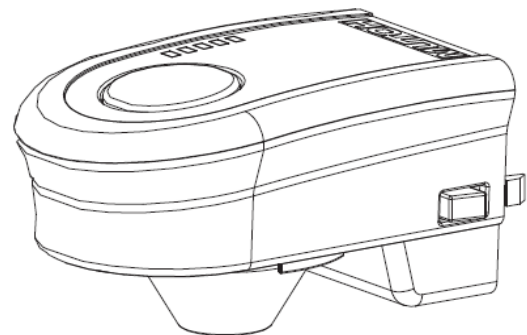


Overview of the Color Profiling Workflow Onyx ProductionHouse® with SPECTROVUE VM-10

Important Information

The purpose of this document is to serve as a supplement to the Onyx® software user manual, and as a handout for onsite and classroom training. It assumes the reader is already familiar with the Onyx ProductionHouse® software, and the general steps involved in creating a Media Profile. This document describes in general terms the steps involved in making a new Media Profile using the SPECTROVUE VM-10 on-printer spectrophotometer. The reader is encouraged to review the VM-10 user manual for specific information regarding installation, operation and storage of the instrument.

At points in this document, the reader will be instructed to install the SPECTROVUE VM-10 instrument onto the printer; please refer to the **VM-10 user manual** for detailed instructions. Likewise, certain features of the Onyx software are referenced in this document; for a detailed description of these features, please refer to the Onyx software user manual or online Help.



VM-10

IMPORTANT NOTE

Before starting a profiling session in Onyx ProductionHouse® using the SpectroVue VM-10 instrument, you must verify the printer output setup is set to **off**.



Press the Menu button to enter the setup menu.



Press the Right arrow button to enter the menu.



Press the Enter button to enter Output Mode.

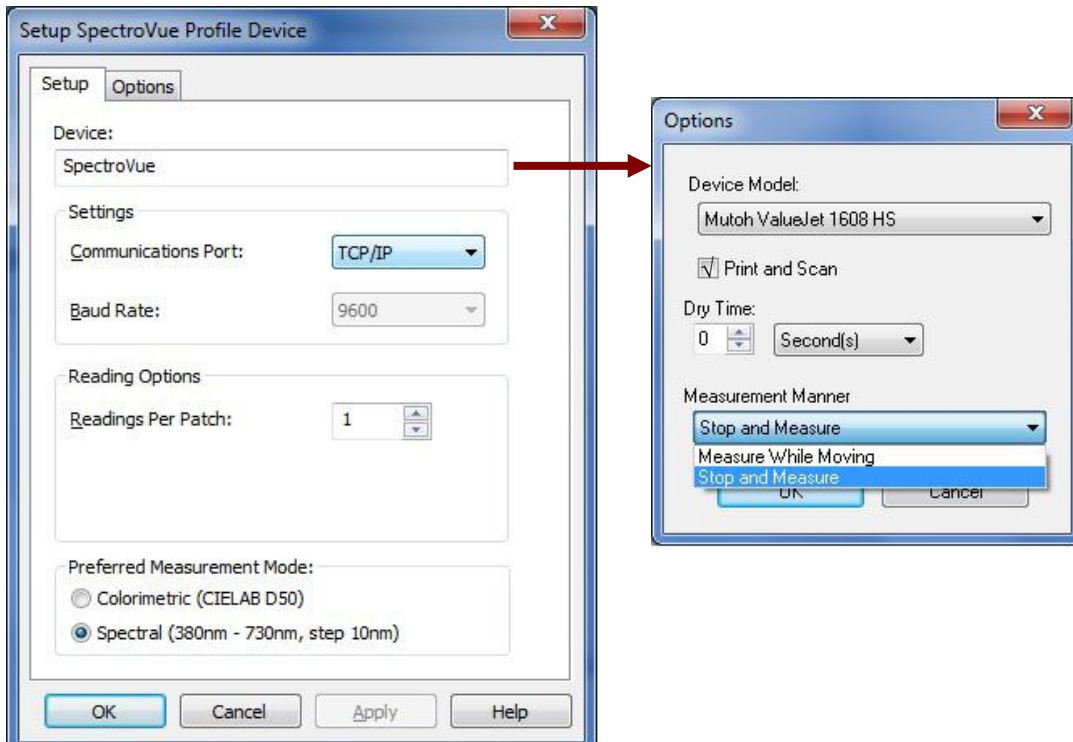


Use the '+' and '-' buttons to toggle Output Mode.

FIRST TIME: Setting IP Address & Instrument Read Mode

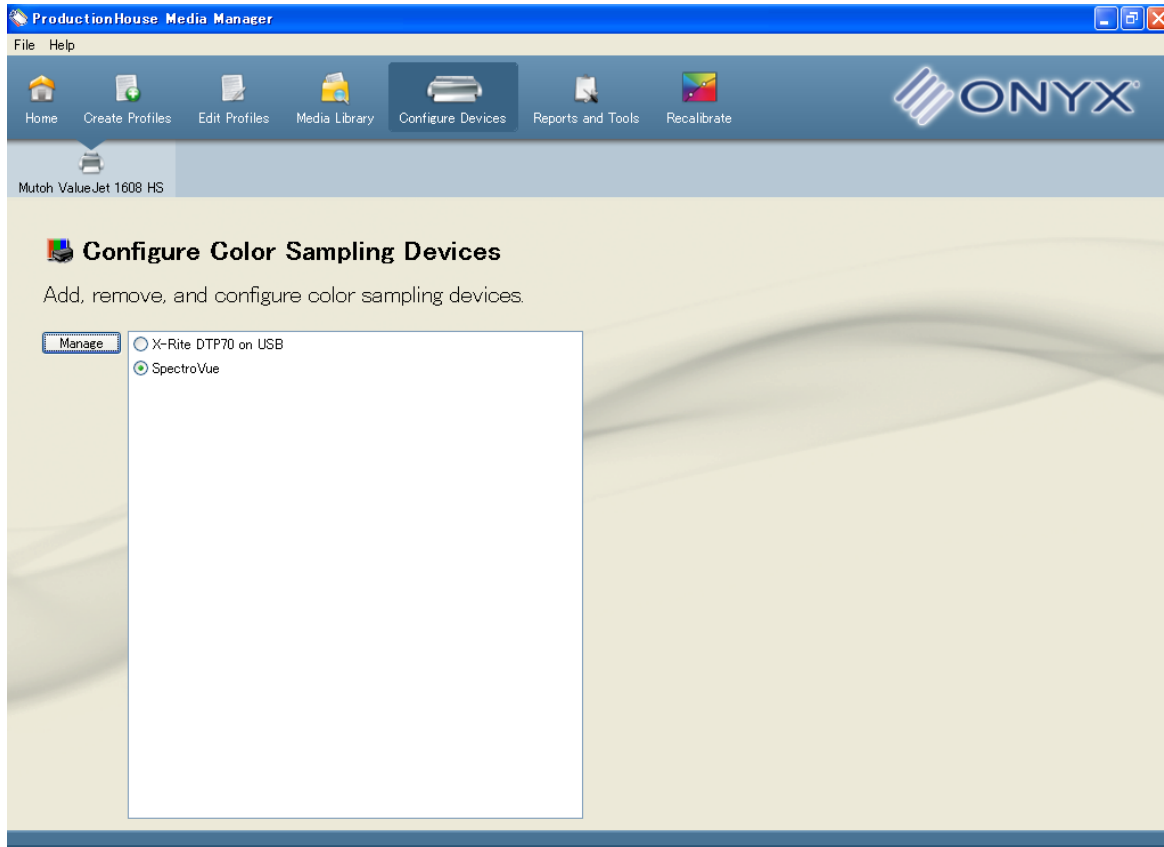


The first step is to specify to the Onyx® software the IP address of your ValueJet printer. Refer to your ValueJet user manual for specific instructions to configure the network settings for your printer.



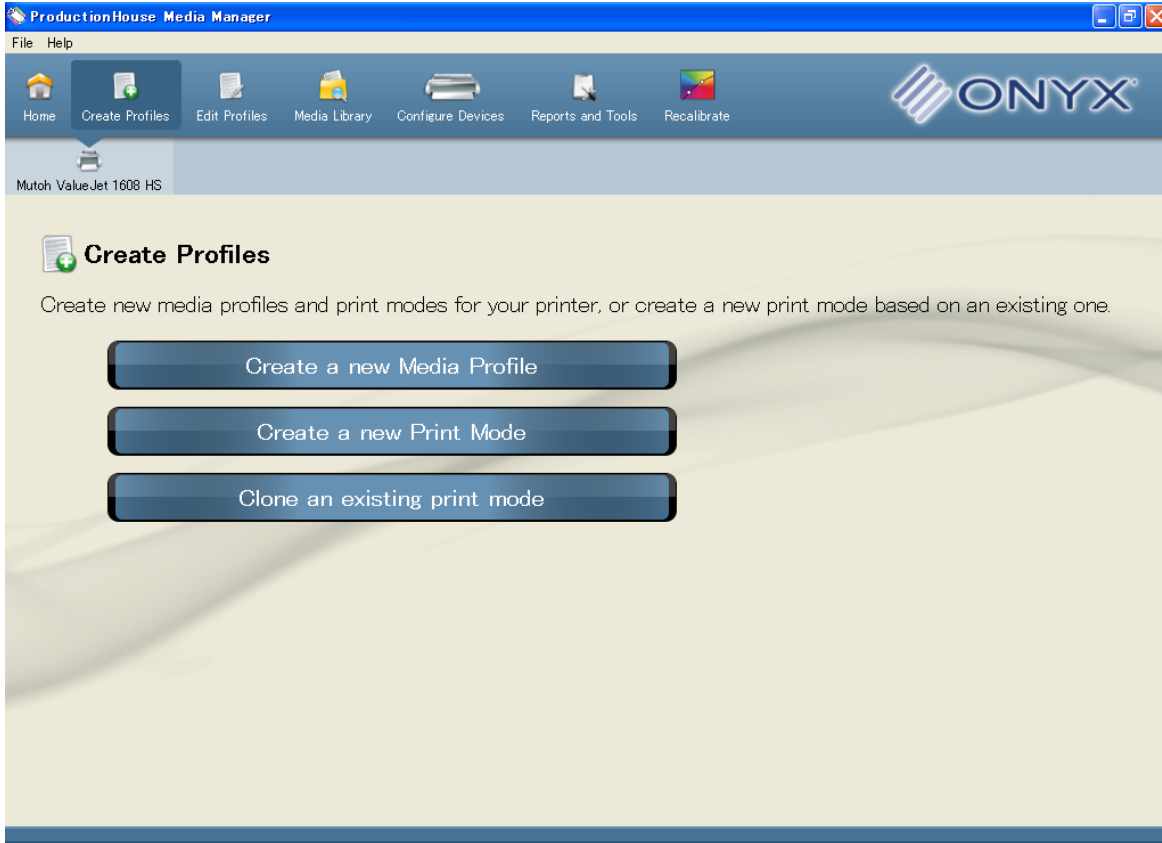
- The SPECTROVUE VM-10 offers several configuration options.
- **Communications Port** should be “TCP/IP.”
- **Readings Per Patch** should be “1.”
- **Preferred Measurement Mode** should be “Spectral.”
- Under the Options tab, **Measurement Manner** should be “Stop and Measure” (for optimum accuracy).
- Make sure the **Print and Scan** check box is checked

2. Configuration of Color Sampling Devices



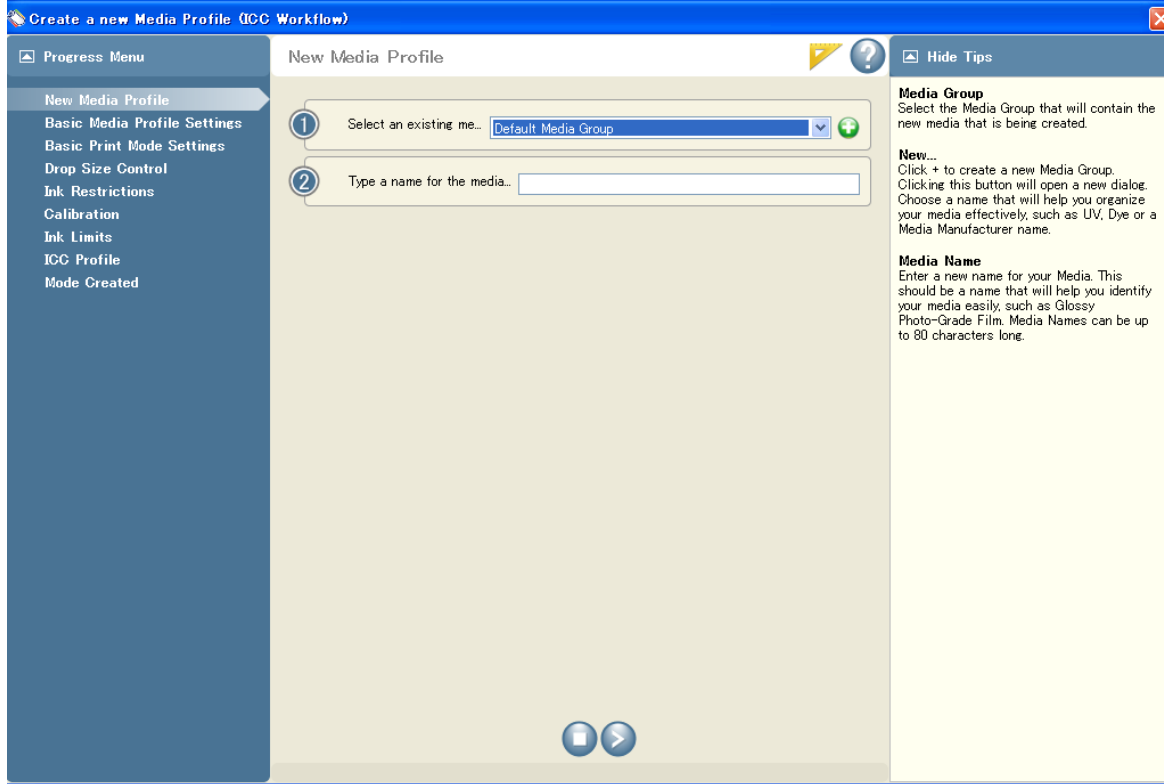
- To create a new media profile, first the **Color Sampling Device** must be configured.
- Although it is mounted on-printer, the SPECTROVUE is managed in the same way as a handheld instrument.
- To configure a Color Sampling Device, click the **Configure Devices** icon in the tool bar. For a detailed description of how to Add or Configure a Color Sampling Device, please refer to the Onyx software user manual or online Help.
- Select "SpectroVue" from the list of Color Sampling Devices.

3. Creating a New Media Profile



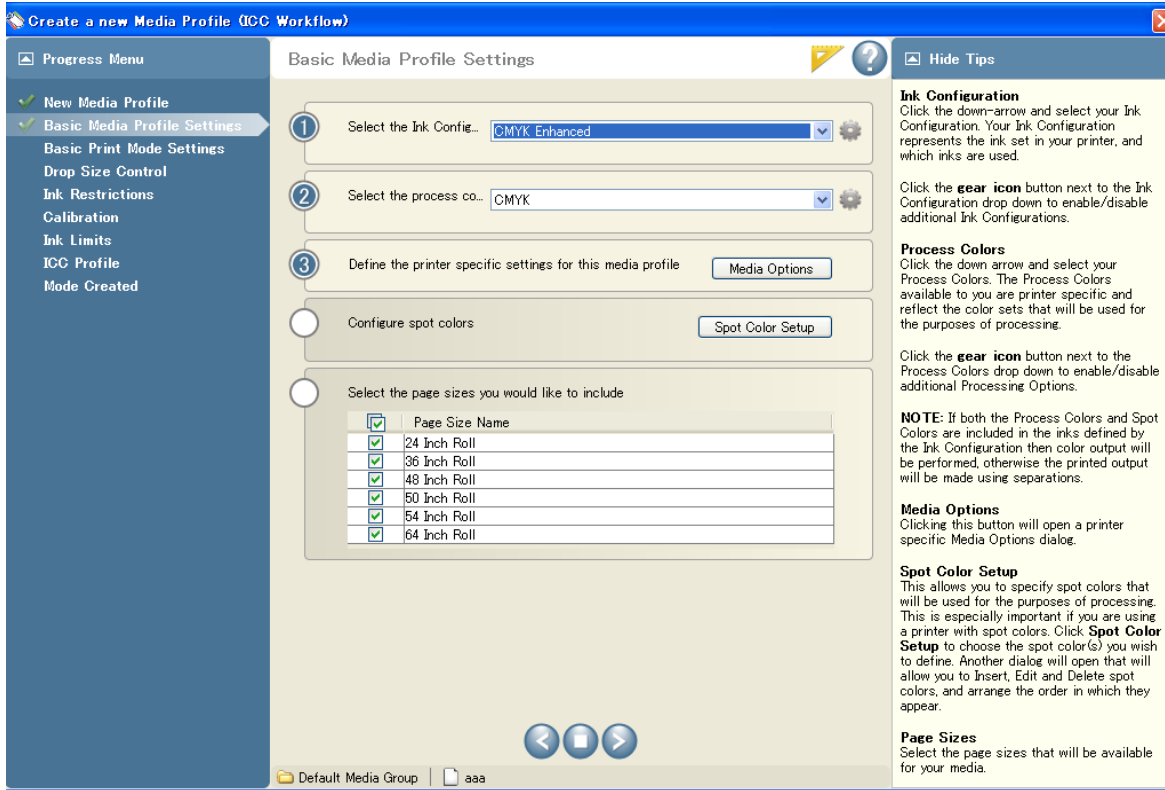
- A new **Media Profile** will be created after a sequential step-by-step operation. For a detailed description of what a Media Profile is and how it is used, please refer to the Onyx software user manual or online Help.
- To create a new Media Profile, click the **Create a new Media Profile** button.

4. Naming the New Media Profile



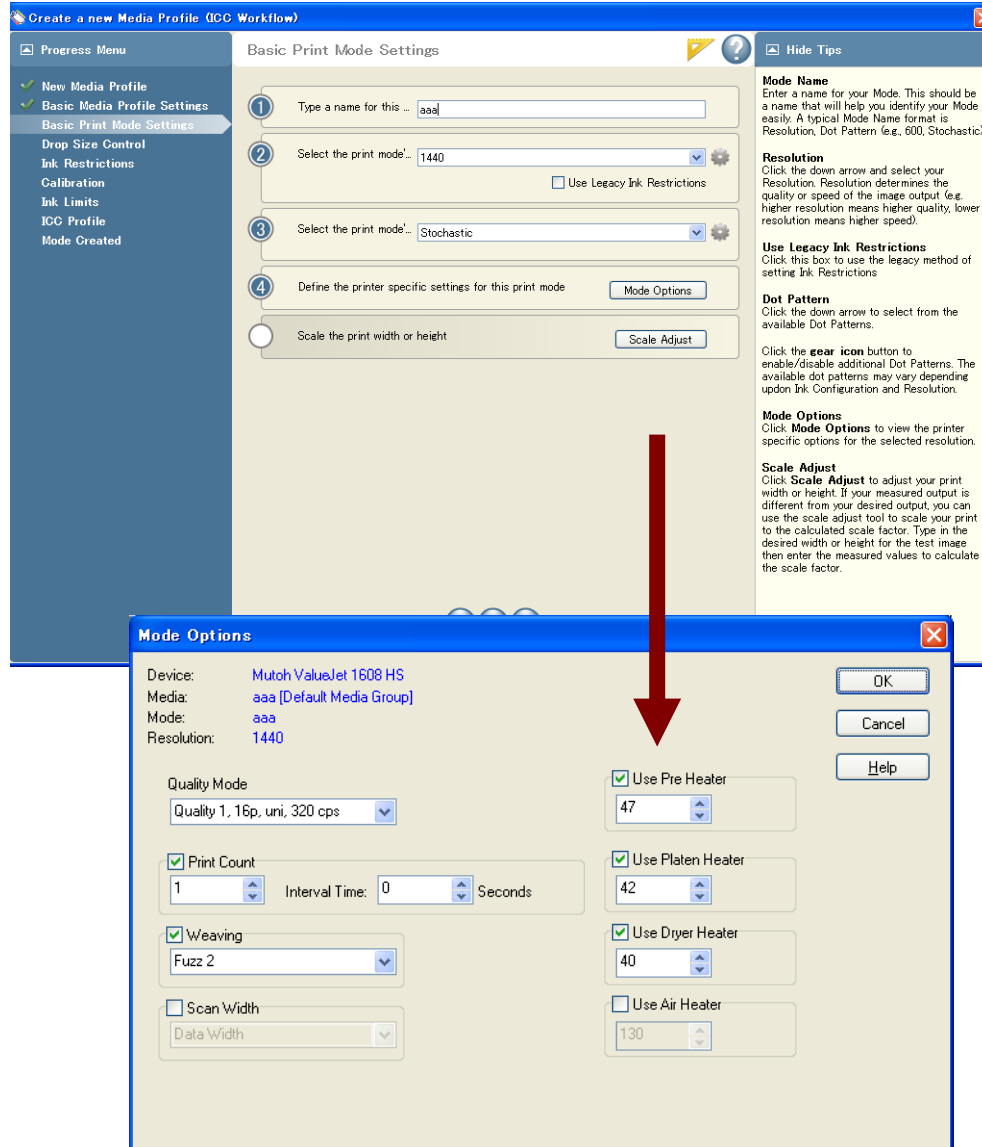
- Select a **Media Group**, or create a new one; then, enter a unique name for the new media. For detailed information regarding the creation and selection of Media Groups, and how and why they are used, please refer to the Onyx software user manual or online Help.

5. Specifying Media Profile Settings



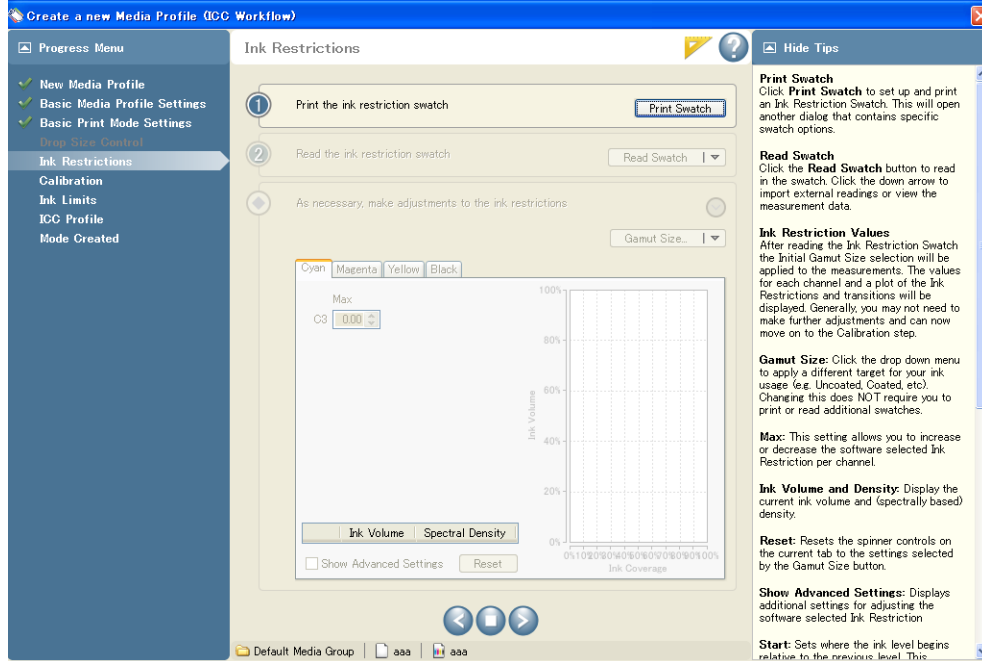
- Specify **Media Profile Settings**... ink type, color set (CMYK), page size, etc. For a detailed description of the various Media Profile Settings and how they are used, please refer to the Onyx software user manual or online Help.

6. Specifying Print Mode Options



- Specify the **Print Mode Options...** Quality Mode, Weaving options, Heater and Air Knife settings. For a detailed description of the various Print Mode Options and how they are used, please refer to the Onyx software user manual or online Help.
- Different modes can impact color reproduction; different modes, especially different Quality Modes, typically require new Media Profiles to be generated. A single media type may have multiple Media Profiles, representing different Print Mode / Quality Mode options.

7. Determining Ink Restrictions



- To determine **Ink Restrictions**, swatches are printed and measured.
- By clicking the **Print Switch** button, a print / measure cycle is initiated. After printing, the software will prompt the user to install the SPECTROVUE VM-10 instrument onto the printer. Please refer to the VM-10 user manual section entitled "Using the Spectrophotometer" for detailed instructions.

- After the measurement sequence completes, click the **Read Switch** button. The measurement data from the SPECTROVUE is displayed in the Read Switch dialog (an example of which is shown on the right). This dialog displays the actual measured values, alongside the optimum target values.

Patch	Expected	Measured	L*	a*	b*
A1			51.0686	-38.2119	-46.6985
A2			51.1041	-39.43	-47.5279
A3			51.4769	-39.6824	-47.4347
A4			51.9263	-40.086	-47.3009
A5			52.3005	-40.4079	-47.1025
A6			52.8207	-40.4378	-47.0523
A7			53.3031	-40.7221	-46.9856
A8			53.819	-40.7356	-46.9578
A9			54.4031	-41.2968	-46.5581
A10			55.0012	-41.5974	-46.3953
A11			55.6446	-41.6351	-46.1446
A12			56.2793	-41.7457	-45.9052
A13			56.9955	-41.9765	-45.622
A14			57.7279	-42.0867	-45.2859
A15			58.5879	-42.1735	-44.8859
A16			59.45	-42.0046	-44.3532
A17			60.3573	-42.1816	-43.7944
A18			61.3369	-42.0326	-43.2517
A19			62.4579	-41.6474	-42.5649
A20			63.615	-41.4508	-41.7013
A21			64.8982	-41.1431	-40.8661

After the target prints you will need to follow the prompts on the printer display panel to attach the SpectroVue VM-10 and complete the measurements. To install the VM-10, follow these steps:



The Display will scroll through the message "Attaching Instrument and [ENTER]"



You will see the message "Wait for a while" several times during the measurement process. Do not touch anything while this message is displayed, simply wait for the next prompt.



The Display will scroll through the message "Open left mainte. Cover."



The head will move to the left maintenance station; open the maintenance cover.

Installing the SpectroVue VM-10 (continued):



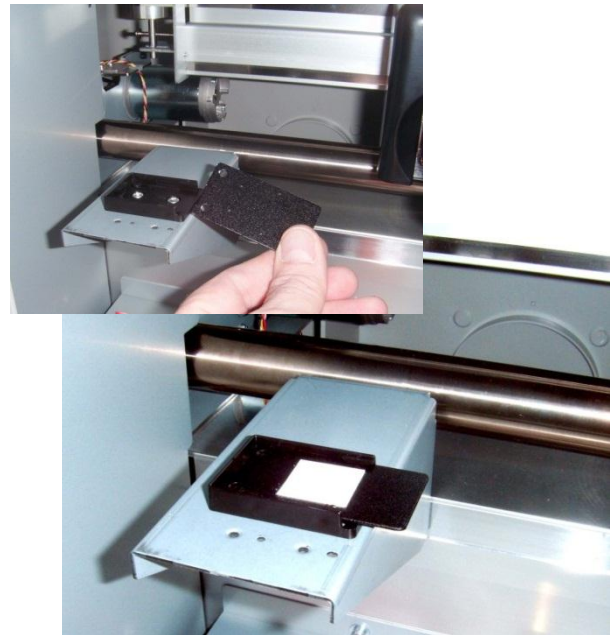
The Display will scroll through the message "Remove connector cap and attach instrument [ENTER]"



Remove the connector cap.



Attach the SpectroVue VM-10 (instrument).



Turn the white calibration plate over and set it back in its slot. The white calibration square must remain **turned down** when not in use.

CLOSE THE MAINTENANCE COVER TO BEGIN

8. Entering Measurement Mode to Take Spectral Measurements



The instrument will calibrate to the white reference plate, which will take a few seconds; then, the head will move back to the right and the display panel will scroll through the message “Start Mesurement [ENTER]”

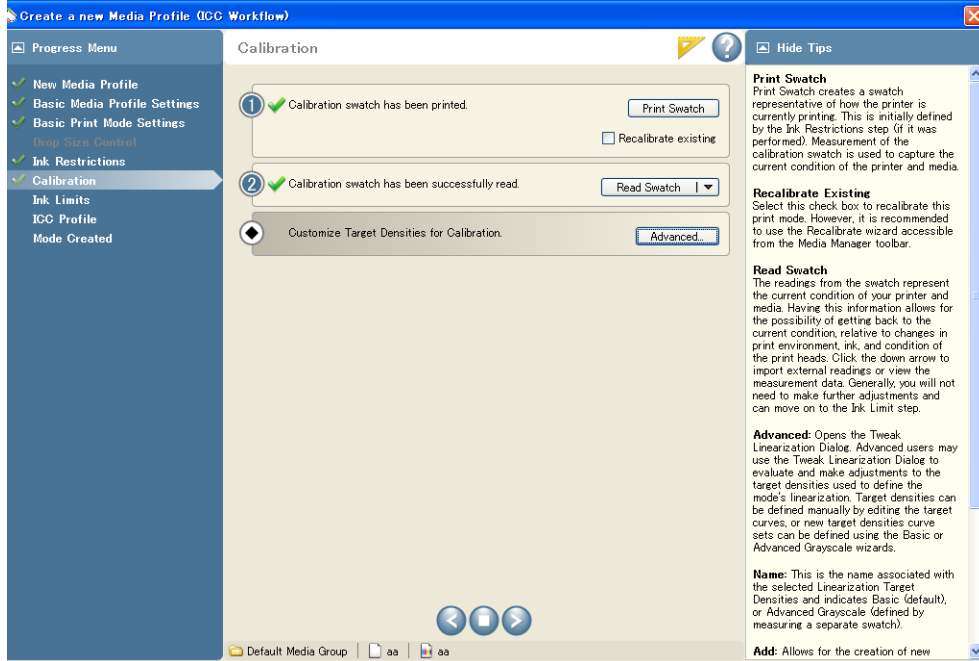
At this point, press the **Enter** button on the printer control panel and the printer will measure all of the patches on the target and return to right.

When finished, the display panel will scroll through the message “Detaching instrument [ENTER]”

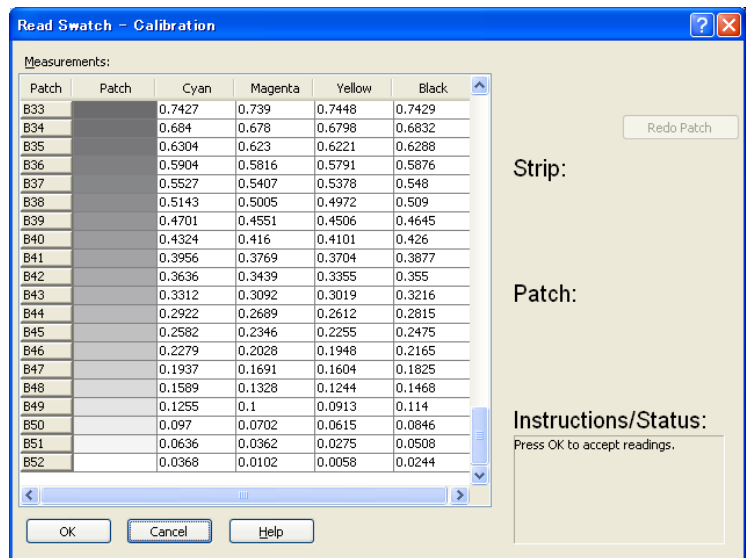
1. Press the **Enter** key on the printer control panel and the head will move to the left maintenance station.
2. The display panel will now scroll through the message “Open left mainte. Cover.”
3. Open the left maintenance cover, and the display panel will scroll through the message “Detach Instrument and set connector cap [ENTER]”
4. Detach the SpectroVue VM-10 by squeezing both tabs on each side of the device and pulling out.
5. Place the **orange connector cap** back on the SIP port where the SpectroVue had been connected.
6. Press the **Enter** button on the printer control panel.
7. The display panel will now scroll through the message “Remove white plate then close left maintenance cover.”
8. Remove the white plate, turn it over and place it back in its holder.

- Close the left maintenance cover and the head will return to the right side and “Ready to print” will be displayed on the printer control panel. Be sure to set the VM-10 in a safe location, preferably back in its storage box.

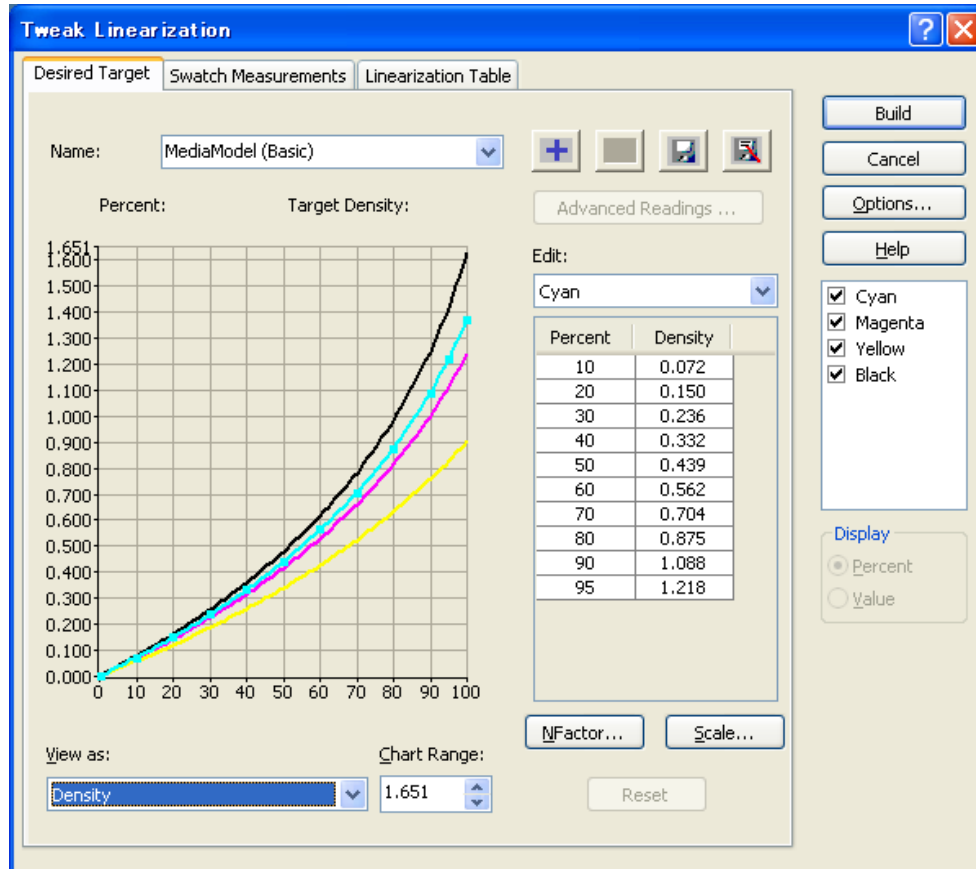
9. Determining Calibration



- To determine **Calibration** (linearization), swatches are printed and measured.
- By clicking the **Print Swatch** button, a print / measure cycle is initiated. After printing, the software will prompt the user to install the SPECTROVUE VM-10 instrument on the printer. Please refer to the VM-10 user manual section entitled "Using the Spectrophotometer" for detailed instructions.
- After the measurement sequence completes, click the **Read Swatch** button. The measurement data from the SPECTROVUE is displayed in the Read Swatch dialog. (an example of which is shown on the right). This dialog displays the ink density values.



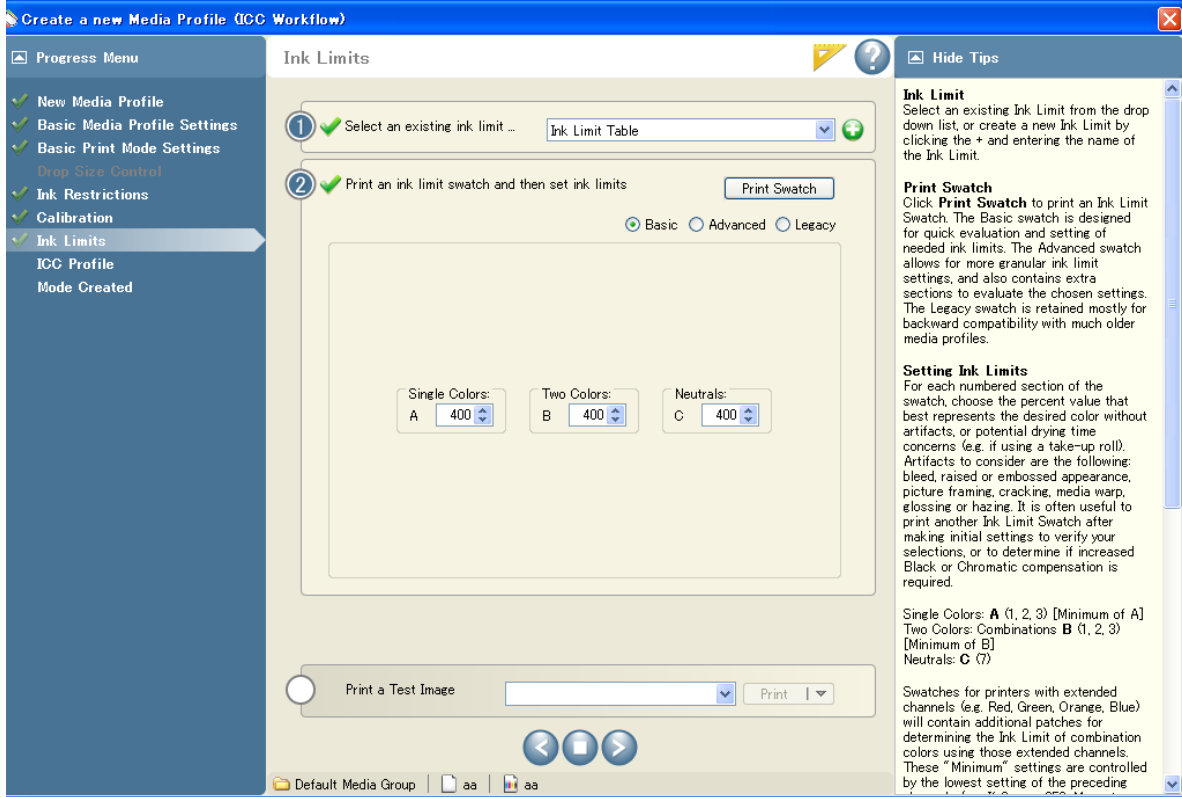
- To manually adjust Calibration, use the **Tweak Linearization** dialog.



Note that in most cases, manually “tweaking” linearization is not necessary, and should only be done by an experience user who understands how such changes can impact color reproduction and print quality. The Onyx ProductionHouse RIP software provides a power set of color management tools; questions as to how to properly use these tools should be directed to Onyx Graphics. To gain optimum benefit, the user is encouraged to seek color management training.

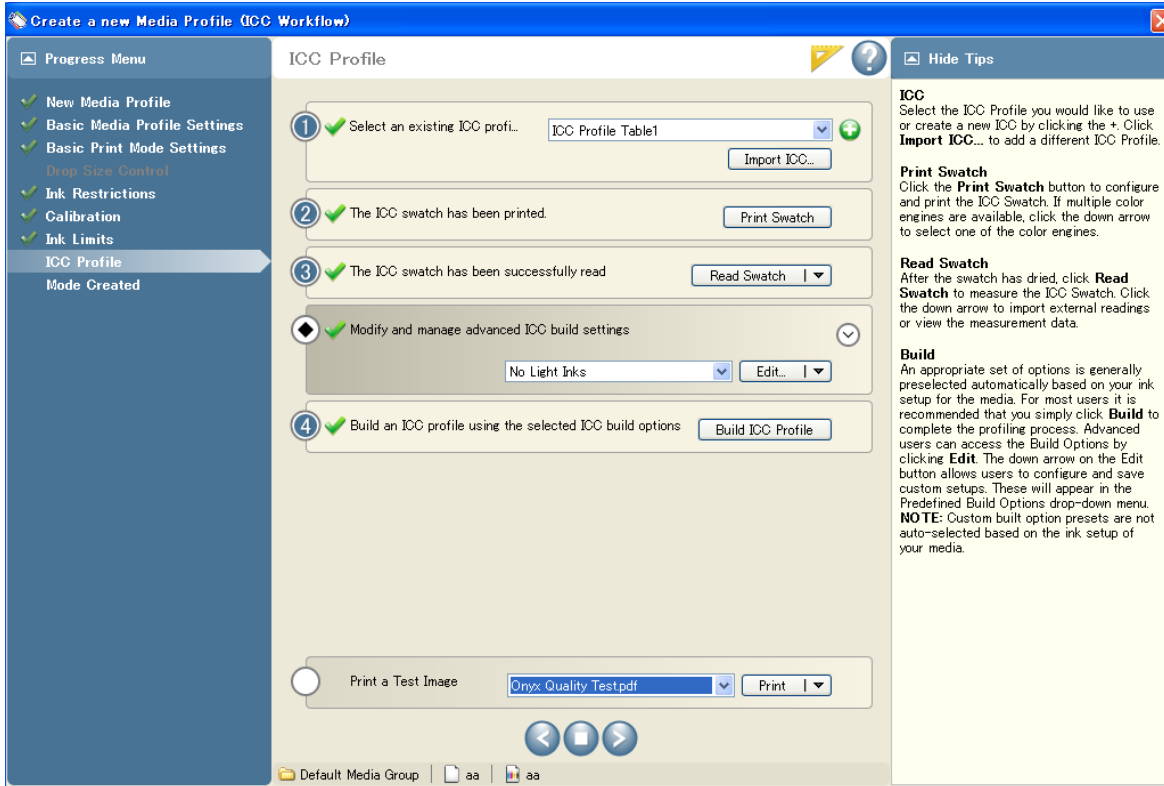
For a detailed description of how and when to use the Tweak Linearization dialog, please refer to the Onyx® software user manual or online Help.

10. Determining Ink Limits



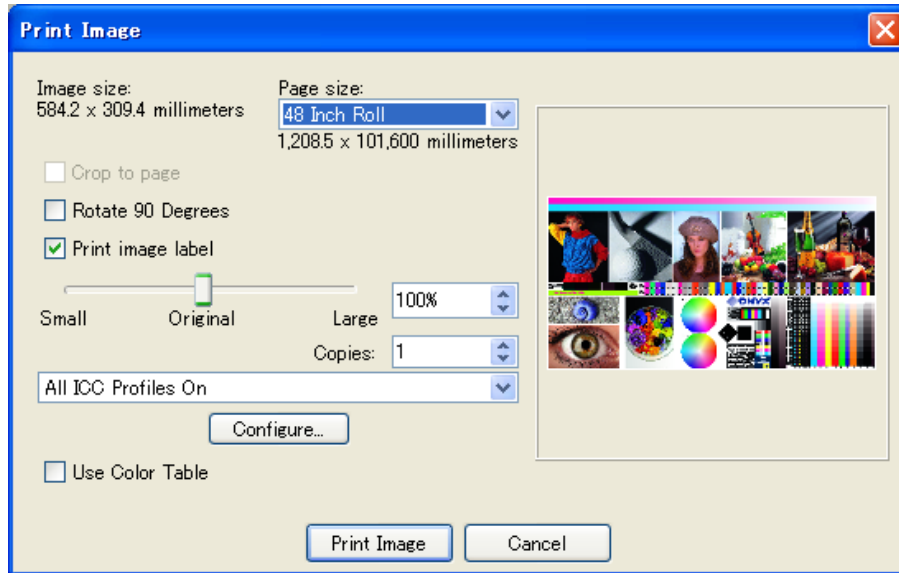
- The Onyx RIP software does not determine ink limits automatically; the user must specify these directly.
- Therefore, the **Ink Limit Swatch** is printed, but is not measured by the SPECTROVUE VM-10.
- For a detailed description of how to interpret the Ink Limit Swatch printout, to determine Single, Two-Color and Neutral ink limits, please refer to the Onyx software user manual or online Help.
- This is a function of the RIP software, and not of the VM-10 instrument.

11. Creating an ICC Profile



- The final step to creating a Media Profile is to create an **ICC Profile**.
- Select a color target, then print the color target; the measurement cycle will begin automatically.
- The ICC Profile dialog has several user-adjustable options; for most situations, the default settings are sufficient. Under the option for **Color Mapping**, Enhanced is generally preferred to Classic when using the SPECTROVUE VM-10 and ValueJet printers. For a detailed description of all of the ICC Profile options, please refer to the Onyx software user manual or online Help.

12. Printing the Test Image



- Once the Media Profile is created, print the **Test Image** to confirm the quality of the new profile.
- Consistent use of a well-define color workflow, such as that provided by the combination of Onyx ProductionHouse® and the Mutoh SPECTROVUE VM-10 on-printer spectrophotometer, can help to ensure accurate and consistent color reproduction across multiple media types.

