

Callisto Printer User Guide



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Neuralog Callisto Well Log Printer User Guide

Congratulations on your Neuralog Callisto Well Log Printer. This User Guide will get you printing well logs as quickly as possible, provide important information about printer features, and offer tips for workflow optimization and problem troubleshooting.

Note that the information in this User Guide may change as further printer development is done. Please check the Neuralog website for the latest updated documentation.

This User Guide provides answers to many questions about setup, operation and troubleshooting for the Neuralog Callisto printer. Please contact Neuralog support if you need further assistance.

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

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1. Setting up the Printer

The Callisto printer ships in a two-piece box and usually on a pallet. Unbox your Callisto printer and remove all packing materials. Make sure the printer is set on a sturdy table with plenty of room for both entrance and exit of well log media. If your printer includes a well log stacker, install it at the printer exit, making sure there is plenty of room for paper stacking. A Callisto setup video is available on the web.



The printer contains orange colored packing materials and blue packaging tape. Make sure to remove the orange ink cap and left/right orange service tray caps before turning on the printer. If these packaging materials are not removed and the printer is powered on, an error will occur and a motor stall message will be displayed on the operator panel. If this happens, turn the printer off and remove all packaging materials. Be sure to save all Callisto packaging materials in case you need to move or ship your printer to another location.

Once the packaging is completely removed, open the ink door and place the ink cartridges in the printer. New printers may ship with Setup cartridges that include a reduced amount of ink. Printer setup involves purging the ink lines to remove initial shipping fluid and filling the lines with ink; this step is performed at the Neuralog factory. Place the ink cartridges in the printer by lifting the ink door and pushing each ink into its corresponding color slot. Close the printer door when all ink is installed.

Connect the power and network cables in the back of the Callisto printer and plug them into the wall. Turn on the printer with the back power switch located next to the power port. The printer takes about 2 minutes to boot up. During this time, the blue LED power button on the printer front will blink and eventually remain solid blue. Once the back power switch is set to the ON position, the front power button should be used to turn the printer on and off.



As the printer is booting up, it will display the home screen of the operator panel shown. When the printer has finished booting, a *Printer Ready* status will appear in the lower left corner of the display. The printer is not completely booted up and ready for use until *Printer Ready* is indicated on the display.

The printer has handles on either side that allow it to be more easily carried if it should need to be moved. Keep in mind the Callisto printer weighs about 55 pounds and may require two people to lift and move it. If you need to move the printer to another location within the same room or building, no special packaging care is required. However, if you need to ship the Callisto printer, be sure to reinstall the original packaging materials.

2. Tour of the Callisto Printer

Callisto Printing Technology

Neuralog's Callisto Printer is based on state-of-the-art PageWide™ printing technology developed by Hewlett Packard. The 12-inch wide stationary printhead is made up of 14 individual printhead dies that work together to create a seamless print. Because the printhead is stationary, fast printing speeds, up to 18 inches per second (or 90 feet per minute), are possible. Note that speed is related to file resolution, complexity and width. Most well logs can be printed at 11-14 inches per second.

The Callisto printer also includes a precision encoder and mechanical drive system for accurate printing, a machined aluminum frame for light-weight robustness, and advanced media detection sensors and algorithms. Well log length accuracy should be 99.5% or better, and header placement should have no visible error. User-printer interaction is accomplished through a 7-inch touch display or through the printer's web server visible anywhere on your local network. The Windows-based printer driver provides built-in controls such as quality and speed selection, color tuning, and ink saving.

The following sections provide an introductory tour of the Callisto Well Log Printer and its various components.

Callisto Printer Media Entrance Side

Facing the printer front, well log paper is loaded into the printer on the right-hand side. The printer entrance has center-based adjustable guides to fit any size well log paper up to 12.1 inches wide. Full-scale, half-scale, and 12-inch wide well log paper can be purchased from Neuralog, and only Neuralog certified paper should be used in the Callisto printer. A lock nut allows the guides to be locked into place.

It is critical to allow adequate room for the well log media to enter the printer. Well log paper may be stacked at least 12-18 inches away on a table next to the printer entrance, or well log paper may be pulled from a box on the floor as long as there are no obstructions to the paper path. Make sure the paper box lid is completely removed and make sure there is no plastic in the paper box.

The Callisto Ink Door lifts out and up to access the ink cartridges. Lift the ink door to install and replace cartridges. The four high-capacity color cartridges slide into their respective slots and

snap into place. Only Callisto ink, available from Neuralog, will work in the Callisto printer. Once the ink is installed, the ink door must be completely closed and remain closed during printing. Note that it takes the printer a few moments to return to the *Printer Ready* state after the ink door has been open and closed.



Figure 2-1. Callisto Paper Entrance Side

Callisto Printer Media Exit Side

Well log paper exits the printer on its left side. Because the paper path is short and simple, a vacuum table is used to aid in holding the well log paper in place. It is critical to make sure there are no obstructions to the printer exit. The well log paper must be allowed to flow freely from the printer and not back up into the printer exit. If the paper is allowed to back up into the printer exit, it may hit and damage the printhead.

The 7-inch Touch Operator Panel allows the printer operator to interact with the printer. From this panel you can jog media, check ink and other status, view printer reports and version information, and even print jobs that have been stored on the printer. The Touch Operator Panel displays the printer status, printer network address and current date and time. Further details on this display are covered later in the User Guide.

The printer front blue LED power button indicates that the printer is turned on. Press this button to power the printer On/Off; the LED will blink during both printer bootup and printer shutdown. When printing the LED will blink each time a paper mark passes under the printer sensor.



Figure 2-2. Callisto Paper Exit Side

Callisto Printer Back Side

The back side of the Callisto printer contains the master power switch, the power port, and the network port. The master power switch will generally remain on because for normal operations the front power button will be accessed to turn the printer on/off. The Callisto printer is a network printer; therefore, the network port will be needed. If you wish to printer over USB, there are special USB-to-network adapters that are readily available.

The serial number of the printer can also be found on the back side of the printer. The serial number is available through the printer operator panel as well by clicking on the “?” symbol in the upper right corner of the display. All Callisto serial numbers begin with the letters CAL and are followed by a 7-digit number.

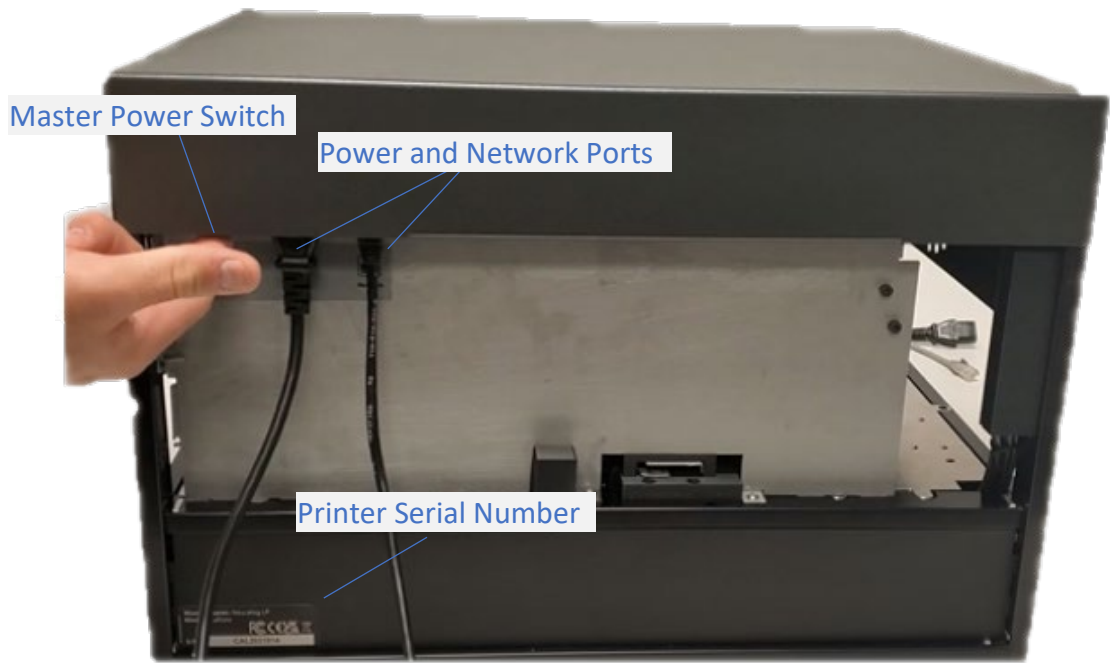


Figure 2-3. Callisto Back

3. Callisto Consumables

The Callisto printer uses four high-capacity ink cartridges to produce printed images and a replaceable service tray to absorb excess ink within the printer. Ink cartridges, the service tray, and well log paper make up the consumables used by the Callisto printer to create well log prints.

Ink

The Callisto Ink is a pigment-based water-resistant ink designed to make permanent well log prints. Approximate ink volume is listed below. The slight discrepancy in the color ink volume is related to drop size, and all colors are expected to produce approximately the same output; a black cartridge produces roughly twice the output.

Ink Cartridge	Volume (ml)	Dimension (cm)
Yellow	225	21.1x4.7x4.4
Magenta	233	21.1x4.7x4.4
Cyan	238	21.1x4.7x4.4
Black	498	21.1x9.45x4.4

Callisto ink may be purchased from Neuralog through the Neuralog online store or by sending your request to orders@neuralog.com.



Figure 3-1. Callisto Ink Cartridge Set

Ink Status

The status of the Callisto Ink Cartridges is available in the Supplies section of the printer operator panel. To check the cartridge ink levels:

- Touch the Supplies icon on the home view of the operator panel.

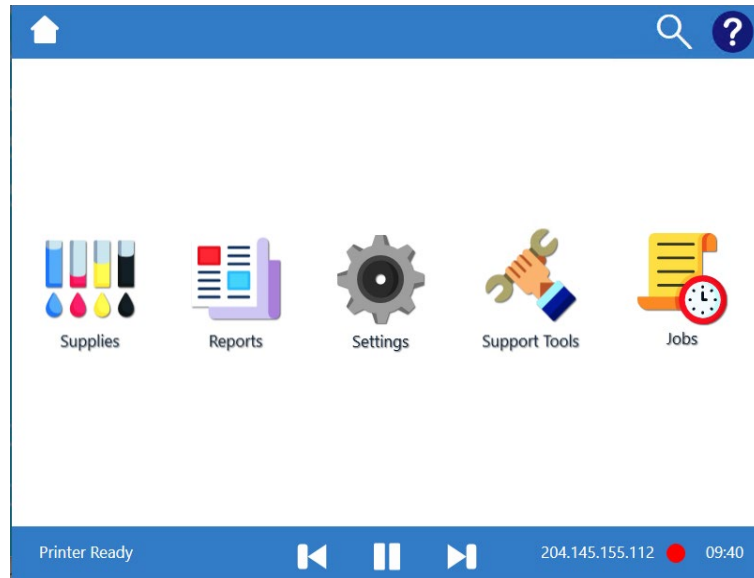


Figure 3-2. Callisto Operator Panel Home View

- Touch the Supplies Summary to see a summary view of all printer supplies.
- Notice the alert on any cartridge that is “Low on Ink”. This is a warning only.

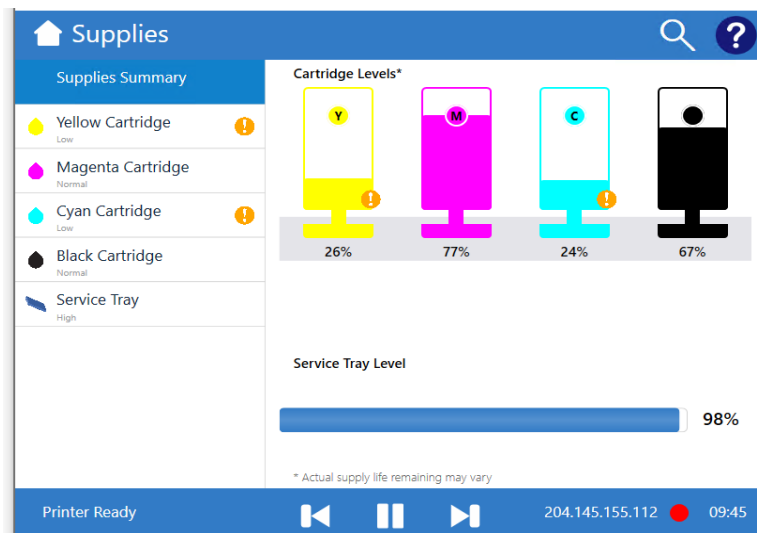


Figure 3-3. Supplies Summary View

- Touch an individual cartridge menu item to see a view of that ink supply.
- Notice the QR code for each supply. This code takes you to the Neuralog online store. You must create an account and login to the store to purchase supplies.

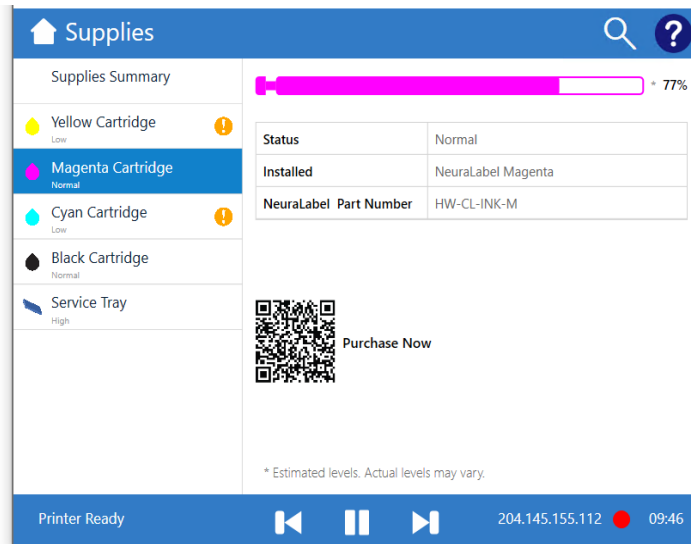


Figure 3-4. Cartridge Status

Ink Access

Callisto ink is installed in the printer by opening the printer ink door located to the right of the operator panel. Only open this door when the printer is in a ready state or powered off. Do not attempt to change Callisto ink when the printer is actively printing.

To access Callisto ink:

- With the printer in a Ready state or turned off, open the Callisto ink door by pulling up and out on the door handle. Whenever the door is open, the printer operator panel will display an *Ink Door Open* status in the lower left corner.



Figure 3-5. Callisto Ink Door

- Insert cartridges by pressing in until the cartridge snaps into place.
- Remove cartridges by pressing in until the cartridge snaps out of place.



Figure 3-6. Ink Cartridge Access

- When all cartridges are in place, close the Callisto ink door by pulling down and out until the door is in place.

NOTE: Whenever the door is closed, the Callisto printer goes through an ink checking routine that may take a few moments. The operator panel status will change from *Ink Door Open* to *Printer Ready* when the printer is ready.

Service Tray

The Callisto Service Tray helps to keep the stationary printhead clean by wiping off and absorbing excess ink. When printing and when running printhead cleaning routines, the Callisto ink system performs “spitting” and “wiping” routines to keep the printhead healthy. The service tSray has the job of absorbing excess ink generated from these routines.

All ink jet printers produce excess ink in a manner similar to this. The Callisto printer includes the ink collection system as a replaceable item to extend the life of the printhead and maintain print quality.



Figure 3-7. Callisto Service Tray

Service Tray Status

The status of the Callisto Service Tray is available in the Supplies section of the printer operator panel. To check the service tray levels:

- Touch the Supplies icon on the home view of the operator panel.
- Touch the Supplies Summary to see a summary view of all printer supplies.
- Touch Service Tray in the Supplies menu to see a view with the status of the service tray.

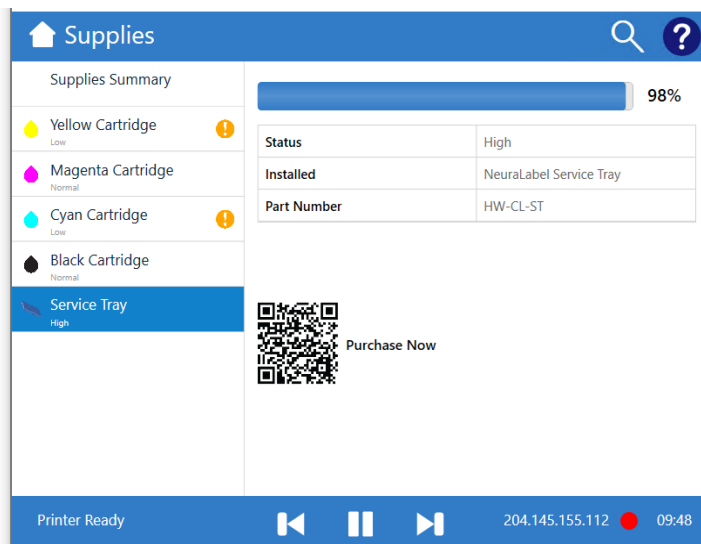


Figure 3-8. Service Tray Status

- Notice the QR code for the service tray. This code takes you to the Neuralog online store. You must create an account and login to the store to purchase supplies.

Service Tray Access

The Service tray will periodically need to be replaced.

To remove the service tray:

- Touch the Support Tools icon on the operator panel home view.
- Touch Maintenance and then Service Tray in the menu that appears.
- Touch Remove.
- Follow the instructions on the panel that appears and select the Eject button when ready to remove the tray.

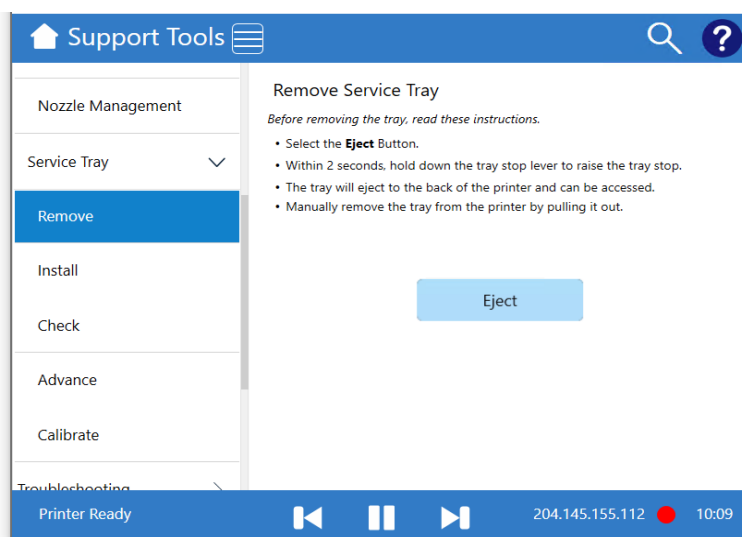


Figure 3-9. Service Tray Removal

To install a service tray:

- Touch the Support Tools icon on the operator panel home view.
- Touch Maintenance and then Service Tray in the menu that appears.
- Touch Install.
- Follow the instructions on the panel that appears and select the Install button when ready to install the tray.

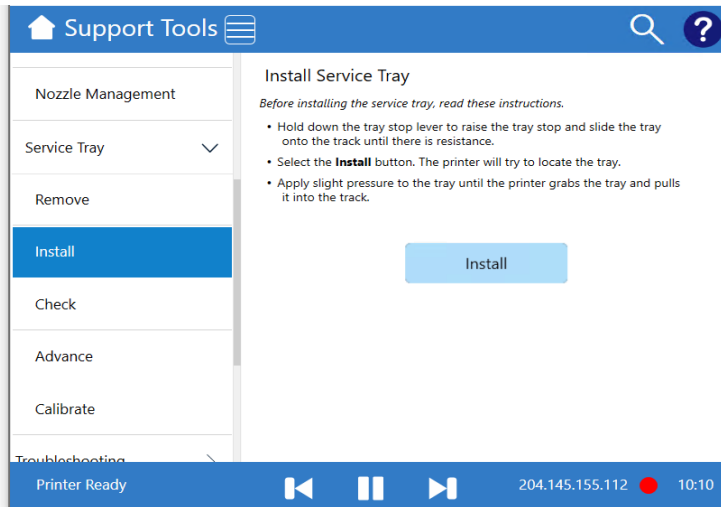


Figure 3-10. Service Tray Installation

Instructional videos can also be found on the Neuralog web site for removing and installing a service tray.

Well Log Paper

The Callisto uses high quality inkjet coated well log paper available from Neuralog. This paper has registration marks used by the printer's sensors to start the well log image in the correct location. Three sizes of well log paper are available from Neuralog. Adjustable guides on the Callisto printer accommodate each paper size.

- Full Scale Well Log Paper, 8.5 inches wide
- Wide Well Log Paper, 12 inches wide
- Half Scale Well Log Paper, 5 inches wide

Well log paper is loaded into the Callisto printer with the printable side facing up. The printer will automatically start the next log print at the proper location on the page. Note that 300x well log printer paper can be used in the Callisto printer. Paper made for the NeuraJet well log printer uses a different registration mark and is not compatible with the Callisto printer.

4. Setting up the Network

The Callisto printer is a network printer and connects to your local network. By default it will use a dynamically assigned IPV4 Address. A static address may be assigned or IPV6 may be used. Once detected, the network address will be displayed in the lower right section of the printer display. The Callisto printer will also attach and print directly to your PC via a network cable. If you need to print over USB, USB-to-network adapter cables have been found to work well for this kind of printing.

The Callisto printer has a Host Name that can be used to access it over the network. By default, the Host Name will be set to the printer's serial number, however the Host Name may be changed by the end user. Accessing the printer via Hostname is convenient when using dynamic addressing since the network address can change.

To access the printer's Host Name from the operator panel:

- Touch the Settings icon.
- Go to Settings->Device Settings->Networking->Host Name.
- Edit the Host Name if needed and touch Apply.

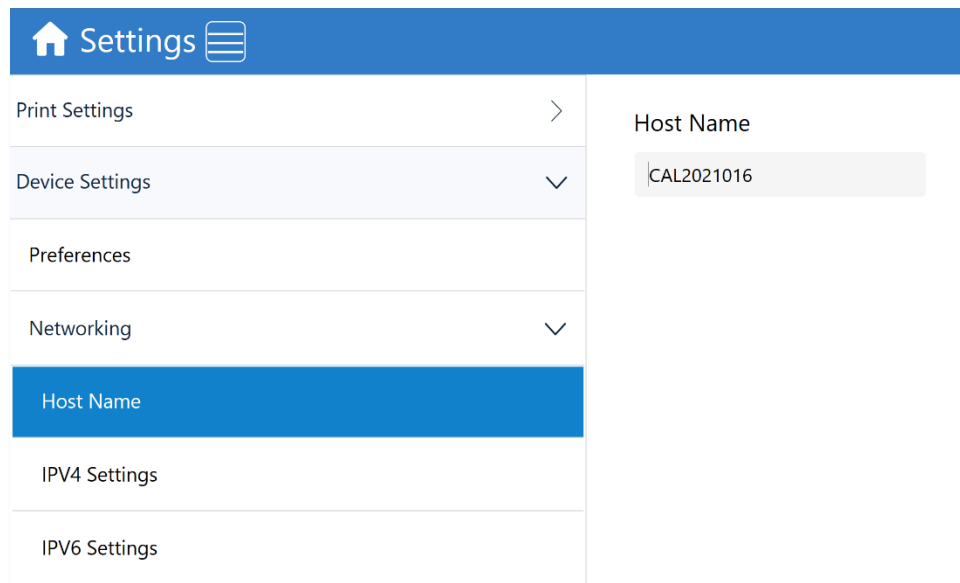


Figure 4-1. Host Name View

To assign an IPV4 *dynamic network address* simply plug in the network cable.

To assign a *static network address* do the following on the printer display using the touch interface.

- Go to Settings->Device Settings->Networking->IPv4 Settings.
- Select the Manual choice and enter the corresponding data.
- Touch the Apply button.

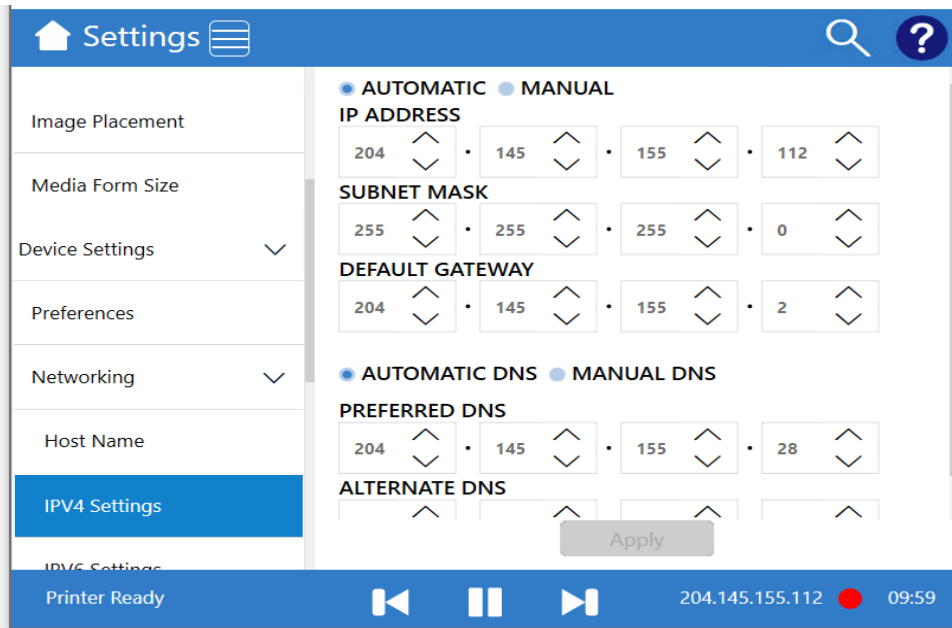


Figure 4-2. IPv4 Settings View

- Note that DNS is automatically determined by default, however DNS may be manually overridden as well.

To use IPV6, either dynamic or static, do the following.

- Go to Settings->Device Settings->Networking->IPv6 Settings.
- Select Automatic (default) or Manual IPVS.
- Select Automatic (default) or Manual DNS.

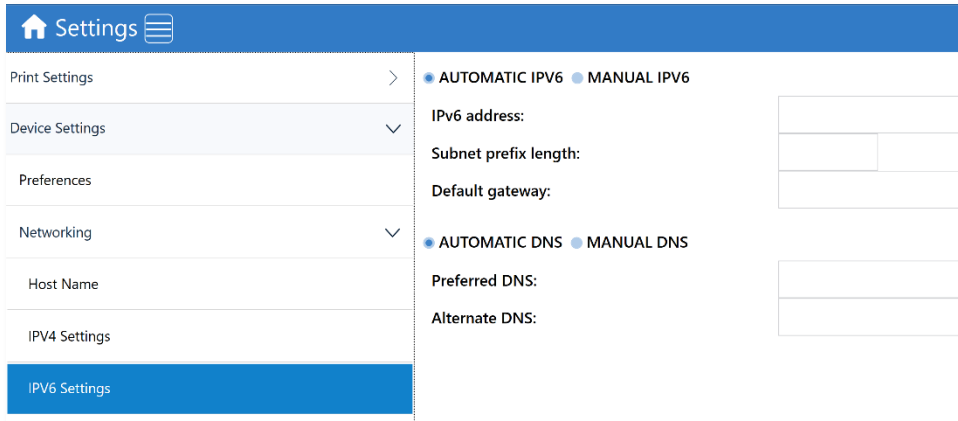


Figure 4-3. IPv6 Settings View

When connected to a network, the printer will display the network address in the right lower section of the operator panel. If no network is detected the words *No Network Detected* are displayed.

If the printer displays a network address and it is not what was expected, return to the network settings screens to make sure the Manual override setting has not been inadvertently activated.

5. Printing Well Logs

Neuralog provides high quality ink-jet coated fan-fold well log paper for use with the Callisto printer. Full-scale, half-scale and 12" wide well log paper are available as standard stock and custom widths may be ordered. Use only Neuralog certified well log paper in your Callisto printer.

Well log paper is loaded into the Callisto printer with the printable side up and the marked side down. Before loading media, make sure there is adequate clearing at both the printer entrance and exit. If loading paper from the box, make sure there is no plastic in the box, the lid has been removed, and the paper flow is in no way restricted. For best folding, load paper with the sheet without the mark.

Loading Well Log Media

Before loading the media, make sure the Callisto printer track has been adjusted to the media width. The Callisto is a center-based printer. There is a nut-latch that tightens and releases the track guides. Loosen the latch, slide the track guides to the proper position, and retighten the latch. Load the media by grasping each side with two hands and guiding it into the Callisto track. The paper should slide freely through the track, but the track should be tight enough to keep the paper straight. Move the media forward until it touches the paper sensor. When the media touches the paper sensor, it will complete the loading process with an auto-load stop.

Jogging Well Log Media

Loading well log paper does not require using the jog button, however, if you need to jog the media at any time, use the forward and backward jogging buttons. Touch and hold the jog button on the operator panel to jog the media. Avoid jogging the media backwards for distances greater than a few inches.

Unloading Well Log Media

If you need to unload or eject the well log media, hold the forward jog button down until the end of the media has exited the printer. As the media exits the printer and moves past the paper sensor, you may hear the media wheel spin. This is normal operation and indicates the end of the media is out of the printer. Media may also be unloaded using the backward jog button if only a few inches of paper need to be moved. The Callisto track is designed to move media forward; however, jogging backward for short distances is supported.

Printing a Sample Well Log

The Callisto printer ships with sample well logs that are useful for checking the printer during the setup process.

With well log paper loaded in the printer, print a sample log.

If you have full-scale well log paper loaded, print *WellLogDemo.las*.

- Load full-scale (8.5" width) well log paper into the printer, marks down.
- On the operator panel touch the Jobs icon.
- Select the *Held Jobs* tab.
- Select the *WellLogDemo.las* job from the Held Jobs list.
- Touch the Print button.

The printer will begin to process the job.

You can touch the *Print Queue* tab to see the job processing, or if you touch the Home icon and return to the Home screen, you will see the status of the processed job displayed. The printer will print the well log and return to the *Printer Ready* state when complete.

If you have 12" wide well log paper loaded, print *WideWellLogDemo.tif*.

- Load 12" wide well log paper into the printer, marks down.
- On the operator panel touch the Jobs icon.
- Select the *Held Jobs* tab
- Select the *WideWellLogDemo.tif* job from the Held Jobs list.
- Touch the Print button.

The printer will begin to process the job.

You can touch the *Print Queue* tab to see the job processing, or if you touch the Home icon and return to the Home screen, you will see the status of the processed job displayed. The printer will print the well log and return to the *Printer Ready* state when complete.

Printing the sample logs lets you know the printer is working as expected. If the sample log(s) did not print, please see the troubleshooting section of the User Guide.

6. Installing the Printer Driver

Before you can print well logs from your well log viewing application, you will need to install the Callisto printer driver on your computer. The Callisto printer driver is pre-installed on the Callisto printer and will automatically copy to your computer during the installation process. You do not need to download the driver from the Neuralog website, however if you wish to, it is available for download in the Callisto Support section of www.neuralog.com.

To install the Callisto printer driver follow these steps to copy the driver from the printer to your host PC.

1. First identify either the printer IP address or the printer host name. On the printer operator panel find values similar to these examples.

- Settings->Network->Hostname *CAL2021001*
- Settings->Network->IPV4 *204.145.155.1*

2. On your computer launch *Control Panel->Devices and Printers-> Add a printer*

3. Select “The printer that I want isn’t listed”

NOTE: There are many ways to add a printer. This option provides one straightforward way; other choices can work as well.

4. Choose the radio button “Select a shared printer by name” and enter either network address or Host Name with printer name. Then select Next. Examples:

- <\\204.145.155.1\Callisto>
- or
- <\\CAL2021ABC\Callisto>

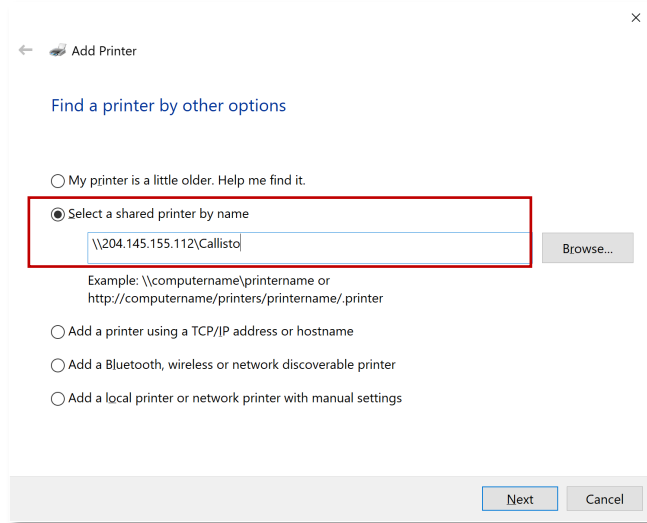


Figure 6-1. Printer Driver->Select a shared printer by name

TIP: If you are using dynamically assigned IP addresses on your company network, add the printer using the Host Name. This will preserve the printer connection even if the network address changes.

5. After you click **Next** you will see this screen, followed by a screen indicating the files are being copied from the printer to the host PC.

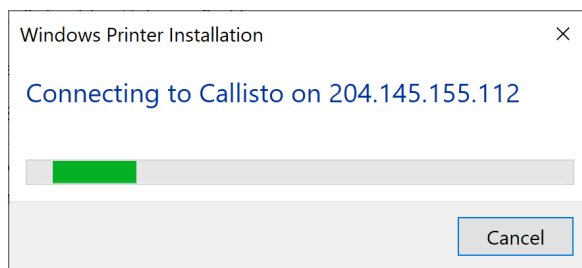


Figure 6-2. Printer Driver->Copy the Files

6. When complete, you will see the following screen.

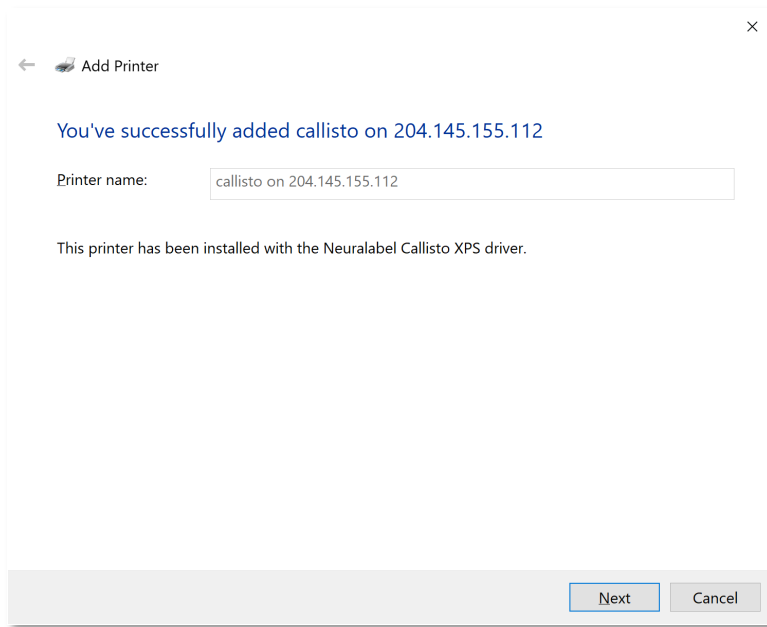


Figure 6-3. Printer Driver->Successful Installation

7. Select **Next**. If desired, set the Callisto as the default printer.

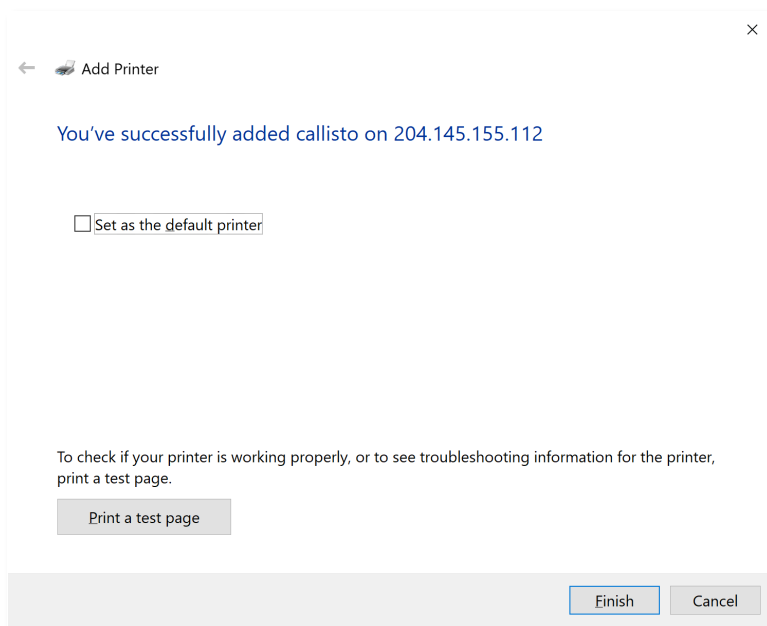


Figure 6-4. Printer Driver->Default Printer

At this point you have installed the Callisto printer driver and can access it in the Printers and Devices area of the Control Panel.



Callisto on
CAL2021014

Figure 6-5. Printer Driver Callisto Installed

Special Case Driver Installation

In some cases policy settings on your network may cause the setup of the printer and the printer driver installation to fail. To set up the printer and install the printer driver in this case, you will need to create a special *CallistoPrinter* account with a unique password on the printer. This is done through the printer operator panel.

To create a *CallistoPrinter* account for your network do the following.

- On the Operator panel touch the Settings icon.
- Select the Device Settings->Networking->Password Protection
- On the Password Protection panel that appears, check **Password Protection**.
- Enter and Confirm a password for the *CallistoPrinter* account.
- Select the Apply button. This will now allow the printer to be setup and the printer driver to install on computers attached to your network by entering the *CallistoPrinter* account and the password you created when prompted during printer setup.
- Remember this password. If you are installing multiple printers on the network, the other printers will need these same steps performed.

A screenshot of a web-based configuration interface for a printer. The title is "Password Protection". Below the title, there are two lines of text: "Add printer password accessible through the Operator Panel." and "Use 3 to 8 case sensitive alphanumeric characters." There is a checkbox labeled "Password Protection" which is currently unchecked. To the right of the checkbox, there are three rows of input fields. The first row is labeled "Printer User Name" and contains the text "CallistoPrinter". The second row is labeled "Enter Password" and contains a text box with four asterisks "****". The third row is labeled "Confirm Password" and contains a text box with four asterisks "****".

Figure 6-6. Password Protection for the Callisto

7. Setting up and Using the Printer Driver

The Callisto printer driver ships with preset defaults for full-scale well log printing at a normal print quality of 300 DPI. If this is how you print well logs, you do not need to set any parameters on the Callisto printer driver. For other sizes and types of printing, follow these instructions.

Set Printing Defaults

Set up your printing defaults in the driver installation by right clicking on the Printer Icon in *Devices and Printers* and select Printer properties from the popup menu. Then select the *Advanced* tab and **Printing Defaults...** button.

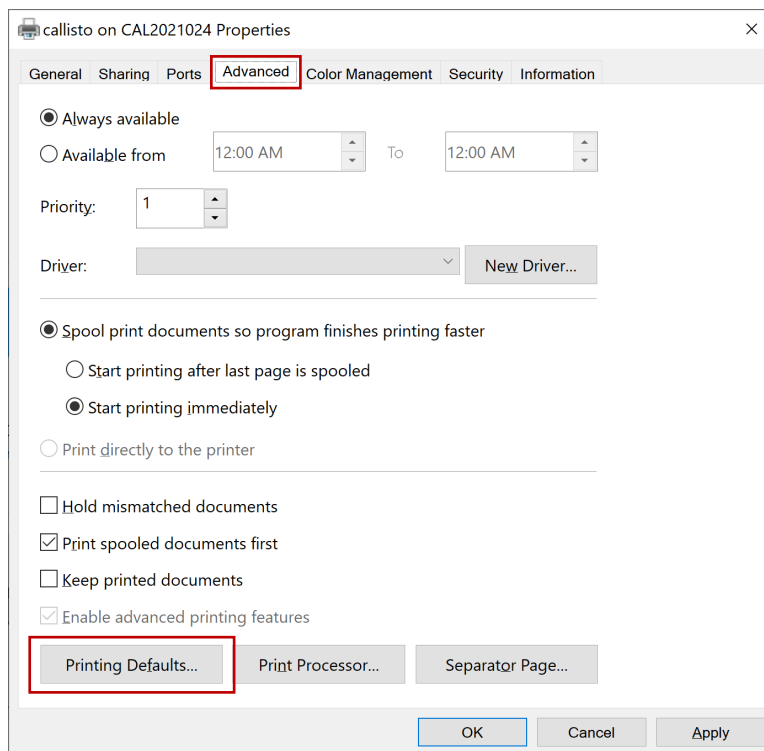


Figure 7-1. Printing Defaults

Set up the printer driver defaults to match your workflow. Printer driver settings can be selected in the driver from your well log application as you print, however setting the defaults in this step in the driver installation will provide a more convenient workflow later.

Quality Tab

Set the **Print Quality**. The Callisto Quality choices are Draft, Normal, Best and Max DPI. The most appropriate quality setting depends on the types of well logs you are printing. Here are some guidelines for Print Quality.

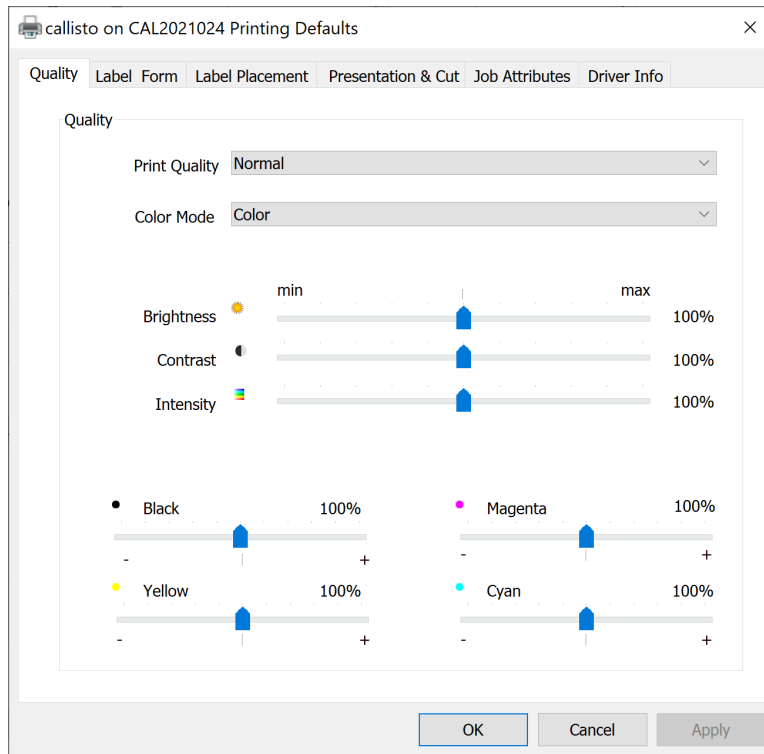


Figure 7-2. Quality Tab

Normal Print Quality

Use *Normal* print quality for most well log printing. *Normal* quality prints at 300 DPI and is comparable to the setting of Neuralog's other well log printers. Standard full-scale (8.5 inch wide) well logs will print at 11 inches per second (ips) to 14 ips at the *Normal* setting. Well logs that are up to 12 inches wide will print at 8 to 11 inches per second at the *Normal* setting.

Draft Print Quality

Use *Draft* print quality to achieve faster speeds for logs that require less detail. Draft quality prints at 300 DPI but with draft quality and is comparable to the draft setting of Neuralog's other well log printers. *Draft* quality is often suitable for simple LAS files or older black and white logs that have been scanned at lower resolutions, however any well log can be printed in this mode. Print speeds of 18 ips are possible when printing in *Draft* quality.

Best or Max DPI Print Quality

Use *Best* or *Max DPI* only for printing well logs that require a lot of detail. *Best* quality prints at 600 DPI, and with a higher quality than *Normal* mode. *Max DPI* prints at 600 DPI and is the highest quality setting. When using *Best* quality, the printer should be set to print no faster than 6 ips. When using *Max DPI* the printer should be set to print no faster than 3 ips. *Best* and *Max DPI* are not normally practical for well log printing. They have been included for special case well logs that must be printed with the highest quality.

Color Mode will be left at Color for most well log printing; however, there is a “Grayscale (only black cartridge)” mode available for printing black and white logs using only black ink.

Brightness, Contrast and **Intensity** set the amount and way the ink is placed on the paper. Use **Intensity** to fine tune the level of ink used in the print. This is equivalent to placing the printer in an “Ink Saver” mode. **Black, Magenta, Yellow** and **Cyan** sliders control the amount of ink for these individual ink colors. Use these sliders to fine tune the levels of individual ink colors used in the print.

Label Form Tab

The *Label Form* tab allows you to create any size page, however standard well log paper sizes are already included in the printer driver. The Callisto printer driver stitches all pages of a well log together to create a continuous image. It is only the paper width that needs to be defined and/or selected to match your well log media.

Neuralog offers full-scale (8.5”), half-scale (5”), and wide (12”) well log media. Select one of these **Paper Sizes** that correspond with the well log paper size you will use. Note that any paper width between 1.5” and 12” may be used with the Callisto printer. You may create a page of any width that is needed or that matches your well log up to 12 inches. Use the **Manage New Sizes** button to do this. Contact Neuralog if well log paper sizes other than those offered are needed; it is possible to order custom well log paper sizes.

Predefined Neuralog Paper Sizes

- Well Log 8.5”
- Well Log 12”
- Well Log 5”

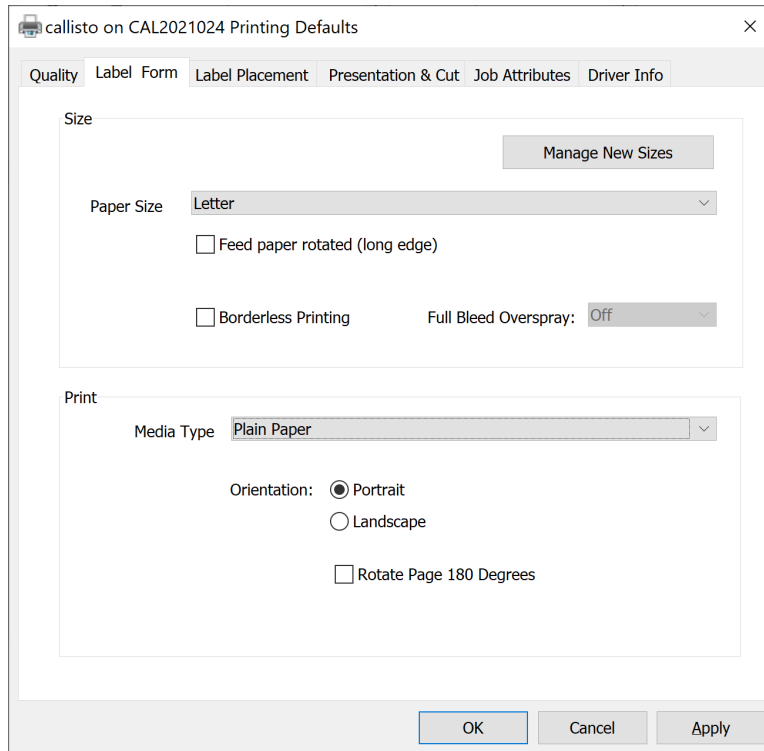


Figure 7-3. Label Form Tab

The Callisto printer has a center-based mark sensor and uses well log paper that has a center mark. Media without marks or with side marks will not print properly. Only media available through Neuralog is guaranteed to work with the Callisto printer.

The *Label Form* tab also has a selection for **Media Type**. For Well Log Paper, keep this selection at *Plain Paper*.

Well logs are normally printed in *Portrait* Orientation. *Landscape* and *Rotate 180* options may be needed for certain Well Log printing applications.

Form Sizes for PDF Printing

For well logs in PDF format, a standard page size such as *Letter* is usually needed for well log printing.¹ This is because PDF applications present predefined individual 8.5" x 11" pages. In particular, if you are printing letter-sized pages in PDF format from a PDF viewer such as Adobe Reader or Foxit Reader, the *Letter* page size must be used to properly create the continuous print. Keep in mind that these PDF readers only offer proportion scaling and cannot scale a well

¹ The same page size limitations are true for legal, A4 and A3 printing. For successful printing, first determine the PDF page size of the well log.

log horizontally only. Because of their scaling limitation, they will not allow for proper printing of well logs greater than 12 inches wide. Neuralog offers NeuraView for printing these logs.

Label Placement Tab

The **Print Mode** on the *Label Placement Tab* should be set to *Banner* for printing Well Logs. The **Mark Mode** should be set to *Black Mark*.

Continuous Direction Placement

No mark adjustment should be needed for continuous direction placement. However, if you do wish to adjust the placement of the well log header in the continuous direction, **Mark/Gap Adjust** should be used. A larger (positive) number moves the image up the page. A smaller (negative) number moves the image down the page. The Callisto well log printer will print on the first mark seen, rather than the leading edge of the media.

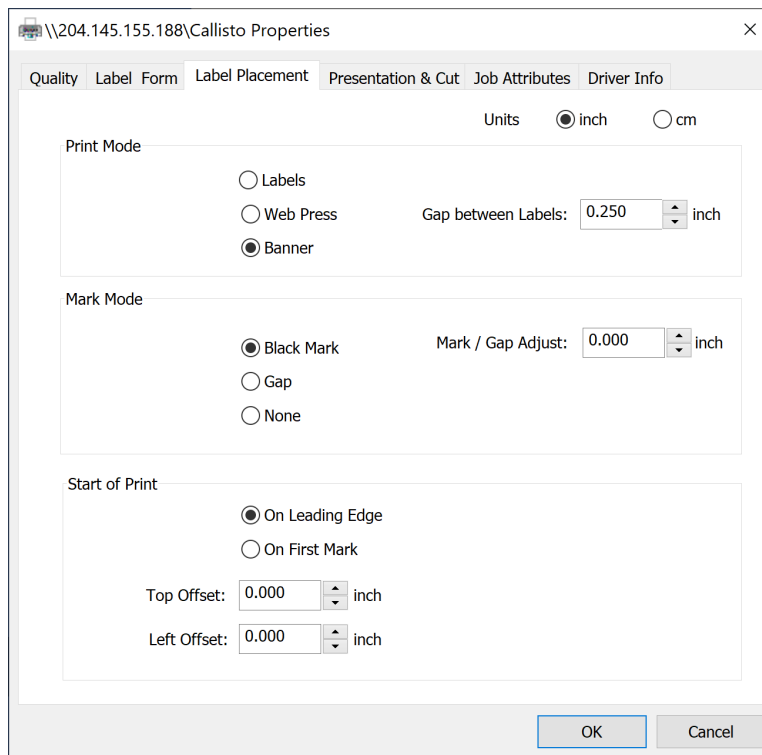


Figure 7-4. Placement Tab

Non-Continuous Direction Label Placement

Callisto is center-based and no left-right positioning is normally needed. However, if you do wish to adjust the well log image in the non-continuous direction, **Left Offset** should be used. Facing the exit of the printer where the well log print is produced, a larger (positive) number moves the image to the left. A smaller (negative) number moves the image to the right.

Presentation and Cut Tab

There are no options needed for well log printing in the *Presentation and Cut* tab.

Job Attributes Tab

The *Job Attributes* tab contains the **Print Speed** setting. Well logs can usually be printed at 11 to 14 inches per second, depending on quality selection, log complexity, and width. Recommended well log printing is *Normal* quality and *11 inches per second*.

Print Head Height can be left at *Auto* for well log printing. *Auto* will usually provide the best quality result.

Background Spitting keeps the full width of the printhead active and can be used to extend the life of the printhead. It ensures that all of the dies in the printhead have a light flow of ink. Use this option if you typically switch between different paper widths. Note that activating this feature may result in slightly slower printer speed.

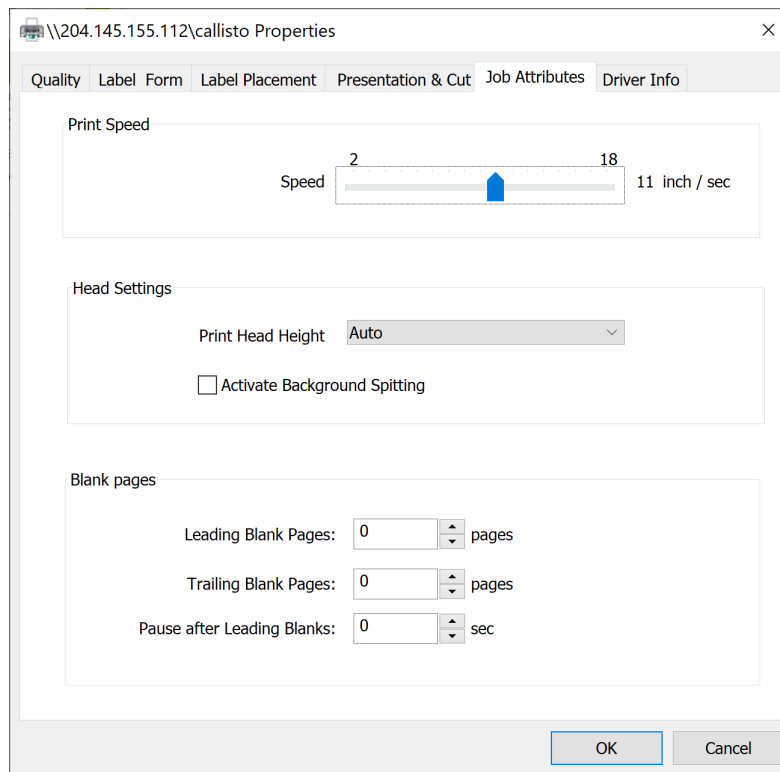


Figure 7-5. Presentation Tab

Well logs do not normally have leading or trailing blank pages. Do not use these options for well log printing unless you want additional blank pages on your print.

8. Callisto Operator Panel

The Callisto printer has a 7-inch built-in touch display to help you navigate the printer and its settings. This section will provide detailed information about the Callisto Operator Panel.

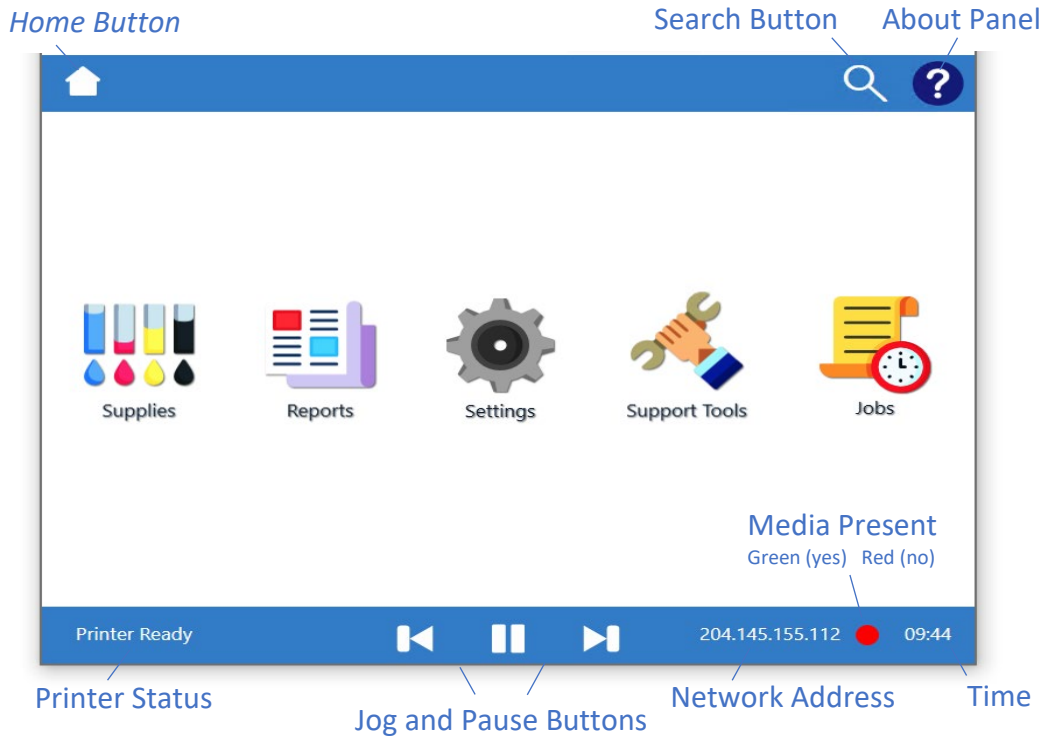


Figure 8-1. Operator Panel Home Screen

Home Screen

The Callisto Operator Panel Home Screen contains everything you need to configure your printer. Following is an overview of the Home Screen buttons.

Home Icon

Touch the Home icon at any time to return to the home screen. Note that if the Home icon appears with the door closed, this indicates that the printer has at least one override parameter in Settings->Print Settings that has been activated. When this is the case, the activated parameter overrides the value sent by the printer driver with the value specified in the operator panel. If the Home icon appears with the door open as is shown here, no overrides have been activated.

 *Search Icon*

Touch the Search icon to search the Callisto Operator Panel for any keyword. An On-Screen Keypad (OSK) will appear for you to enter the search criteria.

 *About Icon*

Touch the About icon to see the current version information about the Callisto printer, as well as the printer serial number.

 *Time*

View the current printer time. Touch this area to see the full date and time. Visit Settings->Device Settings->Preferences to set display format and time zone.

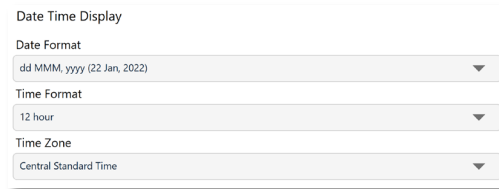


Figure 8-2. Date Time Preferences

 *Media Present Indicator*

Green light indicates media detected; red light indicates no media detected. Flashing light indicates the printer is receiving a job.

 *Network Address*

View the network address. Touch this area to go to the network address view.

 *Jog and Pause Buttons*

Touch the left/forward (<) button to jog the media forward and out towards the printer exit. Touch the right/backward (>) button to jog the media backward towards the printer entrance. Touch the pause button to stop and end the current print job. Note the Pause/Resume functionality is scheduled to be released first quarter 2022.

 *Printer Status*

View the current printer status.



When navigating any menu system, touch the Hide Menu icon to hide the menu so that the corresponding view takes up the full screen of the operator panel. Touch the Show Menu icon to return to the menu structure. Hiding the menu makes the current view larger for easier touch interaction.

Printer Icons



The printer icons represent major functionalities of the printer. Peruse each area to learn about the Callisto printer.



Supplies shows Callisto ink and service tray levels. Detailed information for each color cartridge and the service tray can be found in the Supplies View. See the *Callisto Consumables* chapter for more information.

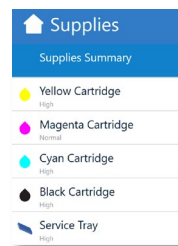


Figure 8-3. Printer Supplies Menu



Reports includes Callisto reports such as Device Information, Device Statistics, and Quality Reports. Statistics on ink usage and pages printed are provided in Device Statistics. Event Logs which are useful for troubleshooting problems can also be found in the Reports section.

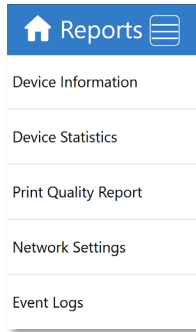


Figure 8-4. Printer Reports Menu

Device Information

Device Information contains data about the printer. Access this panel to provide information to technical support when needed.

Device Information	
Version	21.09.17.5
Serial Number	CAL2021031
Panel Version	21.09.17
NeuraQ Version	21.09.09
Printbar Engine Version	5.3.0
Controller Version	2121E.00
Printbar Interface Version	21.09.17

Figure 8-5. Device Information Report

Device Statistics

Device Statics contains basic statistical data about the printer. Ink Usage in Drops and Printed Pages are available.

Device Statistics	
Device Ink Usage in Drops	
Yellow	72565907
Magenta	69154614
Cyan	65160559
Black	82349762
Device Statistics	
Printed Pages for all Time	
Pages:	17,051
Recent Printed Pages	
Last 30 days:	766
Today:	0

Figure 8-6. Device Statistics

Print Quality Report

Print Quality Report gives quick access to a variety of quality reports, or test patterns, that are useful for diagnosing any quality issues that the printer might have. Access the following reports through this panel.



Figure 8-7. Print Quality Report

- CYMK – Cyan Yellow Magenta Black Quality Report
- ROGP – Red Orange Green Purple Quality Report
- Cyan
- Magenta
- Yellow
- Black
- Red
- Orange
- Green
- Blue
- Purple

Network Settings

Network Settings Report provides a summary of all the printer's network settings.

Network Settings	
Host Name:	CALLISTO
Password protected sharing:	N/A
IPV4	
Configuration	Automatic
IP Address	204.145.155.236
Default Gateway	204.145.155.2
Subnet Mask	255.255.255.0
IPV6	
Configuration	Automatic
Address	
Subnet Prefix Length	
Default Gateway	
DNS Configuration	Automatic
Preferred DNS	
Alternate DNS	

Figure 8-8. Network Settings Report

Event Logs

Event logs contains subcomponent logs that are useful if technical support is required. The following logs are available.

- *Panel logs* for the operator panel
- *Alert logs* for all types of printer alerts
- *Printbar Interface logs* to capture communication between the printbar and other printer components
- *NeuraQ logs* to capture NeuraQ debugging and troubleshooting information
- *Controller logs* to capture the controller debugging and troubleshooting information

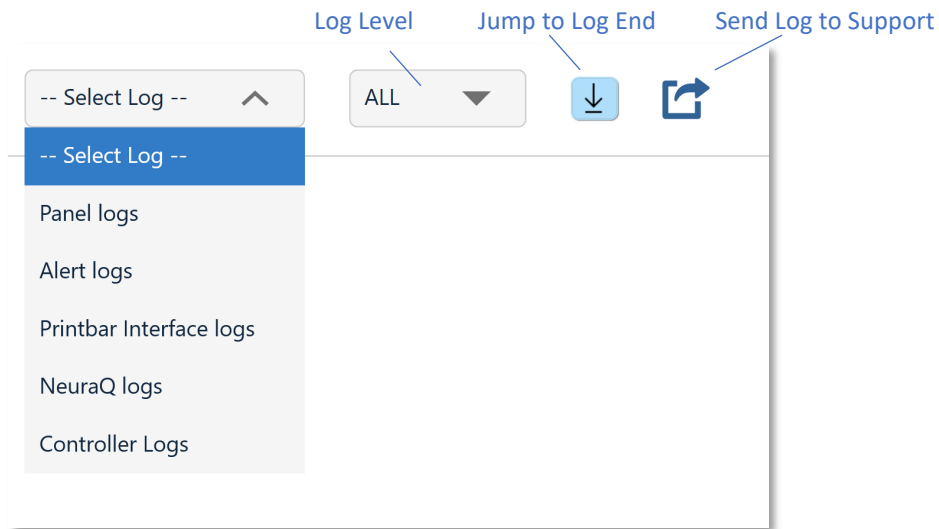


Figure 8-9. Event Logs

The logging level can be set for Callisto logs. Note that the logging level applies to all Callisto logs and will update for future logs when the value is changed. Logging levels include the following:

- ALL – most logging
- DEBUG
- INFO
- WARN
- ERROR
- FATAL – least logging
- OFF – no logging

Neuralog recommends keeping the logging level at WARN or ERROR. Normally the logging level would be changed by support to diagnose a printer problem. The Callisto printer saves a “rolling” set of the last few logs for each subsystem, and the most recent log is displayed. Note that the printer’s web server includes a means of downloading all printer logs into a zipped file for the purpose of sending them to Neuralog support.



This section allows configuration of Print Settings, Device Settings and Preferences, and Special Printer Features.

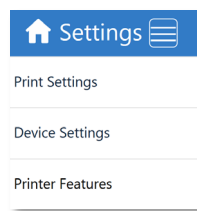


Figure 8-10. Printer Settings Menu

Print Settings

While most Print Settings come from the Callisto Printer Driver, there are several specific settings which can be overridden using the operator panel. These settings include Print Mode, Mark Mode, Mark Adjustment, Printhead Height, and Print Speed.

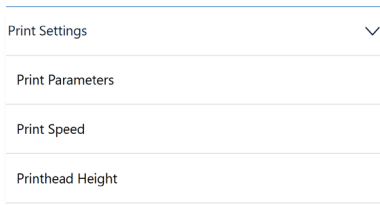


Figure 8-11. Printer Print Settings Menu

The Print Parameters View allows overriding Print Mode, Mark Mode and Mark Adjustment to values specified in this view. Normally the printer driver provides these values for the print job. Occasionally a company’s network is set up such that a printer driver cannot correctly pass certain print parameters. The Callisto printer provides override options for these special parameters. Overrides are not normally used in well log printing. However, they are available to help overcome certain types of printing problems.

Well logs are always printed using **Banner Print Mode** and **Black Mark Mark Mode**. **Mark Adjustment** is in inches and is usually has a value close to 0. There are no other parameters on this page that need to be set for well log printing.

Print Mode

- Labels
- Web Press
- Banner**
- Single Page

Override Driver

Label Placement

Mark mode

Override Driver

Gap Between Labels

0

Mark Adjustment

0.3 Override Driver

Start Print

- On Leading Edge
- On First Mark

Presentation and cut

Auto Present

- Off
- Each Job
- Each Label
- Each Copy(multi page copies)

Cut after Present

- Off
- Manual
- Auto second pause

Auto Present Distance

Auto Present Time

Job Attributes

Apply

Figure 8-12. Print Parameters

Printhead Height allows the printer printhead height to be overridden with values specified in this view. A value of *Auto (0)*, *Low*, *Medium* or *High* can be selected, or a *Custom* value can be selected. Selecting override on this view will ignore the printhead value in the driver and use the value specified on this panel. A value of Auto is usually sufficient for well log paper.



Figure 8-13. Printhead Height

Max Print Speed allows the printer's maximum print speed to be overridden with values specified in this view. This is useful for preventing the printer from printing too fast and resulting in print errors.

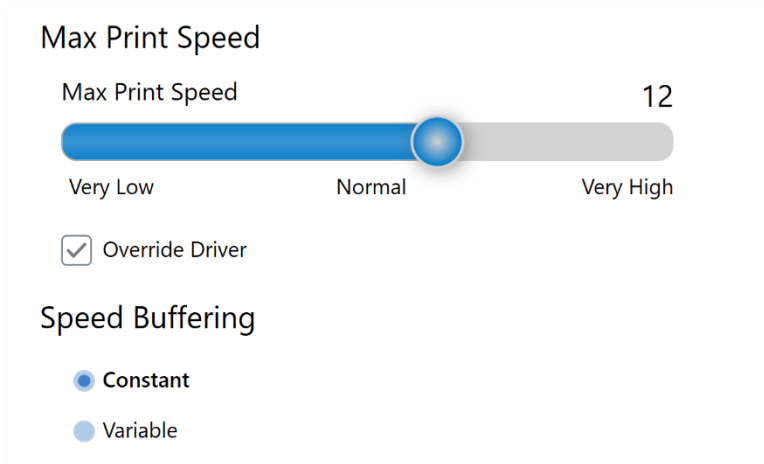


Figure 8-14. Max Print Speed

Device Settings

Device Settings include configurations for network and time. The Host Name and IPV Settings are accessed in this area, as well as a means for creating a network password for the printer. These settings are covered in the [Network](#) section of the User Guide.

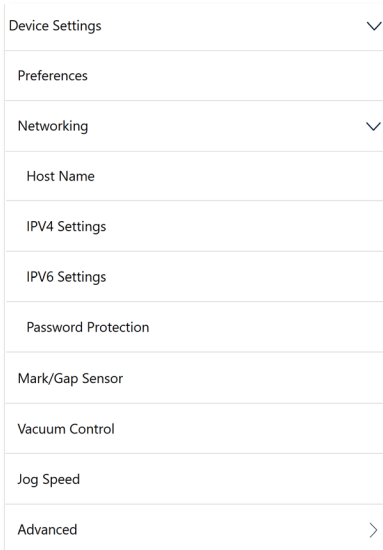


Figure 8-15. Device Settings Menu

Preferences

Set the format of the time and date displayed on the operator panel, as well as the time zone, using the Device Preferences setting. Note that the time is displayed in the lower right section of the operator panel. Touch the time to access a popup view of the current date.



Figure 8-16. Time and Date Format

Mark/Gap Settings

Device Settings also include a control for the brightness and sensitivity settings of the printer's Mark/Gap Sensor. For well log paper the recommended setting is *Auto* mode with **Brightness** set above 85. **Sensitivity** is not used in the Auto configuration and does not need to be changed.

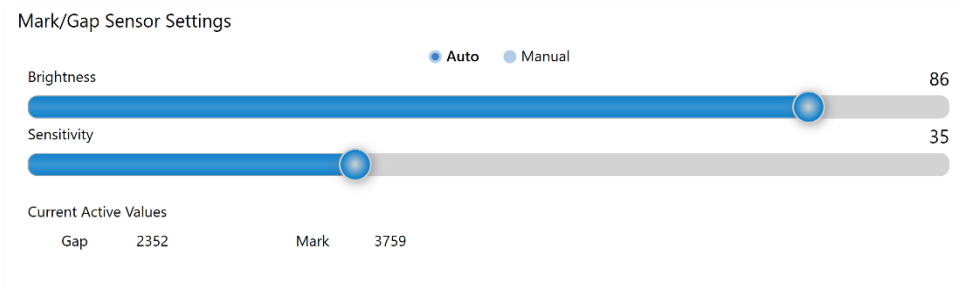


Figure 8-17. Mark/Gap Sensor Settings

Vacuum Control

The Vacuum table is useful for holding the well log paper to the printer surface. If the paper is not held down, it may touch the printhead causing a smearing defect. If these defects are observed, increase the Vacuum Control.

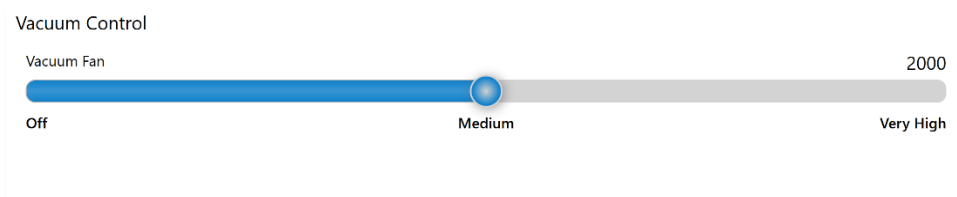


Figure 8-18. Vacuum Control

Jog Speed

Jog Speed is scheduled for release first quarter 2022. This functionality will allow the control of forward jogging. Reverse jogging should only be done at slow speeds for limited amounts of time.

Printer Features

Printer Features include any special applications that have been deployed with your Callisto printer. Contact your Neuralog representative for a list of currently available printer features. The following printer features are released as of January 2022.

Printer Features

Activate Printer Features

- Label Cost Calculator
- Printer Statistics Module
- Job Continuation

Figure 8-19. Printer Features

Cost Calculator

The Cost Calculator is a tool that allows for job cost accounting. When activated, this tool automatically provides the ink usage of each job. The ink cartridge cost may be entered into the calculator to determine the total job cost, based directly on the ink used for that job.

Finally, the media cost, provided by the user as single sheet cost, can be entered to give a complete job cost accounting report.

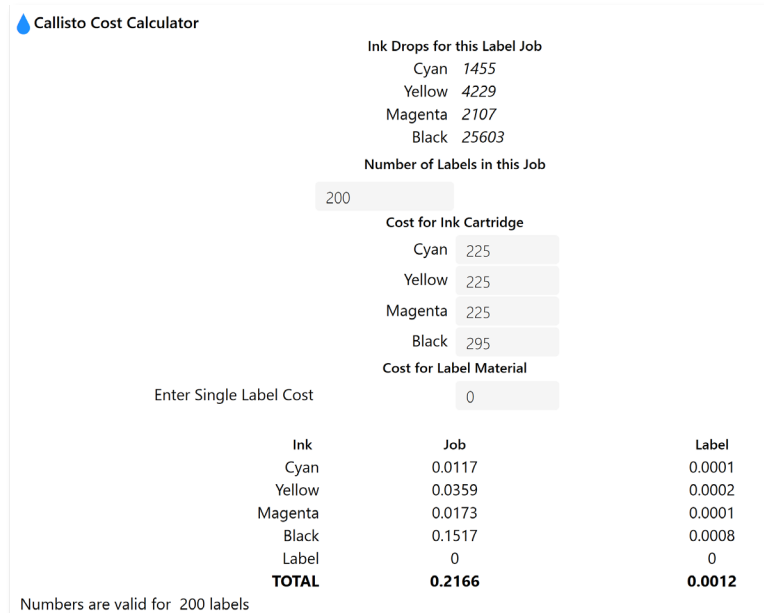


Figure 8-20. Cost Calculator

Printer Statistics Module

This feature provides basic information about printer statistics such as page count and ink usage.

Job Continuation

Job Continuation, when turned on, will cause the current well log copy to reprint if media runs out. If Job Continuation is off, the well log print is cancelled. Job continuation is useful when printing well log copies so that the current copy is reprinted, resulting in the correct number of prints at job completion.

The Support Tools menu has options for printer cleaning and other maintenance routines, troubleshooting tools, over-the-air updates, and an Advanced section for use by Neuralog support.

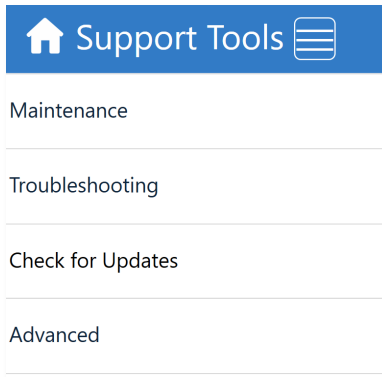


Figure 8-21. Support Tools Menu

There are several maintenance routines; the next figure shows all the Maintenance menu listings. Main categories are Clean Printhead, Calibrate Printer Manual, and Service Tray.

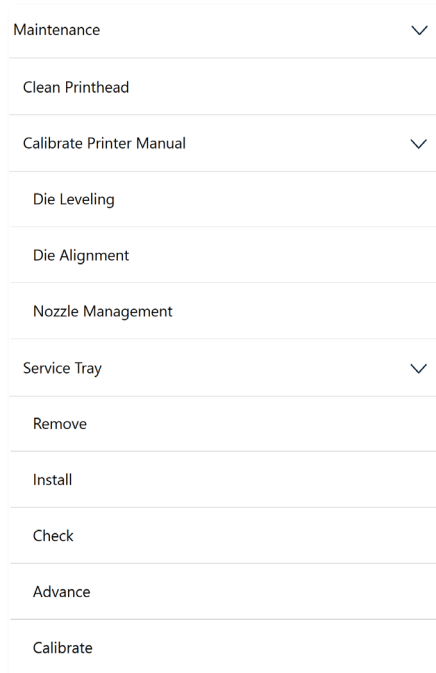


Figure 8-22. Maintenance Routines

Clean Printhead

Printhead cleaning may be run any time a quality defect is observed. It should be run whenever a printer is moved. There are several options for printhead cleaning. Try minimal cleanings before running more in-depth cleaning routines.

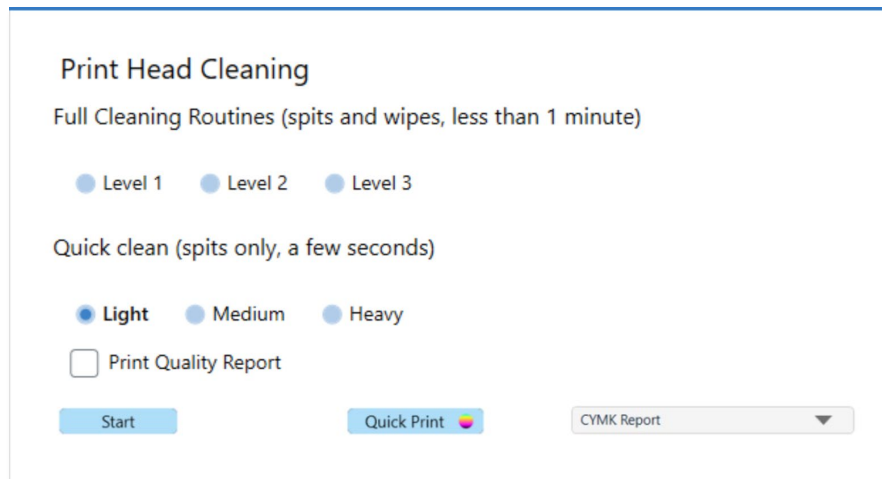


Figure 8-23. Printhead Cleaning View

The Full Cleaning Routines (Levels 1-3) are designed to alleviate minor print defects that have resulted from a printhead nozzle being clogged. Sometimes a bit of dry ink or dust will temporarily block a printhead and a white line will be seen in the printed image. Occasionally a bit of media or debris will block a printhead nozzle. When a defect like this is seen in the printed image, run Level 1, Level 2 and then Level 3 until the nozzle is clear and the defect is gone.

For very small defects and maintenance, the *Quick clean* routines can be used. These routines spit ink through the printhead nozzles without wiping the printhead on the service tray, whereas the printhead cleaning Level routines, spit ink and then wipe the head after the spits as part of the routine.

Do only minimal (one or two) Quick cleans without doing a Level 1, 2 or 3 cleaning. If too much ink runs through the nozzles without a wipe, additional nozzle clogging could occur.

It is not critical to run the cleaning routines in any particular order. The routines are ordered by amount of cleaning, and any routine can be used at any time. Note that some, but not all, routines require the removal of media from the printer. For these cases the user is prompted to remove media before continuing.

A quality report can be printed after any cleaning routine to view the progress of the clean. A selection of quality reports is available on this page. Choose the one that best assists with resolving any printing defects.

If printhead cleaning has been performed with no improvement to print quality, look into using other maintenance routines. Contact Neuralog support if needed.

Other Maintenance tools include Die Leveling, Die Alignment and access to the printer's Nozzle Out Database. These tools will help alleviate any print quality that might appear on the printer.

Die Leveling

The Callisto printer has 14 stationary print dies. These dies are calibrated at the factory to ensure that the same levels of ink come from each die to ensure a smooth image. If one or more dies appear to be too light or too dark and a wide band (a little less than an inch) appears in the printed image, use Die Leveling to alleviate the problem.

Use Die Leveling by printing out a test pattern to determine which die(s) need adjustment. Select the corresponding color and die in the interface and adjust the element to make it darker or lighter. Reprint the test pattern to see the results. If needed print a well log to verify the results.

To use the Die Leveling (Wide Bands) Tool:

- On the Operator panel touch the Support Tools icon.
- Select Maintenance->Calibrate Printer Manual->Die Leveling
- Touch **Quick Print** to print the CMYK quality report to identify the color(s) and die number of the issue. This test pattern has the dies numbered and the CMYK colors separated.
- Look at the printed report to determine the die(s) and color(s) where a wide band is occurring.
- For any wide band, touch the cell in the Die Leveling grid that corresponds to the die number and color for that band. If the wide band is present across all colors, touch the die number at the top of the column to select all colors for that die. A popup box will appear that allows adjustment numbers to be entered.

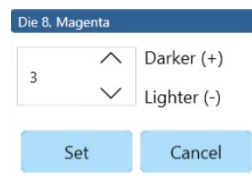


Figure 8-24. Darken/Lighten Bands

- For dark banks, touch the down arrow to lighten the band.
- For light banks, touch the up arrow to darken the band.

TIP: Touch the number key in to directly edit the number in the popup. An on-screen keypad will appear.

- Select **Set** in the popup to see the number update in the die leveling grid.
- Select **Apply** to temporarily apply the values, and then select **Quick Print** to review the results on the printed test pattern.
- Repeat the process as needed. Once you are satisfied with the results, touch the **Save** button to permanently save your changes to the printer.

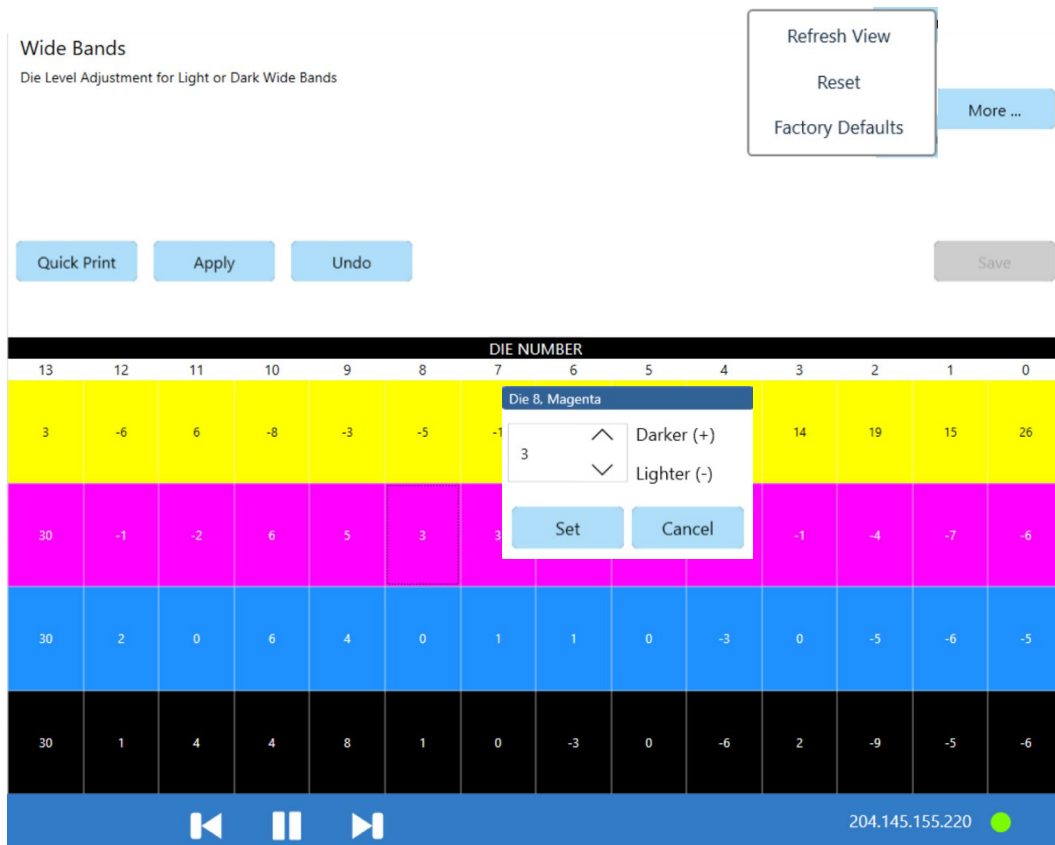


Figure 8-25. Die Leveling for Wide Bands

Notice the **More...** button. The following additional options are available.

- **Refresh View** – Refresh the view, in case the values have been changed elsewhere, i.e. the printer web server view.
- **Reset** – Reset the values to all zeroes.
- **Factory Defaults** – Reset the values to the original values set at the factory.

Die Alignment

The 14 Callisto stationary dies have an overlap of nozzles between each adjacent pair. This overlap, or alignment, is calibrated at the factory to ensure a seamless die integration. If a dark or light line appears in the image at a die seam, the die alignment may need further adjusting.

Adjust die alignment by printing out a test pattern to determine which die seam(s) need adjustment. Select the corresponding color and die seams in the interface and adjust the element to make it darker or lighter. Reprint the test pattern to see the results. If needed print a well log to verify the results.

To use the Die Alignment (Narrow Bands) Tool:

- On the Operator panel touch the Support Tools icon.
- Select Maintenance->Calibrate Printer Manual->Die Alignment
- Touch **Quick Print** to print the CMYK quality report to identify the color(s) and die numbers of the issue. This test pattern has the dies numbered and the CMYK colors separated. Notice that this time you are looking for narrow lines in between the dies.
- Look at the printed report to determine the die(s) and color(s) where a narrow band is occurring.
- For any narrow band, touch the vertical line in the grid that corresponds to the die numbers and color for that band. If the narrow band is present across all colors, touch the space in between the die numbers at the top of the column to select all colors for that die. A popup box will appear that allows adjustment numbers to be entered.

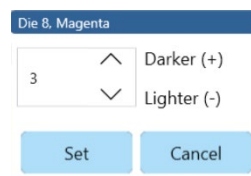


Figure 8-26. Darken/Lighten Bands

- For dark banks, touch the down arrow to lighten the band.
- For light banks, touch the up arrow to darken the band.

TIP: Touch the number keyin to directly edit the number in the popup. An on-screen keypad will appear.

- Select **Set** in the popup to see the number update in the die alignment grid.
- Note that Die Alignment does not have the “Apply Preview” that was available in Die Leveling.

- Touch the **Save** button to save the die alignment settings. Print the Quick Print to verify your results.
- Repeat the process as needed. Once you are satisfied with the results, touch the **Save** button again to permanently save your final changes to the printer.



Figure 8-27. Die Alignment for Narrow Bands

Notice the **More...** button. The following additional options are available.

- **Refresh View** – Refresh the view, in case the values have been changed elsewhere, i.e., the printer web server view.
- **Reset** – Reset the values to all zeroes.
- **Factory Defaults** – Reset the values to the original values set at the factory.

Calibrate Printer Manual->Nozzle Management

The Callisto printer has a database where it stores any faulty printer nozzles, in order to compensate for those nozzles. Nozzle Management has been done at the factory. It is not currently available for end users to edit, but it may become available as a tool at a later date.

Service Tray

The Service Tray is a Callisto consumable that absorbs excess ink. The printhead routinely wipes itself on the service tray. Eventually the service tray becomes saturated with excess ink and must be replaced. Follow these instructions to replace the service tray.

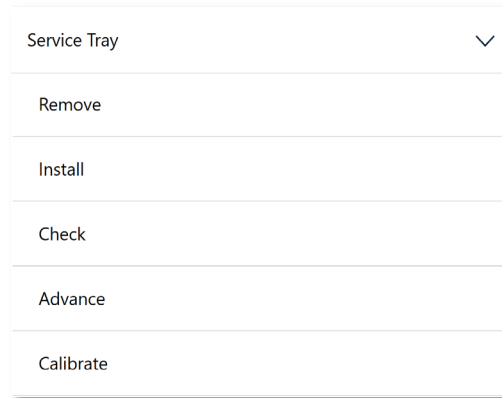


Figure 8-28. Service Tray Actions

Remove Service Tray

Instructions for removing the service tray are found directly on the operator panel. To access this view, do the following.

- On the operator panel touch the Support Tools icon.
- Select Maintenance-> Service Tray->Remove
- Follow the instructions on the Callisto operator panel. They are shown here as well.

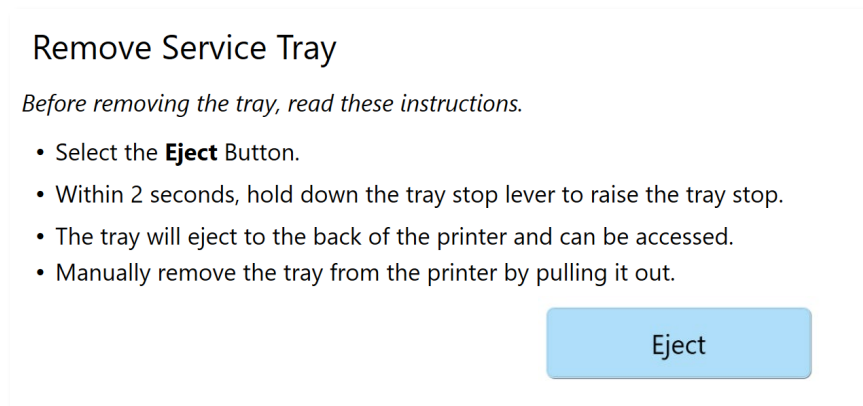


Figure 8-29. Remove Service Tray

Install Service Tray

Instructions for installing a service tray are found directly on the operator panel. To access this view, do the following.

- On the operator panel touch the Support Tools icon.
- Select Maintenance-> Service Tray->Install
- Follow the instructions on the Callisto operator panel. They are shown here as well.

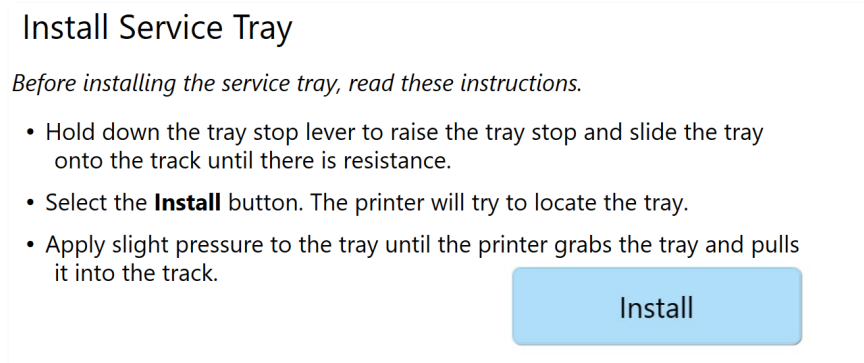


Figure 8-30. Install Service Tray

Check Service Tray

The service tray life is queried when the printer boots up and is shown in the supplies view. To manually check the service tray life and update this value, execute this command.

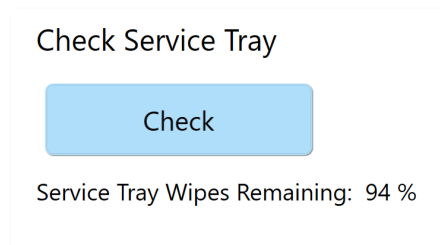


Figure 8-31. Check Service Tray

Advance Service Tray

The service tray automatically advances when needed so that it can properly absorb excess ink. If at any time the user wishes to advance the service tray manually, selecting this Advance button will advance the tray. Manually advancing the service tray does use the consumable, but advancing a few times will not have any significant effect on the product life.

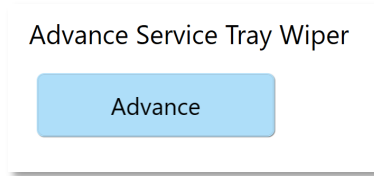


Figure 8-32. Advance Service Tray

Calibrate Service Tray

A new service tray should be calibrated so that its life expectancy is properly measured. This calibration is part of the tray installation routine. If at any time, a user needs to reset the service tray, the Calibrate Service Tray routine can be used. The Calibrate routine resets the measured life expectancy as reported by the Supplies view on the operator panel, causing the supply to reset to 100%. It does not, however, extend the life of the consumable. When the service tray is completely used, a hard stop is activated to indicate the tray needs to be replaced. For this reason, calibrate the Callisto service tray only when needed and as directed by Neuralog support.

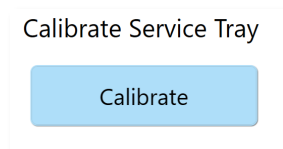


Figure 8-33. Calibrate Service Tray

Callisto Troubleshooting Menu

The Callisto printer contains an extensive troubleshooting section. These printer functions are designed to help Neuralog Support diagnose any printer issues. The troubleshooting menu is listed below.

Troubleshooting
Print Quality Report
Sensor Check
Motor Check
Check Printbar
Event Logs
GPIOs Diagnostic
Sensors Diagnostic

Figure 8-34. Troubleshooting Menu

Calisto Printer Updates

The Callisto printer maintenance contract includes over-the-air updates. These updates are accessed through the Support Tools->Check for Updates View. Printer updates will be available for printers that have active maintenance plans.

The Updates view will show the version of printer firmware currently installed on the Callisto printer. It will also query the Neuralog website to determine the shipping firmware version, as well as the printer maintenance status.

Printer updates are downloaded directly to the printer hard driver and then automatically installed on the printer. You should always update your printer to the latest shipping Callisto firmware. Do the following to update your Callisto printer.

- On the Operator panel touch the Support Tools icon.
- Select the Check for Updates menu. The Updates view will appear.

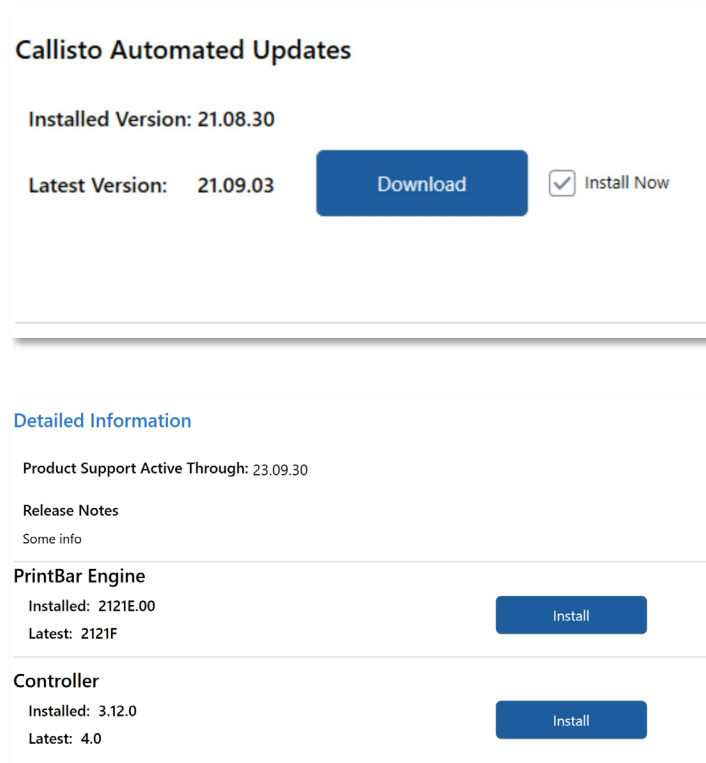


Figure 8-35. Automated Updates

From the Updates view the following information is available.

- *Installed Version* of Callisto firmware.
- *Latest Version* of Callisto firmware available for download.
- *Printer's Maintenance Date* through which product support and updates are available.

The upper section of the Updates view allows downloading of all updates, and updating the printer operator panel and associated components. The lower section of the Updates view provides the means for installing updates to the Printbar Engine and Controller. The Printbar Engine is the portion of the printer that controls the printhead; the Controller is the portion of the printer that controls the mechanics of the printhead.

Be sure to update all printer components as they are available. Update one component at a time. Note that for some updates, a printer reboot may occur.

Advanced Support Tools

The Advanced area of Support Tools contains additional tools, most of which are advanced and only meant to be used by Neuralog support. The Advanced menu is listed below, and the most important commands are discussed.

Advanced
Rest Commands
Rest OOBE
Printhead Recovery
Printhead Height
Printer Controller
Reset
Printbar Replacement
Network Adapters

Figure 8-36. Advanced Support Tools

Rest Commands

Rest Commands will allow Neuralog support to send diagnostic queries to the printer. Use these commands only with the direction of Neuralog support.

Printhead Height

The Printhead Height menu choice may be of particular use for some users. From this view a custom printhead height can be created. This custom height will then be available in the printhead height settings view. The custom printhead height is useful if very thick media should need to be run through the printer. Well log media purchased from Neuralog will have consistent thickness and not require the use of this panel.

[Set Custom Printhead Height](#)

If a custom printhead height is needed do the following.

- On the Operator panel touch the Support Tools icon.

- Select Advanced->Printhead Height
- On the view that appears, use the slider or +/- buttons to adjust the custom printhead height.
- Touch the Apply button to save the value.
- Note that you can touch the Auto, Low, Medium or High labels to reset the slider to those positions. Printhead heights above High should not be needed for well log paper.

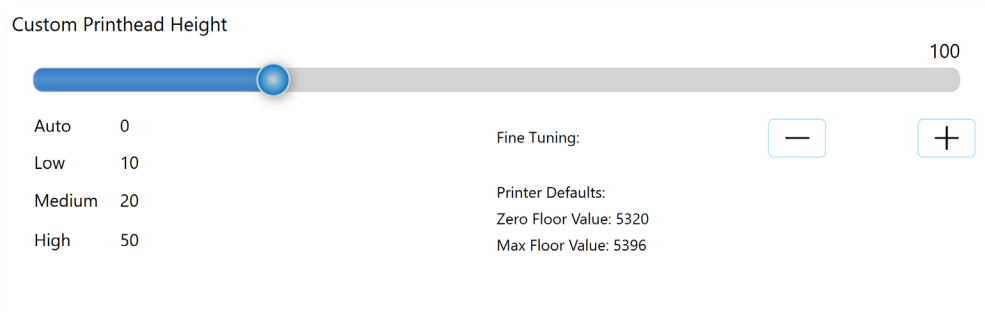


Figure 8-37. Custom Printhead Height

Use Custom Printhead Height

To use the custom printhead height that was set in this view, do the following.

- Touch the Settings icon.
- Select Print Settings->Printhead Height.
- On the view that appears select Override Driver and Custom.
- The value you set will now be used in all prints.
- Uncheck Override Driver to disable this function.



Figure 8-38. Using the Custom Printhead Height

Printer Controller

Printer Controller will allow Neuralog support to send diagnostic queries to the printer. Use these commands only with the direction of Neuralog support.

Reset

There are a set of Reset commands that can be used to reset the printer or one of its subsystems. Reset **Printer** resets and reboots the entire printer. Other menu items reset the named subsystem. Each menu item will show a view similar to the Printer Reset shown below.

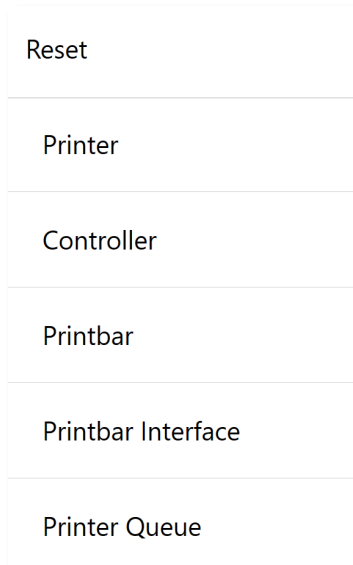


Figure 8-39. Printer Reset Menu



Figure 8-40. Printer Reset




The Jobs section of the operator panel contains the Job Log of all printed jobs, the active Print Queue and the Held Jobs list. A job log summary is saved for every file the Callisto printer prints. It is very useful for diagnosing printer issues and verifying what was printed. The Print Queue will list any jobs that are actively in the printer. The Held Jobs list provides access to all jobs that have been saved to the printer hard drive.

Job Log

Every time a file is sent to the Callisto printer, an entry is made in the job log. Touch the Job Log tab to access this view. Each job contains a summary report with useful information about the well log print. Job summary includes printer driver settings, any overrides that were set, and whether or not pages were printed and paper movement was seen.

Each job summary contains the following information.

- All printer driver settings such as quality, speed and ink levels
- Print Mode and Mark Mode – useful for verifying the well log was correctly sent to the printer
- Job Date/Time Stamps
- Printhead height – selected and actual
- Pages printed (TOF or Top of Form count of pages that moved through the printer)

The job log is very useful for reviewing what was printed and diagnosing any printer issues. The five most recent jobs have a special attribute that allows further evaluation and processing of that job. *Touch and Hold* on any job entry with the “thumbs up”  to see a menu pop up with additional options. Additional options include printing again, sending the file or report to Neuralog support, and copying the file to Held Jobs. Notice that both the job summary and the print job itself can be sent to Neuralog to help with support issues. These functions will upload the associated information to the cloud, where Neuralog support can directly access the files and further assist you.

From the job log the user can do the following for jobs with the “thumbs up” icon.

- Send the job summary to Neuralog support
- Send the job PRN (or printable file) to Neuralog support
- Reprint the job
- Copy the job to Held Jobs

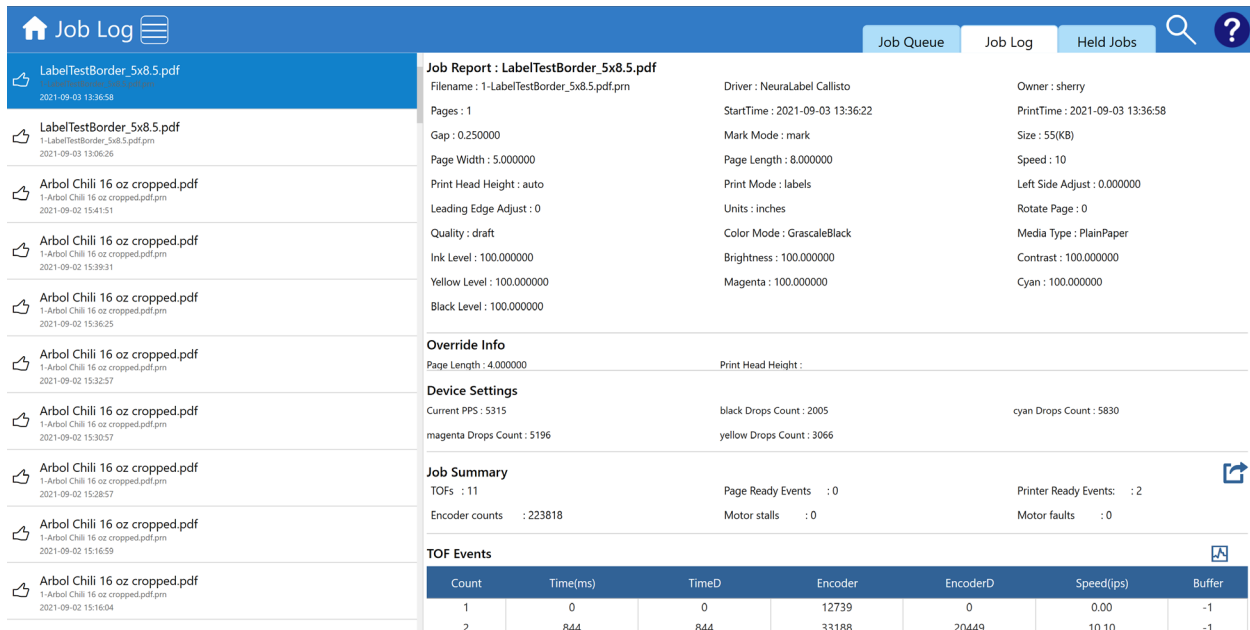


Figure 8-41. Job Log

A printer feature called Callisto Cost Calculator is also available from Neuralog that will track the ink used for each well log print and record a precise ink usage in the job report. A built-in calculator is available so that the user can perform cost accounting for well log prints. Contact your Neuralog representative you are interested in this feature.

Job Queue

The Job Queue shows any active jobs that are currently on board the Callisto printer. Touch the Job Queue tab to access this view. If you send a job to the printer, it should appear in the Job Queue. If the job does not appear in the Job Queue or it disappears, then there is a problem with Callisto Printing. It may be that the printer is not in a ready state, or it might be the case that the printing application is not properly send the job to the printer. If any unusual behavior occurs with job printing and the Job Queue, first make sure the printer says *Printer Ready* in the status area. If problems persist contact Neuralog support and be ready to provide the information available through the Job Log.

From the Job Queue you can see the following about a print job.

- Document Name
- Status (spooling, processing, printing, canceling)
- Owner (as reflected in the PRN)
- Number of Pages (Because of continuous printing algorithm, the pages may be a different size and the page count may be different than the original application file.)
- Number of Copies

- Size
- Time the job was submitted

Touch and hold on an entry in the Job Queue to access Cancel or Pause functionality.

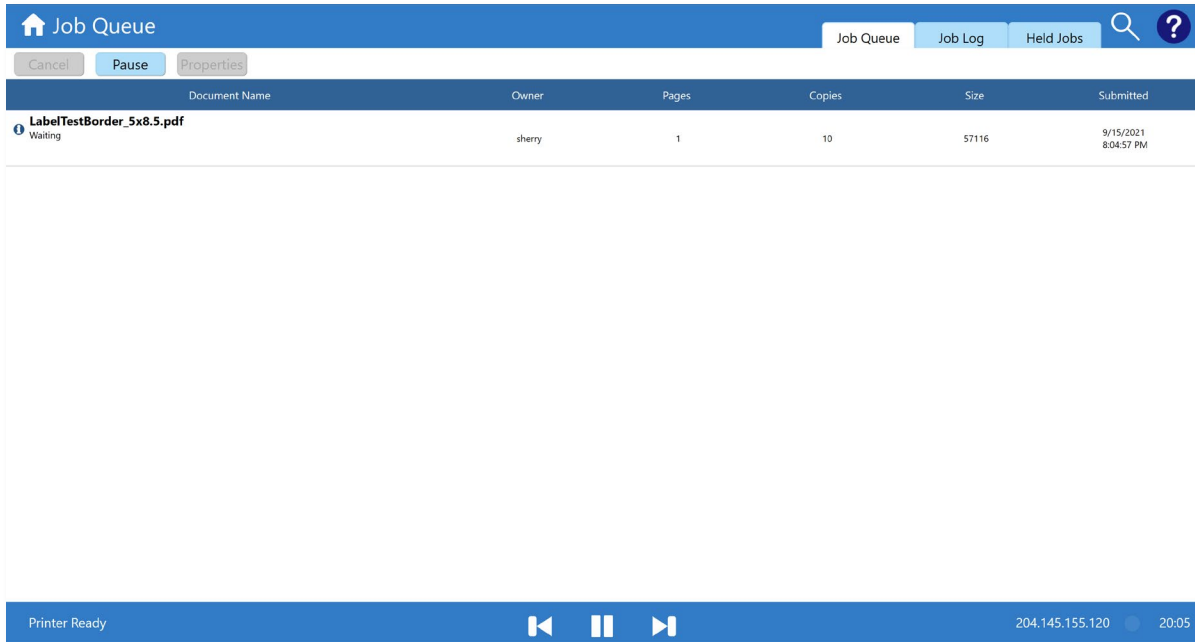


Figure 8-42. Job Queue

Held Jobs

Held Jobs allows you to store any well log (or other) print on the Callisto printer built-in hard drive. Once a job is held it can be printed at any time. The number of job copies can be changed from Held Jobs, however other attributes of the well log job cannot be changed.

To add a job to Held Jobs, send the file to the printer so that it appears in the Job Log. Access the file in the job log by touching and holding on the job entry. Select “Copy To Held Jobs” to permanently move the file to Held Jobs.

From the Held Jobs list you can see the following about a held job.

- Document job name and when it was created
- Owner of the job as taken from the PRN
- Number of pages as provided by the driver (may be different than the application)
- Number of copies
- The size of the PRN

From the Held Jobs list touch and hold any job entry to do the following.

- *Quick Print* the job with currently set number of copies
- *Print* the job with an interface to set the number of copies
- *Delete* the job from the Held jobs list
- View the job's *Properties*

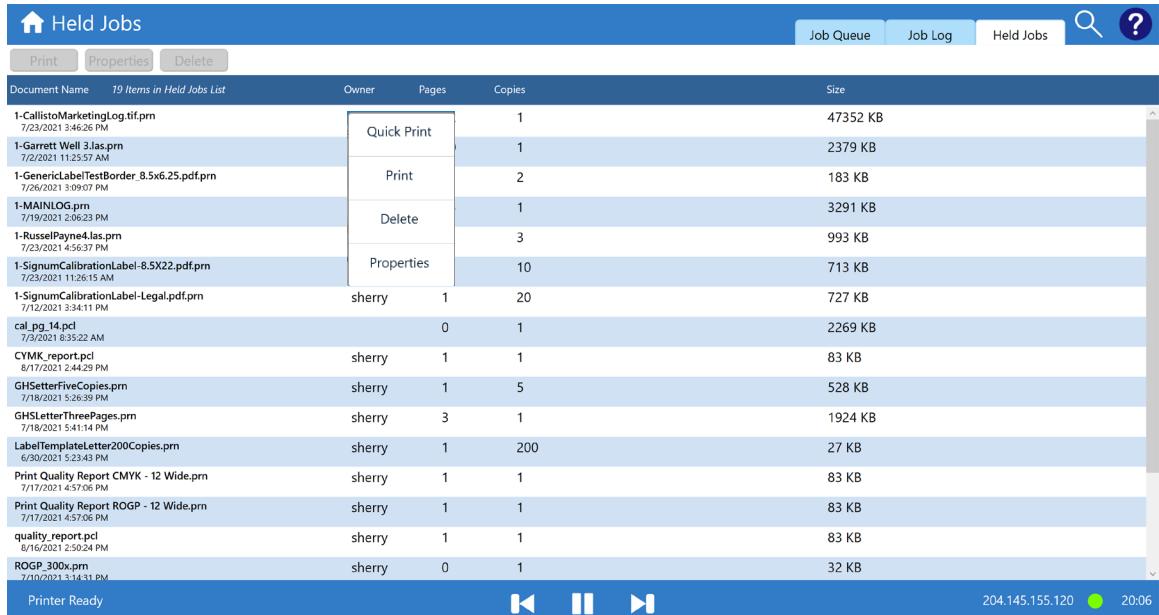


Figure 8-43. Held Jobs

Held Jobs is sorted alphabetically. Touch the *Document Name* label at the top of the Held Jobs list to re-sort the job list by date, so that the most recently added job appears at the top of the list. Held Jobs are permanently stored and will remain on the Callisto printer until they are deleted.

9. Callisto Web Server

The Callisto printer has a built-in web server that mimics many of the operations found on the operator panel. The web server interface makes it possible to interact with the printer from a client machine on your local network at your desk or office. The printer interface can be accessed from any network location as long as you are able to see the network where the printer resides. Edge, Chrome or other modern web browsers are supported. Older web browsers such as Internet Explorer are not supported.

Web Interface Home

The web server home page is accessed by entering the printer's network address in a web browser. From the home page you can get *Estimated Ink Levels*, *Network Summary* and other *Printer Information*. You also have access to many of the screens available on the operator panel.

Use the *Search* keyin to quickly locate information about any topic. Select an item on the home page to go to a page with more information.

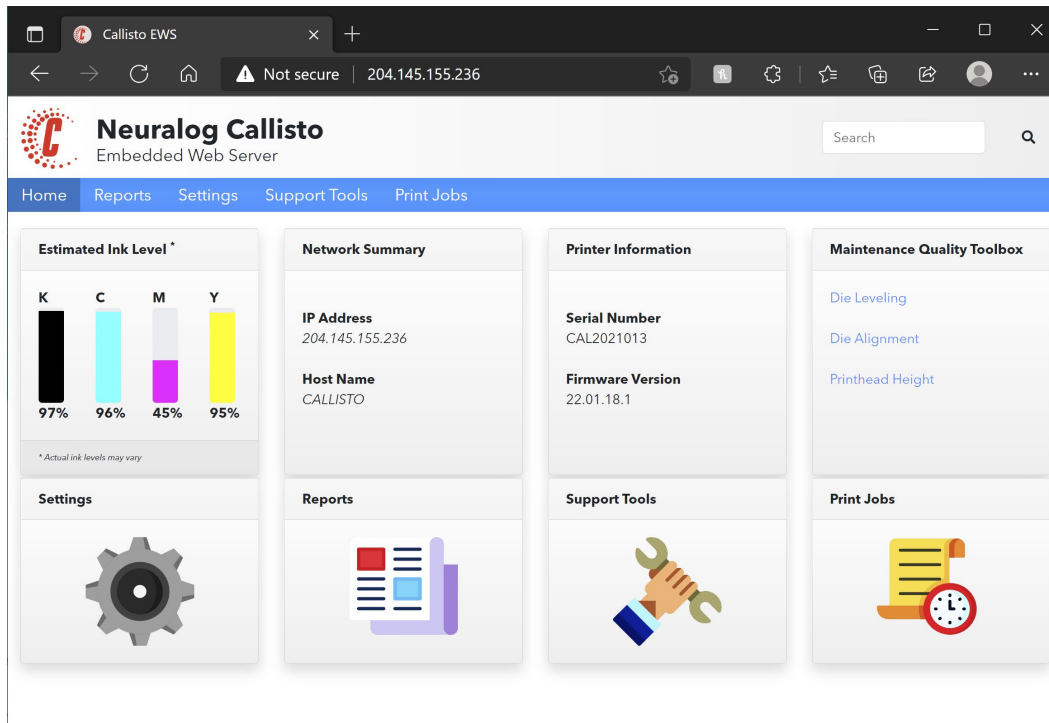


Figure 9-1. Web Server Home

Maintenance Quality Toolbox

The *Maintenance Quality Toolbox* provides links to the most commonly used printer maintenance routines.

Die Leveling

Die Leveling allows you to correct wide bands that correspond to a single die providing too much or too little ink. The web interface workflow is the same as the operator panel workflow. Review the section [Die Leveling](#) in the *Callisto Operator Panel Chapter 7* for instructions on using this page.

The screenshot shows the Neuralog Callisto Embedded Web Server interface. The main content area is titled "Wide Bands" and "Die Level Adjustment for Light or Dark Wide Bands". It features a grid of adjustment values for 13 dies, numbered 13 to 0. The grid is color-coded: yellow for positive values, purple for negative values, and blue for zero values. Below the grid are buttons for "QUICK PRINT", "APPLY", "UNDO", "SAVE", and "MORE".

	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Row 1	30	-28	-22	-8	-3	-5	-1	4	6	11	14	19	15	26
Row 2	30	-1	-2	6	5	3	3	1	2	-1	-1	-4	-7	-6
Row 3	30	2	0	6	4	0	1	1	0	-3	0	-5	-6	-5
Row 4	30	1	4	4	8	1	0	-3	0	-6	2	-9	-5	-6

Figure 9-2. Web Server: Die Leveling

Die Alignment

Die Alignment allows you to correct narrow bands that correspond to the overlap between two dies providing too much or too little ink at the die seam. The web interface workflow is the same as the operator panel workflow. Review the section [Die Alignment](#) in the *Callisto Operator Panel Chapter 7* for instructions on using this page.

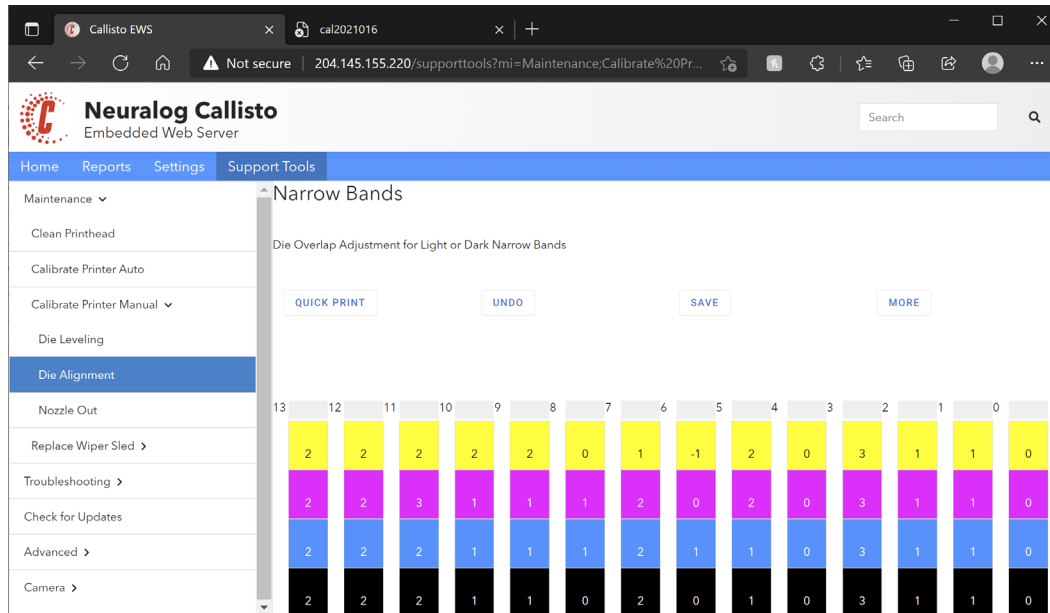


Figure 9-3. Web Server: Die Alignment

Printhead Height

Printhead Height is usually set to Auto for well log printing. However, if the prints seem to have smears or smudges, you may need to raise the printhead height. The web interface workflow for changing printhead height is the same as the operator panel workflow. Review the section [Printhead Height](#) in the *Callisto Operator Panel Chapter 7* for instructions on using this page.

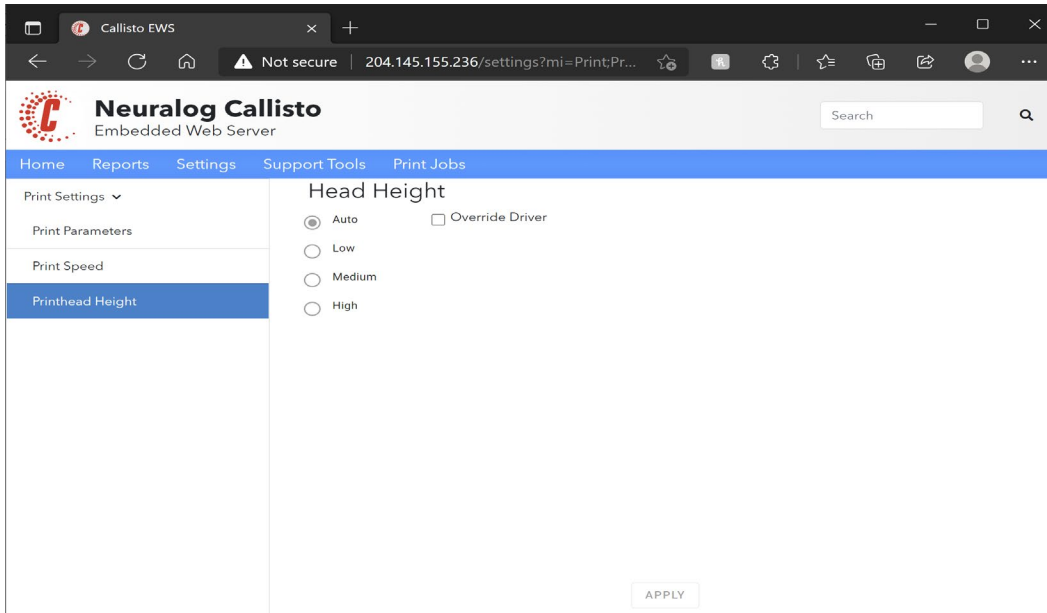


Figure 9-4. Web Server: Printhead Height

Settings

The Callisto Web Server contains the most commonly used printer Settings. *Print Parameters*, *Print Speed* and *Printhead Height* pages offer the ability to set the same parameters as the operator panel.

Print Parameters that are settable on this page include the parameters that can be overridden from values passed in by the printer driver. These include *Print Mode*, *Mark Mode* and *Mark Adjustment*. Well logs will always be printed with *Print Mode* set to Banner and *Mark Mode* set to Black Mark. *Mark Adjust* should not need to be changed. Normally no parameters on this page will need to be changed for well log printing. These values would only need to be overridden in cases where complicated or outdated network, versions of windows or printing applications are keeping the driver values from being properly sent to the printer.

Print Speed may be overridden if desired. The speed at which well logs can be printed on the Callisto printer depends of a variety of factors including print quality, file complexity and file width.

Printhead Height, discussed in the previous section, should usually remain at Auto for well log printing. Well log paper usually requires no special adjustment to the printhead height.

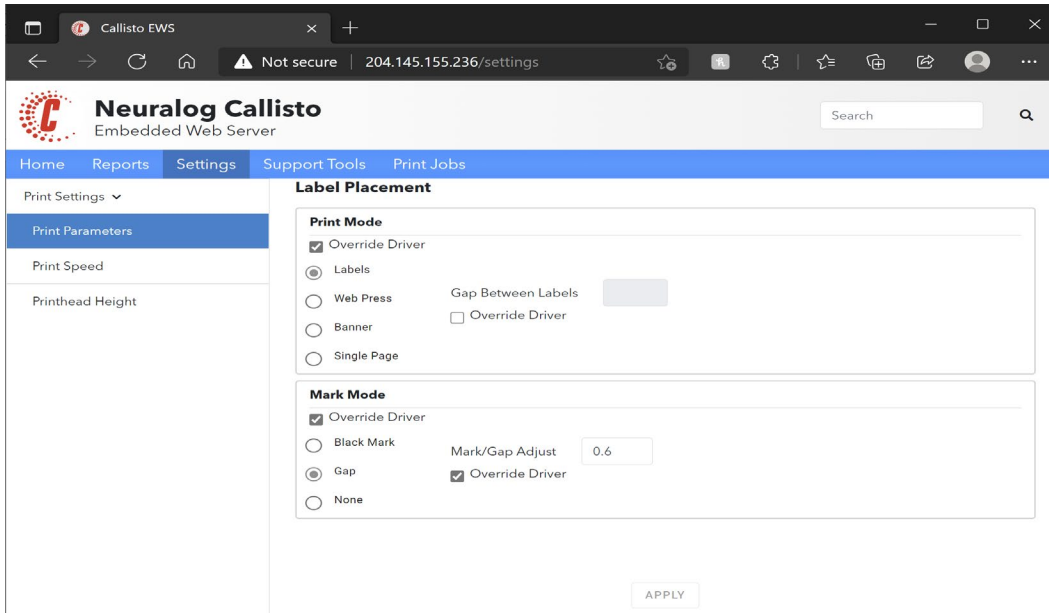


Figure 9-5. Web Server: Print Parameters

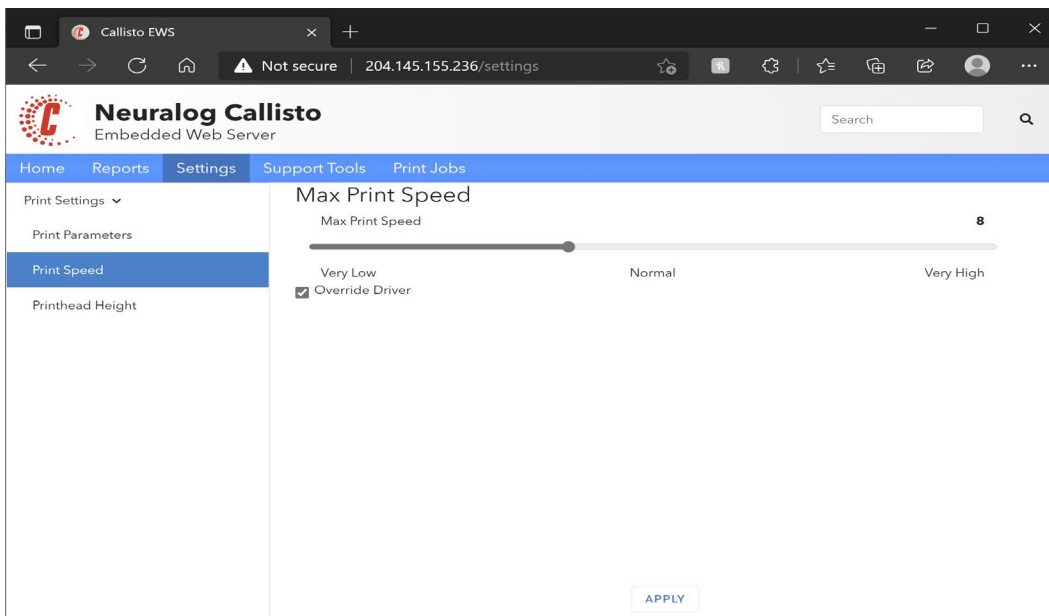


Figure 9-6. Web Server: Print Speed

Reports

The Callisto Web Server contains the reports that are found in the operator panel.

Device Information includes system versions and serial numbers of device components.

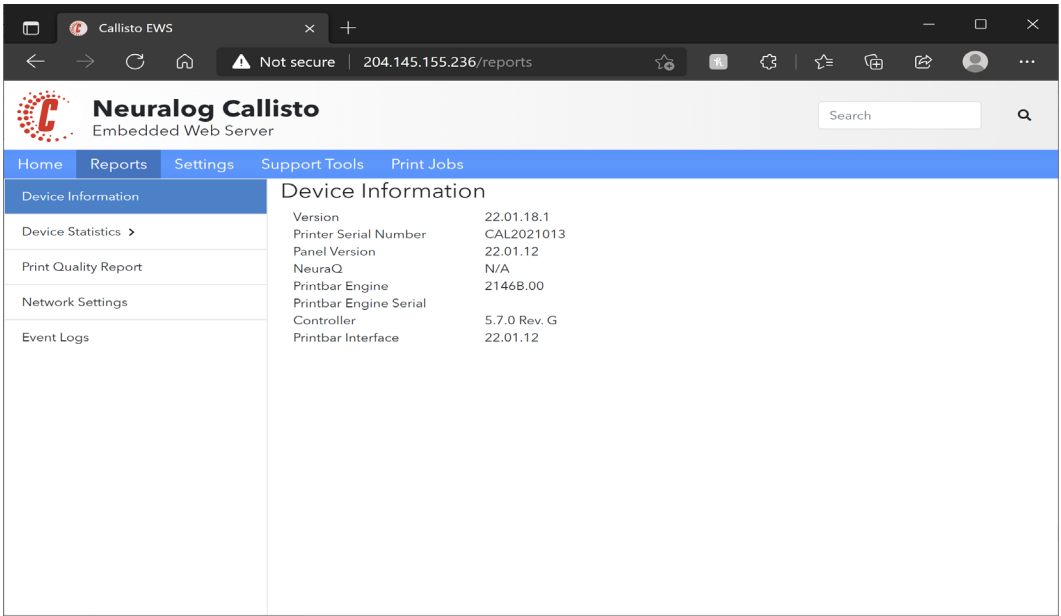


Figure 9-7. Web Server: Device Information

Device Statistics includes a report for ink usage and a report for printed pages.

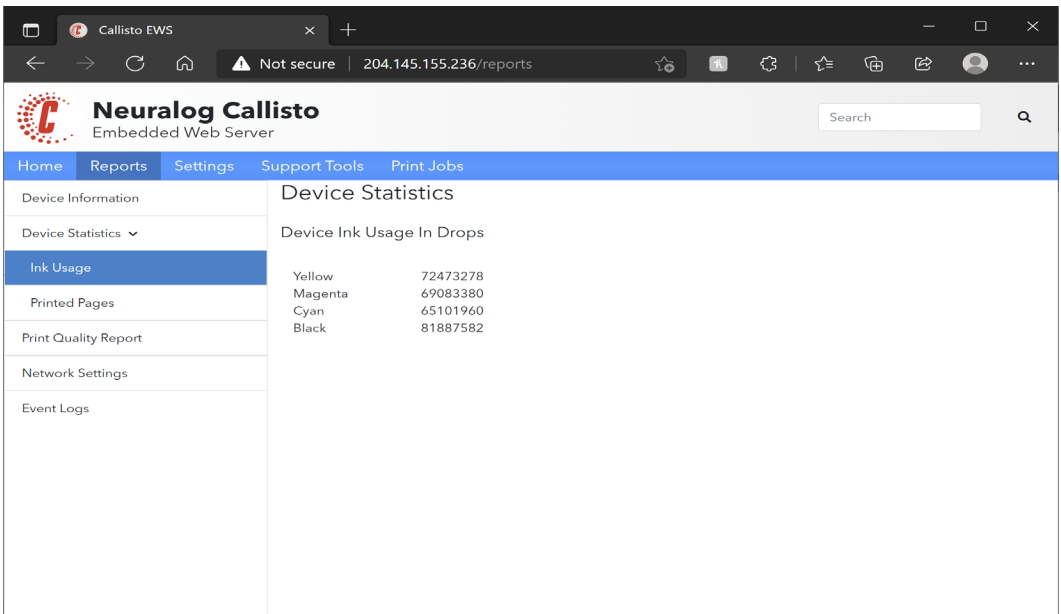


Figure 9-8. Web Server: Device Statistics->Ink Usage

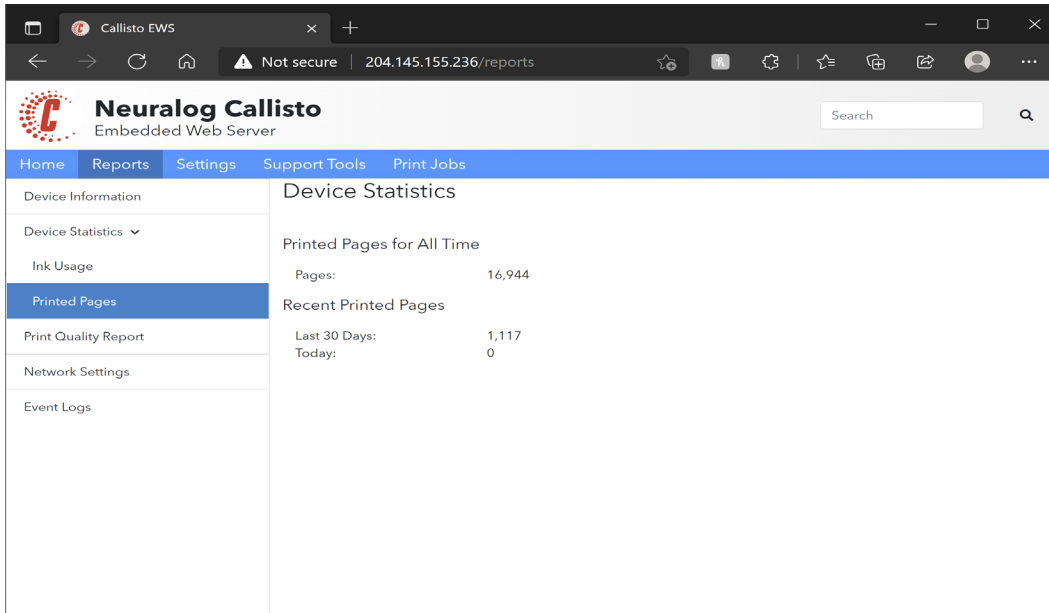


Figure 9-9. Web Server: Device Statistics->Printed Pages

The *Print Quality Report* page allows the built-in printer quality reports to be printed from the web server.

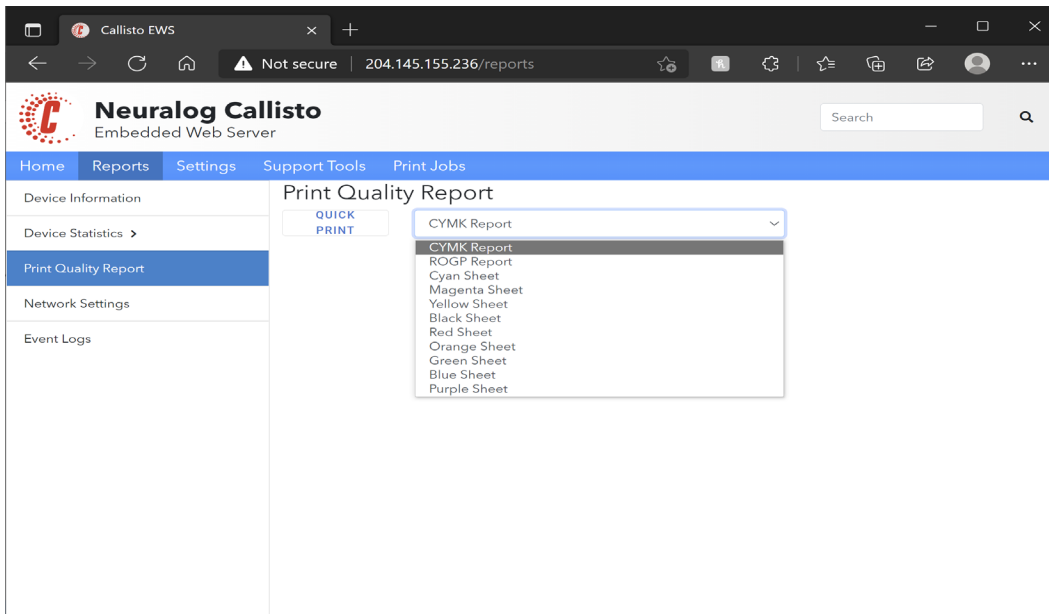


Figure 9-10. Web Server: Print Quality Report

The *Network Settings* report provides a summary of the printer's network settings.

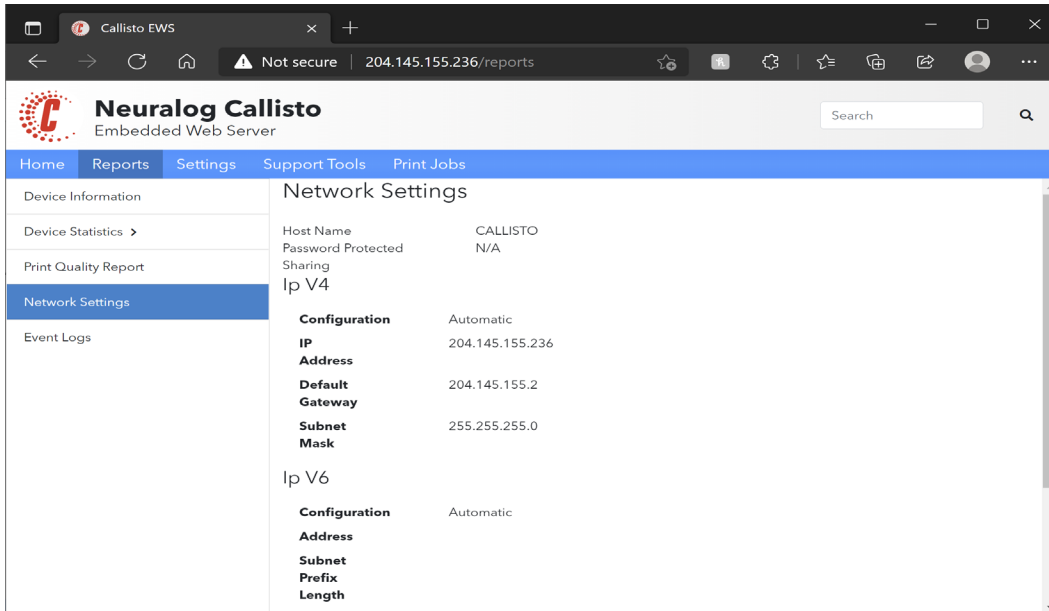


Figure 9-11. Web Server: Network Settings

The *Event Logs* page allows any of the printer's event logs to be viewed and downloaded. This can be very helpful when printer support is needed.

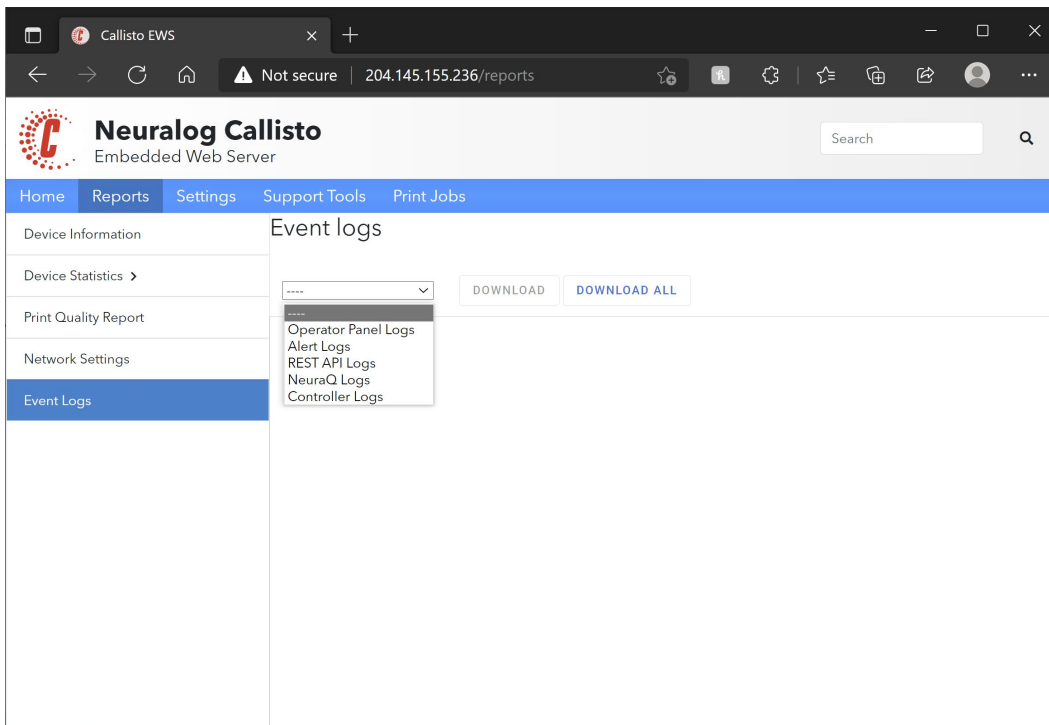


Figure 9-12. Web Server: Event Logs

Support Tools

The Callisto Web Server contains several critical Support Tools for maintaining the printer. These tools are also available through the printer operator panel.

Update Printer Firmware, found in Support Tools Maintenance section of the web server, is useful for updating Callisto printer firmware when the printer is not on the internet and cannot access cloud updates. The most straightforward way to update the Callisto printer firmware is to directly access the update through the operator panel. However, if the printer is only on a local network and not on the internet, this update functionality cannot work.

In the case that the printer is not on the internet, a firmware update may be requested by the end user by contacting Neuralog support. Once the update is received and downloaded to the user's local network, the web server may be used to directly upload the file to the printer. The update file will always be named **Callisto.zip**. Once the file is delivered to the printer, the firmware update installation can be executed from the operator panel.

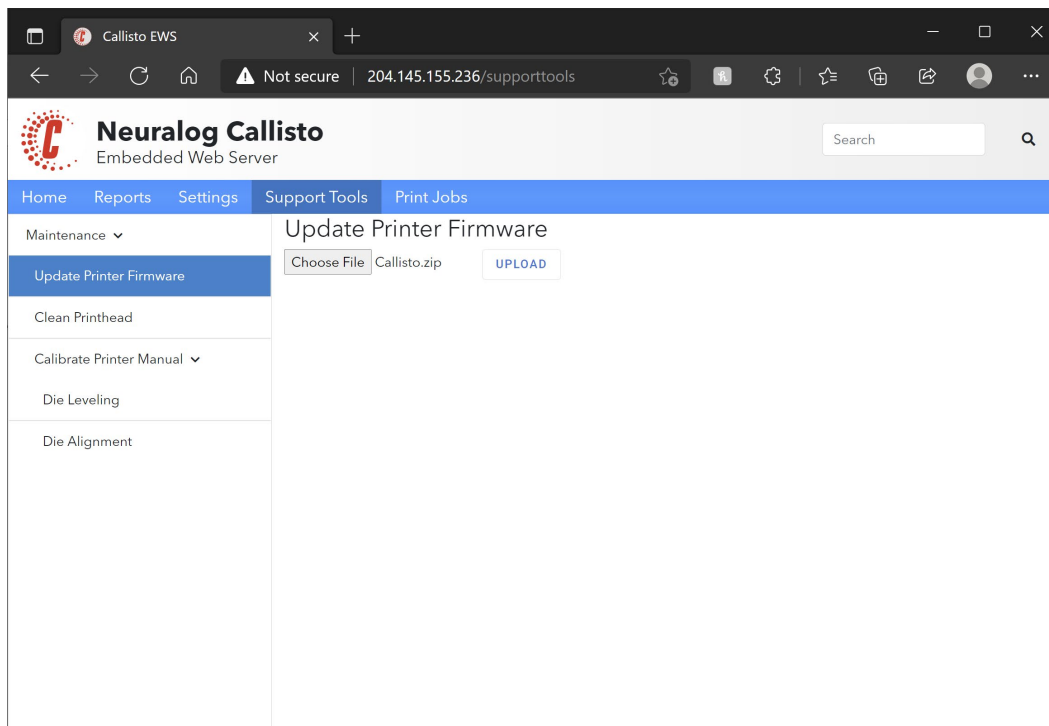


Figure 9-13. Web Server: Update Printer Firmware

The same printhead cleaning routines found on the operator panel are also available through the web server *Clean Printhead*. Be sure to be near the printer when executing these routines. Only execute these routines when the printer is in the Ready state. Do not execute these routines if the printer is actively printing or executing other routines.

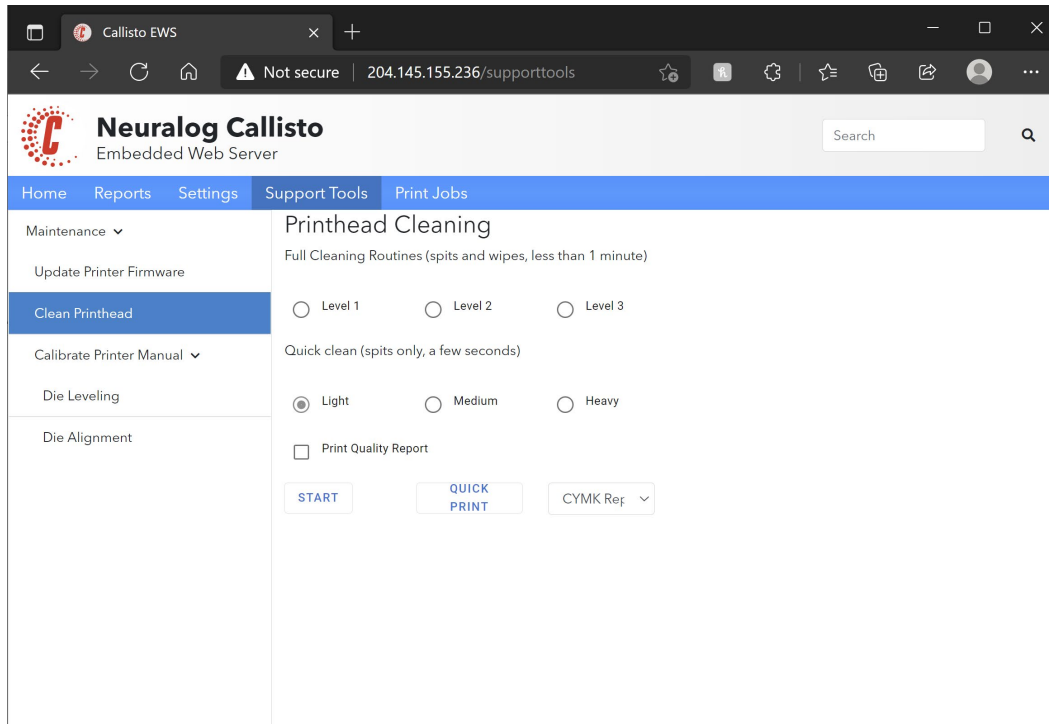


Figure 9-14. Web Server: Clean Printhead

Calibrate Printer Manual allows execution of *Die Leveling* and *Die Alignment* routines. These workflows were discussed earlier in this chapter in the Maintenance Quality Toolbox section.

Print Jobs

Several useful features are available in the Printer Web Server related to print jobs.

Send Job to Printer will send any valid Callisto print file to the printer for immediate printing. *Send Job to Held Jobs* will send any valid Callisto print file to Held Jobs to be stored on the printer. Be sure to use only valid Callisto printer files. These files normally have a **.prn** file extension. A Callisto print file can be created by printing directly to a file port, or Neuralog support might send a test file to print on the printer.

To send a file directly to the printer for immediate printing, select *Send Print File to Printer*. Browse for the file on your computer or local network by selecting the Choose File button. Select the Upload button to send the file to the printer.

To send a file to Held Jobs to be stored on the printer, select *Send Print File to Held Jobs*. Browse for the file on your computer or local network by selecting the Choose File button. Select the Upload button to send the file to the printer's Held Jobs. From Held Jobs the file can be printed at any time.

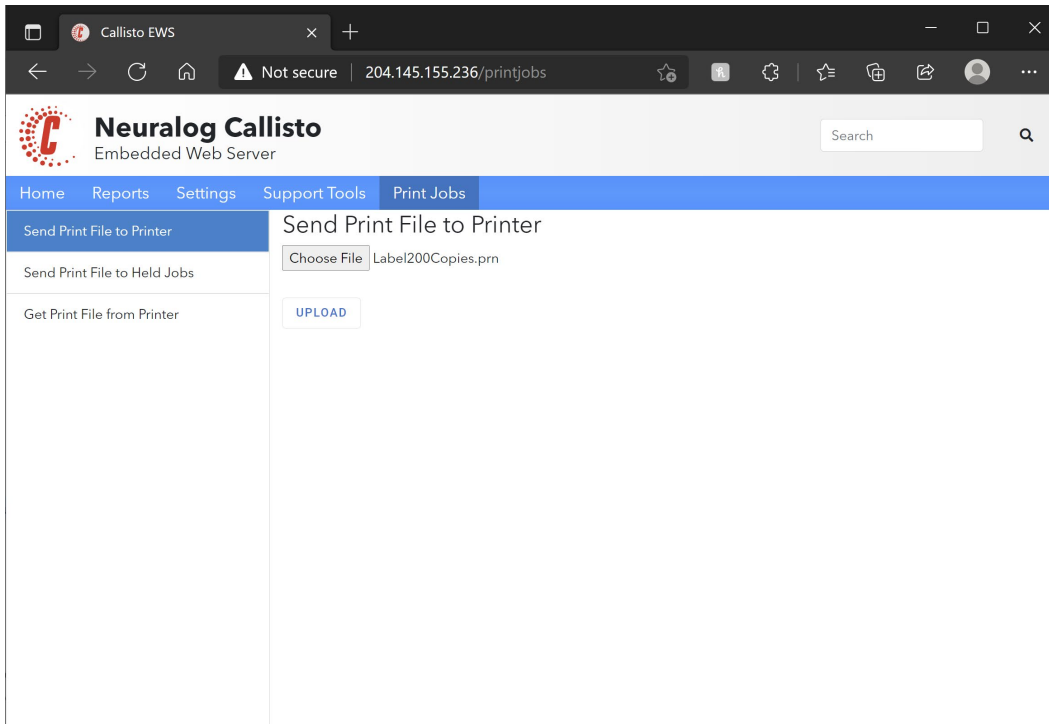


Figure 9-15. Web Server: Send File to Printer

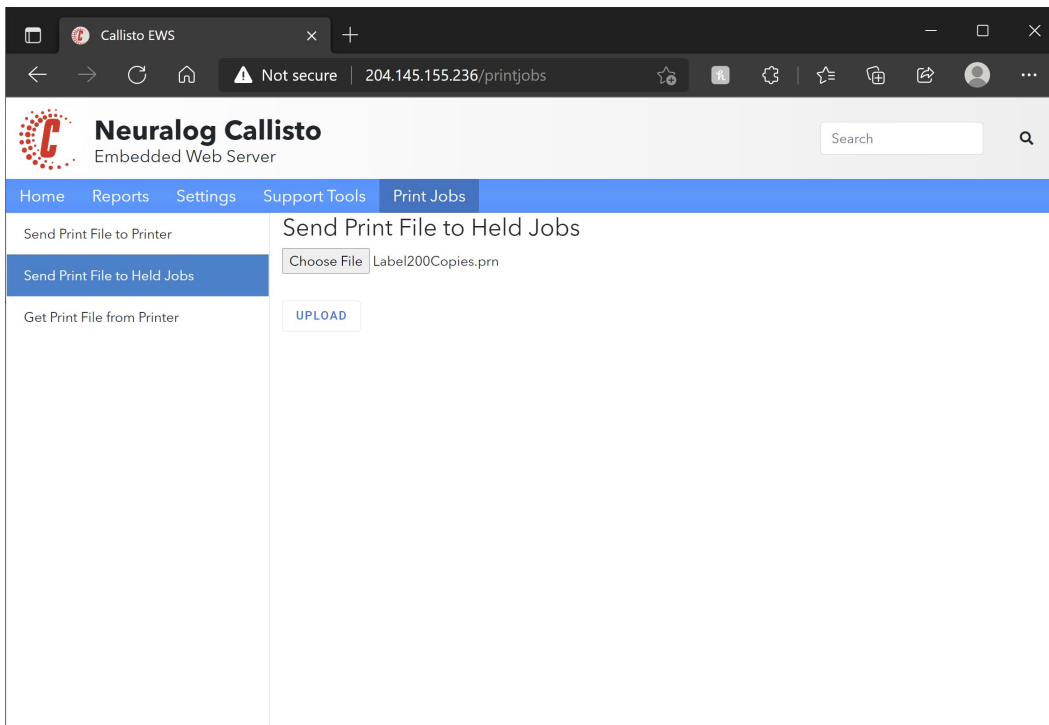


Figure 9-16. Web Server: Send File to Held Jobs

The web server also offers a means of downloading recently printed files from the printer. On the printer operator panel in the *Jobs* section there is a Job Log view showing the most recently printed jobs. The last few print files (PRNs) are always saved for reprinting. The *Get Print File from Printer* feature allows the user to download recently printed jobs.

To *Get Print File from Printer*, select this menu choice and check the file(s) you want to download to your local computer or network. Choose the *Download Selected* button. This will create a zipped file of the selected job(s) and place the file in your computer downloads directory.

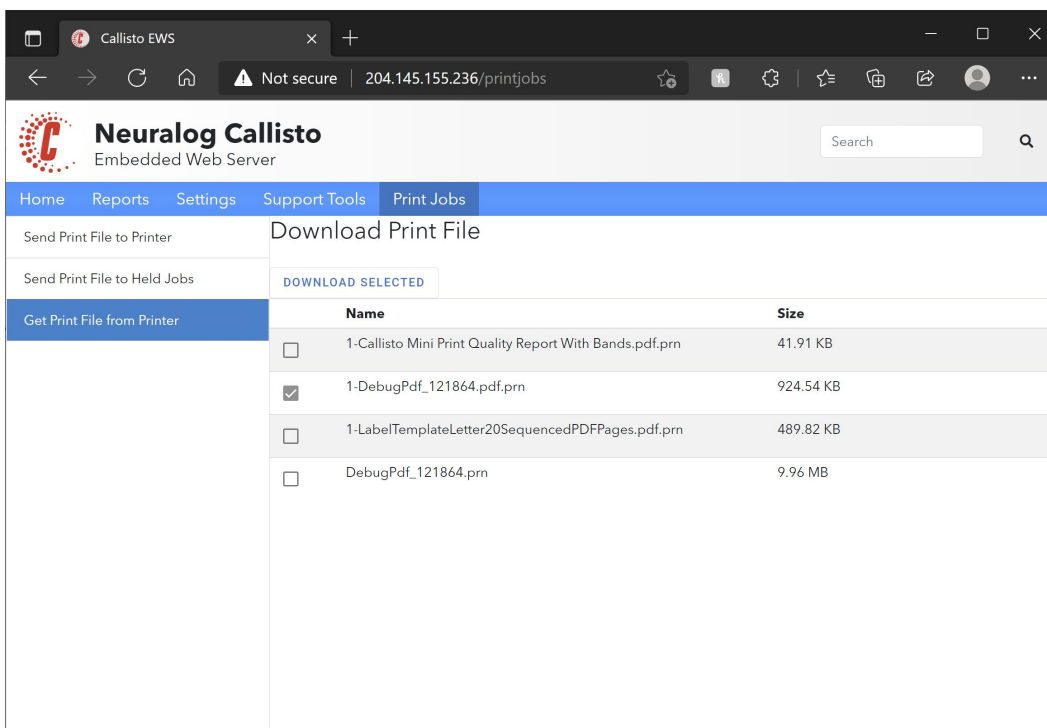


Figure 9-17. Web Server: Get Print File from Printer

10. Printing Well Logs from NeuraView

NeuraView is the industry standard well log viewing, editing and printing application and is provided with your Callisto printer. Practically any industry standard format well log can be loaded into and printed from NeuraView. NeuraView is particularly useful for printing well logs that will not correctly print from other viewing applications. Contact Neuralog support if you need to download the NeuraView software. While any industry accepted well log viewing program will work with the Callisto printer, we recommend using NeuraView for its ease of use, performance and ability to load a large variety of industry formats.

Load and Print Well Logs

Run NeuraView and load well logs. NeuraView is designed to load very large well logs, and NeuraView is designed to load numerous well logs at the same time.

To load well logs:

- File-> Open and Browse
- Drag and Drop onto the NeuraView workspace
- Scan a paper well log with the NeuraScanner and select *SendTo* NeuraView

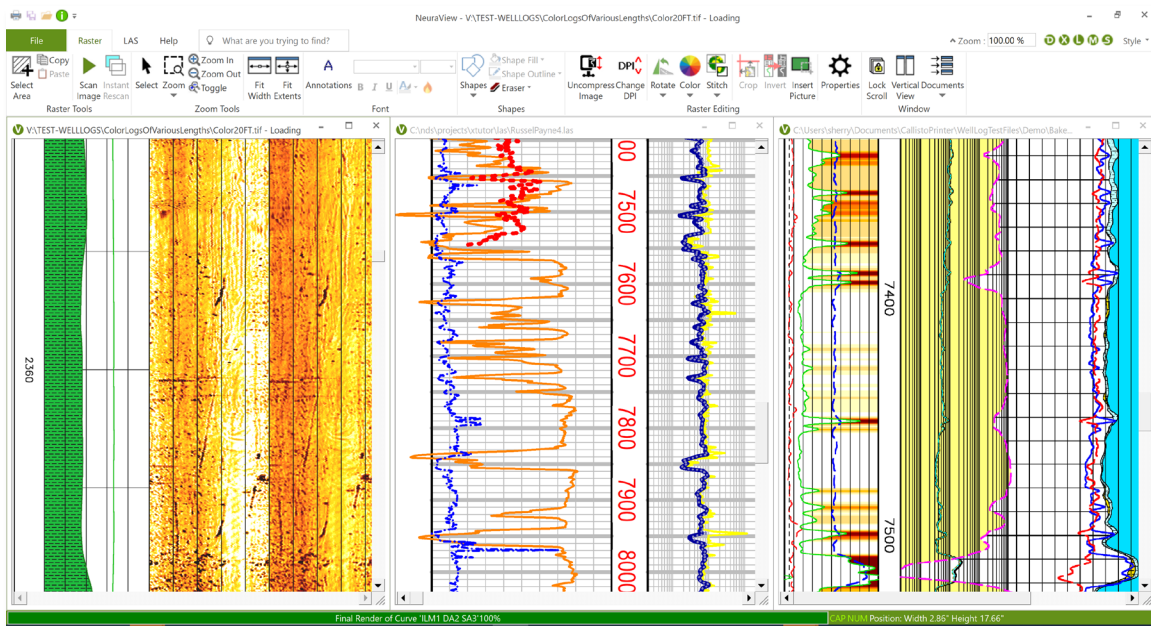


Figure 10-1. NeuraView Well Log Printing

Print a well log in NeuraView by selecting **File -> Print** on any log.

Select and set the page size so that the width matches the width of the actual well log. Full-scale, Half-scale and 12-inch wide page sizes are available through the printer driver, or you can create your own well log page size up to 12 inches wide. NeuraView scales width and height independently. Normally a well log will not be scaled in the continuous direction, however any well log wider than 12 inches will need to be scaled horizontally. For more details on selected pages and working with the printer driver, review that section of the user guide.

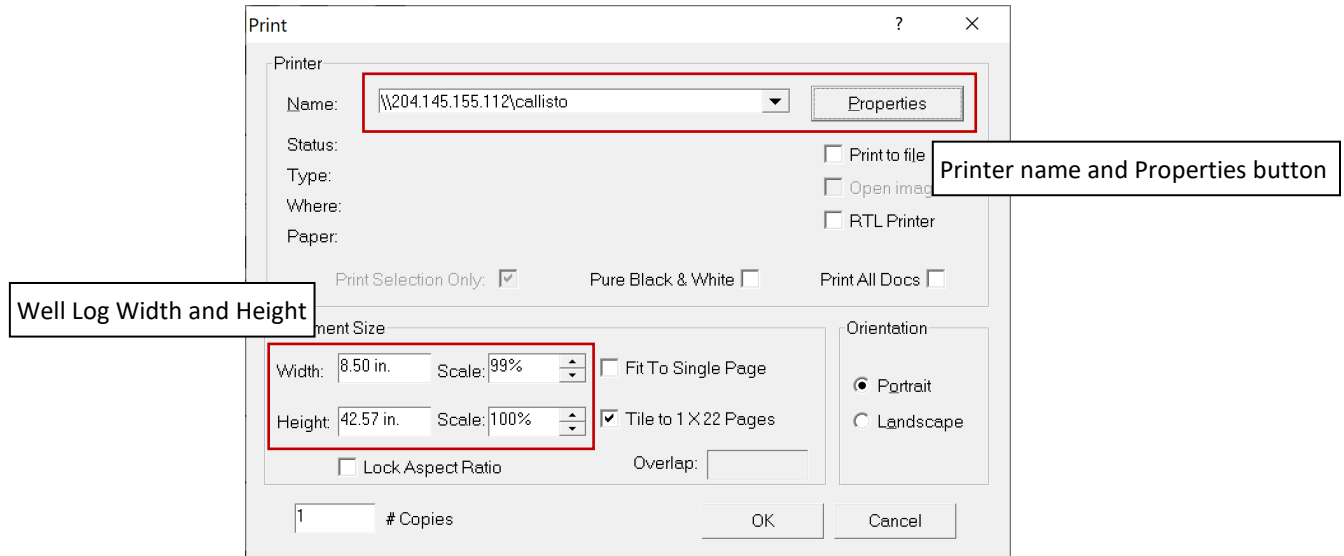


Figure 10-2. NeuraView Print Dialog

Select the Callisto printer from the printer list and then click the **Properties** button. The only parameter you will need to select for well log printing is the page size so that the width is correctly set. The printer driver is already set to the required Banner and Black Mark modes for well log printing. However, you may optionally change parameters on the following screens. Review the User Guide Printer Driver section for further details.

Form

Select from the predefined Well Log Form sizes to correspond to the well log paper you have available. Or create your own well log form with a width between 1.5" and 12"

Quality

Normal is the default and should be used for most well log printing. *Brightness*, *Contrast*, and *Ink Intensity* may be optionally adjusted. If you are familiar with the 300x well log printer driver, the Intensity setting is similar to Ink Saver in the 300x.

Attributes

Set the *Maximum Print Speed* to 11-14 ips for *Normal* printing for Full-scale logs. *Draft* printing may be done at faster speeds. *Best* or *Max DPI* printing must be done at slower speeds. Wider logs may need slower speeds.

Number of Well Log Pages

For the page size you select, the number of pages for your well log print will be shown in the NeuraView dialog. In the example above, Tile to 1x22 Pages indicates that there will be 22 pages stitched together to create the well log print. The printer driver may break these pages into smaller units when sending them to the print engine. If you see that the operator panel for the corresponding print indicates more than 22 pages, this is the normal operation of the printer driver repaginating into smaller chunks before sending the pages to the printer. The operator should notice no other difference and the print quality will not be defected. Because the pages are smaller, it is normal for the number of pages shown on the printer operator panel to be a larger number than the pages shown in the NeuraView dialog.

Well Log Printing

After the well log is rendered from NeuraView it is immediately spooled to the printer and then printed. The print should appear at top of paper form as expected. If well log copies have been selected, the copies should each print at top of form as expected. Remember that the most recent 5 jobs are stored in the job log for reprint or technical support.

11. Troubleshooting

Driver Fails to Install

- Make sure you are connected to the printer over a network.
- Follow the steps in the section [Special Case Driver Installation](#) in the section on Installing the Printer Driver.

Print does not start

- Make sure the printer is in the *Printer Ready* state before printing. Remember that the printer takes about two minutes to boot up.
- Make sure the media is loaded with printable side up and marks down.
- Check to see that the media present indicator is green; red means media is not detected.
- Make sure there are no other jobs “stuck” in the print queue. Do this by touching the Jobs icon and then the Jobs Queue tab. If there is an old job in the queue, select it and cancel it.
 - Check to see that the paper is properly loaded in the media track and that it has not become wrinkled in the printer.

Print does not start at correct position (top of form)

- Make sure that the paper is not loaded backwards, such that the marks are not at the top of the page.
- Use Mark Adjust to precisely place the well log print.
- Make sure the image itself does not have excess white space at the top of the log.

Printer stops printing in middle of print

- If the printer stops in the middle of the print, it is likely the printer cannot keep up. Try lowering the speed. You could also try lowering the print resolution if you need to print at faster speeds.

Media will not load

- Make sure the edge of the paper is not damaged.
- Make sure the guides have been adjusted so that the media glides through them. Lock the guides into place.
- Make sure there is not media already loaded in the printer, perhaps near the exit.

Printer does not detect media

- Make sure Mark sensing is set to Auto and Brightness is set above 80. Touch the Settings icon and then Device Settings to find Mark adjustment. If needed turn the Brightness level up.
- Make sure the printer is in the *Printer Ready* state. Remember that the printer takes about two minutes to boot up.

Well Log print has gaps

- If printing from a PDF viewing application such as Adobe Reader or Foxit do the following.
 - o Make sure the application is set to print pages without gaps.
 - o Make sure the correct page size is selected in the driver to match the PDF page size. This is usually letter, legal or A4, but may be different depending how the PDF file was created.
 - o When printing PDF logs wider than 12 inches, use an application with independent horizontal and vertical scaling. NeuraView is designed to print these logs. Adobe Reader and Foxit Reader cannot scale these logs correctly for continuous printing. Other PDF viewers may also not be able to scale properly.
- Check to see if you are printing in an incorrect mode.
 - o Make sure the driver **Print Mode** is set to *Banner* (not labels or web press).
 - o Make sure the driver **Mark Mode** is set to *Black Mark* (not none or gap).
 - o Make sure the modes are not overridden in the operator panel. Touch the Settings icon and select Print Settings->Print Parameters. Make sure there are not overrides selected, or if they are they are set to *Banner* and *Black Mark*.

Printer prints at wrong speed

- The printer may be printing at a slower speed due to the complexity of the log.
- The Speed override might be checked. Touch the Settings icon and then go to Print Settings->Print Speed to check the Maximum Sprint Speed override.

Well Log Width is not correct

- The correct page size has not been selected. Check the selected Paper Size in the driver. Make sure the width matches the width you expect.
- The well log has not scaled horizontally. Use NeuraView to manually scale the log width.

Print is too dark/Print is too light

- Use the Printer Driver to adjust the amount of ink placed on the well log paper.

Print disappears from Job Queue

- Make sure the printing application has not run out of memory. Adobe Reader has been found to occasionally produce 0 size print files.
- Try reprinting the file. Try rebooting the printer. If the problem persists contact Neuralog support.

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