheck function displays Calcheck status summaries for all attached monitors, as compared to the values defined in the Calcheck Chart assigned to the SoftProof Default Press and Camera setting. Clicking on the Calcheck header allows users to quickly view whether a display is currently calibrated for softproofing a particular press profile. See Applications > SoftProof; or Workbench > Press for details.

Note: If a Calcheck summary is blank, this means:

No Calcheck data exists for the monitor; That the current Calcheck for the monitor was measured against a different Calcheck Chart than the one assigned to the SoftProof Default Press; or No Calcheck Chart has been assigned to the default Press.

The top section of the display area shows:

- SoftProof – The currently selected Default Press or Default Camera configuration.
- Calcheck Chart – The Calcheck Chart assigned to the above configuration.

The remainder of the display area shows the current Calcheck status of each connected monitor. Information includes:

- Process Colour/Gray/Paper delta values.
- Average/maximum/standard deviation delta values.
- Display name (top left).
- Timestamp of the last Calcheck (top right).
- Chart and Instrument used (bottom left).
- Overall Calcheck score (bottom left).

Note: In cases where multiple areas of a screen have been calchecked, the summary will display the worst results from across all calchecked areas.

Clicking on a Display name under the Calcheck header (e.g., iMac) will allow the user to perform a Calcheck on the chosen monitor.

The main part of the display area (white box) will show the detail or summary of the Calcheck as it is performed. The top section above the main area has the following options:

- Δ All – Shows all of the Δ results measured, as defined in the Calcheck Chart.
- Δ_e – Shows all of the Δ_e results only. The Δ_e standard used (DeltaE/CIE94/CIE2000/CMC(1:1)/CMC(2:1)) is selected in the Calcheck Chart (see Workbench > Calcheck Chart for details). CIE2000 is a recommended standard to use for display verification.
- ΔH – Shows all of the ΔH results only.
- ΔCh – Shows all of the ΔCh results only.
- Summary button – Shows Calcheck summary results.
- Detail button – Shows results for each measured patch of the Calcheck Chart.

The lower section of the main display area contains the following:

- Screen Area buttons – These buttons enable the user to look at results from one of the nine (9) defined areas of the monitor screen. The buttons are grayed out (cannot be selected) if a screen area has not been

calchecked. Areas that have been checked will enable the button and show whether the area passed (green) or failed (red) a Calcheck.

- Instrument (offline/online) / Instrument Name – Displays the currently activated instrument.
- Instrument – Select which supported Spectrophotometer is to be used for the Calcheck.
- Measurement Type – Select which area of the screen to Calcheck or Calcheck the whole (3x3 grid) screen. The middle centre of the screen is the default option for standard Calchecks.

History

By clicking on the History header, users can see at a glance the Calcheck summaries for all attached monitors. This is useful for keeping track of any changes in your monitor's performance (i.e., drifting).

Information includes:

- Process Colour/Gray/Paper delta values.
- Average/maximum/standard deviation delta values.
- Display name (top left).
- Timestamp of the last Calcheck (top right).
- Chart and Instrument used (bottom left).
- Overall Calcheck score (bottom left).

These summaries show Calcheck results for the monitor(s) in relation to the Calcheck Chart used at the time of checking (shown at the bottom left of the summary). The summaries are independent of the currently assigned SoftProof Default Press / Calcheck Chart although, in most cases they will match the current Calcheck summaries (see above section).

Clicking on a Display name under the History header (e.g., iMac) will allow the user to review past results of Calchecks for the monitor. The window shows a sort list of previous Calcheck results, with the time and date the Calcheck was performed and the Calcheck Chart used. Selecting a history item will display a summary or the detailed results. Calcheck history within the Displays application is only kept for a period of 30 days from creation for each history item.

The Displays menu has the following options available for Calcheck related tasks:

- Page Setup – Allows the user to configure the label printing properties for the Print Label option below.
- Print Label – Print a summary label of the currently displayed Calcheck results to a system printer.
- Print Report – Print a Calcheck report on the job / media, or choose to save as a PDF.
- Show Graph – Displays a representational graph of the ΔE for each patch of the currently loaded Calcheck result. Checkboxes toggle pass/fail views. Results can be displayed in one of three formats, selected via dropdown menu:
 - Show Error Bars – Shows two (2) coloured spheres, joined by a bar for each patch positioned in a 3D Lab colourspace. The dull sphere represents the reference value for the patch; the shiny sphere is positioned based on its Lab values in the colourspace. The relative distance between spheres shows the ΔE between them.
 - Error Plane – Shows a line of coloured spheres representing each patch, lined up in order. The larger the sphere, the higher the ΔE .
 - Error Spheres – Shows a coloured sphere for each patch position in a 3D Lab colourspace. The larger the sphere, the higher the ΔE .

- Export Calcheck as SVF – Exports the Calcheck information as an SVF file. Any additional tags added to the file may not be supported.
- Export Calcheck as standard SVF – Exports the Calcheck information as a standard SVF file (as per spec) with no extra tags added.
- Export Calcheck as ISO28178 – Exports the Calcheck information as an ISO 28178 xml file.

Ambient

By clicking on the Ambient header, the option to select a supported Spectrophotometer becomes available to measure the ambient (cd/m²) and white point (K) of the light source, e.g., a light booth or room.

- Instrument (offline/online) / Instrument Name – Displays the currently activated instrument.
- Measure – Select from the list of supported ambient-mode spectrophotometers to use for measurement.

Note: For some spectrophotometers, after initial instrument calibration, an ambient light filter will need to be attached before measurement.

The lower, white area displays constantly updated measurements.

Light Booth

By clicking on the Light Booth header (when available), any currently connected light booths will be shown.

Each connected light booth shows information on:

- Name/Model.
- Driver.
- Driver Version.

Clicking on a light booth name under the header will make calibration options available for the booth. These include:

- Brightness – Choose to set the brightness level in either:
 - Candela – Brightness in cd/m².
 - Set the level from 0-100%.
- Instrument (offline/online) / Instrument Name – Displays the currently activated instrument.
- Instrument – Select which supported Spectrophotometer is to be used for the light booth calibration.
- Adjust – Click this button to calibrate the brightness of the selected booth. Follow any onscreen instructions.

Note: For some spectrophotometers, after initial instrument calibration an ambient light filter will need to be attached before placing it in the booth and commencing the booth adjustment.

FlipBook

The FlipBook application allows you to view a publication as a virtual book. In Megarip, a publication is defined as a group of pages with the same publication name. This is a collection of book or magazine signatures that have been de-imposed, but a publication may consist of any number of pages.

FlipBook allows you to load the publication and flip through pages as you would with a real magazine or book. This enables you to check that your de-imposition has worked correctly, that pages are in the correct order, orientation and if there are any duplicates. Larger views of the pages can be called up and the whole publication can be exported to PDF or as a QuickTime movie.

FlipBook can be opened:

1. From the Application menu of the Serendipity Client. Publications can be dragged and dropped from the QueueManager into the FlipBook window and will open automatically.
2. From the QueueManager application by selecting a job and choosing View Flipbook. The View FlipBook option is only available if the job has a publication name.

The FlipBook window comprises of four (4) main panels – **Publication**, **Pagination**, **Page View** and **Page Index**.

Publication Panel

This panel contains the name of the Publication being viewed.

Pagination Panel

- **Start** – Enter the page number for the starting page or use the arrows to select the first page number of the FlipBook. If the first page loaded is page 1, you cannot alter the start page number. If the first page loaded is greater than 1, you can enter a lower value as the start page number. This can be used if you are viewing a part publication where the first pages have not been processed.
- **Top Page** – Choose whether the top page of the FlipBook is Even or Odd.

Page View Panel

This panel is where the FlipBook pages can be viewed. When a FlipBook is opened, the pages of the publication are loaded and displayed in 2D (two-dimensional) view. There are various ways to navigate through the publication:

- **Clicking on the page of the image** – If you click on the right page, you move forward through the publication. Clicking on the left page moves backwards.
- **Clicking on the pages in the Page Navigator Panel** – displayed below the Page View panel. The view jumps to the page (pair) you select.
- **Space Bar** – The space bar moves forward to the next pair of pages. Hold the shift key and press the space bar to move backwards.
- **PageUp/PageDown** – Use these buttons on the keyboard to navigate forwards and backwards through the publication.
- **Arrow Keys** – Use down or right arrow keys to move forward through the publication and left or up to move backwards.
- **Scroll Bar** – Moving the scroll bar below the image moves forwards or backwards through the publication.

Page View (Contextual Menu)

There are various options available from the context (right click) menu:

- Open Publication – Opens a QueueManager showing all jobs processed in the system. Select a job or publication job to load and click OK.
- Reload Publication – Reloads the current publication with files from the queue. This is used if additional files have been processed as part of the publication, or changes have been made and the publication needs to be updated.
- Choose Press – Select a Press configuration to apply to the job currently (and subsequently) loaded into the FlipBook. (see Workbench – Press for details).
- Job Info – displays the Job Info information about the currently selected page. (see Workbench – QueueManager for details).
- Swap Page with – This allows you to swap the page currently selected with another page from the same (currently loaded) publication.
- View Original – opens and views the imaged file of the selected page in the SoftProof application.
- View Printed – opens and views the rendered file of the selected page in the SoftProof application.
- View 3D – toggles between a 3D or 2D view of the publication. Three dimensional viewing shows the page turning as you navigate through. The turning speed can be adjusted FlipBook Settings. 3D mode adds 2 sliders on the right side of the Page View. The first alters the angle at which the 3D virtual book is viewed, the second zooms the view in and out.

Note: The performance of the page turning may vary depending on the size of the thumbnail being viewed and the performance of the graphics card.

- View as Calendar – Only available in 3D mode. Changes the flip axis to horizontal so pages flip up and down in the same manner as a calendar.
- Export – Exports the FlipBook as a PDF. Select the resolution, compression type and quality. Choose between exporting the whole book or a range of pages.
- Export as Spreads – Exports the FlipBook as a PDF but as spreads. The same options as above apply.
- Render Queue Thumbnails – View the rendered thumbnails in rather than the default imaged thumbnails.

Page Index Panel

The Page Index displays a numbered box for each page making up the loaded Publication. It allows for direct navigation to any page by clicking on it.

The page boxes are colour coded:

- Light green indicates the pages are loaded into the FlipBook and can be viewed. These show as dark green when selected.
- Purple indicates there are duplicate pages, i.e., they have the same publication name and page numbers. Dark purple indicates the pages are selected. Clicking on these pages allows users to select and view the alternative page.
- Light red indicates the page is not in the FlipBook. This occurs when there are other pages greater than the numbers displayed. This could be due to the imposition signature not being rendered yet. As they render, reload the publication to update the pages.

The status colours are updated whenever Reload Publication is selected.

A bar directly above the Page Index displays the job name for each currently viewed page on the left and right sides respectively. Pages with more than one version will show a dropdown to select which version to view. The page numbers being viewed are shown in the centre of the bar.

Menu Options

The following are available from the FlipBook File Menu:

- Open Publication.
- Reload Publication.
- Export.
- Export as Spreads.
- Export as Movie.
- FlipBook Settings – Configure the FlipBook viewing options and press configuration.

View Options

- Allow Multiple Windows – Enable or disable. Allows multiple Publications to be opened and viewed in separate FlipBook windows. If disabled, a newly opened Publication will replace the one currently being viewed.
- Page Order – Choose between reading left to right or right to left.
- Flip Time (3D) – Select the speed for the flipping of pages when in 3D mode.
- Render Queue Thumbnails – Enable or disable render queue thumbnails.
- Show Borders (2D) – Enable or disable the borders when viewing in 2D mode.

Press Configuration

This panel allows you to view or change the Press configuration FlipBook uses to display Publications.

View Menu

These options are also available from the FlipBook View Menu:

- View 3D.
- View as Calendar.
- Ink Weight – Opens the Ink Weights window displaying the FlipBook publication's ink weights and coverage.

Jobs

The Jobs application is used to display jobs before, after and during processing and allows users to manage jobs through the system to plot their progress.

The Jobs application consists of an easy to navigate user-interface, with tabs and layouts available for various monitoring functions. Tab layouts may be added or managed according to individual preferences and are saved at the Client level, allowing different users to display information appropriate to their location and workflow.

Jobs is the default monitoring application and will be run automatically on launch of Megarip after the initial software installation.

Menu Options

Tabs Menu

- Add Tabs—Add a new tab to the Jobs main window. Select from a list of factory default layouts. New tabs can be imported for use via the Manage Tab Library option.

The factory default tab layouts available are:

- Job Queues (default loaded view).
 - QueueStatus – Adds a tab with multiple QueueStatus modules.
 - Status and Drop – Contains the MediaStatus, Status, QueueStatus, DropZones and ClusterStatus modules.
 - Logs – Contains the ServerLog and ClientLog modules.
 - Jobs – Contains the QueueManager module with the Jobs view selected.
 - Jobs and Drop – Contains the QueueManager module, a DropZone and a QueueStatus module.
 - Assets – Contains the QueueManager module with the Assets queue selected.
 - Drop Area – Contains the DropZone module with Assets dropspot added by default. Right-click to add any additional dropzones to the Drop Area tab.
 - ServerLog – Contains the ServerLog module only.
-
- Rename Tab – Rename the selected tab.
 - Manage Tab Library – Add, remove or preview tab layouts for the Jobs application.
 - Close Tab – Close the currently selected tab.

View Menu

- Previous Tab – Open the previous tab window.
- Next Tab – Open the next available tab window.
- Titlebars – Show or hide the titlebars for each module within the Jobs application tabs. This will show or hide all titlebars in all tabs and is not limited to the currently selected tab.

Job Queues Tab

The default tab layout (Job Queues) for the Jobs application contains the following modules:

- QueueManager (See QueueManager section for further information on features and use).
- Thumbnail – Imaging Preview.
- Thumbnail – Rendering Preview.
- QueueStatus – Imaging Queue.

For information on each module, see the Modules section of this manual.

Lineariser

The Lineariser application creates a Linearisation Curve for an output device (printer). Assigned to a Media after paper profiling, it brings the output device to a known (linear) state. This means a 50% Cyan will print at 50%.

The user first prints a stepped wedge chart for a selected Spectrophotometer/Densitometer to the output device in the colourspace specified by the Media. The chart is measured and the resulting curve is saved, assigned to the Media and a History recorded.

At this stage, ICC profiles can be created and applied for accurate colour representation. If the printer output varies due to ink batches or head wear, a quick re-linearisation process is all that's required to get back to the same linear state initially created. The original ICC profiles can be re-applied to achieve the same colour output.

The Interface

The Lineariser window is made up of a Toolbar and a number of panels – Available Media, Linearisation History, Measurement, Advanced Options, Spectrophotometer or Densitometer information and Curves display.

Toolbar

The following options are available via the Toolbar at the top of the panel. Any option can be shown or hidden by ticking/unticking it in the contextual (right-click) menu within the Toolbar. The Configure Toolbar option in the menu also allows the order of the buttons/options to be set.

- Customise Patches – Allows for the selection of patches to be used in the Linearisation Chart. Choose which Patch Percentages using the numbered buttons. Total number of patches selected is displayed.
- Restore Defaults – Restore the patch selection to the default 23 patches per channel.
- Use Lab – Toggles between Density and Lab measurement modes. Lab mode for linearisation is required for printers with built-in Spectrophotometers.
- Measure Patches – Initialises the connected Spectrophotometer. Follow any instructions in the status bar to measure the chart.
- Submit Linearisation – Save the data in the Measurement panel to the Media being linearised. A popup will request a name for the curve.
- Reset Linearisation – Regenerates the linearisation chart to match the loaded Media's colourspace and paper profile. Normally only used in the event of a channels mismatch popup warning when printing a linearisation chart.

Note: If viewing curves loaded from a Version 3.x or earlier database, the options will be unavailable until the Update Legacy Curves option is selected from the Measurement panel contextual menu (see below). There is no need to update Version 3 curves if your printer is performing satisfactorily. However, there have been significant improvements made to the Lineariser so it is worth considering re-linearising with Version 9.1.

Available Media

This panel displays a list of available Media. Select a Media to view its current linearisation curves and data, or to linearise a new Media. Any changes made are applied to the currently selected Media.

Linearisation History

Shows a list of all the linearisations performed for the selected Media, allowing the user to track the performance of the output device.

The following sort columns can be selected using the contextual menu on the column header bar. Column order can be changed by dragging and dropping the columns into the desired order, or by using the Configure Headers option in the context menu:

- Date – Date and time the linearisation was measured.
- Type – Shows whether each linearisation curve was measured in Density or Lab mode.

The panel has one (1) button:

- Trim To – Trims the number of stored histories to the value shown from oldest first.

The following options are available from the context (right click) menu within the History list:

- Show Charts – Launches a separate window that plots the linearisation history of the Media/Gradation Curve on various charts (See below for further information on the available charts). Checkboxes at the top of the window allow you to choose which ink channel to view. Shift+click to view another channel at the same time. Double click a channel to see all.
- Revert to this Date – Reverts the linearisation curve assigned to the Media to the selected, historical (previously measured) curve.
- Unload – Unloads the historical curve data being viewed in the Measurement panel and loads the currently assigned curve. Measurement
- Curve Name – Displays the name of the Linearisation Curve currently selected. This can be the saved curve assigned to the Media or a selected History item.
- Last Linearised – Located top-right above the measurement panel, Last Linearised displays the date and time the printer/media combination was last linearised.

The display shows the colour-coded linearisation patches for each ink channel. The patch number and the Dot % it represents are listed across the top of the panel. Measured Values (Density or Lab) are shown within each patch. If no values are present, the Media has not yet been linearised.

Advanced Options (Density)

- Yule Nielsen Number – Enter the YN number if you know what it is for the media in use. The default is 2. The Yule Nielsen number or N-Factor is used to compensate for dot spread on different media types. This is basically a “fudge factor” added to the standard Murray-Davis formula used to calculate dot area from a density reading. An N-Factor of 1 means no compensation is made and just the Murray-Davis equation is used. An N- Factor of 2 seems to work well with most media types. As adjustments are made, the curve preview on the graph will change, showing the effects of the value entered. Further information on the Yule Nielsen Number can be found below.
- Maximum Densities Override – Enter a value to limit the top end density for each of the process colours. The default is 0 (no override). As adjustments are made, the curve preview on the graph will change, showing the effects of the value entered. Further information on Maximum Densities Override can be found below.

Advanced Options (Lab)

Choose from three (3) ink limiting options for each channel:

- Default – Standard option, the gradation curve is graphed per the measured ink % patches.
- Max. Chroma – The end point of the gradation curve is set to the point at which the chroma (a^* and b^* values) of the measured patches stops increasing. This option is suitable for C, M, Y or any other non-black (K) channel.
- Min. L – The end point of the gradation curve is set to the point at the lightness (L^*) of the measured patches stops decreasing. This option is suitable for Black (K), Light Black or gray channels.

Densitometer/Spectrophotometer

- Device – Select the appropriate instrument from the pull down list of devices.

Note: The Embedded Printer Spectro option is only available when in Lab measurement mode (Use Lab enabled).

- Configure – Select the measurement condition and/or other options available to the connected instrument. This option is only available to instruments with configuration options.
- Instrument Standards – Choose from the list which instrument standard is to be used for measurement. This will only appear when Use Lab is not enabled.
- Measure – Connects to the selected instrument and prepares to read patches. The patch window changes to a measuring window and the instrument list changes to a text field where instructions are displayed.
- Print Chart – Print the appropriate chart for the selected instrument to the Media selected. You will be prompted with an options window with the following:
 - Cancel Printing – Cancels the action and returns to the previous window.
 - Don't Apply. Print to Linearise – This will disable all colour management except for Paper Profile. Use this to make a Linearisation Curve.
 - Yes. Print to check Linearisation – This applies all colour management so you can check a Linearisation.

Curve

This panel shows the Linearisation Curves for each ink channel.

Select individual channel checkboxes to view a channel. Shift+click to add more channel curves to the view. Double click a channel to show all curves.

Show Charts

Selecting Show Charts will display another window with a chart for each channel in the linearisation curve. At the top of the window is a series of tick boxes, one for each colour. Selecting one displays the single colour and hides all others. Selecting another box changes the graph to that colour. Select the same colour again and all graphs will be displayed. Use SHIFT+Click to show more than one graph.

Chart Types

There are five (5) chart types available for selection:

- Density / History – Plots the date of the curve on the X-axis and the density values for each patch on the Y-axis. If the density begins to drop off, it will be displayed in the chart.
- Density / Patches – Plots the patches along the X-axis and the density on the Y-axis. For each patch in the history, a point is placed on the graph. If the density for a given patch does not vary greatly, the points will appear on top of each other. Where there is some change, a line will appear between points.
- Dot % / History – Plots the date of the measurements on the X-axis against the dot percentage on the Y-axis. The points on the chart represent the patches. For any patch, the effective dot % and how it varies across the history is shown.
- Dot % / Patches – Plots the patch number along the X-axis against dot percentage on the Y-axis. A diagonal line from 0 to 100 is shown as a guide to a linear curve. This graph will show if the patches are generally higher or lower than a linear measurement, as well as differences over the course of time.
- Dot % Delta / Patches – Plots the patch number along the X-axis against the dot percentage delta on the Y-axis. It shows the percentage difference from the target. For example, if the target is 40% and the measured value for that patch is higher or lower, the error is shown in the graph.

Yule Nielsen Number

The Yule Nielsen Number is essentially a “fudge factor” applied to the standard Murray-Davis formula used when calculating dot percentage area from density.

The value is used to compensate for various media types, as some react differently to others in the way a dot will spread on a particular media and thus affect the dot percentage value. It is sometimes helpful to change the YN number (and some manufacturers will quote a YN number for a given media) but this is rare.

The YN formula used for calculating the dot percentage is:

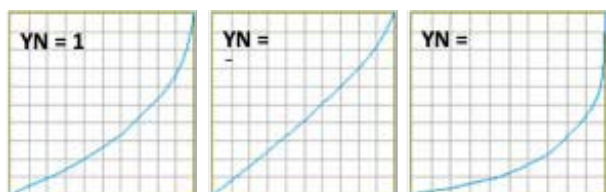
$$\text{Dot \%} = \frac{1 - 10^{\frac{-\text{dot}}{\text{YN}}}}{1 - 10^{\frac{-\text{solid}}{\text{YN}}}} \times 100\%$$

dot is the value of the density being measured.

solid is the density of the solid patch.

Therefore, a YN value of 1 has no effect on the dot percentage area. A value other than 1 will compensate for the dot spread on the media. If the YN is greater than 1, the Dot % decreases and if the YN is less than 1, increases.

This can be seen from the graph on the Lineariser.



The curves display the compensation; therefore if the YN number is less than 1, the dot percentage calculated is increased so the curve applied will go down. The reverse is true for a YN number greater than 1.

For most of the testing done during initial development, the value of 2 (the default setting) seemed to work well. It was also noted on occasions, better results were obtainable by setting different values for each process colour.

Note: As the ICC profiles are created after Linearisation, any value entered will be used for printing the ICC chart and will affect the output. This means when the ICC profiles are applied, the same YN number must always be used in the Lineariser to obtain correct results.

Maximum Densities Override

The Maximum Densities Override allows the user to cap the top end density to any value less than the maximum value read.

If a value less than the highest value measured is entered, the curve will change. The top end will move down and the rest of the curve will adjust to compensate for the new end position. The values in the middle of the curve will also change.

Pros and Cons

There are various arguments for and against setting a maximum density override. In general, the Match ICC profile would set the maximum density values so there should be no need to set them here. However, some users have found it to be an advantage to set the values to the target densities required for the final proof output and in doing so, have achieved very good results.

Reducing the density of the output used to print the ICC chart will affect the gamut. However, as the gamut of a press is generally smaller than that of a proofing device, this may not have any noticeable effects.

It is desirable to drop the top end densities of the output prior to ICC creation, as sometimes there is a need to boost the values after ICC is applied. This should only be used as a last resort and is not desirable as a general rule. If the top end densities drop, the ICC profiles are generally to blame and therefore should be corrected.

Note: It is the Match ICC profile that has the biggest bearing on the output and sets the output top end densities.

Monitor

The Monitor application is an alternate user-configurable version of the Jobs application, central to the Serendipity Client interface (see Applications > Jobs). Like Jobs, it displays jobs before, during and after processing and allows users to manage jobs through the system to plot their progress. The Monitor provides feedback from the Server and Client via logs. Modules can be added and configured to suit specific requirements. See the Modules section for further information.

The Monitor consists of one or more user-defined tabs. Modules are added, positioned and sized according to individual preferences. Settings are saved at the Client level, enabling Serendipity Clients on different systems or in different departments to display information appropriate to their location.

The Monitor can be in one of two modes – **Edit** or **Use**.

Edit

This mode allows the user to move and resize modules on a tab. The mouse pointer changes to a cross when in Edit mode. Resize a module by grabbing the corners or sides and dragging to the preferred size. Click anywhere in the modules and drag it to the desired position. Modules close together will snap-to each other.

While in Edit mode, all Modules have a contextual menu available (right-click) with the following options:

- Remove (Module) – Removes the module from the Monitor tab.
- Set Size For (Module) – Allow the user to enter a width and height (in pixels) for the selected module via a resize popup.
- Duplicate (Module) – Duplicates the selected module. The duplicate has all the size, layout and configuration options of the original.
- Use Layout – Switches the Monitor to Use Mode.

Use

This is the normal user mode. It locks the module sizes and position and allows you to configure the modules preferences and manage jobs. Select this after Editing to use the configured layout.

Menu Options Layout

- Edit – Switches the Monitor to Edit Mode (see above explanation).
- Use – Switches the Monitor to Use Mode (see above explanation).
- Dynamic Update – Enables or disables updates to the modules while in Edit mode.
- Show Titlebars – Shows or hides module titlebars.
- Add Modules – See the “Modules” section for further information on each module.
- Load – Loads a previously saved Monitor configuration.
- Save As – Saves the current Monitor configuration.
- Search UI (User Interface) – Activates a search bar for finding buttons and functions in the current Monitor tab.

Note: Module Toolbar functions can only be searched if the toolbar is open.

Tabs

- New Tab – Creates a new tab.
- Rename Tab – Renames the currently selected tab.
- Duplicate Tab – Duplicates the currently selected tab and all modules within it.
- Choose Tab Colour – Allows the user to select a colour for the currently selected tab.
- Choose Tab Image – Allows the user to select an image for the currently selected tab background. Valid types are PNG and JPEG. It is recommended a large image not be used, as it will take up memory.
- Clear Tab Colour/Image – Reverts to the default background colour.
- Remove Tab – Deletes the currently selected tab.
- Remove All Tabs – Deletes all tabs.
- Next/Previous Tab – Switches to the next or previous Monitor tab (right or left).

Reordering Tabs

Tabs can be moved to a new position by clicking on and dragging the tab to the desired place in the order. A red pointer appears, showing the drop point between two tabs.

SoftProof

The Softproof application is used to proof a job on the screen. There are many tools available to check every aspect of the job at any stage of production or processing. SoftProof can be used in conjunction with or instead of a hardcopy proof. Using a calibrated monitor and configured press settings, proofs can be viewed and verified onscreen with precise colour accuracy.

All job plates are shown and can be turned on or off, or changed as desired. Colour attributes and plate characteristics can be changed to see the effects of different printing processes, including paper types and the effects of show-through from the reverse side.

The data can be exported to various file formats, including CIP3 and PDF. An Ink Key Viewer can display a job as it would be on the press, with the values for each key shown.

The ink weight can also be calculated and over-ink areas identified. The proof can also be verified using the Displays application to give a pass or fail status in accordance with chosen colour standards.

Layout

The SoftProof application consists of a large, central viewing window for jobs; a visual Tools menu on the left and a View panel to the right; a Navigation Thumbnail at the top right; and a status bar along the bottom of the window.

TAB Key – When SoftProof is selected as the current active window, the TAB key will show/hide the Toolbar, the Navigation Thumbnail and Panel, and the Status Bar.

Navigation Thumbnail

This thumbnail shows the entire image loaded for softproofing. The area currently shown in the main viewing area is represented by a rectangle on the thumbnail. Mouse over and left-click to view a new area of the proof.

Status Bar

This bar shows the information about the currently loaded proof, the SoftProof Press Setting and the current calibration status of the monitor in relation to the Press Setting (see Applications > Displays for more information on screen calibration).

The left of the bar displays:

- Jobname (Original/Printed Preview) and current zoom level %

The right of the bar displays:

- Current Press or Camera settings, along with the Embedded ICC Profile for the image (if applicable). Use the tick box to override the currently selected Press or Camera profile and enable the embedded ICC Profile.

Clicking on the Press or Camera profile button will popup a menu with the option to choose another Press/Camera setting if available.

When Calcheck Managed is enabled (Client Preferences > Colour) a small tick or cross representing the Calcheck status will be displayed in the status bar at the bottom right of the SoftProof window.

Hovering the mouse pointer over the cross or tick shows a tooltip (when Tooltips are enabled) displaying information including:

- The ICC Profile used by the monitor (normally created using the Displays application, Calibrate option).
- The Calcheck Chart assigned to the Press/Camera Settings currently used in SoftProof and the current calcheck status of the monitor.

Click on the Tick/Cross to popup a menu with the following options:

- Calibrate – Begin calibration of the monitor using the current settings and Spectrophotometer assigned in the Displays application. Once calibrated, the monitor ICC profile is automatically saved as the operating system default replacing the previous ICC profile.

Note: When calibrating or calchecking, the Spectrophotometer assigned in the Displays application for either tasks should be connected and ready for use. If the instrument is different to the assigned one an error will occur, ceasing the operation. It is recommended to check the appropriate Spectrophotometer has been assigned before using the Calibrate or Calcheck Monitor functions (see Applications > Displays).

- Calcheck Monitor (Chart Name) – This option will open the Displays application and begin a Calcheck of the softproofing monitor using the Calcheck Chart assigned to the current Press settings. The chart is named in brackets. The pass/fail status may change as a result of the check. Detailed results can be viewed in the History area of the Displays application.

Tools

- Show/Hide Tools – Available from the Tools menu and also activated by pressing the Tab key to toggle the show/hide function. This will hide all Tools, Buttons, and the Status Bar in the SoftProof interface.
- Pan (H) – Navigate around the image by clicking and dragging the job around the screen.
- Zoom (Z) – Zoom in or out of the job. Clicking the mouse zooms twice the current percentage factor.
- SHIFT+Click will zoom out half the percentage factor. Click and drag over an area to zoom it.
- Note (N) – Create, manage and delete notes.
- Measure (I) – Take a measurement on the image. Use the shift key to draw straight horizontal or vertical lines. Also displays the angle of the line. This tool can be used to measure approximate screen angles.
- Crop (C) – Crop an image and resubmit it.
- Guide (G) – Display guide lines on the image to check for alignment. Change the orientation by pressing SHIFT. ESC will remove the guides.
- Spectro (X) – Take measurements of the job being viewed. A popup window will appear displaying the Lab/Lch/XYZ/Density values at the point the Spectro cursor is onscreen. A note can be created at the location of the cursor to record colour information.

SoftProof Widgets

There are four (4) sliding widgets available from the left panel of icons in the SoftProof viewing window. These include:

- Channels (Shift+C)
- Publications (Shift+P)
- Ink Keys (Shift+I)
- Get Info (CTRL+I / CMD+I)

Channels Widget

The Channels Viewer shows the channels or plates of the job currently being viewed in SoftProof. Plates can be turned on or off by clicking the relevant coloured checkbox to the left of the plate name and can be reordered by clicking and dragging to a new position. The plate colour and associated attributes can be changed by double-clicking and choosing another Special Colour Set from the library, or edited for that SoftProof instance only.

- Name – The plate name. The checkbox indicates whether or not the plate is displayed.
- Value – The percentage of colour at the point of the cursor in the window. Total ink displays the total amount of ink at the point of the colour selector, i.e., the sum of all plate percentages. For RGB it will show the relative RGB values only.

Publications Widget

When softproofing a job that forms part of a publication, additional controls and view options are available:

- Single Page – Display just the single page selected. Disabling this option enables the following:
 - Show Back Page (B) – Display the reverse side of a page through the page currently loaded, as if the final print was being held up to the light. The Back Page Opacity setting in the Press Settings controls the amount of show-through.
 - Show Page Spread (D) – View the spread of the selected page, for example, pages 2 and 3 as a spread.

Ink Keys Widget

The Ink Keys icon will display the Ink Key Viewer containing the loaded image in the SoftProof window.

At the bottom of the window will be a series of ink keys. Colour bars give a graphical display of the proportion of each ink contained within the job across the keys.

For each key selected, the relative percentage of ink for each of the plates is shown. An information panel runs down the right side of the window. The top of the panel shows information about the currently loaded Press Settings. Job view and placement can be changed and ink weight can be calculated for any job.

- Colour checkboxes – Positioned above the image, these show the inks or plates used in the job. Clicking on one will turn the others off and leave the ticked colour on. SHIFT+Click allows for multi-selection of colours. Double-click to show all.
- Ink Keys – The keys at the bottom of the window show the inks selected to be viewed on a graph. The scale of the graph varies, depending on the amount of ink in the job. Hovering over or clicking on an ink key will display the key number and its ink values at the bottom of the information panel.
- Press Settings – Shows the values for the currently loaded press. Click the box to show or hide the details. Press settings used are selected in the Default Press panel of the SoftProof Settings.
- Show Excess Ink Weight Area – Display areas exceeding the Maximum Ink Weight setting as defined in the Press configuration.
- Max Ink Key Value – Set the size of the ink keys to match your press. Ink values are calculated based on the size entered. If the size is 100, percentages are displayed.
- Sheet Placement – Show the job as positioned on the press sheet defined in the configuration. The job can be centred (selecting the Centre checkbox), or offset from the left (X) and bottom (Y). De-selecting this displays the whole job in the viewer and changes the ink keys to show total ink amounts for the job.

- Ink Weight Calculator – Calculate the amount of ink required to print (x) number of copies.
- Print Run Size – How many to print.
- Ink Weight (g/m²) – Enter the weight of the ink used in grams per square metre.
- Calculate – Based on the values entered for ink weight and print run size, the total weight of ink for each colour will be calculated for the loaded job and displayed in the ink value area.

Contextual (right-click) menu options include:

- Show Ink Key Table – Shows a separate window, listing the ink key values of all keys for each plate. These can be printed using a local printer or exported to PDF.
- Export Tab Delimited – Exports the values for the keys and ink values to a tab delimited text file.

Get Info Widget

The Get Info icon will display job information about the currently viewed image in SoftProof – how it was processed, what Pagesetup and Media were used and other useful processing information. Click the icon again to hide the panel.

Loupe

The Loupe is available via the sidebar menu. Once opened, the Loupe will appear with the default setting “Loupe to Mouse” enabled.

Loupe Options (accessed via the Spanner icon):

- Screening LPI – Enter the desired value for screen ruling for SoftProof in Lines Per Inch (LPI). The default is 150.
- Loupe to Mouse – This is enabled by default. The mouse pointer location is used as the reference point for the Loupe display. This allows you to position the Loupe off image and use the mouse to display the relevant part of the image within the Loupe for proofing.
- Rulers – Turn rulers on or off. The rulers will appear in the Loupe window with measurement units displayed. The rulers are centred or at the mouse pointer location if held over the Loupe window.

The Loupe is moved around the SoftProof by left-click and holding to drag it.

The Loupe can be resized by clicking on the button with 3 lines (see image) and dragging outwards. The mouse scroll wheel will also increase/decrease the Loupe size when the mouse is positioned over the window.

A number of display and control options are available via the buttons at the bottom of the Loupe window:

- + (button) – Click to increase the zoom factor of the Loupe. The zoom factor is displayed at the bottom centre of the Loupe. Note: 100% = the resolution at which the proof was originally imaged, i.e., 1 screen pixel is 1 job pixel.
- - (button) – Click to decrease the zoom factor of the Loupe.
- Spanner – Opens the Loupe Options window.

SoftProof Menu Options File Menu

- Open Files – Load an image file directly into SoftProof. Supported file types are Canon RAW format (CRW), JPEG, PNG, PPM, Serendipity Blackmagic Image, TIFF and Adobe Photoshop PSD.

- **Open Jobs** – Load completed jobs into SoftProof. The Imaged (Original) or Rendered (Printed) file may be viewed.
- **Save** – Save the preview as a Blackmagic Image File. This can be submitted or placed in a hot folder, or on a DropSpot.
- **Export** – Export data from SoftProof. The available formats are CIP3, PDF, Postscript (Separated) and TIFF Multichannel.
- **Revert** – reloads the original or printed preview file, reverting any effects that have been applied to the job in the SoftProof application.
- **Submit** – Submit the current preview, including any onscreen changes, to a Pagesetup/Media/Jobticket. This re-images and re-renders the job at the current image preview resolution. If the resolution is restricted in Server Settings then the limited resolution will be used.
- **Submit ICC Target** – Submit the current preview, including any onscreen changes, to a Pagesetup/Media/Jobticket as an ICC Target. The preview submitted uses the Paper Profile, Linearisation LUT and Correction LUT in the Media but is not ICC corrected.
- **SoftProof Settings** – Opens the preferences for SoftProof, allowing for configuration of default viewing conditions. See below for further information.

SoftProof Settings

The SoftProof Settings allow you to select viewing preferences including how to load a job, and the quality and press settings used to produce accurate proofs. The settings window is split into four (4) tabs – View Options, Image, Default Press and Default Camera.

View Options Tab

Window

- **Allow Multiple Windows** – When enabled, allows jobs to be opened and viewed in separate SoftProof windows. If disabled, each job viewed will appear in a tab running along the top of the same SoftProof window. If a job is dragged and dropped into SoftProof from the QueueManager, it will replace any open image in the viewing window selected.
- **Status Bar Size** – Select the size of the status bar text from Small, Medium or Large.
- **Rulers** – Show or hide the rulers.
- **Scrollbars** – Show or hide the scrollbars.
- **Image Centring** – Select to align any images opened in SoftProof either Horizontally or Vertically or both.
- **Max Preview Resolution** – Set the maximum preview resolution for SoftProof for both Imaged and Rendered options. The default is zero (0), which is the full job resolution of the output file.

On Load

- **Honour Embedded ICC Profiles** – When enabled, this will honour any embedded ICC profiles when viewing the image in SoftProof.
- **Rotation** – Control the orientation of jobs when they first load. The option None leaves the job in its imaged or rendered orientation.
- **Zoom Level** – Select the default zoom setting. All fitting zoom modes calculate the size based on the monitor resolution. This is set in the Colour Management tab of the Client Settings.

- **Show Back Page – (Checkbox)** Toggles whether publications with consecutive pages will open in SoftProof displaying back page show-through (based on Press settings) by default.
- **Show Spreads – (Checkbox)** When enabled the publication pages open in SoftProof as part of a spread pair alongside the previous/next page.

Publications

- **Enable Pager Thumbnail –** Enable or disable the thumbnail viewer when viewing a publication. When enabled, a thumbnail of the page appears when the mouse pointer hovers over the page number box.
- **Enable Pager Sections –** When enabled a Section label/button is displayed above the pages in the SoftProof Page Index panel. This allows for loaded multi-section publications to be viewed one section at a time, displaying the page range within each section. Clicking the section label bar will open a menu to choose which section to view or to view all sections.

Image Tab

- **Resampling Algorithm –** Set the resampling algorithm for jobs as they are viewed in SoftProof.
- **Screening LPI –** Enter the desired value for screen ruling in lines per inch (LPI). The default is 150.
- **Unsharp Mask –** The Unsharp Mask feature allows SoftProof previews to be sharpened onscreen. The sharpening applied is controlled via the following settings:
 - **Amount –** Choose the amount (from 1-500%) of edge sharpening. The higher the value, the more contrast between pixels around the edges. Default value is 180%.
 - **Radius –** Define the width (from 1-100 pixels) of the edges that the filter will sharpen. The higher the value, the wider the edge. The appropriate value to be used varies depending on the resolution of the softproofed image. Lower resolution images require a smaller radius value. Higher resolution images require a higher value. Default value is 3 pixels.
 - **Threshold –** Specify the difference in brightness (from 0-255) that must be present between adjacent pixels before the edge is sharpened. A lower value sharpens edges with minimal contrast difference. Higher values sharpen when adjacent pixels are very different in contrast. The default value is 15.

Default Press

The default press tab allows the selection of a Press configuration from the database to be applied to the loaded jobs and for all subsequent jobs loaded in SoftProof.

- **Press 1 –** The default press used for softproofing jobs.
- **Press 2 –** Assign an alternate press configuration for publications that include pages printed on a different stock, e.g. glossy magazine covers.

An information window shows the settings of the currently loaded Press setup. Configurations are managed in the Workbench and contain information such as size, number of keys and colour information.

Default Camera

The default camera tab allows for the selection of a Camera configuration from the database to be applied to any loaded jobs using an RGB colourspace. If Honour Embedded ICC Profiles in the SoftProof Settings is unchecked and the RGB image contains an ICC profile, the default camera configuration will be used in its place.

An information window shows the settings of the currently loaded Camera setup. Camera configurations are managed in the Workbench and contain information such as the ICC profile to be used, rendering intents, black point compensation and Calcheck Chart reference.

View Menu

Select menu items are also available as icons within the SoftProof window.

- Tabs – Control the tabbed viewing of images in SoftProof.
- New tab – Opens a new, empty tab ready for a job. Use the Open Job option or drag and drop a job from the QueueManager to view it.
- Close Tab – Close the currently selected tab.
- Next Tab – Loads the next available tab.
- Previous Tab – Loads the previous tab.
- Show Tab – Show/hide the tabs listed at the top of the screen.
- Get Info – Display information about the softproofed job and how it was processed.
- Show Page Boundary – Display a red line around the page area of the job.
- Show Notes – Display any notes attached to the job.
- Ink Weights – Opens a window displaying the ink weights (source and print inks) for the job.
- Go To Page – Opens a popup window to enter a page number to display in SoftProof. Only available for publications.
- Proof Colours – For use with RGB images only. Automatically select a Press Configuration to display onscreen what the RGB image will print like using a specific Press profile. The selected Press will appear in the status bar at the bottom right of the screen. Clicking the status bar button will allow you to adjust which profile is used.
- Zoom In/Out – Zoom in or out of the image. Holding down CMD (Mac) or CTRL (Win) and scrolling the mouse wheel over the image will allow for zoom in and out functions.
- Show All – Fit the entire job into the SoftProof window.
- Show Actual Pixels – One pixel of the screen is equal to one pixel of the job. This is shown at 100%. This view mode has the quickest load time as resampling for scaling is not required.
- Show Actual Print Size – Show the print size of the job.
- Fit Width/Height – Fit the job to the height or width of the SoftProof window.
- 90 CW – Rotate the image 90 degrees clockwise.
- 90 CCW – Rotate the image 90 degrees counter-clockwise.
- 180 – Rotate the image 180 degrees.
- Rotate – Rotate the currently viewed job by the positive or negative angle (###.##°) entered in the popup window Angle field.
- Revert Rotation – Undo any rotation made to the image in SoftProof.
- Invert – Invert (negate) the image.
- Mirror – Mirror the image.
- Autocrop – Remove any whitespace around a job. There must be a completely clear area on any one side of the job.
- Unsharp Mask – Apply an unsharp mask to the image. This will affect the edges within the image. Settings for the unsharp mask can be set via the SoftProof Settings.
- Use Press 2 – Switch between Press 1 and 2 as configured in the SoftProof Settings for non-RGB images viewed in SoftProof.

- Full Screen – Switch between full screen mode and window mode.
- Thumbnails – Select the Thumbnails tab within the SoftProof window.
- Page Index – Select the Page Index tab within the SoftProof window.
- Notes – Select the Notes tab within the SoftProof window.
- Loupe – Display a virtual loupe on top of the loaded image. The loupe can be resized and magnification level changed if required. The current magnification is shown at the bottom of the Loupe; 100% means 1 screen to 1 job pixel.

Thumbnail Panel

The thumbnail panel displays a small image of any jobs currently open in SoftProof. Clicking on the relevant image will switch the SoftProof preview to that window.

Notes Panel

Notes gives users the ability to draw a text box on the imaged or rendered SoftProof to make a note. The note is attached to the job file and remains attached until it is either deleted or the job is removed from the system. There is no limit to how many notes can be created, and they can be shown or hidden as required.

Notes cannot be attached to files opened in SoftProof via File Menu > Open Files. The file needs to be submitted as a job before any embedding of notes can take place.

When creating a note with the Note Editor, a configurable arrowhead pointer option is available along with the existing area marker for a more precise commentary on the job. The User and Group of the note creator are also displayed (see Secure Mode). Notes can be edited or the anchor adjusted by double-clicking on the Note.

The Note panel displays any notes attached to the job currently selected in the main viewing window. There is also a Note column in the QueueManager showing the number of notes attached to a particular job. The Notes icon on the left menu bar is used when adding Notes to the softproofed image. The Notes icon in the right panel is used to display or hide any notes on the image.

- Show Notes – Show or hide the notes on the preview. Notes can also be toggled by clicking the icon on the right panel.
- Text – The text making up the note.
- User / Group – The User and Group responsible for the note.

Page Index Panel

The Page Index panel displays a numbered box for each page making up the loaded publication. This allows for direct navigation to any page by clicking on the page number. Hovering the mouse over a page number will pop-up a thumbnail for the page. The “T” hotkey toggles the thumbnails on or off.

The page boxes are colour coded:

- Light green indicates the publication pages are loaded and can be viewed. These show as dark green when selected.
- Purple indicates there are duplicate pages, i.e., they have the same publication name and page numbers. Dark purple indicates the pages are selected. Clicking on these pages allows viewing of the alternative page.
- Light red indicates the page is not yet available for viewing in SoftProof. This normally occurs when there are page number gaps if pages have not yet imaged or rendered, or when processing a de-imposed publication

with known (signature defined) page numbers. As the missing pages image/render, close and re-open SoftProof to update the publication pages.

Spectro

The Spectro application allows for the measurement of colours with a Spectrophotometer. The accuracy of the measured value can be viewed against an imported value when mapped through a selected ICC profile.

The window is split into two sections. The right side allows for the import and viewing of a Special Set, which is used as the comparison base. The left side displays the measured values. Selecting a particular measured value matches the closest colour of the imported set, giving it relative deltaE values. These can also be filtered to only show the closest matches for better viewing.

Options

- Spectrophotometer – Select a device from the list of supported spectrophotometers.
- Configure – Select the measurement condition and/or other options available to the connected instrument. This option is only available to instruments with configuration options.
- Activate – Connect to the selected device. Once connected, the pull down device list will change to display any status messages from the device and the values measured.
- Turn Off – Disconnects the connected spectrophotometer. Alternates with the Activate button.
- Add – Select this to append to the list for each reading. If this is not selected, the last reading is updated. This is available after the device has successfully connected.

Measurement / Loaded Set Panels

The Measurement and Loaded Set panels show the following information:

- Colour – A swatch visually representing the colour.
- Name – The name of the colour. This can be edited by clicking in the name field.
- Values – the Measured (Lab) values of the colour or the (colourspace specific) values of the Loaded Set colour.

The Measurement Panel displays these additional data fields:

- Lch – the Lch values of the measured colour.
- Lab (above the list) – shows the Lab values of the currently selected measured colour.
- Xyz (above the list) – shows the xyz values of the currently selected measured colour.

In addition, the Loaded Set panel displays the following:

- ΔE /CIE94/CMC (1:1)/CMC (2:1)/Delta L/Delta a/Delta b – These columns list the relative deltas of the loaded set colours when compared to the selected, measured colour.
- Space – The colourspace of the colour (Lab or CMYK).
- Mode – The paint mode of the colour.
- Tint – The tint value of the colour.
- DotGain – The dotgain curve assigned to the colour (if any).

Export Menu

The Export menu allows for the measured values to be exported to a space or tab delimited file. Save all or only selected entries and select the format for export:

- Lab – Export just the Lab values.
- XYZ – Export just the XYZ values.
- Lab XYZ – Export the Lab values followed by the XYZ values on the same line.
- XYZ Lab – Export the XYZ values followed by the Lab values on the same line.
- Separate Values With – Choose if the values are to be separated with spaces or tabs.

A contextual (right-click) menu in the Measurement / Loaded Set panels has the option to Delete (a selected colour); Delete All (measured colours); Print (the measured/loaded set to a system device); and Font Options.

Studio

The Studio application allows for the manual nesting or tiling of jobs that are processed and output by Megarip. Any jobs to be nested or tiled are submitted to an asset queue before they can be used in Studio.

Unlike other queued jobs, assets exist only as placeholder thumbnails until a nest or tiled job is submitted for printing from Studio.

Submitted assets are visible in the Asset Queue in the QueueManager and remain, even after printing, until deleted via Studio or the QueueManager.

Studio Interface

Studio is made up of four (4) main sections:

- Asset Panel – Displays any submitted asset files available for nesting and/or tiling.
- Media Panel – Define the printable media (paper) area for nesting and access tiling options.
- Layout Area – Where any jobs (assets) are placed for nesting and/or tiling.
- Additionally, the Box Properties can be set to appear in the left section at the bottom. Default is set to be a floating box. To lock it into the Side Panel go to the Studio menu > Studio Settings and un-tick the Floating Box Properties checkbox. When the blue and white [i] icon is selected from the Toolbar, the box properties will load into the panel.

A toolbar is available for quick access to a range of options and functions listed in the Studio menus. The toolbar can be toggled on or off and may be positioned at the bottom or to the right in the Studio screen (see Studio Settings).

Sections of the toolbar can be hidden by right-clicking on the toolbar and unticking the appropriate section.

Asset Panel

The Asset panel displays all jobs that have been submitted as an asset to the Asset Queue. Any assets that appear may be used in Studio for nesting or tiling. The assets are low resolution placeholder thumbnails until such time as the nest is submitted for print. Place assets in the Layout area by selecting from the list and drag+drop. Assets can be selected singularly or in multiples.

The Asset header bar has the following view options:

- List View – Display assets in text form (filename/jobname). A thumbnail preview of the image will appear at the bottom of the panel when highlighted in the list.
- Small Thumbnail – Display the assets as small thumbnail images with the jobname listed beside them.
- Large Thumbnail – Display the assets as large thumbnail images only.

Right-clicking in the Asset panel shows the following options:

- New Folder – Create a new folder to place assets in.
- New Folder with Selection – Create a new folder containing any currently selected assets.
- Rename Folder – Rename the selected folder.
- Remove Folder – Remove the folder from the list. Any assets in the folder will not be removed but will move to the top level.
- Remove From Folder – Remove the selected asset from the folder and move it to the top level.

- Move to Folder – Move the selected folder to another folder, selected from the dropdown.

Asset Folders are opened:

- In text view – Double-click on the folder name.
- In text and icon view – Double-click on the folder. The name will appear to the right of the folder.
- In Icon only view – Double-click on the folder. The name of the folder will not be visible in this view, however mouse hover over the folder will display the folder name.

To exit/close a folder:

- In text view – Double-click on the up arrow.
- In text and icon view – Double-click on the folder icon. An up arrow will appear next to it.
- In Icon only view – Double-click on the folder icon.

Folders can be backed-up with a Client backup. The contents (assets) are not included but folder location will be remembered when the Client backup is restored, and any assets will be moved to their folder location.

A searchable field is available at the bottom of the panel. Enter text to find a jobname containing the text string. Non-relevant assets are temporarily filtered out of the view as the string is typed. This search field will not be available when Large Thumbnail view is selected. Clear the search box to view all assets again. If you are in a folder, it will only filter within that folder.

Sort – A dropdown menu is available to sort any assets by Name (Ascending / Descending) or Date (Ascending / Descending).

Media Panel

The Media panel is used to configure the onscreen representation of the printer media as a guide for job placement in the Layout area.

- Page Size – Select a pre-configured page size from the dropdown menu or enter custom dimensions.
- Manage Custom Sizes – This option allows users to create and manage custom page sizes for use in Studio. Any page sizes created here will also appear in the Media > Cut Sheet page size options in the Workbench and in the Signature Groups > Grid page size section.
- Width – The width of the media being used for printing. If Tiling mode is enabled, this is also the tile width.
- Height – The height (length) of the media being used for printing. If Tiling mode is enabled, this is also the tile height. Note: The Height can be left at zero (0) when using roll media as the Layout paper guide will automatically adjust the length as assets are placed. If set to 0 when tiling, the height will snap to the image placed in the tiling area.
- Template – Displays the name of the template (if any) currently loaded in Studio. The name will be italicised if a change is made to the template, for example removing a frame, and it has not been saved. The field will be blank if no template is loaded.
- Tiling – Enable / disable Tiling mode. Click the Settings button to configure options.
 - Settings – Opens document settings which must be configured when using Tiling mode.
 - Width – Total width of the area to be tiled. This is a required field.
 - Height – Total height (length) of the area to be tiled.

Note: The height can be left at 0 in which case the document height will snap to the image placed in the tiling area.

- Tiling Overlap – Enter the image overlap amount for each tile.

Layout Area

The Layout area is where any jobs (assets) are placed for nesting or tiling.

The area is surrounded by a ruler, marked with the user-defined measurement units and appropriately scaled to the current zoom level. All assets and frames are shown at accurate, relative size.

The dark gray area is the work surface onto which assets are placed and positioned. The lighter gray area is the defined, printable media area (see Media panel). When Tiling mode is enabled, the edges of the total area to be tiled appear on the work surface as a red outlined box.

Menu Options

Studio Menu

- Load New Template – Opens the Load Template Window. A list of available templates will appear to the left with a visual representation of the template on the right. Select the template to load and click OK.
- Save New Template – Saves the current frame layout to the template library. Only empty frames are saved, not the images within them. A popup will appear to enter a name for the template.
- Save Template – Opens the Save Template window. This option saves the current nesting layout to the selected template in the library, overwriting any existing data.
- Remove Template – Opens the Remove Template window. Remove the selected template from the library list.
- Template Info – Opens a window to display a list of available templates. Selecting a template will show a visual representation of the template to the right. Selecting OK will display the template permissions, date the template was modified and the date created. Permissions can be changed by an administrator if required.
- Export Template – Export a saved template or templates to a user-defined location.
- Import Template – Import saved templates. The imported template, or templates if multiple layouts exist in the file, will appear in the Template list when loaded. Select Load New Template after import to view any templates.
- Print / Print Tiles – Displays a chooser window to select a Media and Pagesetup combination to send the job to for processing. The option to enter a Job Name when submitting to print is available in the Submit window.

Studio Settings

- Cloak Submitted Frames – Locks images and frames after they have been submitted for processing, preventing changes. Cloaked images will appear shadowed.
- Auto-place – Allows for automatic placement of assets on to the Layout area when dragging and dropping them. The default position is top left (0,0). If a job has already been placed in the area, the auto position will align with the left side of the frame.
- Frame Spacing – The distance (gap) between jobs being auto-placed in the Layout area.
- Minimise Cuts for Auto-arrange – Aligns auto-arranged frames in a way that minimises the number of horizontal and vertical cuts required to separate the individual jobs after printing. This option may use more media (paper) when nesting.
- Snap to Grid – Allows for assets to snap to a user-defined grid spacing, measured from the left ruler. The asset frame will snap to the closest defined grid position, taking into account any auto-place spacing settings.
- Grid Size – Define the snap-to-grid size for frame placement in the Layout area.

- Cropmark Type – Select the type of cropmark to apply to any cropmark enabled frames. Choose from Default (Standard), Paper-saving or Border.
- Visual Warning – Enabled by default. Options include:
 - Overlap – Display a dashed line around any assets placed in the Layout area that have overlapping frames.
 - Out of Bounds – Display a dashed line around any assets placed in the Layout area that are outside the defined media.
- Toolbar – Set the location of the toolbar to either bottom (default) or right side of the Studio screen.
- Floating Box Properties – Enable or disable the Box Properties as a floating box or locked in the left panel when open.

Edit Menu

- Undo – Undo the last change made. The amount of available undo levels is configured via the Client Settings (0 = Operating System default level).
- Redo – Redo the last undone change. The amount of available redo levels is configured via the Client Settings (0 = Operating System default level).
- Revert Template – Reloads the last opened template in the Layout area. Any changes made to the previous layout are removed. Useful if using the same template for different assets.
- Cut – Cut the currently selected frame to the clipboard.
- Copy – Copy the currently selected frame to the clipboard.
- Paste – Paste the frame/s in the clipboard to the Layout area. Paste is centred at the current mouse pointer position.
- Delete Assets – Delete any selected assets from the Studio application and the Asset Queue.
- Delete Layout Assets – Delete any assets currently in the Layout area from the Studio application and the Asset Queue.
- Create Frame(SHIFT+0) – Create an empty frame in the Layout Area. Default size is 7x5in.
- Create Crosshair (SHIFT+1) – Create a frame in the Layout area containing a configurable crosshair. Click on the ... box within the Frame panel in the Box Properties window to view further options.
- Create Horizontal Line (SHIFT+2) – Create a frame in the Layout area containing a configurable horizontal line. Click on the ... box within the Frame panel in the Box Properties window to view further options.
- Create Vertical Line (SHIFT+3) – Create a frame in the Layout area containing a configurable vertical line. Click on the ... box within the Frame panel in the Box Properties window to view further options.
- Create Colour Box (SHIFT+4) – Create a frame in the Layout area containing a configurable colour. Click on the ... box within the Frame panel in the Box Properties window to view further options.
- Create Text Box (SHIFT+5) – Create a frame in the Layout area containing configurable text. Click on the ... box within the Frame panel in the Box Properties window to view further options.

Note: For all Create options a frame will appear at the current mouse pointer location if using the shortcut keys. If selected from the menu, the frame will appear in the centre of the current Layout view.

Frame Menu

- Bring to Front – Move the selected frame to the front (top) layer of the nesting layout.
- Bring Forward – Move the selected frame one layer forward (up) in the nesting layout.
- Send Backward – Move the selected frame one layer backwards (down) in the nesting layout.
- Send to Back – Move the selected frame to the back (bottom) layer of the nesting layout.
- Clear – Clear the contents of the selected frame.
- Pin – Pin the selected frame/s to the current location. This stops the user from moving the frame, but an asset can be dropped into empty pinned frames and contents modified. Auto-arrange, rotation, and alignment options will override any pinned frames.
- Unpin – Unpin the selected pinned frame/s.
- Edit Crop – The selected frame will enter Crop mode. Double-clicking on a frame will also enter Crop mode.
- Group – Group multiple selected frames for movement, deletion, locking or asset multi-drop. Grouping is ignored if auto-arrange/ auto-arrange with rotation are used.
- Ungroup – Ungroup any currently grouped frames.
- Align Left – Align selected frames along the left edge of the leftmost box in the selection.
- Align Right – Align selected frames along the right edge of the rightmost box in the selection.
- Align Top – Align selected frames along the top edge of the uppermost box in the selection.
- Align Bottom – Align selected frames along the bottom edge of the lowest box in the selection.
- Align Horizontal Centre – Align selected frames along the averaged horizontal centre line of the frames.
- Align Vertical Centre – Align selected frames along the averaged vertical centre line of the frames.
- Orient Up / Down – Alter the frame orientation to either upright or upside down (180 degrees).
- Orient Right / Left – Alter the frame orientation to either right or left by 90 degrees from the upright position.
- 90CW – Rotate the frame and contents 90 degrees clockwise.
- 90CCW – Rotate the frame and contents 90 degrees counter-clockwise.
- Rotate – Rotate the frame Content (only) by the positive or negative angle (###.##°) entered in the popup window Angle field. A selected frame can be rotated freehand by holding Alt+left click, then dragging the pointer.

Note: This option will increase the horizontal and vertical dimensions of the frame. Rotation and freehand rotation are only available on the frame style Frame.

- Lock – Lock the selected frames. Locked frames appear transparent and cannot be edited until unlocked.
- Unlock All – Unlock all currently locked frames.
- Decloak All – Decloaks all frames. Allows for movement, deletion or editing of frames that were locked/cloaked after submission (only available when Cloaking mode is active).
- Select All – Selects all frames in the nest layout area for grouping, ungrouping, movement, locking or deletion. Frame properties may be adjusted and will affect all selected frames and their positions within the Layout area.
- Select Inverse – Deselects currently selected frames while selecting all previously unselected frames.

- Step and Repeat – Create a set of user-defined frames for image placement, or copy dimensions of existing frames and repeat them across and down the Layout area. Step and Repeat can also be used to create an empty template. If an asset is placed into a frame prior to step and repeat, both frame and asset are repeated when selected.
- Auto arrange – Automatically arranges (nests) the images placed in the Layout area to fill the media dimensions.
- Auto arrange with Rotation – Automatically arranges (nests) the images placed in the Layout area to best fill the media dimensions by appropriately rotating the frames.

View Menu

- Zoom In – Zoom in to the Layout area view. Holding down Z+left click will also enable this mode.
- Zoom Out – Zoom out of the Layout area view. Holding down Shift+Z+left click will also enable this mode.

Note: Holding down CMD (Mac) or CTRL (Win) and scrolling the mouse wheel over the image will allow for zoom in and out functions.

- Fit All – Scales the Layout area view to show all frames currently in the nest.
- Fit Tiling Document – Scales the Layout area view to show all assets and frames within the dimensions as defined in the Media Panel > Tiling Options.
- Print Size – Shows the nest in the Layout area at actual print size.
- Fill with Tiling Document – Scales the Layout area, filling the view to the shorter width or height dimension as defined in the Media Panel > Tiling Options.
- Clear Guides – Clear any guides from the Layout area.
- Guides – Enabled by default. Create a guide by clicking in the horizontal or vertical ruler section of the Layout area and dragging the guide to the desired location. See the “Guides” section for further information.
- Box Properties – Displays the Group, Frame and Contents properties for any assets and frames placed in the Layout area. The window can remain open, floating above any assets for quick access to precise editing of frames and images, or it can be locked into the left panel via the Studio Settings > Floating Box Properties option. See the “Frames vs Content” section for further information.
 - Group – Allows for the accurate positioning of grouped frames only.
 - Frame – Displays editable properties for the frame that holds the asset (image/job).
 - Contents – Displays editable properties for the contents (asset) placed into any frame.
- Job Names – Toggle this option to display the name of each job (asset) placed in the layout area. Names are displayed at the top edge of each frame.
- Clear Layout – Clears the Layout area of all frames and assets, including resetting the Media panel dimensions.
- Full Screen – Toggle between a windowed or full screen view.
- Sidebar – Toggle the view of the sidebar containing the Asset, Template and Media panels.
- Section Headers – Toggle the headers of each section within the sidebar on or off.
- Toolbars – Toggle the toolbar on or off. Select which sections of the toolbar to show or hide by ticking/unticking the available sections.

As an added option, holding down the spacebar will allow for panning around the Layout area when moving the mouse, similar to navigation used in graphics applications. The mouse cursor will change to a hand when this mode is enabled.

Guides

Guides are a useful tool when placing asset images into the Layout area for printing. Enabled by default, guides are created by clicking in either the horizontal or vertical rulers of the Studio Layout interface and dragging a guide in to the desired location. Guides are saved with a template design in the library.

- To move or reposition an existing guide – CTRL (win) / CMD (mac) + click on the guide and drag it to a new location.
- To snap guides to grid – CTRL / CMD + shift + click on the guide and drag it to a new location. The guide will snap to the closest grid point.
- To remove all guides – Select View menu > Clear Guides. • To remove a single guide – CTRL / CMD + click on a guide and press delete (not backspace), or CTRL / CMD + click + drag the guide back in to the appropriate ruler.
- To enter a precise location for a guide – CTRL / CMD + double-click on a guide to open a dialog box and enter the ruler location for either horizontal or vertical guides.

Note: If Guides and Snap to Grid are both active, the asset frame will snap to the guide first if the frame edge is closest, otherwise it will snap to the grid point. Guides are ignored if Auto arrange or Auto arrange with rotation options are used.

Templates

Templates are a useful tool for anyone needing to make repeat prints using a specific layout for the available media. Studio gives users the opportunity to create and store a library of templates, set to specific sizes, styles and orientations.

Templates are saved when a Server backup is performed, or can be selectively archived using the Archives application via the Add to Archive menu options.

Loading Saved Templates

Templates (nesting layouts) can be loaded from the template library by selecting Load Template from the Studio menu.

The Load Template window will display any available templates. Selecting a template in the list will display a visual representation of the template to the right.

Select a template and click OK to open, or double-click the name of the template.

Assets dragged in to an empty frame are resized to fit or fill, are rotated and cropped according to the frame settings. A single asset dragged in to a selected frame grouping will be duplicated and placed into every frame within the group.

Creating Templates

Templates can be created from an existing asset file or by utilising the Step and Repeat function within Studio. Both methods are outlined below. Media dimensions, guides, frame positions and styles are saved.

Create a Template from an Existing Asset

1. Select Submit menu > Files as Assets to add the job as an asset.
2. Navigate and select any files to use in Studio. Once the asset appears in the Asset panel they are ready to be used.
3. Select an asset and drag+drop it in to the Layout area.
4. Adjust the size and properties for the frame if required. The frame may be copied and pasted in the Layout area for quick duplication, or use the Step and Repeat function.
5. Save the template when finished. This does not save the images within the frames, only the empty frame and its various properties.
6. To load the template, go to Studio > Load Template. Select the template and OK, or double-click the name. An empty frame set of the nest will appear in the Layout area, ready to accept any asset files dropped in to the frames.

Create a Template using Step and Repeat

1. Go to the Frame menu > Step and Repeat option, or select the Step and Repeat icon in the toolbar.
2. Enter the required dimensions, spacing and number for horizontal and vertical distribution. Frames will automatically appear in the Layout area as values are entered.
3. Select OK when done.
4. Select single or multiple frames and adjust their properties as required via the Box Properties option.
5. Save the template when finished.

Note: If the Step and Repeat function is used when there are multiple frames selected with varied sizes, all frames will be repeated in the Layout area. The size dimensions in the Step and Repeat window will not be editable.

Frame vs Content

Assets placed in the Layout area are always contained within a separate frame.

The **Frame** controls the size, position, style and orientation. Frames in the layout area will display a floating info bubble when selected or when hovering the mouse pointer over them. The bubble displays the asset name, its current orientation, and the width and height dimensions of the frame. The information updates dynamically when resizing with the mouse.

The **Content** relates to the actual asset placed inside the frame. If an asset is dropped into the empty Layout area, it is automatically assigned a frame.

Both Frame and Content can be edited via the *Box Properties* popup window.

Frame Properties

- Left – The offset distance of the frame from the left guideline. Offset is measured from the top left corner of the frame.

- **Top** – The offset distance of the frame from the top guideline. Offset is measured from the top left corner of the frame.
- **Width** – The width of the frame. This field will lock when Canvas Wrap is selected.
- **Height** – The height of the frame. This field will lock when Canvas Wrap is selected.
- **Lock Button** – Locks the current proportions of the frame size if resized along one dimension. The locked proportions are overridden by free resizing with the mouse within the Layout area. Frames can be unlocked and resized to any required dimension.
- **Cropmarks** – Enable to add cropmarks (as defined in Studio Settings) to the selected frame. Cropmarks are enabled by default when Canvas Wrap mode is in use.
- **Overprint** – Enable to convert the selected frame to overprint mode. Not available when using Canvas Wrap.
- **Style** – The style of frame, (Frame, Canvas Wrap, Marker, Frame with Border, or Text). Click the ... button to configure options for Canvas Wrap and Marker modes.
- **Canvas Wrap** – Convert the selected frame to a canvas wrap. Configure properties via the ... button.
- **Marker** – Convert the selected frame to a marker. Configure properties via the ... button.
- **Frame with Border** – Create a border around the selected frame of user-defined size and colour. Configure properties via the ... button.

Content Properties

Content within Studio refers to the actual assets placed within a frame. Content is editable when in Frame and Canvas Wrap modes. It is not available for Marker mode.

- **Left** – The offset distance of the asset image from the left edge of the frame. This is available when in Crop mode.
- **Top** – The offset distance of the asset image from the top edge of the frame. This is available when in Crop mode.
- **Width** – The width of the asset within the frame.
- **Height** – The height of the asset within the frame.
- **Lock Button** – Locks the current proportions of the content if resized along one dimension. The locked proportions are overridden by free resizing with the mouse. Content can be unlocked and resized to any required dimension when in Crop mode.
- **Scaling** – The method of scaling used for an asset placed within a frame.
- **None** – The asset is shown at actual size inside the frame, irrespective of what size the frame is.
- **To Fit** – The entire asset image is rescaled and shown within the frame proportions.
- **To Fill** – The asset expands to fill the frame, scaling to show as much of the image as possible given the proportions and centring options of the frame.
- **Custom** – The dimensions and frame offset for the asset are independent of the frame (similar to Crop mode). This method is automatically selected when in Crop mode.
- **Centring** – When enabled, any selected frames will have their asset centred within the frame. This is useful for reverting to the original placement when undoing any cropping.

- Orientation (dropdown) – Change the orientation angle of the frame Content, selecting from 0°, 90°CW, 90°CCW, 180° or Angle°. If Angle° is selected, the Content is rotated by the positive or negative angle (###.##°) entered in the pop-up window Angle field.

Note – the Angle° option will increase the horizontal and vertical dimensions of the Frame. Angle rotation is only available on the frame style Frame.

Canvas Wrap

The Canvas Wrap mode allows for the asset to be transformed into a canvas print, ready for stretching around a wooden (or other) frame.

Cropmarks are enabled by default when Canvas Wrap mode is in use. This is to assist in cutting the canvas. Set the type of cropmark to be used in Studio via the Studio Settings option.

Note: Cropmarks (Standard) will take up extra space around a job when selected for use, changing the position of the job on the media and the total size of the job once rendered. Paper-saving cropmarks will not expand the overall rendered job size.

Canvas Wrap Options

- Front width – The width of the front of the canvas.
- Front height – The height of the front of the canvas.
- Frame thickness – The thickness of the canvas frame (wooden or other). The default size is 1.25in.
- Back wrap – The length of canvas to wrap around the back once the canvas is stretched around the frame. The default size is 20mm. This will remain as an unprinted area unless Print Back Wrap options are selected.
- Print Back Wrap – Prints the currently selected wrap style to the back wrap in addition to the frame sides of the canvas.
- Wrap style – The style of canvas to create. Further options are:
 - Gallery – This is the default canvas style, stretching the image to expand to the frame thickness as defined.
 - Mirror – Mirror the edges of the image to the frame thickness as defined.
 - Colour – Select a colour to fill the frame thickness as defined. Double-click the colour display box to select a colour from a Special Colour Set (Blackmagic only), or create a colour using the Lab, CMYK or RGB sliders.
 - Pick from screen (eyedropper button) – Activates an eye-dropper tool to select a screen/image colour to apply to a Colour wrap style. Hover the pointer to see RGB values and a colour swatch of the current colour. Left-click to select. This option is only available when using RGB as the selected colourspace.
- Save – Saves the Canvas Wrap configuration but will not change the size of the asset (image) to fit the dimensions specified if they have been altered.
- Fit & Save – Fit the asset to the configured Canvas Wrap settings and save the layout, returning to the Studio screen.

Note: If multiple canvasses are to be printed, a quick and easy method of duplicating a finished canvas is to use the Step and Repeat function.

Marker

The Marker mode allows for the placement of a frame containing a style of marker in the Layout area.

- Crosshair (Shift+1) – Create a frame containing a configurable crosshair.
- Horizontal Line (Shift+2) – Create a frame containing a configurable horizontal line.
- Crosshair (Shift+3) – Create a frame containing a configurable vertical line.
- Colour Box (Shift+4) – Create a frame containing a configurable colour.

Note: For all create options, a 1x1 inch frame will appear at the current mouse pointer position if using the shortcut keys. If selected from the menu the frame will appear in the centre of the screen.

When in Marker mode, click on the ... box within the Box Properties popup window to view settings for each marker style.

Options include:

- Marker Type – Select from Crosshair, Horizontal Line, Vertical Line or Colour Box.
- Line Thickness – Set the thickness of the line for Crosshair, Horizontal and Vertical Line options. Does not apply for Colour Box.
- Line Colour – Select a colour for the line or box as selected above. Double-click the colour display box to select a colour from a Special Colour Set (Blackmagic only), or create a colour using the Lab, CMYK or RGB sliders.
- Pick from screen (eyedropper button) – Activates an eye-dropper tool to select a screen/image colour to apply. Hover the pointer to see RGB values and a colour swatch of the current colour. Left-click to select. This option is only available when using RGB as the selected colourspace.

Note: If a frame is selected in the Layout area and Marker is chosen from the Style dropdown menu, the frame and image within will be replaced with the selected Marker.

Frame with Border

Frame with Border allows for the asset to have a colour border applied to the outside of the frame. It is best practice to apply the style of Frame with Border before any other editing of the frame.

- Frame thickness – The thickness of the border applied to the frame. The default size is 0.5cm.
- Colour – Select a colour to fill the frame thickness as defined. Double-click the colour display box to select a colour from a Special Colour Set (Blackmagic only), or create a colour using the Lab, CMYK or RGB sliders.
- Pick from screen (eyedropper button) – Activates an eye-dropper tool to select a screen/image colour to apply. Hover the pointer to see RGB values and a colour swatch of the current colour. Left-click to select. This option is only available when using RGB as the selected colourspace.
- Save – Saves the configuration.
- Fit & Save – Fit the border to the configured settings and save the layout, returning to the Studio screen.
- Save as Defaults – Save the current settings as the default option when Frame with Border is selected.

Text

Text allows for a frame to contain configurable text with a transparent background. Options are available via the ... button and include:

- Text – Enter the text to appear in this field.
- Font – Select the font from the dropdown menu. Available fonts include Helvetica and Times New Roman.

- Orientation – Set the text orientation from 90CW, 90CCW, or 180 degrees.
- Transparency – Set the desired level of transparency for the text. Default is 0% (solid, opaque). 100% will render the text invisible.
- Text Colour – Select a colour for the text. Double-click the colour display box to select a colour from a Special Colour Set (Blackmagic only), or create a colour using the Lab, CMYK or RGB sliders.
- Pick from screen (eyedropper button) – Activates an eye-dropper tool to select a screen/image colour to apply. Hover the pointer to see RGB values and a colour swatch of the current colour. Left-click to select. This option is only available when using RGB as the selected colourspace.
- Save – Saves the configuration.
- Cancel – Cancels any changes made.

Using Studio

Positioning Assets for Nesting

A media guide sheet will appear to scale (in light gray) in the Layout area when width and height dimensions have been entered in the Media panel. This allows for clear and simple placement of assets for nesting.

When submitted to print, everything on the media guide sheet is printed. If only a width is entered (for example, using roll media), once an asset is placed in the Layout area the media guide sheet will automatically lengthen to fit the job. As more assets are placed, the sheet will extend to display the total nesting area.

Note: It is not necessary to have dimensions entered for the media when creating a manual nest in Studio. When submitted, the nest will print to the selected media from the top left origin point, printing as much of the width or length of the nest as the paper in the printer will permit. The remainder will be cropped.

Creating a Nest

Studio allows for single or multiple assets to be dropped in to the Layout area.

1. Select the assets (jobs) from the Asset panel.
2. Drag and drop the assets in to the Layout area. Assets will appear at their native size unless placed in an empty frame with specific properties (via template or Step and Repeat).
3. Resize and adjust the frame and asset as required. This can be done via the Box Properties window or by using the following mouse options:
 - I. Left click (on a frame) – Selects the frame for editing, movement, locking or deletion. Selected frames are highlighted by a magenta border.
 - II. Left click (on empty Layout area) – Deselects all frames.
 - III. Left click (hold) + drag (on empty Layout area) – Creates a temporary framing box for selecting multiple frames. Any frames wholly or partially within the box when the mouse button is released will be selected.
 - IV. Left click (hold) + drag (on a frame) – Moves the selected frame around the Layout area. Release the mouse button to drop and place the frame.
 - V. Right click – Opens the contextual menu with options, depending on where in the Layout area the click occurred.

VI. Double click (on a frame containing an asset) – Activates Crop mode for the selected frame. A frame in Crop mode will appear with a green border (see Cropping Assets for more information).

VII.Spacebar + Left click (hold) – Activates the Grip tool which allows for panning around the Layout area. The mouse cursor will change to a hand when in this mode.

Resizing Options

The following resizing options are available when clicking at the borders of a frame.

- Left click + drag – Enlarge or shrink the frame. Proportions are maintained. Resize is anchored at the opposing edge or corner of the frame.
- ALT + Left click + drag – Enlarge or shrink the frame. Proportions are maintained. Resize is anchored at the centre of the frame.
- Shift + Left click + drag – Free resizing of the frame, ignoring locked width/height ratios. Assets within the frame will fit or fill the resized frame depending upon frame settings. Resize is anchored at the opposing edge or corner of the frame.
- CTRL + Left Click + drag (Windows) – Snaps the frame proportions to the assets native proportions and resizes. Resize is anchored at the opposing edge or corner of the frame.
- CMD + Left click + drag (Mac) – Snaps the frame proportions to the assets native proportions and resizes. Resize is anchored at the opposing edge or corner of the frame.

Grouped frames can be resized by selecting an edge or corner of the group and dragging the mouse. All contents within the group are resized proportionally. Canvas Wraps will not be resized if part of a selected group.

Rotating Frames

In addition to the menu, rotation buttons and Content Orientation dropdown, selected Frame (or Grouped frames) can be rotated using the mouse pointer within their borders.

ALT + Left click + drag – Changes the orientation angle of the frame contents, rotating them around the centre point of the frame.

Note: This option will increase the horizontal and vertical dimensions of the Frame or group. Freehand rotation is only available on the frame style Frame.

Cropping Assets

Crop mode is activated or deactivated by double-clicking anywhere within a frame containing an asset image, or by selecting a frame and clicking the Crop mode button in the toolbar.

When activated the frame changes from magenta to green and a second frame with an orange border is assigned to the asset. Cropping can only be done one frame at a time. Multi-select image cropping is not available.

Either the frame or asset can be selected and moved, or resized as required. Double-clicking the frames again will show how the asset will be cropped. If the frame is resized larger than the asset within, the space around the asset will also be printed to the size of the entire frame.

Cloaking and Nesting with Large Format Flatbed Devices

One of Studio's primary functions is the laying out of jobs for print using large format flatbed printers.

When activated, the Cloaking feature locks images and frames after they have been submitted as a nest to the printer. Cloaked images appear shadowed in the Layout area, are static and non-editable unless decloaked. This allows for easy placement and printing of new jobs on to blank, available areas of the flatbed media. Cloaked images are not reprinted when a new nest is submitted for printing.

If desired, it is certainly possible to place jobs over others that have already been printed. Any new image will print exactly where it is placed, regardless of whether or not anything has already been printed in that area.

Important: The cloaking feature is disabled by default. It is not recommended for use with printers using roll media unless the device has the ability to roll back to previously unused areas of media.

Tiling with Media

Studio's tiling feature allows users to set the total document area and automatically create a tile grid based on pre-configured print media dimensions and overlap.

Tiling is useful for billboard printing, or any type of printing where the image is larger than the available print media (paper).

To Tile a Job:

1. Activate the Tiling mode by ticking the Tiling option in the Media panel.
2. Click on the Settings button to configure the tiling parameters.
3. Document Width/Height – These are the dimensions of the image to be tiled. If a height is not entered the tiling document height will automatically match the height of the asset to be tiled.
4. Enter any overlap size if required.
5. In the Media panel, enter the width and height (optional) of the printer media to be used. This is the tile size. If a height is not entered, such as when using roll paper, the tile height will match that of the tiling document.
6. The tiled area will be outlined by a red border.
7. Once tiling has been configured, place the asset to be tiled in the Layout area and resize as required.
8. Submit the job to print when ready. The print option will appear as Print Tiles in the Studio menu.

Note: Cropmarks and alignment marks are automatically added to any tiling jobs when submitted via Studio.

Studio Rendering Effects

There are various rendering effects available when using Studio. They will not be visible in the Layout area and will only affect the job when it is rendered, ready for printing. Any effects can be previewed using SoftProof once the job has been rendered and nested.

The available rendering effects are:

- Cropmarks – Available as a checkbox within the Studio application. Enabling this will place cropmarks around the selected frame. This effect will adjust the placement of the job on the media to compensate for adding cropmarks during the rendering phase. The type of cropmark to be used is configured in the Studio Settings.
- Convolution Matrix – Available via the Jobticket (see Workbench data types). Allows you to design your own filter effect according to a pre-defined mathematical operation known as convolution. This effect is not available when using the C5 Client.
- Image Overlay – When enabled, this effect allows a Blackmagic Image, JPEG, PNG, PPM, Photoshop or TIFF file to be placed anywhere on the job. Settings include width, height and opacity for the overlaid image

plus options to allow it to stretch and rotate with the job. Available via the Jobticket. This effect is not available when using the C5 Client.

- Mirror – Available via the Jobticket. Mirrors the job.
- Negative – Available via the Jobticket. Allows for the job to be negated or inverted. Useful for printing to film using a white ink printer.
- Unsharp Mask – Available via the Jobticket. Applies an unsharp mask to the submitted job. This effect is not available when using the C5 Client.
- Watermark – Available via the Jobticket. Allows for the placement of a watermark across the job. This effect is not available when using the C5 Client.
- ColourKeys and Screenprinting mode are also available when using Studio, accessible via the Jobticket and Media used for processing the job files.

Serendipity Client Menu Items

The Serendipity Client menus provide access to direct job submission options, system settings and extra functions.

Application Menu (Windows/Linux) or Serendipity Client Menu (macOS)

Preferences – Select this menu option to open the Client Settings (Preferences) for the Serendipity Client, containing default values and preferences configured for the Client and its applications and modules. See the System Settings > Client Settings section of this manual for further information.

Submit Menu

Submit Files

Select one or more files to send to a Media and Pagesetup for processing.

Selecting Open will present the Submit dialog window displaying a list of Pagesetups available. Additional Media and Jobticket tabs are also displayed.

Choose the Pagesetup/Media and optional Jobticket combination to submit any files to for processing and click Submit. The files will be copied into the system for processing.

Flow control can be enabled to hold the job after imaging or rendering. The number of copies can be set, or jobs can be placed as pages in a publication.

Submit Window

The Submit window is comprised of a settings preview panel to the left; a main panel for selecting a Pagesetup/Media/Jobticket combination; and a submission control panel.

Selected Settings Preview Panel

This panel displays the currently selected Pagesetup, Media and optional Jobticket items. A summary appears when a Jobticket is attached to display any custom settings to be used when processing the job. The panel can be hidden by clicking on the information icon at the bottom of the screen.

Pagesetup/Media/Jobticket

The Pagesetup Panel lists all available Pagesetups. Select one from the list to submit a job.

The Pagesetup / Pool buttons (top right when in Pagesetup panel) toggle between available Pagesetups and Pagesetup Pools. When Pool is selected the Media list button is disabled. Jobs submitted to a Pool always use the Pagesetup default Media.

The Media Panel lists any Media items compatible with the selected Pagesetup. Select a Media to which the job will be submitted. If a Media is not selected, the default Media shown in the Settings preview panel is used.

The Jobticket Panel lists all available Jobticket items. Select a Jobticket to use when submitting a job. If a Jobticket is not selected, the default system settings will be used. If a Jobticket is already assigned to the selected Pagesetup, its settings will be used.

A configuration (Edit) button is available within Jobticket to make any custom changes to an existing Jobticket, or to create a new one. Options include:

- Defaults – Load the system default Jobticket settings.
- Save – Save the edited Jobticket to the database. A dialog box opens with options to save over the existing Jobticket or rename it and save as a new one. Once saved, the user is returned to the Jobticket list.
- Discard – Close the Jobticket Edit window and return to the Jobticket list, discarding any changes.
- Done – Save the edited settings to a temporary Jobticket for the job currently being submitted.

Submit Options

The lower section of the Submit window contains the flow control, copies and publication options available for any submitted files.

Flow Control

- Hold after Imaging – Hold the job after the imaging stage has completed.
- Hold after Rendering – Hold the job after both imaging and rendering stages have completed.
- Nest – Submit the job for imaging and rendering then on to be nested with other jobs. Nesting criteria are defined in the Output (see Workbench > Output).
- Duplex – Submit the job for imaging and rendering, then to be duplexed with other jobs. This option is only available to printers capable of duplexing. Duplex options are defined in the Output (see Workbench > Output).
- Rotate 90 – Rotate the job 90 degrees. This will override any rotation settings in a Jobticket.

Copies

- No. of copies – Enter the number of copies of the job to be output (printed).
- Lock button – Locks the number of copies to be output (printed) for any files submitted until unlocked and changed.

Publication

- Publication Name – Optional. Enter a publication name to which the submitted file will be assigned. The job will be viewable in the publication view of the QueueManager.
- First Page – Enter the page number for the submitted file in the publication. If submitting multiple files, the page numbering will start at the defined page and increase sequentially for each job.
- Submit – Press Submit to send the job for processing using the selected options.
- Cancel – Cancel the job submission, closing the Submit Window.

Note: The Serendipity Client stores the last Pagesetup, Media, and Jobticket selections so they need not be selected every time a job is submitted.

Job name – When submitting a job from Studio, the option to enter a job name is available.

Submit Files as Asset

Select files to send to the Studio application Asset queue. Submitted Assets appear in the QueueManager queue as thumbnails, but are not processed until submitted for printing from the Studio application (see Applications – Studio for more information).

Submit ICC Target

This is the standard option that should be used when calibrating a printer Media and submitting an ICC target to generate an output ICC profile. Files submitted using this option utilise the Paper Profile, Linearisation LUT and Correction LUT in the Media but are not ICC corrected.

Note: This is the standard option for submitting an (EPS or TIFF) ICC target chart used for creating an output ICC profile when calibrating a printer Media.

Submit ICC Target Without Colour Correction

Submit an ICC Target to a selected Pagesetup/Media/Jobticket combination. All ICC options and colour correction curves are disabled.

Note: This option works in a similar way to “Submit ICC Target” however, all Linearisation data will be disabled at the time of submission, unlike Submit ICC Target which enables colour correction curves. The job info will display Calibration Target, ICC Disabled in the Properties field.

Test Prints

Send a Megarip Test Print to one or more Pagesetups/Medias. Select which test print(s) to submit by ticking the checkboxes beside each file name in the Submission area of the Submit window.

Note: You can add your own files to the lib/testprints directory for use as test prints. Any files you have permission to use that are placed in this directory will appear for selection in the Test Prints chooser window.

Test Prints as ICC Target

Submit one or more internal test images as an ICC target (as per option above). This allows users to store a commonly used ICC Target chart in the “lib/testprints” folder for easy access when calibrating Media.

Server Menu

Server Settings

Select this menu option to open the System Settings (Preferences) for the Serendipity Server. The Systems Settings section contains default values and preferences configured for the Server. See the Server Settings section below for further information on each panel.

Connect to Server

This allows the Serendipity Client to connect to a Megarip Server running on the network. The Refresh button will search for and display any active Servers. Alternatively, you can enter the name or IP address of the Server in the Server Address field under the Manual tab.

If there are multiple Servers (Masters) running on the network, the list is cached on the first “Connect to Server” selection. A dropdown list of available Servers is accessible via the Auto Detect tab. If a new Server appears after this time, the Refresh button must be pressed to find and add it to the list. Likewise, if a Server becomes unavailable, the connection will fail and the list will require a refresh.

When the Serendipity Client is started, it will attempt to connect to the last Megarip Server accessed by default.

Accounts Admin

Accounts Admin allows an authorised administrator to create, modify and manage User accounts and User Groups. Users can be reassigned to groups dependent upon the operating privileges granted to each User Group. See the Accounts Admin/Secure Mode section below for further information.

Log Out (Secure Mode only)

This menu item only appears while Megarip is in Secure Mode (see Accounts Admin/Secure mode for more information). Selecting Log Out while using Megarip in Secure Mode simultaneously logs out the current user and generates the Login window. At this point, the options available are to enter a username and password; Choose Server before login; and to Quit the Megarip Client.

While the Login window is displayed, the Megarip Client is effectively LOCKED to all users. The Server will continue to operate as normal.

Chatterbox

Chat to other users connected to the same Server. The Chatterbox window will display the Clients connected to the Server. If the user has entered a nickname in the System Settings, this name is displayed; otherwise the machine name is used. If the user’s name cannot be selected, the user has selected the Away option and is not available.

Broadcast Message

This allows messages to be sent to all users connected with a Client to the same Server. Selecting the Broadcast option displays a message window to type into and send. The message is displayed on the users window for a short time and will automatically dismiss if it is not acknowledged by clicking OK.

Download PPD

This option downloads the Megarip PPD from the Server to the desired location. A chooser will appear to navigate to the location for saving the PPD file on the drive. This saves having to get the PPD off the disk. Use the PPD when installing a local printer. When installed, the Megarip PPD (Postscript Printer Description) is selected as the printer driver when setting up a Megarip Published Pagesetup as a print destination for third party applications (see Workbench – Pagesetup and the Publish to a Windows Printer sections for more information).

Accounts Admin / Secure Mode

Megarip gives users the option to login using Secure Mode, which allows the administrator to create accounts for users and groups, with each group configured to allow or deny its users access to particular applications and functions.

When Secure Mode is active, users are required to enter a username and password whenever the Client is started or users are changed. The username and password are both case sensitive.

The Accounts Admin menu option is selected in order to display the panels for configuring any Users and Groups and these should be created prior to activating Secure Mode.

The Log Out option only appears once Secure Mode has been activated. Selecting this while using Megarip in Secure Mode simultaneously logs the current user out and generates the Login window with options to login as a new user and select a Server to connect to, or Quit the application. While the Login window is displayed, the Client is effectively locked to all users. The Server will continue to operate normally.

Setting up Users and Groups

Megarip's Secure Mode is set inactive by default. The software will continue to function normally whether or not Secure Mode is activated.

Important Note: It is recommended all users and groups requiring access be setup BEFORE activating Secure Mode. Secure Mode cannot be activated until at least one (1) user has been created. This would usually be the Admin account, as this is automatically created when the Accounts Admin option is selected for the first time.

Select Server menu > Accounts Admin to display the configuration panels.

Activating Secure Mode

Once the initial user account(s) have been setup, Secure Mode can be activated by checking the tick box located via Accounts Admin menu > Accounts Admin Settings.

Secure Mode can only be activated or deactivated by an administrator (a member of the Admin group).

- Secure mode – Enable or disable Secure Mode.
- Mail Server – Enter the details of the mail server for error notification emails when using Secure Mode.
- Sender Email Address – Enter the details of the Sender (From) address for error notification emails.
- Default Asset Ownership – Set the level of permission for users and groups when an asset is submitted for use in the Studio application via the Asset Queue Drop Folder.

Activating Secure Mode

Secure Mode should be activated after any users and/or groups have been created. Only an administrator or member of the admin group can activate or deactivate Secure Mode.

To activate:

1. Select Accounts Admin menu > Accounts Admin Settings.
2. Tick the checkbox at the top of the screen – Secure mode – to activate or deactivate.
3. Click OK and close the settings when done.

4. If activating Secure Mode, a login window will appear as soon as you close the Settings.

If Email Notifications are setup for users:

1. Enter the mail server details in the Mail Server field. This is the outgoing SMTP server.
2. Enter the email address for the Sender (From) field of the email in the Sender Email Address field.

Configurations Panels Users Panel

- Name – The username of the account. This is case sensitive.
- User ID – This is a numerical ID assigned automatically but may be changed by the administrator.
- Password / Verify – The password is entered and stored here. New passwords must be verified by entering the details in each field. The password is also case sensitive.
- Permission – The level of permission for the user is created here. Click Edit to make changes to the user read/write/execute permissions. Note: The Group (second line) and “Everyone” permissions in the Edit popup determine whether jobs submitted by a user are able to be seen/edited/deleted in the QueueManager by other users in the same user group, or by users outside the group.
- Email – Enter the users email address here.
- Comment – Allows the administrator to enter a note on the particular user account if necessary.
- Group (dropdown) – Assign a user group to the user account.
- User Privileges – Privileges other than those in the user’s group can be added here.
- Notifications – Select which email notifications the user is to receive by clicking the + icon or remove any via the – icon. Notifications are available for Job Spooling failure, Job Autodetection failure, Job Imaging/Rendering failure, Job Printing failure, Dongle removal, Server Crash, Media Remaining warnings, Software Updates available, and Maintenance Expiration reminders.

Note: Notifications will be sent to the nominated email address/es when the Server is running. Maintenance expiration reminders are sent out when the maintenance cover is 30 days or less.

To create a user:

1. Click the + icon in the bottom left of the window. To delete a user, click the – icon.
2. Enter a username in the Name field.
3. Enter a User ID number or leave the default value.
4. Create a password for the user and verify the details. The password boxes will always display black dots irrespective of the length of your password.
5. Edit the permission level to the required access level.
6. Enter the user’s email address (if notifications are required).
7. Add a comment against the user if necessary.
8. Assign a Group for the user. A default group “users” is assigned automatically unless another is selected. The “users” group allows access to the Client but no other functions except job submission. The user may be assigned to multiple groups via the Groups tab if limited access is required (for accessing specific applications and/or functions).

9. Add any extra privileges to the user if required. This will only show privileges not included in the group selected for the user.
10. Add any notifications to the user if required.
11. Apply the changes or select Revert to cancel.

Groups Panel

An **admin** User and Group are created by default with access to all permissions and privileges when the Accounts Admin option is selected for the first time. **The admin user and group cannot be deleted.** It is recommended this be the only group with access to the Accounts Admin application.

The fields within the Groups panel are:

- Name – The name of the Group.
- Group ID – This is assigned automatically but may be changed by the administrator.
- Comment – Allows you to enter a note on the particular user group if necessary.
- Group Privileges – This is a list of available privileges relating to functions within Megarip.
- Members – A list of Usernames and IDs belonging to the Group.

To create a group:

1. Click the + icon in the bottom left of the window. To delete a group, click the – icon.
2. Enter a name in the Name field.
3. To add privileges, click the + icon in the Group Privileges panel. A popup list will appear with all available items. To add, highlight the privilege/s and click OK.
4. Click Apply to save any changes to the group or Revert to cancel.

Assigning Users to a Group

Users are assigned to the groups via the **Users** or **Groups** panel. Once you have created the user group, click on the Users panel.

1. Select the User Name from the list of users.
2. Select the Group to assign the user to from the Groups dropdown menu.
3. Click Apply to save any changes or Revert to cancel.

Once the user group has been created, click on the Groups panel (if not there already).

1. Select the Group from the list on the left.
2. In the Members panel, click the + button.
3. Select any users to be added to the Group.
4. When finished, click Apply.

Hosts Panel

The Hosts panel allows for the configuration of automatic Client logins for selected host computers or network IP addresses when using Secure Mode.

The fields available are:

- Name – Enter a name for the Host setup.
- Hostname/IP – Enter the Hostname or IP address of the computer the user will automatically connect to.
- Automatic Login – Disable or Select a User from the dropdown list. Only one user may be selected per Host setup.

System Settings

The Systems Settings section contains default values and preferences configured for the Server and Client. The settings are split into two (2) different sections – **Server** and **Client**.

Access the **Client** Settings via the Application menu (Win) or Serendipity Client menu (Mac). Access the **Server** Settings via the Server menu.

Client Settings

The Client settings are divided into three (3) tabbed categories: Colour, General and Shortcuts.

Colour tab

- Input CMYK Profile - Select a default Match ICC profile for accurate display of CMYK data.
- CMS Dithering – Disabled by default. Enable for smoother results whenever conversion between 16-bits to 8-bits is required.
- Force Relative Colourimetric Media White - Various ICC profiling packages and some older ICC v2 profiles included an Lab value for media (paper) white in the Relative Colourimetric Intent LUT. This has the effect of printing a paper layer when printing with Relative Colourimetric rendering intent. When enabled, this option ignores the Lab value for paper in the Relative LUT, leaving paper white areas unprinted.
- Output Screening Spots – Set the number of Special/Spot plates available in the Media > Output Screening when printing separated plate output using Screen Print mode. The Workbench application must be closed and reopened if this is changed.

Monitor Settings

- Calcheck Managed – Enabling this will display the current calibration status of the selected monitor. When selected, there will be a small icon showing a green tick or a red cross. This icon is shown in the bottom right corner of the SoftProof window. Its status depends on the expiration time of the monitor calibration (as set below) and the Calcheck status.
- Use Native Profile – Enable this to use the operating system defined ICC profile for colour management. The Client will use the monitor profile as setup for the operating system, i.e., Mac OS will use what is in the Display Preferences Colour tab, Windows will use the Display Adapter Settings.
- Profile – Select a monitor ICC profile for the display the Client is running on. The profiles are used so any colour element viewed on the display is shown as accurately as possible. This includes SoftProof and any colour swatch. It is recommended the monitor be calibrated and set to the same match profile as is used for the softproofing Pagesetup.
- Resolution – Choose the default resolution to use for the monitors. This is used in SoftProof for calculating various fit methods. Options include:
 - Use System Settings – The Client will calculate the system's monitor resolution.
 - Custom Resolution – Specify your own resolution.
 - Calibration Expires – Set a reminder to popup when a calibration needs updating.

Additional Monitors

Specific settings may be set for each monitor when in a multi-monitor environment. The Client Settings will show additional sections with Monitor 2, Monitor 3 etc listed. To identify which monitor is which, press the monitor indicator button to display a graphic in the middle of the screen for the relevant monitor.

Calcheck Managed

The Calcheck Managed option (under Colour Management) constantly reports the status of the monitor used for softproofing.

When this option is enabled a small tick or cross icon representing the Calcheck status will be displayed at the bottom right of the SoftProof window in the status bar.

General tab

- Language – Select your preferred language from those available. This displays all Client and log messages in the chosen language. The default is English. A restart is required if the language setting is changed.
- Default Font – Set the font and size to be used by the Client.
- Undo Levels – Set the number of levels for Undo. The default is zero (0), which means no restriction.
- Default Units – Set the measurement units used by the Client and all of the Applications/Modules.
- Theme – This dropdown menu allows the selection of an overall visual theme for the Serendipity Client. The available options are:
 - Light – Client appears in the standard Light Mode. The option matches how the Client appeared in previous versions of the software.
 - Dark – Client appears in Dark Mode, appearing predominantly in black/grey tones with white text.
 - System – Optional item depending on operating system. Client matches the light/dark appearance configured for applications in the operating system settings. This is the default Theme setting.
- Show Tooltips – Enable or disable tooltips within the Client.
- Turn Sound FX Off – Check this to disable the sound effects. Sounds are used for things such as drag and drop, and error message alerts.
- Nickname – Enter a nickname to use when accessing the Chatterbox application.
- Temp (button) – Set the temporary path for scratch/temp files on the local drive. Useful if using SSD (solid state drive) as operations will perform faster.
- Reset – Reset the location of the temp directory to the operating system default.

Shortcuts Tab

This tab displays a list of the Applications and Modules for which keyboard shortcuts can be created.

Note: It is the responsibility of the user to check the created shortcuts do not conflict with any other Megarip, third party software, or operating system shortcuts/hotkeys.

To add a shortcut:

1. Highlight the selected application or module in the list.
2. Use the Edit option in the context menu (right click) or click in the Shortcut field to the right of the application/module name.
3. Type in the key or key combination for the shortcut and press Enter.

4. The shortcuts will now appear in the Application and/or Modules menu of the Client.

To remove a shortcut:

1. Highlight the selected application or module in the list.
2. Use the Clear option in the context menu (right click); or
3. Click in the Shortcut field and delete the shortcut.

Server Settings

Server settings are saved to the Server and are common to all connected Clients. The Server settings are divided into tabbed categories – Process, Colour, Options, Paths and Debug.

Process tab

- **Tasks** – Control the number of processes the machine will handle, i.e., the number of Imaging and Rendering tasks simultaneously run on the Server. The defaults are 1/1. Up to one imaging and rendering task can be set per CPU core the Server machine possesses. In practice, it is recommended the combined number of imaging and rendering tasks be set to no more than the number of cores. For example, 4 CPU cores = 2 Image/2 Render.
- **Compression** - Set the compression level for the intermediate file formats (the imaged and rendered files). Choose from Fast, Standard, Better, or Best. The default is Standard.
- **Multi-resolution generation** – When enabled, the Server generates imaged and rendered preview files that include a pre-calculated pyramid of preview images (at power of 2 intervals), resulting in much faster zooming when softproofing.

Note: This option slightly increases image and render times and increases the disk size of the preview by approximately one third. Options include:

- **None**
- **Fast** – Default option. Suitable for the majority of workflows, this option slightly increases image and render times and increases the disk size of the preview images by approximately one-third.
- **High Quality** – This option can be used in the rare circumstance that moire or unwanted antialiasing appears in a SoftProof preview. This option further increases image and render times, file size and results in slightly slower zooming.
- **Maximum Print Preview Resolution** – Set the maximum resolution for the rendered preview. The default is 196 dpi.
- **Low Quality Thumbnail** – Selecting this produces a lower quality thumbnail. This is faster but some detail may be lost in the thumbnail.
- **Default Jobticket** – Assign a system default Jobticket. This Jobticket is used when submitting to a Pagesetup without an assigned Jobticket, or when no Jobticket has been previously selected in the Submit window. This is the Jobticket assigned when the “Apply Defaults” option is selected in the Submit window Jobticket editor.
- **Immutable Jobtickets** – When enabled, jobs in the QueueManager retain the Jobticket options they had when they were first submitted, even if the job’s ticket is subsequently changed. If the job is reprinted or re-rendered it will do so with the original Jobticket options. Jobticket information can be viewed by displaying the Job Info window for any submitted jobs.

Note: When selecting “Render with new Jobticket”, the immutable jobticket option is overridden.

Colour Tab

- Default ICC Profiles – Select the default ICC profiles used when first creating a new Jobticket (Input profiles) and Media (Output profiles).
- ICC Engine Accuracy – Select Faster or Better, depending on preferences.
- CMS Dithering – Disabled by default. Use CMS Dithering for smoother results whenever conversion between 16 bits to 8 bits is required.
- Force Relative Colourimetric Media White – Various ICC profiling packages and some older ICC v2 profiles included an Lab value for media (paper) white in the Relative Colourimetric Intent LUT. This has the effect of printing a paper layer when printing with Relative Colourimetric rendering intent. When enabled, this option ignores the Lab value for paper in the Relative LUT, leaving paper white areas unprinted.

Asset tab

- Publish Asset Queue – Enabled by default. When disabled, the Asset queue destinations will be hidden from any Output bonjour/zeroconf configuration options.
- AutoClean – Automatically delete assets from the queue based on times and/or number of assets in the queue. Auto-cleaning is performed the next time an asset is submitted after an auto-cleaning condition has been met. Options include:
 - Keep Most Recent – Set a number of assets. Megarip will keep that number of most recent submitted assets in the queue, automatically deleting any excess.

Note: If this is enabled and the number of assets is set to zero, assets will be deleted from the queue immediately after submitting, so no assets will ever be accepted.

- Keep Jobs Newer Than – Megarip looks at the time signature of submitted assets jobs and deletes any in the queue older than the specified (days/hours/min) time.

Options tab

- Default Units – Set the units used by the Server. Options are mm, cm, inches, points, picas, metres or feet.
- Server Back Log – Number of days to keep the log. Older days are trimmed when the Server starts. Zero (0) means the log will not be trimmed.
- Minimum Broadcast Interval – Set the interval between the Server sending out updates to connected Clients. The default interval is 2sec. High-end systems with good networking are able to set the interval to 0sec for slightly improved image/render times when processing large numbers of jobs. Sites using the Client remotely connected via the internet should set a longer polling interval of 10-20sec.
- Output Unknown Files to Printer – Output any unknown files direct to a printer. If this is unchecked, any unknown files will result in errors and will not be output.
- Log Printed Jobs – When enabled, this option will log completed print jobs in the Server log. The jobname and dimensions are noted.
- Web server – Disabled by default. Enable to allow access to the built-in web server. A Server restart is required for any changes to take effect. When Job Statistics are enabled, this must also be enabled.
- Calcheck History – Disabled by default. When enabled, all Job and Media calcheck results are stored in an internal database. The function enables a History button in the Calcheck application used to view stored results. **Note:** The database is backed-up as part of Backup Server function (see Server Options > Help menu).

- Job Statistics – Enable (along with the Web server option) to collect job statistics in an internal sqlite database file.

Paths tab

Paths lists the default location of the working paths the Server uses to process jobs.

- Raster – Holds all the imaged, rendered and print jobs while they are live in the system.
- Spool – The location where the job is spooled prior to processing.
- Temp – After spooling, the job is moved to the temp directory where it is worked on.
- Drop – The default location for the DropFolders.
- Asset Drop – The default location for the Asset DropFolder (if set).

The Raster directory holds all jobs while they are in the system and as such, can be very large. If this is moved it needs to be placed on a disk with plenty of space. A Server restart is required if any paths are changed in order for the changes to take effect.

Important Note: All existing files in the new working path directory are deleted when the Server is restarted. Ensure the new working path directory has no essential data. A warning message will popup to confirm whether to proceed with the path change.

Debug tab

The Debug tab contains options used only when advised by Serendipity Software support for assistance in technical issues.

Do not enable the options unless advised by Serendipity Software, as the Server speed will be substantially reduced if they are.

- Colourspace Dump.
- Screening Dump.
- Memory Dumps.

Web Server

The Megarip Server has a built-in web server. Accessed via a web browser, the Web Server provides status information about the Server and jobs currently in the system. It cannot be used for submitting or managing files in the system.

Accessing the Web Server

To connect:

1. Enter the IP address or machine name (if using DNS) of the computer running the Server in the browser window, followed by a colon and the port number 8080. For e.g., 192.168.3.43:8080
 2. Press Enter once the address has been typed in. If you have a DNS server, you can type the machine name instead, e.g., papaya:8080
 3. Once connected, the front page will appear with an options menu at the top right:
 1. Queues – Shows all the queues configured on the Server you are connected to.
 2. Server Log – View the log file.
 3. System Info – Displays information about the system.
- Queues – Click on any of the queues to get information about jobs in that queue. Information about the job, including name and current status will be shown.
 - Log File – To view the log file, select the option from the list on the left. From here, you can select a particular time period to fetch from the Server. Once viewed, you can print the file or save it to disk. The log can be printed, saved or exported from the browser.
 - System info – Choose this to display information about the system. Product Info, Licensed Modules – available printers and input drivers; and Available Destinations are shown.

The menus at the top of the page are linked to the live Serendipity Software website. You will need to have an active Internet connection for access to the support website function.

Publishing a Pagesetup on macOS

Megarip Pagesetup's can be set up as a macOS system printer destination to allow jobs to be easily submitted via the Print option of third party software or design packages.

Jobs printed to a Published Pagesetup will be automatically sent for processing and colour management in Megarip, eliminating the need for dropfolders or manual file submission.

Note: Jobs printed via Megarip in this way must be in a file input format available to your Megarip version.

Installing the Serendipity Printer Drivers

The first step when Publishing a Pagesetup for the first time is to install the Serendipity Printer Drivers for macOS. The installation package is located on the Megarip Installation DVD:

1. Navigate to the /drivers/mac folder and run the file Serendipity Printer Drivers.pkg
2. An installer window will appear. Follow the prompts to complete the installation of the drivers. The installer will require administrator access privileges.

Configuring a Pagesetup for Publishing as a TCP/IP System Printer

To configure a calibrated Pagesetup for Publishing:

1. In the Workbench, select the Pagesetup from the list of available data types.
2. Go to the Publish panel and enable the checkbox for TCP Port: Activate port number option.
3. Enter the TCP port number into the field and Save the Pagesetup.

Port Numbers

It is recommended that the port number assigned to a Pagesetup be a port over 10000 to avoid any conflict with the operating system or an existing application. Each Pagesetup to be published needs its own unique port number, for example, 10200, 10201, etc.

Media

When submitting jobs to a Published Pagesetup, the default Media assigned to the Pagesetup is used. If you wish to publish to different media on the same printer, each Media required needs to be assigned to its own Pagesetup, with its own unique port number.

Creating a TCP/IP macOS System Printer

A system printer needs to be created and configured on the macOS computer that is running the Megarip Server.

1. Open the System Preferences for the macOS.
2. Choose Print & Fax.
3. Click the + icon at the bottom of the printer list panel to create a new printer.
4. Select the IP icon at the top of the Add Printer window.
5. Protocol – Select HP Jetdirect - Socket from the dropdown menu.

6. Address – Enter the TCP/IP address and port information for the printer setup in the following format: Computer IPAddress:PagesetupPortNumber (see image for example). The IP address for the printer should not be used.
7. Name – Enter the desired name for the printer. It should be easily recognisable as a Published Pagesetup and/or the particular Pagesetup being published.
8. Print Using – Select Printer Software from the dropdown menu.
9. A list of available macOS system printer drivers will popup.
10. Either scroll down the list and select Serendipity Megarip, or type “Serendipity” in the filter field and select Serendipity Megarip and click OK.
11. Click Add to add the new printer.
12. Set the published Pagesetup “Printer” as the system default and/or share the printer on the network as required.

Configuring a Pagesetup for Publishing as a Bonjour Printer

To configure the Pagesetup for Publishing:

1. In the Workbench, select the Pagesetup to be Published from the list of available items.
2. Go to the Publish panel and enable the printer: Mac checkbox. This lists the Pagesetup in the macOS system Bonjour destinations as “Pagesetup name @ computer name”.
3. Save the Pagesetup configuration when done.

Creating a Bonjour System Printer for macOS

A system printer needs to be created and configured on the macOS computer running the Megarip Server.

1. Open the System Preferences for macOS.
2. Choose Print & Fax.
3. Select the Default icon at the top of the Add Printer window.
4. Choose the Pagesetup from the Printer Name list. The Pagesetup will be listed as Kind: Bonjour and named “Pagesetup name @ computer name”.
5. Print Using – If you have installed the Serendipity Printer Drivers, the Print Using field should auto-fill to show Serendipity Megarip.
6. If the Serendipity Printer Drivers have not been installed, cancel the printer setup and install the drivers as per the above instructions.
7. If the field does not auto-fill, choose Select Printer Software from the dropdown menu. A list of available macOS system printer drivers will popup. Either scroll down the list and select Serendipity Megarip or type “Serendipity” in the filter field and select Serendipity Megarip. Click Add.
8. Name – Enter the desired name for the printer. It should be named to be easily recognisable as a Published Pagesetup and/or the particular Pagesetup being published.
9. Click Add to add the new printer.
10. Set the published Pagesetup “Printer” as the system default and/or share the printer on the network as required.

Publishing a Pagesetup on Windows

Megarip Pagesetups can be set up as Windows system printer destinations to allow jobs to be easily submitted via the Print option of third party software or design packages.

Jobs printed to a Published Pagesetup will be automatically sent for processing and colour management in Megarip, eliminating the need for dropfolders or manual file submission.

Note: Jobs printed via Megarip in this way must be in a file input format available to your Megarip version.

Megarip Printer Driver

The first step before proceeding is to enable access to the Megarip.inf driver file. The Megarip printer driver is a proprietary Serendipity Software driver that Windows will use as the printer driver.

The file is located on the Serendipity Megarip installation DVD in the following directory: /drivers/win/win_xp_vista_7/

Configuring the Pagesetup for Publishing as a System Printer

To configure a calibrated Pagesetup for Publishing:

1. In the Workbench, select the Pagesetup from the list of available data types.
2. Go to the Publish panel and enable the checkbox for TCP Port: Activate port number option.
3. Enter the TCP port number into the field and Save the Pagesetup.

Port Numbers

It is recommended that the port number assigned to a Pagesetup be a port over 10000 to avoid any conflict with the operating system or an existing application. Each Pagesetup to be published needs its own unique port number, for example, 10200, 10201, etc.

Media

When submitting jobs to a Published Pagesetup, the default Media assigned to the Pagesetup is used. If you wish to publish to different media on the same printer, each Media required needs to be assigned to its own Pagesetup, with its own unique port number.

Creating a TCP/IP Windows System Printer

A system printer needs to be created and configured on the Windows computer that is running the Megarip Server.

1. Select Windows Start Menu > Devices and Printers.
2. Click on Add Printer. The Add Printer wizard will appear. • Select Add a Local Printer and click Next.
3. Select Create a New Port and Standard TCP/IP Port from the Type of Port dropdown menu.
4. Click Next.
5. Type a Printer or Hostname Address:
 1. Device Type – TCP/IP Device

2. Hostname or IP address – Enter the Network IP address of the Windows computer running the Megarip Server. (e.g., 192.168.3.59).
3. Port Name – Enter a name for the Windows port (this is NOT the printer name).
4. Uncheck the option to Query the Printer and Automatically Select the Driver to Use.
5. Click Next.
6. Additional Port Information Required:
 1. Device Type – Custom.
 2. Click the Settings button. A configuration window will appear.
 3. Configure Standard TCP/IP Port Monitor:
 4. Protocol – Select Raw.
 5. Raw Settings:
 1. Port Number – Enter the unique TCP Port number assigned to the Pagesetup to be published, e.g., 10201.
 2. Click OK. The window will close and return to the Additional Port Information window.
7. Click Next.

Install the Printer Driver:

1. If this is the first time installing a Megarip system printer, insert the Megarip Installation DVD and select Have Disk.
2. Navigate to the /drivers/win/win_xp_vista_7/ directory.
3. Select the Megarip.inf file and click Open. The Serendipity Megarip driver should now be displayed.
4. Click Next.

Note: The above step can be skipped for any subsequent installs of Megarip system printers. The driver can be chosen from the Windows printer driver list.

1. Which Version of the Driver do you want to use:
 1. Select Use the driver that is currently installed (recommended) unless you are replacing an older installed version of the Serendipity Megarip driver.
 2. Click Next.
2. Type a Printer Name:
 1. Enter a name for the printer. This is the name that will appear in the Windows Printers list and be available as a printer option when printing from Windows applications. The name should be unique for the Published Pagesetup.
 2. Click Next.
3. Printer Sharing:
 1. Select Share this printer so that others on your network can find and use it.
 2. Keep the default printer name or enter a share name.
 3. Click Next.

4. You've Successfully added "Printer Name":
5. Choose whether the Published Pagesetup destination is to be the default system printer.
6. If desired, click the Print a Test Page button. The test page job should appear in the Megarip QueueManager.
7. Click Finish to close the wizard.

Printing to a Published Pagesetup Printer across a Network

Printing from macOS → macOS, or Windows → Windows

Printing to a Published Pagesetup printer across a network where both computers (the machine sending the print and the machine running the Megarip Server) share a common operating system is straight forward. If network sharing has been enabled for the system printer destination created for use with the Megarip Pagesetup, the printer will be available in the printer options of any other computer on the network.

Printing from macOS → Windows, or Windows → macOS

Printing from a computer on the same network, but with a different operating system to the computer running the Megarip Server requires the creation of a new system printer on the computer wishing to print to Megarip. This is done by following the appropriate steps outlined previously for the relevant operating system. The only alteration is when entering the TCP/IP address and the TCP port number:

Enter the network TCP/IP address of the computer on which the Megarip Server is running, i.e., the machine you wish to print to.

Enter the TCP Port Number assigned to the Published Pagesetup you wish to print to.

Troubleshooting

Here are some suggestions of where to look if you run into trouble and experience problems when using a Cluster.

Jobs Not Processing Through a Cluster Node

The possible reasons for this are:

The Cluster Node is not configured to image, render or both. Check the ClusterStatus to see if either of the processing tasks have been disabled. To enable them, open the Clustering application and enable the appropriate task.

The Cluster Node has a Processing Pool attached and the Pagesetup you are submitting jobs to is not contained within the Pool. You can either unselect the Pool or add the Pagesetup to the Pagesetup Pool. The Cluster Node has gone offline. To check, open the Clustering application and check the node. If the Clustering application is already open, click the Refresh button. This will check for node status. If the node appears grayed out or disabled, this indicates the node is not currently online.

The Node and Master are different versions. The node should always be upgraded when the Master is to maintain the same versions in a Cluster.

Cluster Nodes Errors Log

The Cluster Nodes create an error log, which logs all the messages from the node. This is located in the Megarip installation directory on the node's own machine and is called "errors.log". This can be viewed with a normal text editor and can help to track a problem, or it can be sent to support for assistance in tracing a problem.

A Node Cannot Be Found

Once you have started your node successfully, you should be able to see it in the Clustering application. If not, you need to add the node manually. If this fails, there are a few things to check:

Verify the node is still running and the clock is still counting up. Check the error log for any messages.

Check that the Master machine can ping the node machine. If not, there may be a network issue and you will need to contact your network administrator for assistance.

Check the ports on the machines are open for the node to connect to the Master and they are not being used by anything else. The port numbers for the node are as follows:

9103/tcp – Server connects here and submits jobs via this port. 9103/udp – Listens to broadcasts so the Server can enumerate available Node Servers.

Make sure the node is the same version as the Master. Nodes (Megarip Slaves) should always be upgraded at the same time as the Master.

Printing to a Pagesetup on Windows

Here are some suggestions of where to look if you run into trouble and experience problems when printing. For all of the methods documented in this guide, test each step to see where the problems arise. For example, when a printer is created, try printing a test page.

Printing From Mac to Windows

When printing from a Mac to a shared Windows printer, there are a couple of utilities available to verify whether or not the printer is installed correctly and working. These are:

The CUPS printing system on the Mac has a web interface that lets you view and test printers. To access this, do the following:

1. Open a web browser and enter the following address: `http://localhost:631`
2. This will connect to the local print system.
3. Choose Manage Printers or select the Printers tab and the list of printers configured on the Mac will appear.
4. Scroll down the list to locate the printer. A detailed description of the printer is available here.
5. Print a test page to the Windows printer. This will determine if the connection from the Mac to the Windows device is valid. The test job should appear in the Windows print spooler.

As mentioned earlier, if a name is created with spaces or hyphens these are transposed to underscores for the actual printing device. Through CUPS the actual device name is shown.

The description still contains the spaces but the actual device being printed to has underscores. Another way to check the status is to use the terminal.

1. Open a terminal from the Applications > Utilities folder In the terminal type:`lpstat -p`
2. This will report on all printers configured on the Mac.
3. Search for your printer in the list and verify the name. The format will be like:
`printer my_printer_with_spaces is idle. Enabled since Jan 01 00:00`
4. Try and print from the terminal. Locate a print file (run a test job with the correct driver and find the file in the raster folder in the installation directory) and type the following on the command line:
`lp -P<printer> <jobname>`
5. For the example of a HP printer, we can type the following:
`lpr -Php_t1100_via_tanglefoot Quickcal_230166.rtl`
6. This should submit the rtl file created by the Server to the printer spooler.

You must be in the raster folder when the command is typed or if not, enter the full path to the file, for e.g., Applications/Serendipity/Serendipity Megarip/raster/Quickcal_230166.rtl.

The Mac Spooler Reports “NT_ACCESS_DENIED”

This means that the print system cannot access the printer. It may be that there are insufficient privileges for the user trying to connect, the username and/or password could be incorrect, or the username and password part of the string have been forgotten.

Client Error

When testing with lpr or from Serendipity Megarip and the error “client-error-not-found” is seen, it means it is unable to find the printer the file is being sent to. Check to make sure the name of the printer is correct. Unable to Print to Remote Windows Printer

This can happen from Mac or Windows.

If you are on a Windows machine and are creating a new printer to connect to the remote printer but it fails to find the path, make sure the remote printer is shared and the name is correct.

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