

C1100/C1070 Series Color Linearization with RU CCMT v2.4.0h

(Using Color Care Measure Tool v 2.4.0)



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Overall Objective:

The purpose of this guide is to provide an easy to follow process for production print engine color linearization, quality analysis, color calibration, and quality control for the Konica Minolta bizhub PRESS C1100/C1085/C1070/C1060 systems using Konica Minolta's Color Care Measure Tool.

Upon completion of these procedures, users will be able to:

1. Learn the proper workflow for linearizing color on the main body.
2. Perform the Density balance adjustment when density evenness becomes an issue.
3. Manually adjust Initial Maximum Density.
4. Apply Color Density Control.
5. Reference Controller Calibrations documentation.

Estimated Completion Time: 90-120 Minutes**Required Tools and Documentation Reference:**

- Obtain one of the following supported measurement devices:
 - FD-5BT / FD-7 / FD-9
 - i1-Pro, i2-Pro, ES-1000, ES-2000
 - i1-iSis XL (it **MUST** be an "XL")
- Properly formatted USB flash-drive; preferably blank but not necessary.
- Color Centro v2 / Command Workstation 5 / Creo Color Server GUI installed on PC / laptop.
- Color Care Measure Tool (latest version) installed on PC/laptop.
- Konica Minolta Color Care Measure User Manual
- Konica Minolta Color Care Setup Guide
- Engine Field Service Manual

Precautions/Warnings:

- It is important to note that these procedures will provide instructions for completing each task using the default Dot 190 screen. In most cases, the factory default screens are suitable for printing with excellent results, however, if the customer prefers another screen as the default, that screen may be selected instead when completing this process.
- It is important to understand that CDC can be an all or nothing feature applied to every tray or left disabled OR it can be applied on a tray by tray basis (by enabling SW 56-2 to 1). If the CDC is not used for all print jobs, non-CDC jobs can become visually unappealing compared to the CDC enabled jobs. In order to prevent this, the Printer Gamma Offset adjustment would have to be performed along with controller recalibrated each time the CDC is turned on or off; as the engine density curves will change.
- Color Density Control is **NOT** a substitute for image controller calibration (with the exception of the IC-602, in which case calibration can be managed using CDC or external device calibration using Color Centro). However, for engines using a Fiery or Creo RIP with CDC enabled, controller calibration will not need to be performed as often since the engine is maintaining proper color output.

Precautions/Warnings: Continued

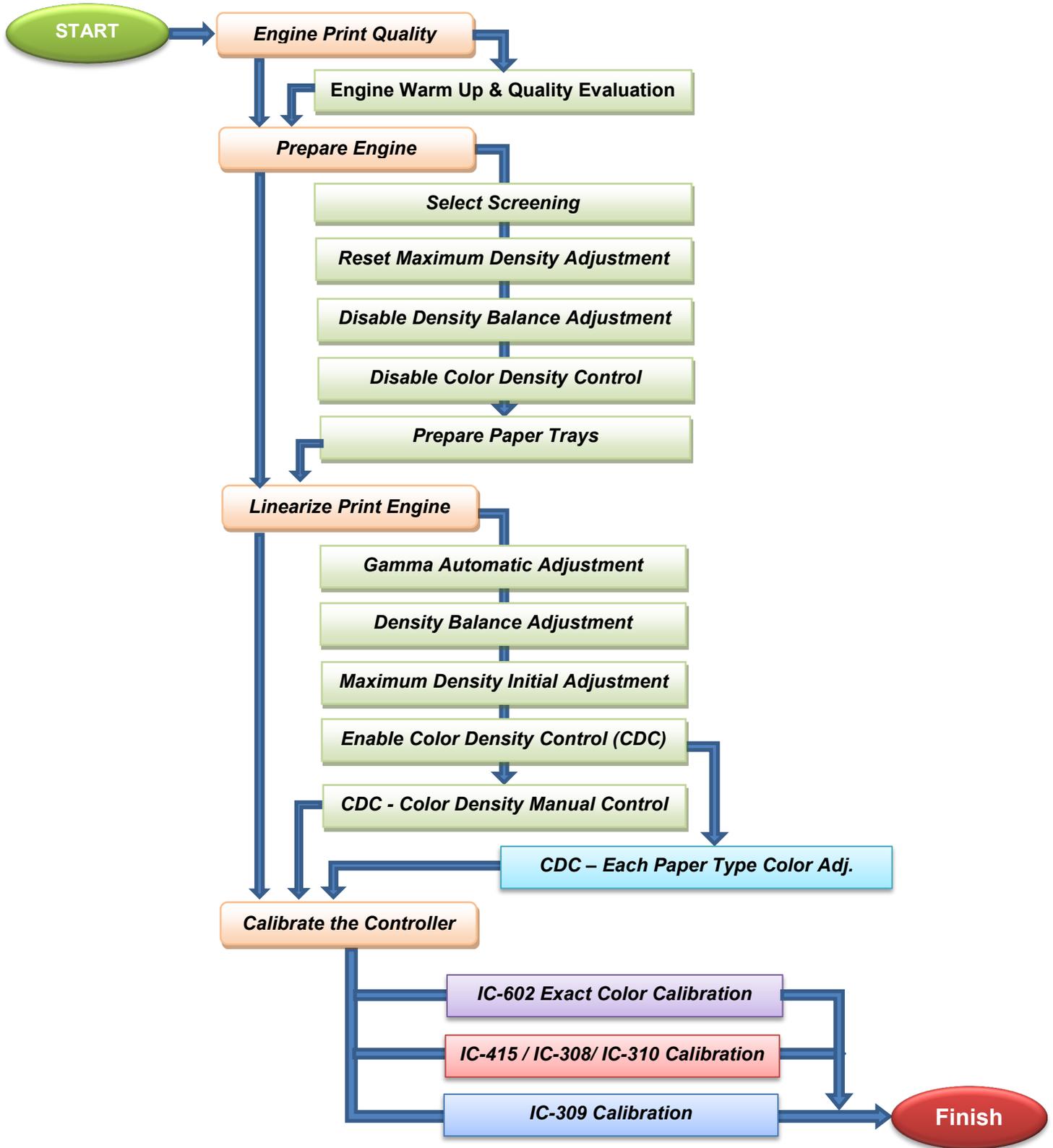
- The Color Density Control results are dependent on machine condition, including color density balance. If the Color Density Balance adjustment is not performed, CDC will not be able to compensate for uneven densities.
- The CDC charts that are output when CDC is in automatic adjustment mode are included in the print count.
- If the customer wants to linearize to a known standard like Gracol or SWOP, they need to measure and verify the substrate's white point for compliance with whatever standard they're shooting for.

Before You Begin:

- **Must** have an **RU-5XX (w/CDC)** sensors on the system.
- Make sure engine Firmware and all PMs are up to date.
- Basic hardware adjustments, e.g. paper feeding, image positioning, color registration and others should be properly adjusted beforehand.
- Ensure system code is up to date on the controller; with any necessary patches applied.
- Perform any and all necessary "Break-Fix" or "Replacement" adjustments. *To ensure best results, the print output should be free of image defects prior to proceeding; e.g. spots, voids, dark lines, excessive banding, etc*
- Obtain the appropriate substrate:
 - The Konica Minolta recommended substrate is: Mohawk Everyday Digital Coated 118 gsm Silk White 13x19 (or 11x17 for Density Balance and 8 ½ x 11 for Color Density Control and Max Density Initial Adj.). **Setting the paper profile to Coated-ML vs Coated-GL may give you better results as the "Silk" designation is between gloss and matte.**
 - If the recommended substrate is not available, use the most common "coated" stock that the customer will be using for "color critical" jobs.

Note: In order to maintain proper color management workflow, you **MUST** make sure that you are using the same media and screen settings, and that the substrate is in the proper tray throughout the whole process.

Color Linearization Procedures Overview



Engine Warm-up & Print Quality Check

PRINT INTERNAL TEST PRINTS

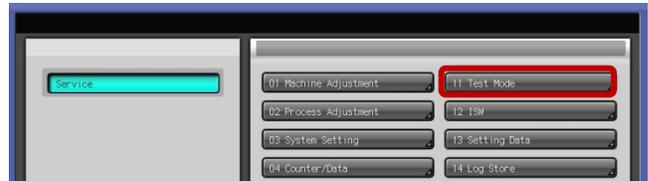
1. Prior to beginning, properly “warm-up” the engine by running 25 - 100 prints of a full color image with at least 20% coverage; such as the Konica Minolta Color Chart.

Note: You can also use Test print 55 at 5% per color from Service Mode.

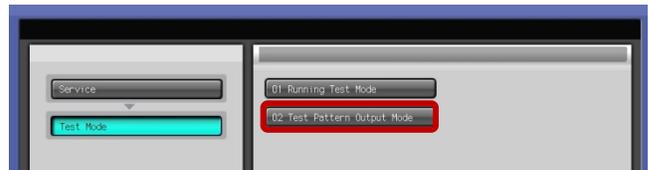


Check the overall condition of the image print area by printing the following test pattern.

2. Enter Service Mode, press Test Mode.



3. Select Test Pattern Output Mode.



4. Set the following:

- Test Pattern = +43
- Gradation-Y = 255
- Gradation-M = 255
- Gradation-C = 255
- Gradation-K = 255
- Screen1

Note: Test Mode Lead Edge Erase may need to be set to 10mm depending on the substrate.

5. Press Print Mode.



PRINT INTERNAL TEST PRINTS - Continued

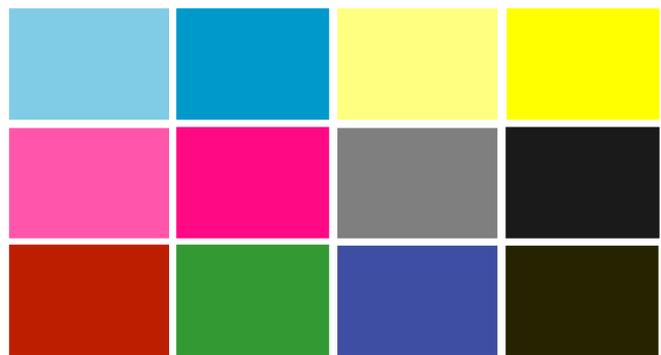
6. Set the “Color” setting to Full Color.
7. Select a tray with high quality substrate loaded then press Start.

Note: High Quality substrate should be at least Color Specific or Coated, 28 lb. / 105 gsm and 94 bright or better.



12 prints are output for CMYK colors, as well as, halftone prints of R-G-B and processed black. If necessary, print Test Pattern +53 for specific colors at varying densities to further identify image density issues.

8. Use these test prints to evaluate the engine print quality; resolve any issues if necessary.



9. Press Exit Print Mode and exit Service Mode.



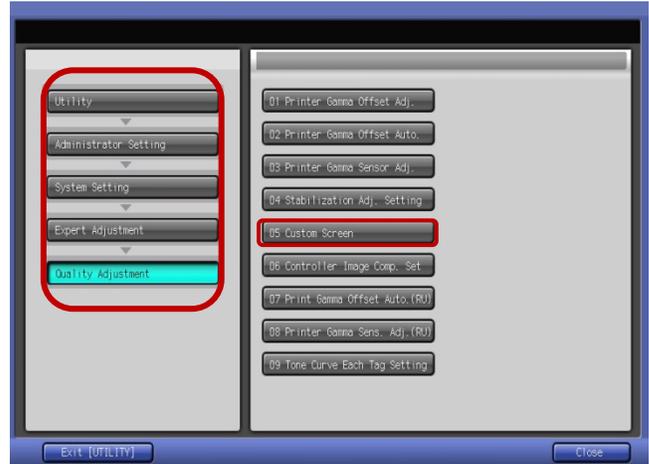
Section 1: Prepare Engine Settings

1.1 Select Screening

The purpose of this section is to reset color related settings and adjustments to an initial state.

1. From the "Machine" status screen on the Operation Panel, press **Utility/Counter** key and then **select** the following:

- [Administrator Setting]
- [System Setting]
- [Expert Adjustment]
- [Quality Adjustment]
- [Custom Screen]

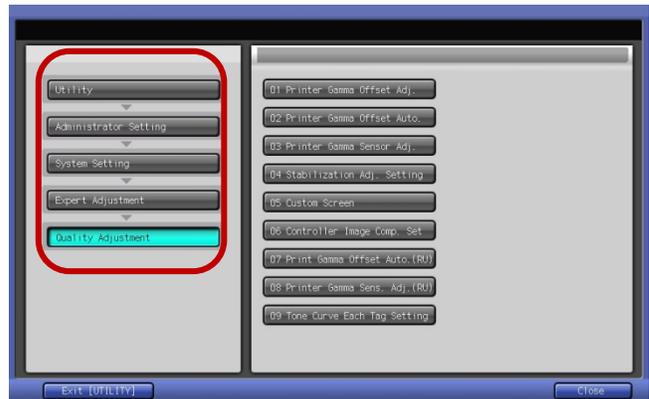


2. **Select** the desired screens based on the customer's needs; engine defaults are shown.

Note: Screen1/Dot190 screening will be used throughout the remainder of these procedures.



3. **Touch OK** to return to the "Quality Adjustment" screen.



1.2 Reset Max Density Adjustment Values

1. With the “**Quality Adjustment**” screen selected, **drop back** to the “**Expert Adjustment**” screen using the left side menu.
2. **Select Process Adjustment** then **touch Maximum Density Adjustment**.

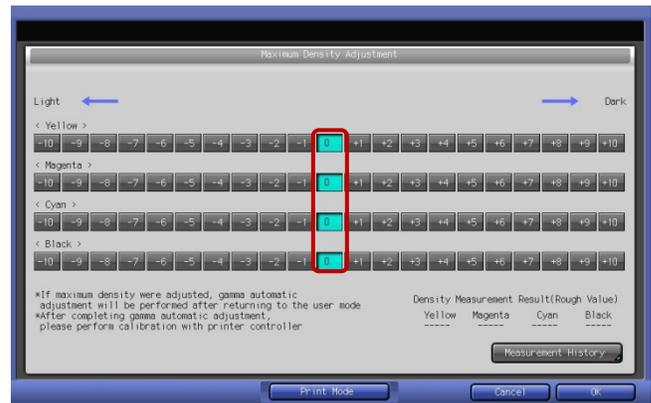
Note: Do **NOT** confuse this with the **Max. Density Auto Adj. (RU)** or **Max Density Initial Adj.**; which will be discussed later.



3. **Set**, or **Confirm** that **Yellow, Magenta, Cyan and Black = “0”**.
4. **Leave** this function by pressing **OK**.
5. **Press Exit** to close the “**Utility/Counter**” mode.

Note: The engine will adjust automatically after you exit back to the “**Machine**” status screen.

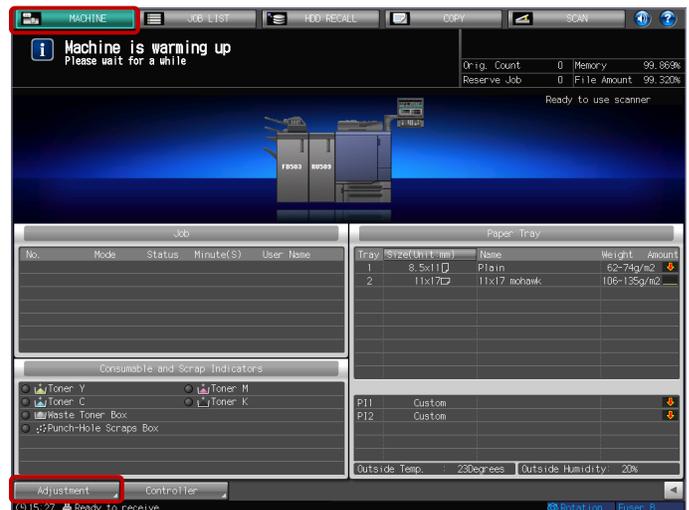
6. **Allow** the “**Gamma Automatic**” to complete.



1.3 Disable or Delete Registered Density Balance Adjustments

1. At the bottom of the “**Machine**” status screen, **press Adjustment**.

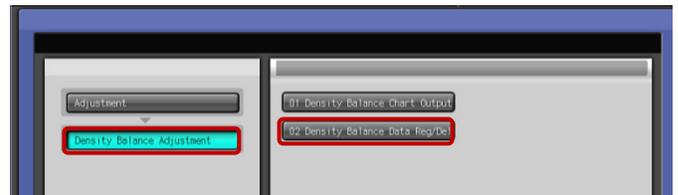
Note: You may have to arrow over at the bottom of the screen to make the “**Adjustment**” button visible.



1.3 Disable or Delete Registered Density Balance Adjustments – Continued

2. From the “**Adjustment**” screen, **select** the following:

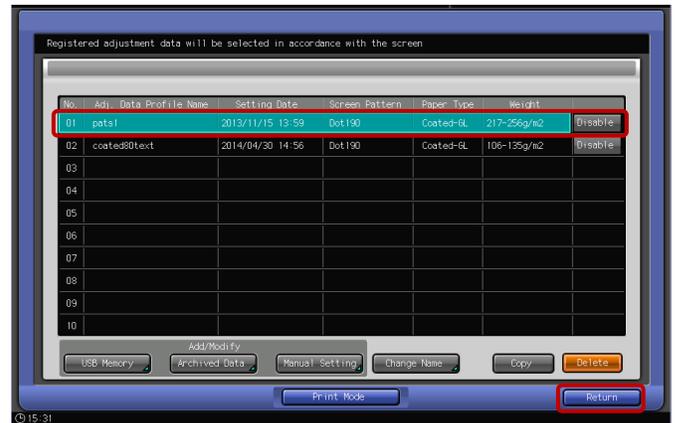
- **[Density Balance Adjustment]**
- **[Density Balance Data Reg/Del]**



3. If data is registered **select** one of the related entries and **press Disable**. **Repeat** this process until all entries are disabled.

Note: In some cases it may be necessary to **Delete** registered **Density Balance** data. Do **NOT** delete **Density Balance** data until it has been determined that it is no longer needed.

4. Once all rows (1 - 10) disabled (or empty), **leave** this function by **pressing Return** and **Exit [Adjustment]**.



1.4 Disable Color Density Control

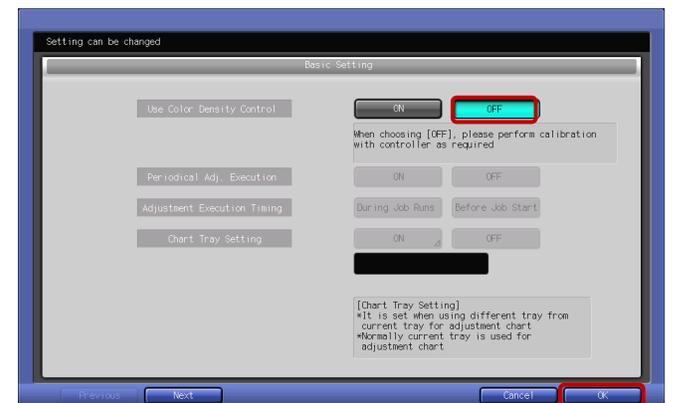
1. From the “**Adjustment**” screen, **select** the following:

- **[Color Density Control]**
- **[Basic Setting]**



2. **Select OFF** then **OK**.

3. **Select Close** then **Exit [Adjustment]**.



1.5 Prepare Paper Trays

For proper color linearization, it's recommended that you use a coated substrate that it is of good quality and has been registered in the **Paper Catalog** and recalled to the appropriate paper tray.

Note: Using “temporary” paper tray settings will reduce the chance of verifying proper Color Linearization down the road; when troubleshooting color management related issues.

- If the substrate being used is not already registered to the **Paper Catalog**, **continue** with the procedures below: **A. Creating Paper Profiles – Paper Catalog**
- If the substrate you're using is already registered in the **Paper Catalog**, **proceed** to the next task: **B. Recalling Paper Profile to Paper Trays.**

A. Creating Paper Profiles – Paper Catalog

1. From the “Control Panel”, **press** the **Utility/Counter** key and **select** **User Setting > System Setting > Paper Tray Setting > Paper Setting.**

2. **Select** an open/unregistered row; if necessary, **scroll** down until you find one.

3. **Touch** **Add/Edit.**



4. **Complete** the settings in the order listed:

- **Weight** – 28 lb. (105 gsm) or near
- **Paper Type** – Coated GL or ML
- **Profile Name** – Brand / type / size (Mohawk Silk 11x17)
- **Paper Size** – Standard 11x17 (or larger)
- **Leave the rest as default**

Note: In some cases it may be necessary to change **Process Adj.** settings in order to improve image quality. If “**Process Adj.**” is not shown, enter service mode and set **DipSW 1-0** to **1 (ON)**.

5. Finish by **pressing** **OK.**



1.5 Prepare Paper Trays - Continued

A. Creating Paper Profiles – Paper Catalog - Continued

For paper saving purposes it is recommended that you add another **Paper Profile** of the same substrate but for 8.5x11 landscape.

- Repeat the process to add 8.5x11 landscape substrate to the **Paper Catalog**.
- Touch **Close** and **Exit** until you get back to the “**Machine**” status screen.



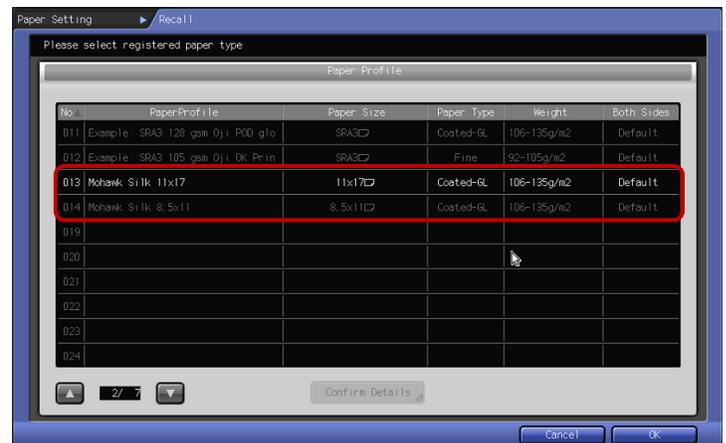
B. Recalling Paper Profile to Paper Trays

- If not already done, load the appropriate trays with the necessary substrates.
- From the “**Machine**” status screen, press **Paper Setting** and select the paper tray containing the appropriate coated substrate.
- Select **Recall**.



Note: If the paper tray guides are not set to the appropriate size that is registered to the Paper Profile it will be grayed out and you will not be able to select it.

- Select the appropriate **Paper Profile** and touch **OK**.
- Repeat the process to assign all necessary paper trays with the correct **Paper Profile**.
- Touch **Close** to get back to the “**Machine**” status screen.



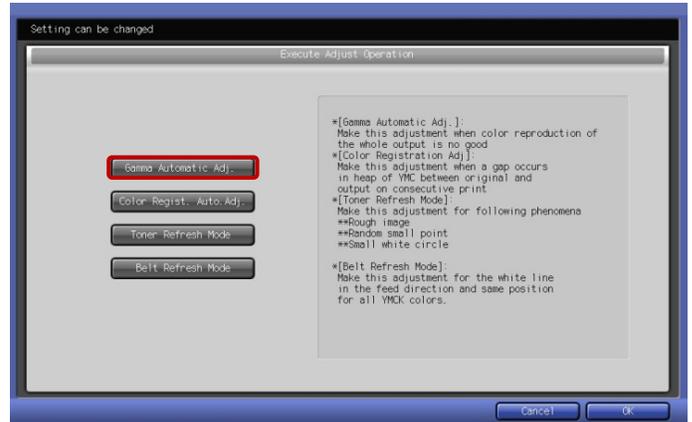
Section 2: Linearize Print Engine

2.1 Gamma Automatic Adjustment

Note: Only run the “**Gamma Automatic Adj.**” if it has **NOT** been run within the past 15 minutes.

- From the “**Machine**” status screen, **press Adjustment** and then **select** the following:
 - [Execute Adjust Operation]**
 - [Gamma Automatic Adj.]**
- Press OK** and then **select Exit** to start the adjustment.

Caution! Running “**Gamma Automatic Adj.**” frequently without printing in between will cause abnormal triboelectric charges in the developers. If you experience this issue, run 50-100 color prints to stabilize the developer charge.



2.2 Density Balance Adjustment

A. Print the Measurement Chart

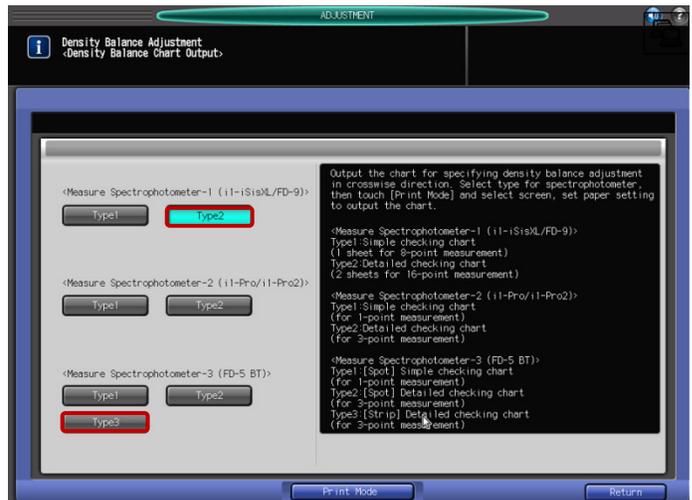
Note: You may have to arrow over at the bottom of the screen to see the “**Adjustment**” button.

- From the “**Machine**” status screen, **press Adjustment** then **select** the following:
 - [Density Balance Adjustment]**
 - [Density Balance Chart Output]**
- Select** the **i1-iSis XL/FD-9 Type2** chart for **FD-9 \ i1-iSis XL** users or the **FD5 BT Type3** chart **i1-Pro/i1Pro2/FD5bt** users.

Note: Even though **Type3** is only listed under the **FD-5 BT** section, this chart can also be used with **i1-Pro/i1Pro2** devices.

Important: “**Type 1**” is not recommended as it will produce less favorable results.

- Touch Print Mode.**



2.2 Density Balance Adjustment - Continued

A. Print the Measurement Chart - Continued

4. Select **Quality Adj.** to verify the proper screen setting (e.g. Dot190) then **close** the **Quality Adj.** window.
5. Enter **3-5** for **Set Number**; number of prints.
6. Select the paper tray with the appropriate substrate loaded; min. size 11x17.

Note: If necessary, use 13x19 substrate; otherwise outer balance settings will use extrapolated data; which can be less accurate.

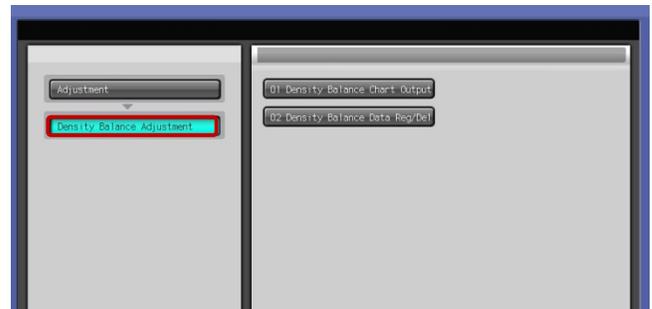
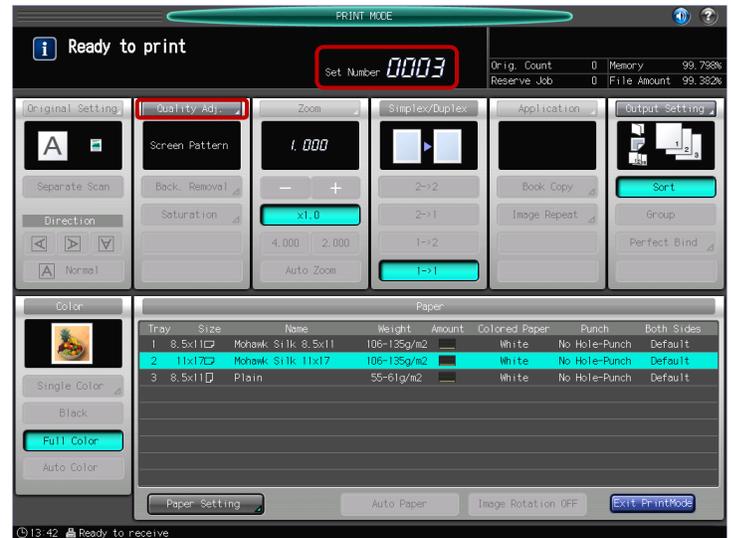
7. Press the **Start** key to print the “**Density Balance Chart**”.

Note: If an image defect is noticed on chart outputs, correct issues then reprint the charts.

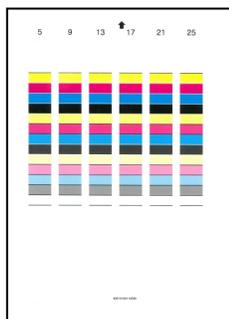
8. When the charts are printed, **touch**:

- [Exit Print Mode]
- [Return]

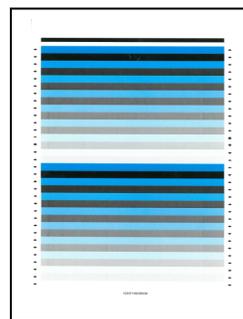
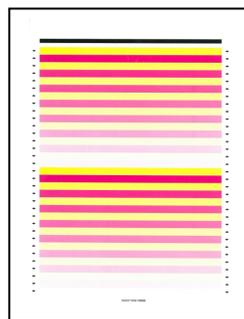
9. Leave the “**Density Balance Adjustment**” screen up on the control panel while performing the next set of steps on your PC/laptop/notebook.



Next you will need to measure the density balance chart using the Color Care Measure tool. Depending on your measurement device and type chart that was printed, you will have one of the measurement charts below.



Type 3
i1Pro / i2Pro / FD5-bt Measurement Chart

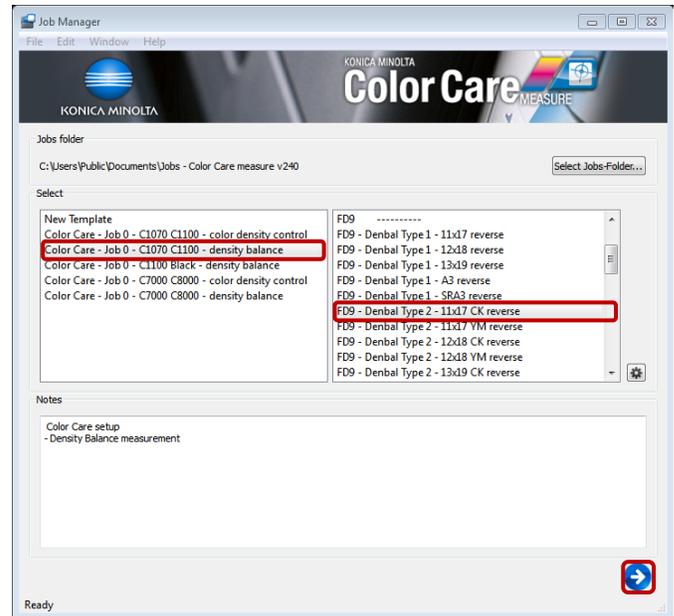


Type 2
FD-9 \ i1-iSis XL Type Measurement Charts

2.2 Density Balance Adjustment - Continued

B. Measure the density balance charts using Color Care Measure

1. **Connect** the measurement device to your PC and launch “Color Care Measure”.
2. **Select Color Care - Job 0 – C1070 C1100 - density balance.**
3. **Select** the appropriate job from the list on the right according to the measurement device, chart type, and paper size:
 - FD5bt – Denbal Type 3sr - 13x6
 - i1Pro2 – Denbal Type 2sr - 13x6: **even though you are scanning a Type 3 chart.**
 - FD9 – Denbal Type 2 - 11x17 CK reverse
 - FD9 – Denbal Type 2 - 11x17 YM reverse
 - i1iSis XL – Denbal Type 2 - 11x17 CK
 - i1iSis XL – Denbal Type 2 - 11x17 YM
4. **Click ‘Right Arrow’** button.

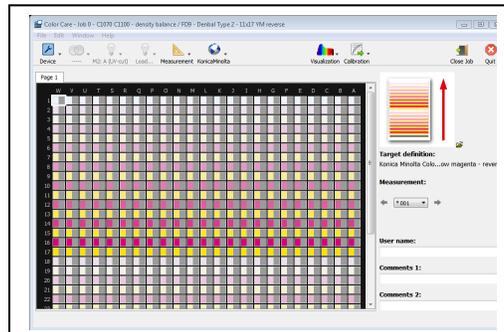
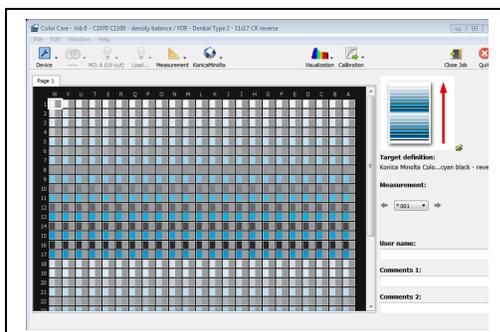


For FD-9 \ i1-iSis XL users, **continue** with the procedures below:
(C. FD-9 \ i1-iSis XL device users)

For i1Pro/i1Pro2 or FD-5bt users, **skip ahead to section:**
(D. i1Pro/i1Pro2/FD-5bt device users (Strip Scan))

C. FD-9 \ i1-iSis XL device users.

Note: For the “Density Balance” “Type 2” charts, “Color Care Measure” will perform separate measurements for the two density balance charts (CK, YM). One data file for each measurement will be created. It is VERY important to note that the FD-9 requires that you feed the chart in reverse.

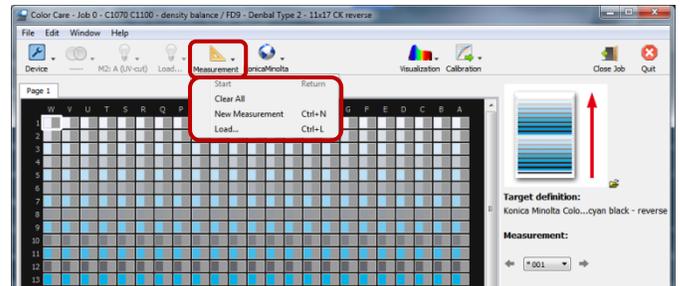


2.2 Density Balance Adjustment - Continued

C. FD-9 \ i1-iSis XL device users - Continued

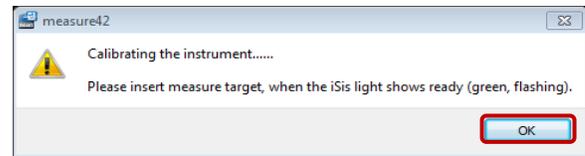
1. If using an **FD-9** you will be prompted on the device LCD to feed the chart; which is described in step 3. If you are using an **i1iSis XL**, click **Measurement** then **Start**.

Note: Depending on density balance chart (CK, YM) you're measuring, different colored patches are displayed in "Color Care Measure Tool".



At this point the i1-iSis XL will perform a calibration while the FD-9 does not but will perform calibration as part of the measurement.

2. Read the prompt then click **OK**.



3. On an **FD-9**, align the paper guides for the appropriate paper width then feed the **Density Balance Chart** in **REVERSE**; making sure chart ID is first and to push the sheet far enough into the device for it to grab the chart. **BE PATIENT**, the **FD-9** will make several passes to recognize the chart before measuring begins.

Note: The chart is registered to the center with the paper guides.



4. On an **i1-iSis XL**, align the **Density Balance Chart** to the **left side** of the entrance, feed the chart in with the registration (black) bar in first; making sure to push the sheet far enough into the device for it to grab the chart.

Note: There are no paper guides like there are on the **FD-9**.



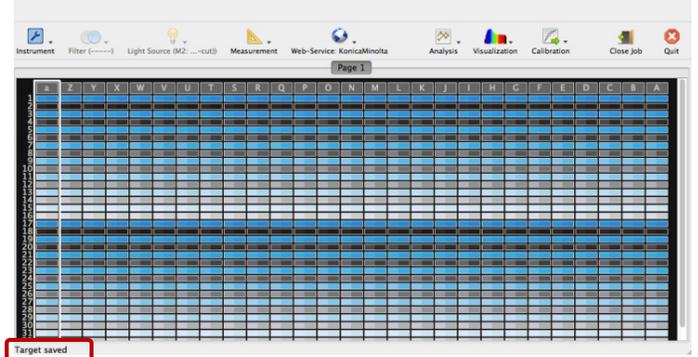
2.2 Density Balance Adjustment - Continued

C. FD-9 \ i1-iSis XL device users - Continued

5. Wait until you see 'Target saved' in the lower left hand corner of the **Color Care Measure Tool** display.

Note: Measurement data will not show up on the screen until all patches have been scanned. When the chart is finished, "Target saved" will appear in the lower left corner.

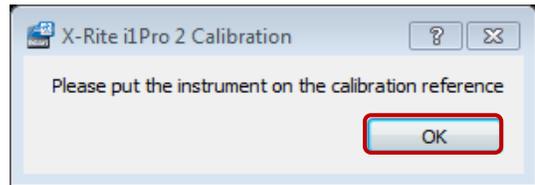
6. Skip ahead to **E. Saving the Measurement Data**.



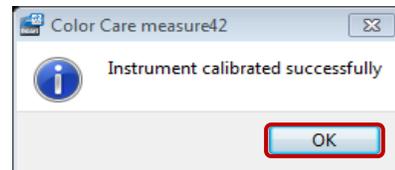
D. i1Pro/iPro2/FD-5bt device users (Strip Scan)

Color Care Measure will automatically ask to calibrate the device.

1. Place the device on its white reference plate and click **OK**.

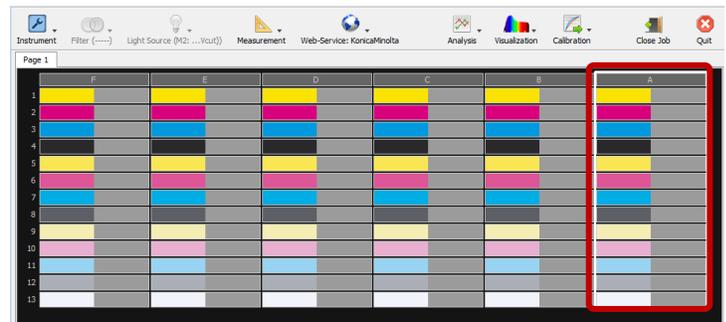


2. At the prompt "Instrument calibrated successfully", click **OK**.



For strip scan measurements, in Color Care Measure, notice that the far right column is selected in the "Page 1" field; the white box (highlighted with a red box in the screenshot) is around the whole far right column.

3. Place several blank sheets of the same substrate under the chart; enough so that light can NOT shine through to the table.



2.2 Density Balance Adjustment - Continued

D. i1Pro/iPro2/FD-5bt device users (Strip Scan) - Continued

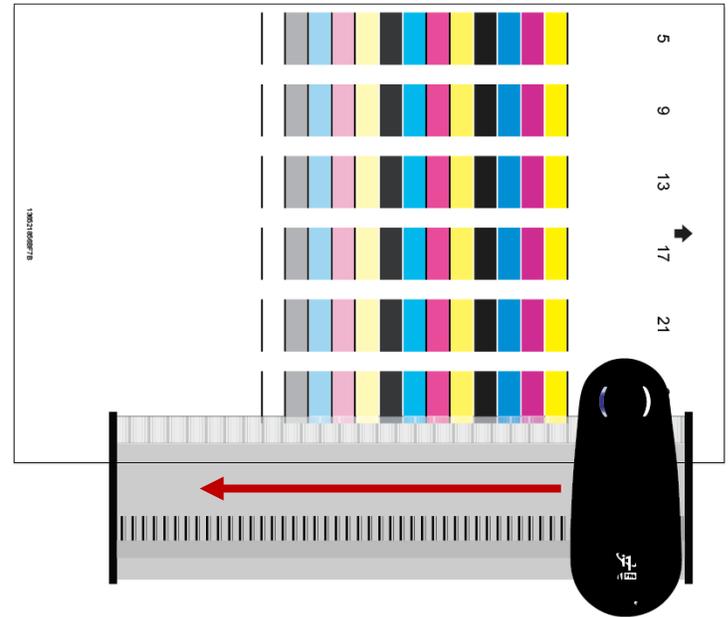
Note: For the first few columns you will have to offset the chart from the underlying sheets in order to keep the measurement device flat on the scan surface.

4. **Position** the measurement device (and the provided slide rule if available) on the chart as shown in the illustration; with the measurement device in the blank (white) space to the right of the column.

Note: Position and direction of the device and chart are very important. On an i1-Pro 2, the left LED will pulse blue when ready.

5. **Press** and **hold** the measurement button on the device while sliding the device from right to left along column then **release** the button when the entire column has been scanned; to the left of the black line.

Note: On an i1-Pro 2, both LEDs will flash green once if it scanned correctly.



A message may appear in the lower left hand corner of **Color Care Measure** asking you to re-scan the same row (column) in the reverse direction.

Note: On an i1-Pro 2, the right LED will now pulse blue when ready to scan in the opposite direction.



Driver Message: Measure same row in reverse direction

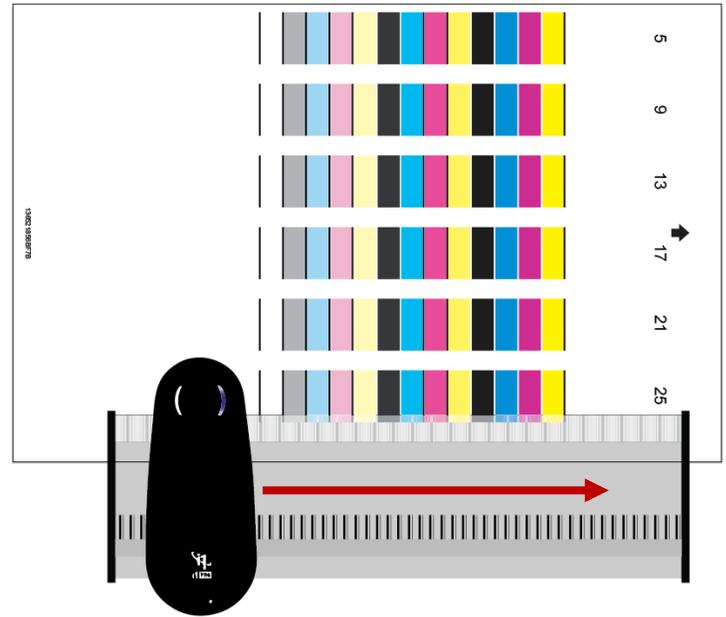
2.2 Density Balance Adjustment - Continued

D. i1Pro/iPro2/FD-5bt device users (Strip Scan) - Continued

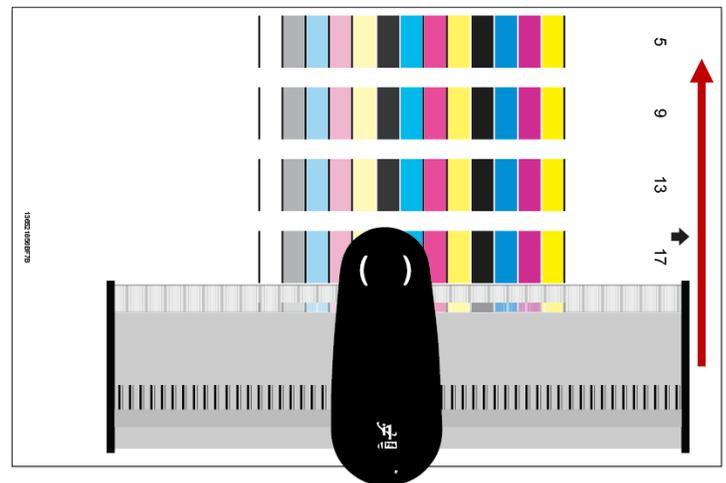
6. If necessary, **press** and **hold** the measurement button on the device this time while sliding the device from left to right along column then **release** the button when the entire column has been scanned; to the right of the black line.

Note: On an i1-Pro 2, both LEDs will flash green once if it scanned correctly.

*Measurement data will populate the screen as you scan each column. If you accidentally scan the column incorrectly, simply use your mouse to click on the correct letter above the whole column in **Color Care Measure** to re-measure that column.*



7. **Repeat** the process moving your way up the chart (or from right to left depending on your orientation) measuring each column until all measurements have been populated into **Color Care Measure**.



8. When finished, **proceed** to the next task: **E. Saving the Measurement Data.**



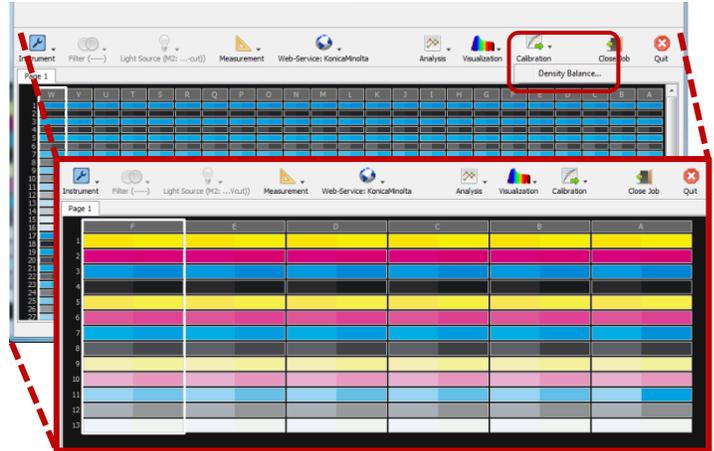
2.2 Density Balance Adjustment - Continued

E. Saving the Measurement Data

Regardless of which device and chart type you measured, the procedures for saving data to a USB drive or archiving data directly to the engine are the same.

Note: If the user likes, in the **User name**, **Comments 1** and **Comments 2** areas they can enter information such as the user's name, paper type, date, etc. but it is not necessary to complete the process.

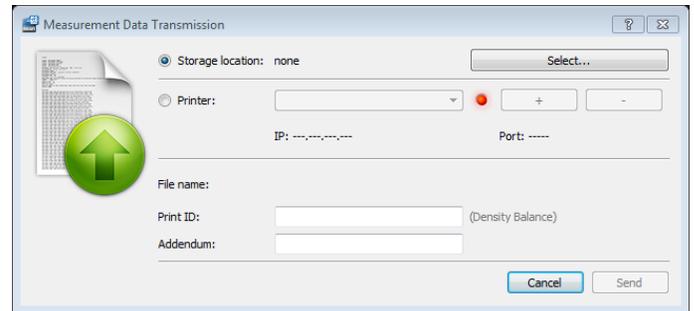
1. Click the **Calibration** drop-down menu and select **Density Balance**.



From this screen the user has two options:

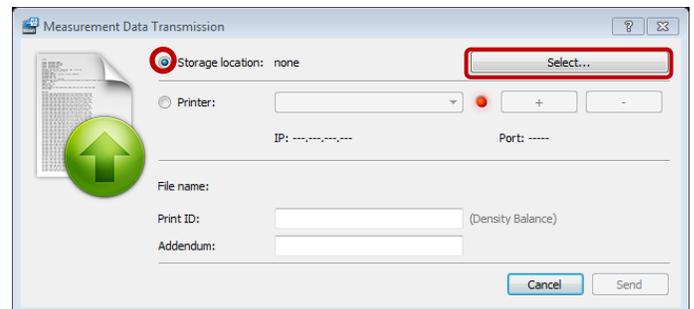
Storage location: For saving measurement data to a USB drive, continue with:
(F. Saving Density Balance Measurement data to USB device)

Printer: For archiving data directly to the engine over a network, skip ahead to:
(G. Archiving Density Balance Measurement data directly to engine)



F. Saving Density Balance Measurement data to USB device

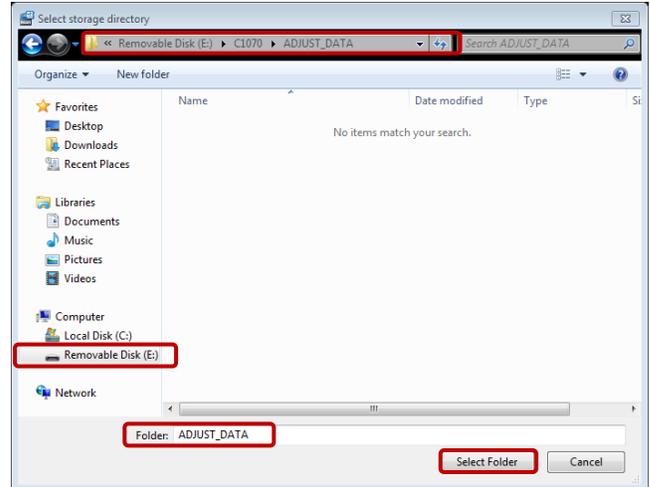
2. Connect your **USB flash-drive** to your PC.
3. In the “**Measurement Data Transmission**” window select the **Storage location:** radio button then click **Select...**



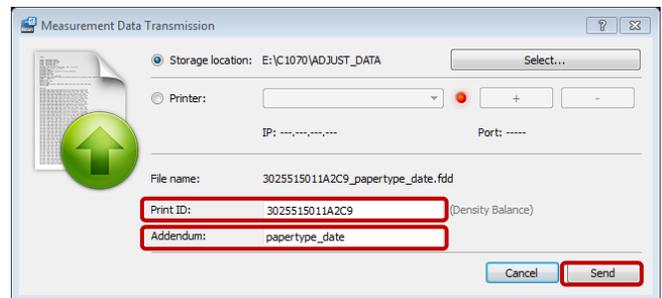
2.2 Density Balance Adjustment - Continued

F. Saving Density Balance Measurement data to USB device - Continued

4. Select the appropriate “USB drive”.
5. On the root of the “USB drive”, create a folder named C1070 or C1100.
6. In the “C1070” or “C1100” folder, create a sub-folder named ADJUST_DATA.
7. Open the “ADJUST_DATA” folder and click Select Folder.



8. In the “Print ID:” field, enter the “ID code” printed on the bottom of the “Density Balance Chart” that was measured.
9. In the “Addendum:” field, enter a unique name; e.g. paper type, date, etc. **Do not use spaces**; instead use an underscore if desired.



Note: When two charts/files are used for the FD-9 \ i1-iSis XL, the Print ID: **MUST** have the unique chart “ID code” values but the Addendum: name **MUST** be the same for both files.

10. Click Send.

For FD-9 \ i1-iSis XL users with the “Type 2” chart, repeat the process from (C. FD-9 \ i1-iSis XL device users) and (F. Saving Density Balance Measurement data to USB device) to scan and save the second “Density Balance” chart before continuing below:

For i1Pro/i1Pro2 or FD-5bt users, continue with the procedures below:

11. When finished saving any and all data files, click Quit to close “Color Care Measure” then proceed to H. Registering the Measurement Data to the Engine.



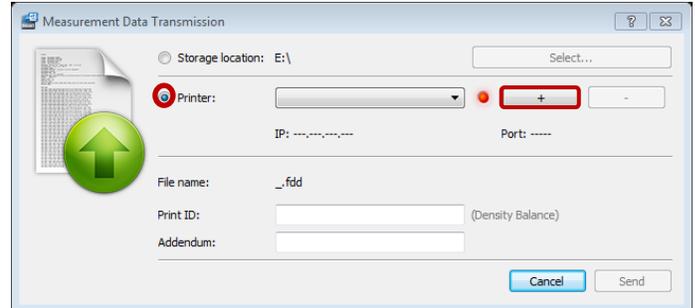
2.2 Density Balance Adjustment - Continued

G. Archiving Density Balance Measurement data directly to engine

1. If not already done, **connect** your **PC/laptop** to the same network as the engine and verify communication.

Note: The engine NIC must be connected with a valid IP address on the network.

2. In the “**Measurement Data Transmission**” window **select** the **Printer:** radio button then **click** the **+** button.



3. **Enter** the **Name:** of the engine.

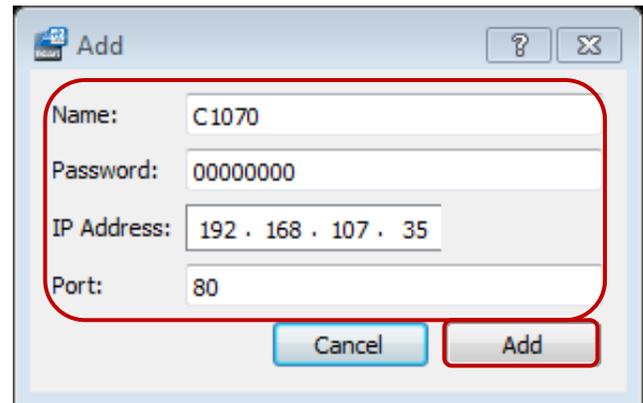
4. **Input** the engine **Password:** in most cases it will be **00000000** (eight zeros).

5. **Type** the **IP Address:** of the engine’s NIC.

6. **Change** the **Port:** according to the controller attached to the engine:

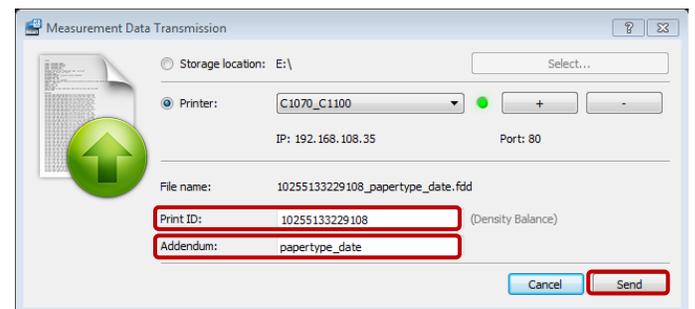
- **Fiery or Creo = 80**
- **IC-602 = 30091**

7. **Click Add.**



8. In the “**Print ID:**” field, **enter** the “**ID code**” printed on the bottom of the “**Density Balance Chart**” that was measured.

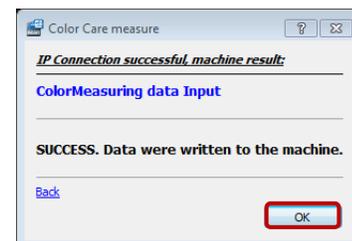
9. In the “**Addendum:**” field, **enter** a unique name; e.g. paper type, date, etc. **Do not use spaces**; instead us an underscore if desired.



Note: When two charts/files are used for the **FD-9 \ i1-iSis XL**, the **Print ID:** **MUST** have the unique chart “**ID code**” values but the **Addendum:** name **MUST** be the same for both files.

10. **Click Send.**

11. If done properly a message will signify a successful upload to the engine. **Click OK.**



2.2 Density Balance Adjustment - Continued

G. Archiving Density Balance Measurement data directly to engine - Continued

For **FD-9 \ i1-iSis XL users** with the “**Type 2**” chart, **repeat** the process from **(C. FD-9 \ i1-iSis XL device users)** and **(G. Archiving Density Balance Measurement data directly to engine)** to scan and upload the second “**Density Balance**” chart before continuing below:

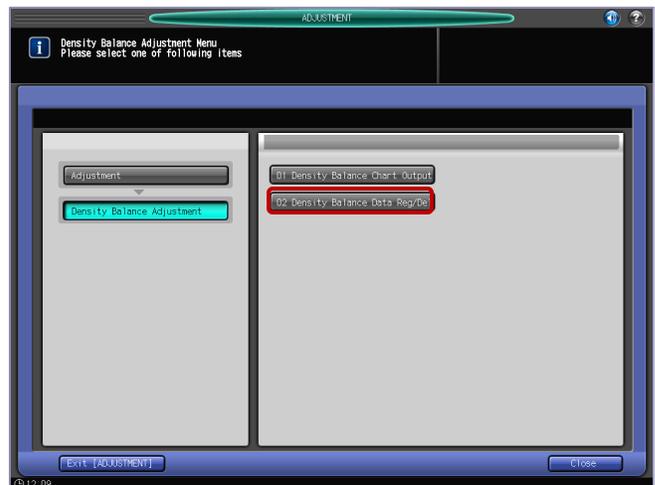
For **i1Pro/i1Pro2 or FD-5bt users**, **continue** with the procedures below:

- When finished saving any and all data files, **click Quit** to close “**Color Care Measure**” then **proceed** with the next step below.

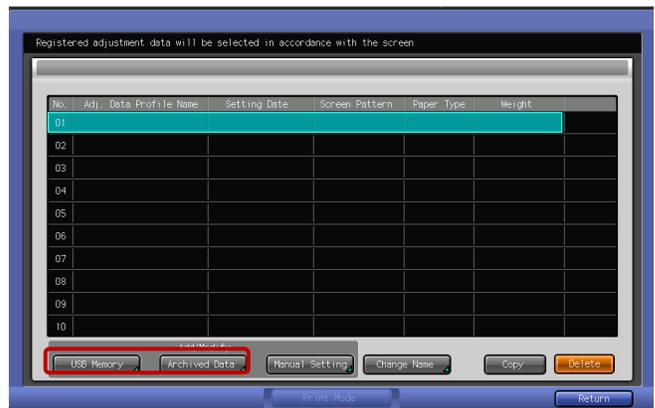


H. Registering the Measurement Data to the Engine.

- At the engines Operation Panel, from the “**Density Balance Adjustment**” screen, **select Density Balance Data Reg/Del.**



- Select/highlight** one of the empty rows (1-10).
- Touch USB Memory** if you saved the measurement data to a **USB device**, otherwise **select Archived Data** if you uploaded the measurement data directly to the engine.



2.2 Density Balance Adjustment - Continued

H. Registering the Measurement Data to the Engine - Continued

- If you chose “**USB Memory**”, connect the **USB flash drive** into the **USB port** of the machine and press **OK**, otherwise skip this step.

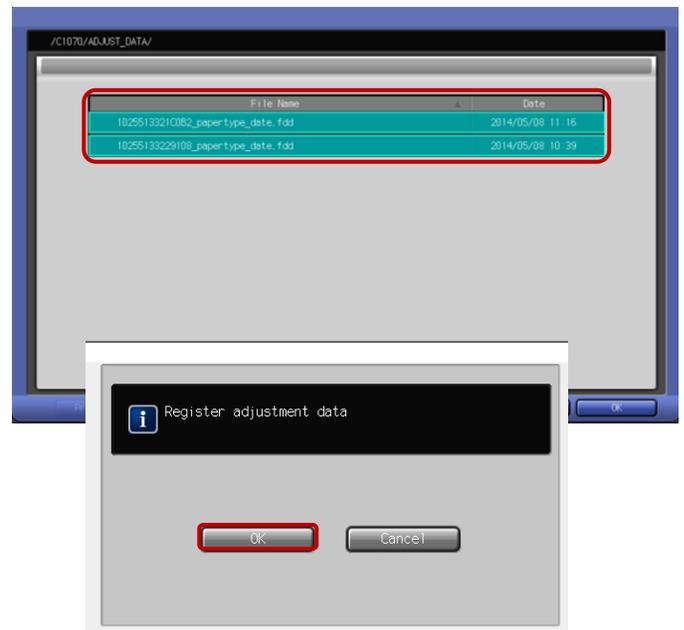
Note: It may take several seconds before the **USB device** is recognized, so you may have to press **OK** multiple times.



- Select/highlight the appropriate measured data and touch **OK**.

Note: For “**Type 2**” charts measured with an **i1iSi** you should see two entries. Touching either entry will highlight both if they were properly measured and saved/archived.

- When prompted to “**Register adjustment data**”, press **OK**.



The “**Density Balance**” data should now be listed and “**Enabled**”.

- Press **Return** then **Exit** to get back to the “**Machine**” status screen.
- If necessary, remove your **USB device** from the engine.



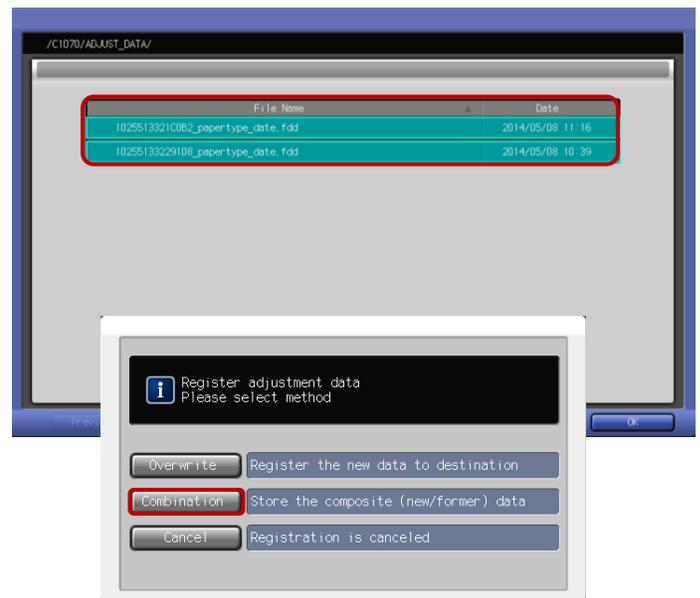
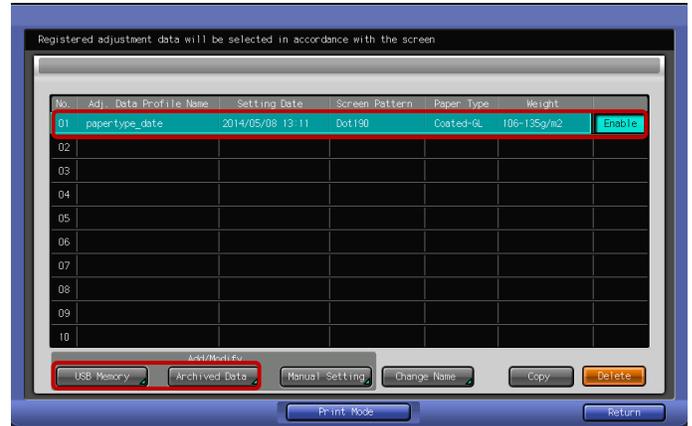
2.2 Density Balance Adjustment - Continued

OPTIONAL: Combining Multiple Density Balance Measurements

Optionally, users can opt to combine multiple measurements to achieve a better density balance when tighter tolerances are needed.

Note: This is typically only necessary when using a hand-held device (**i1-Pro / i1-Pro 2 / FD5-bt, etc.**) as they scan fewer patches than the **FD-9 \ i1-iSis XL**.

1. **Print** a new **Density Balance Measurement Chart/s** and **repeat** the process to measure and save/archive a second set of data file/s.
2. From the **Density Balance Data Reg/Del** screen, **select** the previously registered data set and **Touch USB Memory** if you saved the measurement data to a **USB device**, or **select Archived Data** if you uploaded the measurement data directly to the engine.
3. When prompted, **press Combination**, then **return** to the “**Machine**” status screen.



2.3 Max Density Initial Adjustment

A. Print the Max Density Initial Adj. Chart

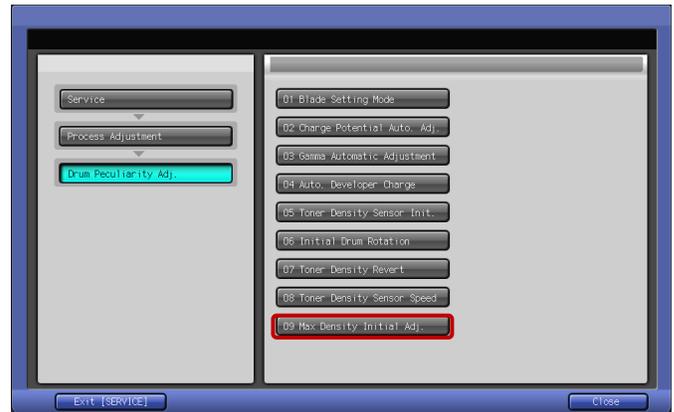
The “**Max Density Initial Adjustment**” in “**Service**” mode is different from the “**Maximum Density Adjustment**” in “**Administrator**” mode and is adjusted at the factory during production.

“**Maximum Density Adjustment**” in “**Administrator**” mode is for the user to use during daily operations and the process is similar to the “**Max Density Initial Adjustment**”.

1. Enter **Service Mode** and then select the following:

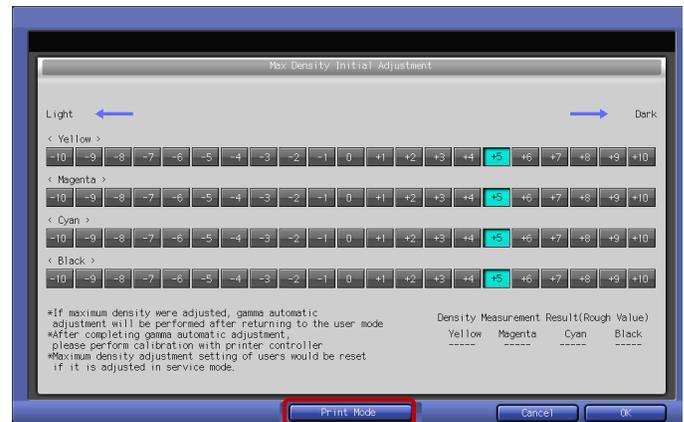
- [Process Adjustment]
- [Drum Pecularity Adjustment]
- [Max Density Initial Adjustment]

Note: Refer to the **Service Manual** for instructions on how to access **Service** mode.



2. Do **NOT** make any changes at this time. First touch **Print Mode**.

Note: The default “**Max Density Initial Adjustment**” settings will vary from machine to machine but can be adjusted per the following instructions. These adjustment settings will **NOT** match those in the **Administrator > Maximum Density Adjustment**.



Note: For paper saving purposes, it is best to use the **Letter-R (landscape)** paper at this point. However it must be the same paper color, type and weight as the 11x17 paper used for **Density Balance**.

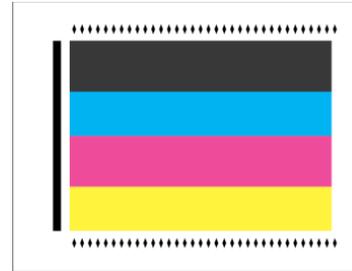
3. Select the appropriate paper tray and press the **Start** key to print the “**Max Density Adjustment Chart**”.



2.3 Max Density Initial Adjustment - Continued

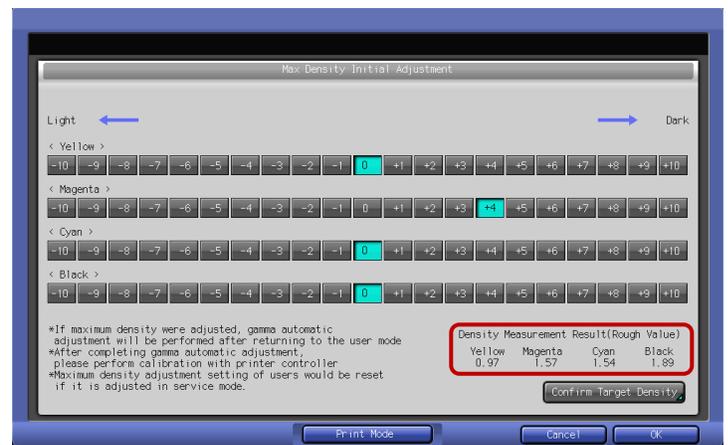
A. Print the Max Density Initial Adj. Chart - Continued

Note: While the chart produced is similar to the CDC chart, notice that the printed chart only has Max Densities for each color.



4. **Ignore** the Max Density Initial Adjustment values shown on the bottom right of the control panel screen.

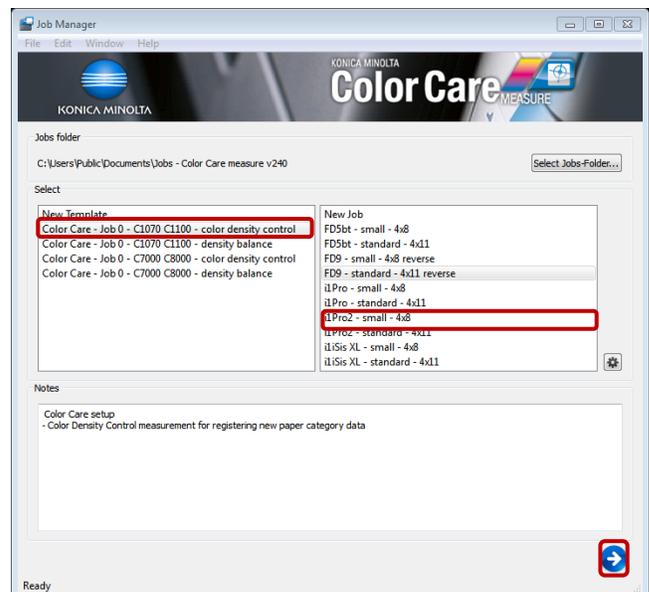
Note: The maximum density measurement values returned by the RU sensors can vary greatly from true max density values that are measured with a spectrometer; because of the substrate type and physical make up.



B. Measure the Max Density Initial Adj. Values using Color Care Measure Tool

Important Note: Although we are using the Color Care Job 0 ... color density control, we will only be measuring 4 patches (C-M-Y-K) to obtain max density values.

1. **Connect** the spectrometer device to your PC and launch “Color Care Measure Tool”.
2. **Select** Color Care - Job 0 – C1070 C1100 – color density control.
3. **Select** the appropriate job from the list on the right according to the measurement device:
 - FD5bt – small – 4x8
 - i1Pro – small – 4x8
 - i1Pro2 – small – 4x8
4. **Click** the ‘Right Arrow’.

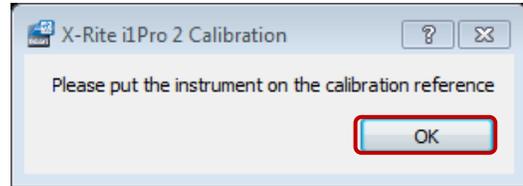


2.3 Max Density Initial Adjustment - Continued

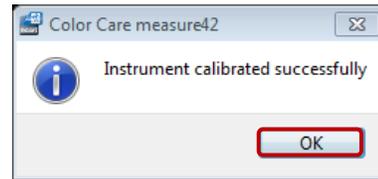
B. Measure the Max Density Initial Adj. Values using Color Care Measure Tool - Continued

Color Care Measure will automatically ask to calibrate the device.

5. Place the device on its white reference plate and click **OK**.



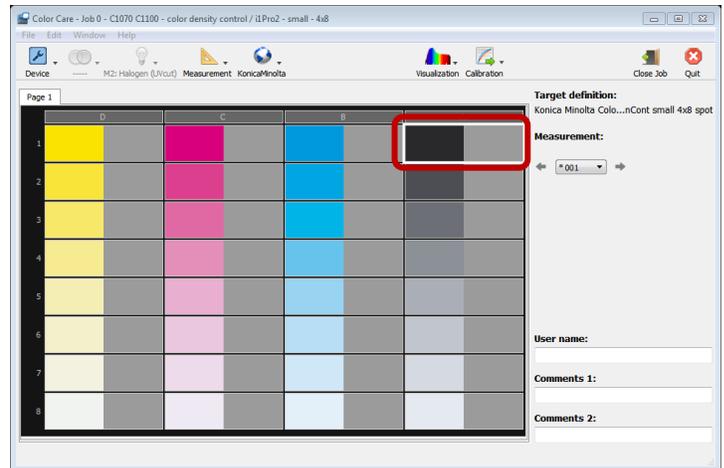
6. At the prompt “**Instrument calibrated successfully**”, click **OK**.



7. For spot measurements, in “**Color Care Measure**” (if not already selected) click on the black patch in the upper right-hand corner of the “**Page 1**” field.

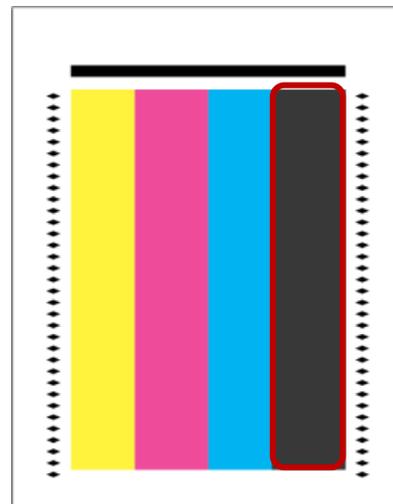
Note: There should be a white box around the black patch.

8. Place several blank sheets of the same substrate under the chart while measuring.



9. Using your spectrometer, measure anywhere inside the **Black** printed patch column.

Note: Make sure to keep the device flat/level against the chart when measuring.

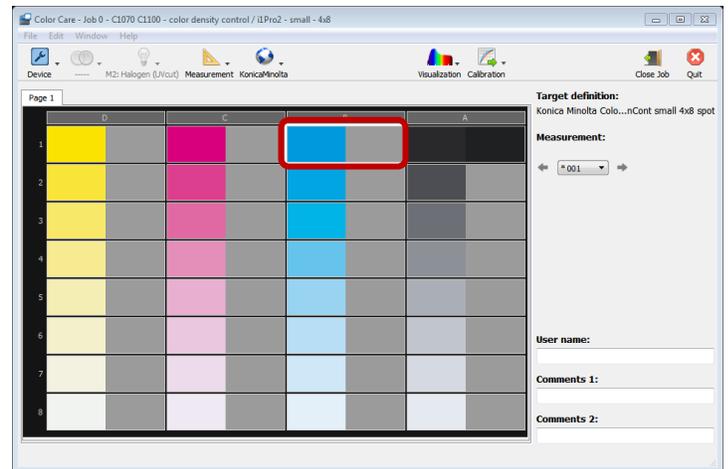


2.3 Max Density Initial Adjustment - Continued

B. Measure the Max Density Initial Adj. Values using Color Care Measure Tool - Continued

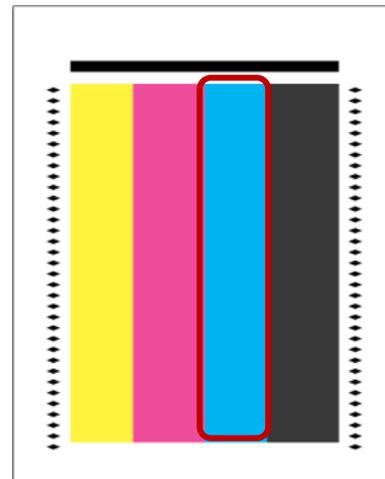
Important Note: We will only be measuring 4 patches (C-M-Y-K); however the measurement patch in **Color Care Measure Tool** will automatically advance down the black column.

10. Using your mouse, **click** on the **Cyan** patch at the top of the **Cyan** column in **Color Care Measure Tool**.



11. Using your spectrometer, **measure** anywhere inside the **Cyan** printed patch column.

Note: Make sure to keep the device flat/level against the chart when measuring.

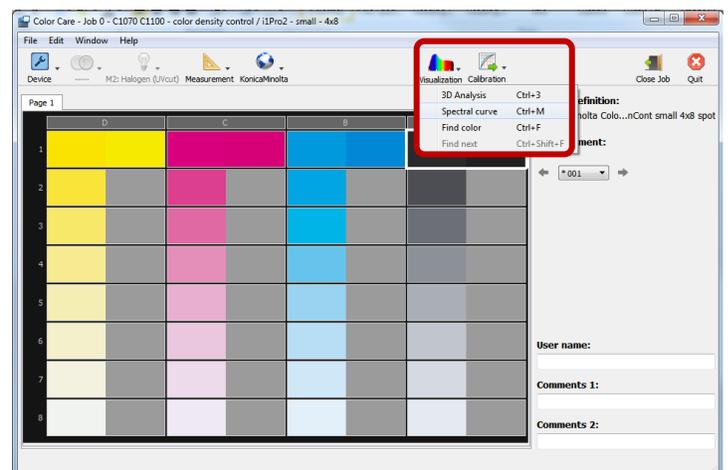


C. Verify / record the Max Density Initial Adj. Values

1. **Repeat** the process to properly measure the **Magenta** and **Yellow** patches.

Now we need to retrieve the max density values we just measured.

2. In **Color Care Measure Tool**, **click** on the **Black** patch you measured first, then **click** the **Visualization** icon and **select Spectral curve**.



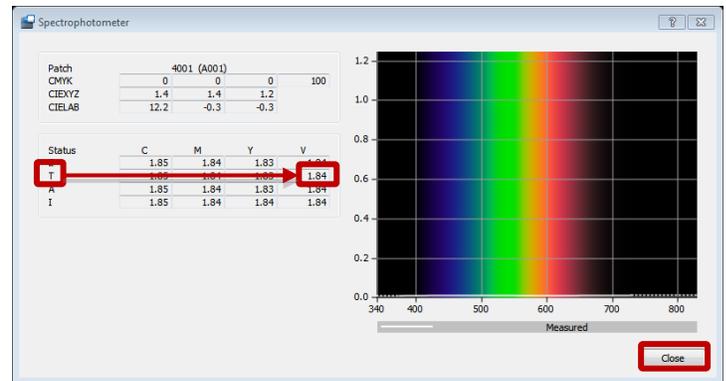
2.3 Max Density Initial Adjustment - Continued

C. Verify / record the Max Density Initial Adj. Values - Continued

3. **Locate** the **T** row under the **Status** column and **follow** the row across to the **V** column and **record** the value for the **Black Max Density**.

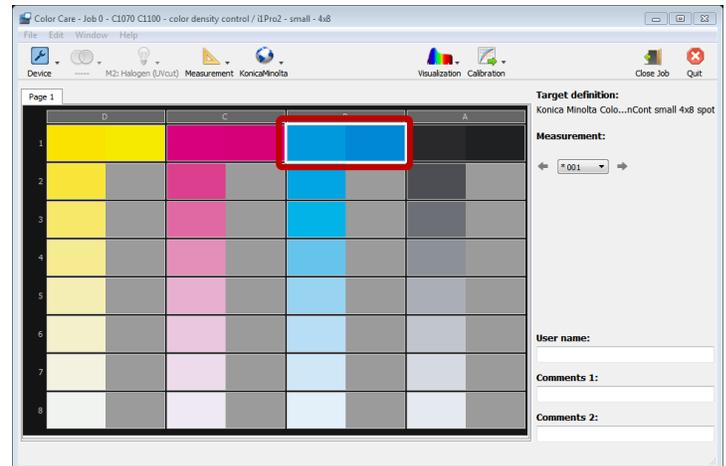
Note: K (black) is represented as V (visual).

4. **Click Close.**



5. **Click** on the **Cyan** patch you measured, then **click** on the **Visualization** icon again and **select Spectral curve**.

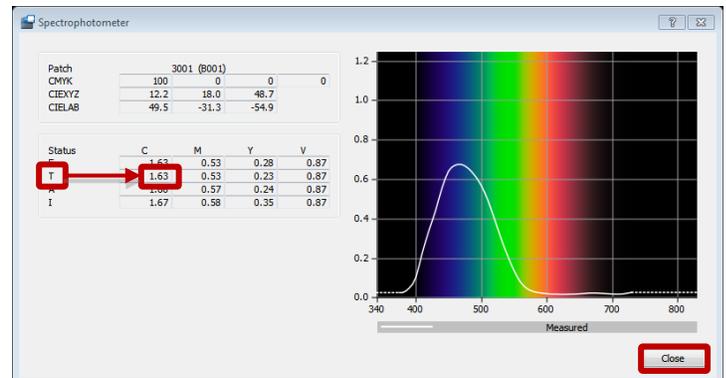
Note: You must close out of the **Visualization** screen in order to retrieve the correct values for each C-M-Y-K max density value.



6. **Locate** the **T** row under the **Status** column and **follow** the row across to the **C** column and **record** the value for the **Cyan Max Density**.

7. **Click Close.**

8. **Repeat** the process to properly record the **M (Magenta)** and **Y (Yellow)** max density (**T**) values.



C. Verify / record the Max Density Initial Adj. Values - Continued

9. Again, **ignore** the **Max Density Initial Adjustment** values shown on the bottom right of the control panel screen and **verify** the **Max Density measurement** values that you obtained using **Color Care Measure Tool** with the specifications below:

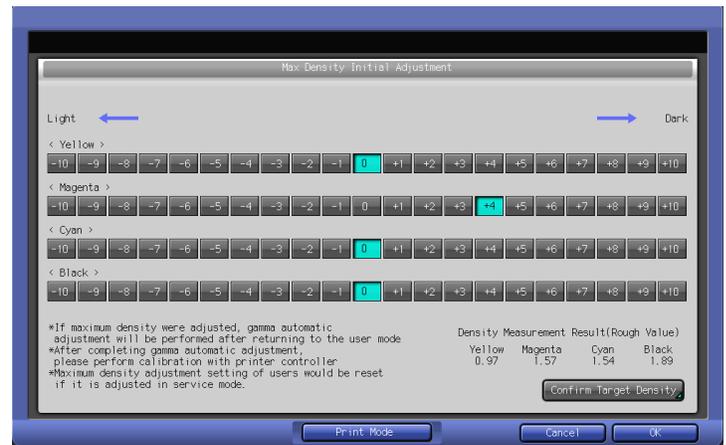
Target levels for **coated** paper **C1100**:

Y = 0.94 - 1.04 M = 1.42 - 1.58
C = 1.65 - 1.83 K = 1.82 - 2.11

Target levels for **coated** paper **C1070**:

Y = 0.91 - 1.01 M = 1.45 - 1.61
C = 1.44 - 1.60 K = 1.73 - 1.91

Note: The values listed here are generic and are acceptable for most customers and are not specific to any industry standard; refer to the **Service Manual** or industry standards for more specific target values if necessary.



STOP! If the engine is within recommended values you can **skip** to **E. Register Target Density to the Engine** otherwise **continue** with: **D. Perform Max Density Initial Adjustments.**

D. Perform Max Density Initial Adjustments

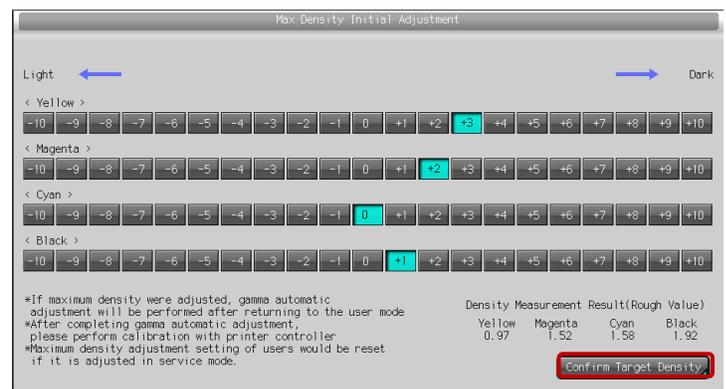
1. **Use** the follow step values to adjust each out of range color:

Y = 0.012 / step M = 0.021 / step
C = 0.026 / step K = 0.021 / step

Note: "Step" can differ depending on substrate.

2. **Repeat** the steps for printing and measuring the **Max Density Adjustment Chart** in order to obtain new **Max Density Initial Adjustment** values.

3. When the "Max Density Initial Adjustment" values are within specs, **touch Confirm Target Density.**



2.3 Max Density Initial Adjustment - Continued

E. Register Target Density to the Engine

On this screen you could compare the **Registered Data** with the **Measured Data** ONLY if this adjustment were performed in the field prior to this.

Note: If this is the first time performing this adjustment in the field then the **Registered Data** will most likely not be visible.

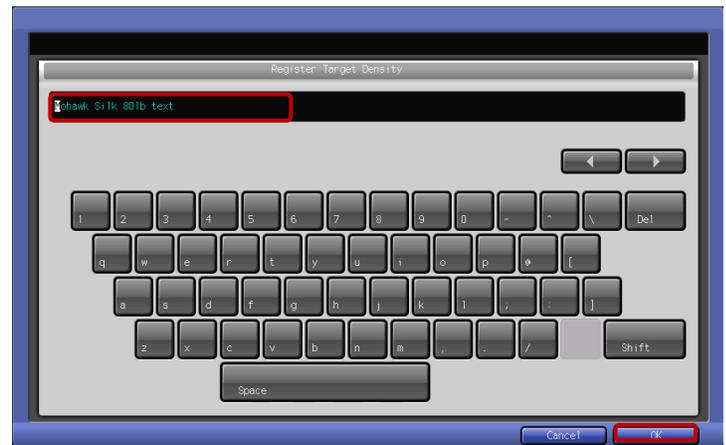
1. **Select Register Target Density.**



2. **Type** in the name of the substrate you're using to base the **Target Max Density** on.

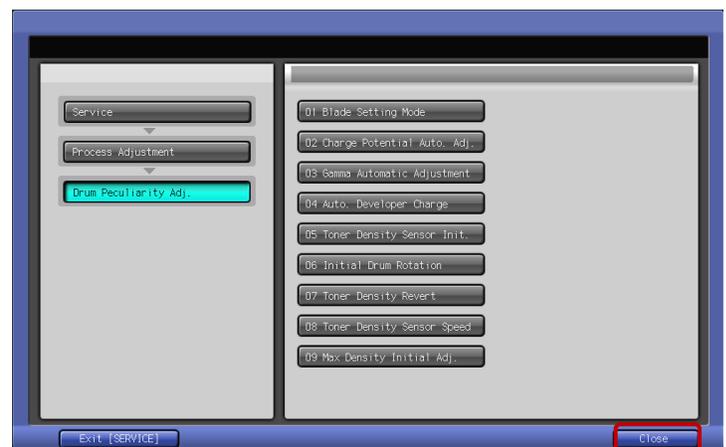
e.g. Mohawk Silk 28 lb bond

3. **Touch OK.**



4. **Touch Close** twice > **Exit [SERVICE]** and **Exit [Utility]** to return to the **Machine** status screen.

5. After **exiting** "Service" mode the engine will automatically run "**Gamma Automatic Adj.**". **Wait** for the adjustment to complete before proceeding.



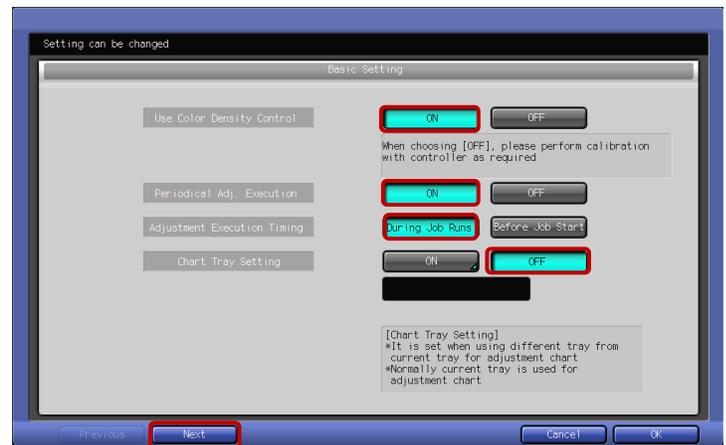
2.4 Enable Color Density Control (CDC)

1. From the **Machine** status screen, **touch Adjustment** then **select Color Density Control**.
2. **Select Basic Setting**.



Note: The following settings are only recommendations. Each customer can choose to select different settings based on their workflow and color management needs.

3. **Make** the following settings:
 - **Use Color Density Control = ON**
 - **Periodic Adj Execution = ON**
 - **Adjustment Execution Timing = Before Job Start**
 - **Chart Tray Setting = OFF**

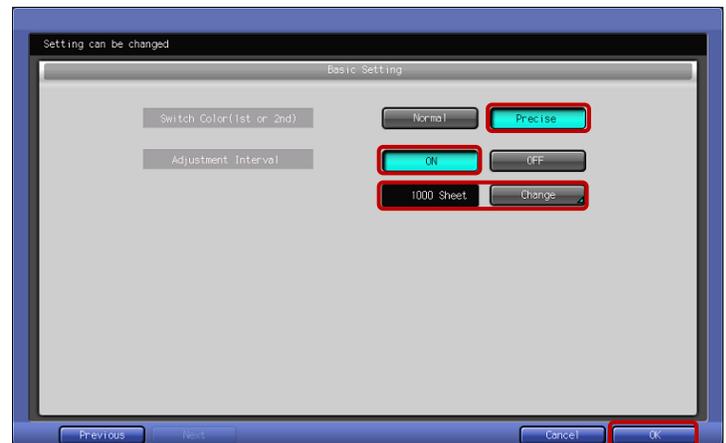


Note: “**Chart Tray Setting**” = **ON** – run CDC from a tray other than the print job (to print CDC charts on a smaller or less expensive substrate).

4. **Touch NEXT**.

5. **Make** the following settings:
 - **Switch Color (1st or 2nd) = Precise**
 - **Adjustment Interval = ON**
 - **Change** = set based on customer’s color management needs.

Note: “**Switch Color**” set to **Precise** will correct both primary (CMYK) and secondary (RGB) colors. “**Switch Color**” set to **Normal** will correct primary (CMYK) colors only.



6. **Touch OK**.

2.4 Enable Color Density Control (CDC) - Continued

From the “Color Density Control” screen the user has two options under the “Expert Setting” side of the screen: “Color Density Manual Control” and “Each Paper Type Color Adj.”.

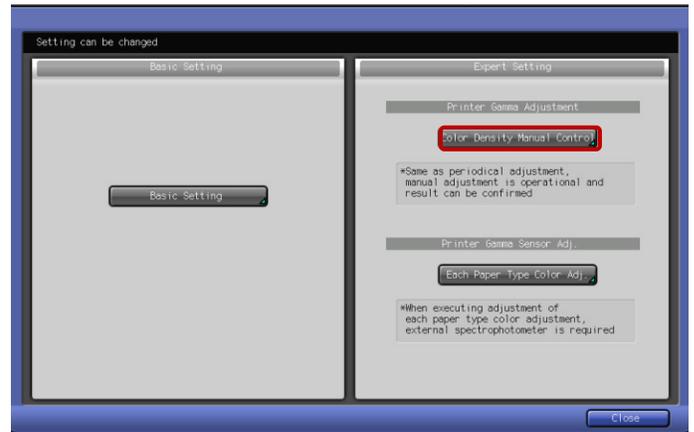
For most customers, performing the “(2.5 CDC - Color Density Manual Control)” procedures below is all that is necessary for achieving consistent and predictable color output:

In some cases however, when users require tighter tolerances or when trying to linearize color to the specific industry standard and/or white point of a particular substrate, [skip](#) ahead to section:

(2.6 CDC – Each Paper Type Color Adj.- OPTIONAL)

2.5 CDC - Color Density Manual Control

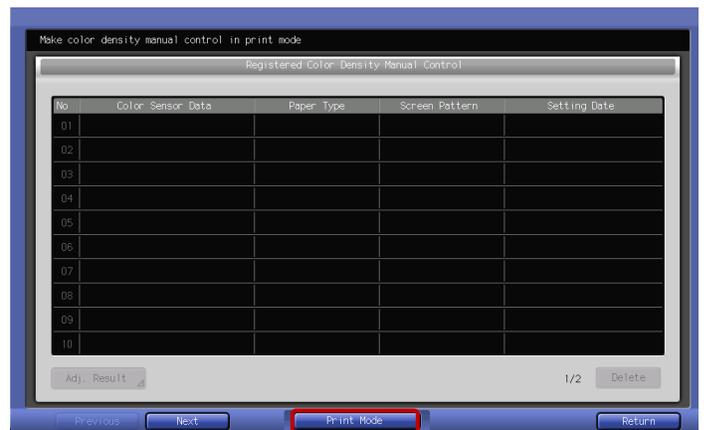
1. From the “Color Density Control” screen **select Color Density Manual Control**.



2. **Delete** any preexisting **Registered Color Density Manual Control** adjustments if they exist for the substrate you are linearizing to.

Note: Do **NOT** select/highlight any of the rows for the next step.

3. **Press Print Mode**.



2.5 CDC - Color Density Manual Control - Continued

4. **Select** the appropriate paper tray with high quality coated substrate.

Note: For paper saving purposes, use **Letter-R (landscape)** paper at this point. However it must be the same paper color, type and weight as the 11x17 paper used for **Density Balance**.

5. **Press** the **Start** key to print the “**CDC Adjustment Charts**”.

6. When printing completes **touch Exit Print Mode**.



The **Color Density Manual Control** Screen will be restored and you should see the manual adjustment that was just made.

7. **Select/highlight** the new adjustment and **press Adj. Result**.

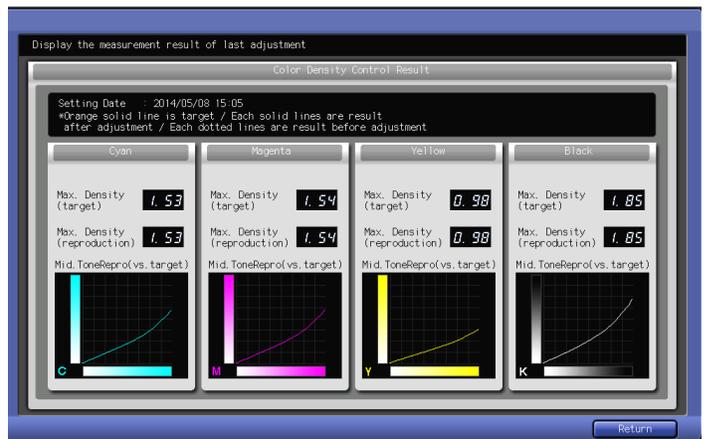


8. **Verify** that the **Tone Curves** are smooth.

Note: If the **Tone Curves** are **NOT** smooth, turn off **CDC** and repeat **Density Balance** and **Max Density Initial Adjustment**.

9. When finished, **press Return** twice, then **Exit**, and **skip** ahead to:

(Section 3: Calibrate the Controller)



2.6 CDC – Each Paper Type Color Adj. - OPTIONAL

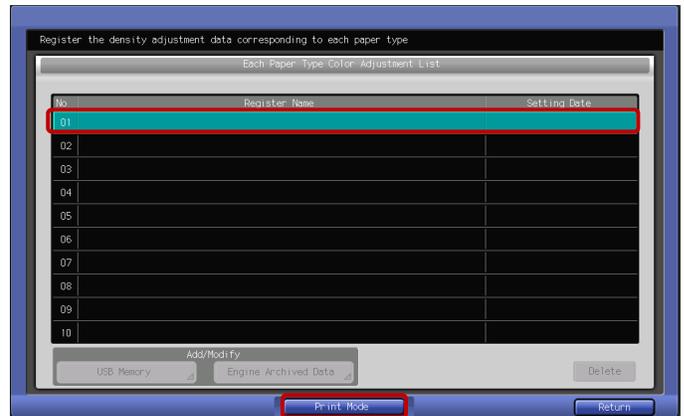
A. Print the CDC Measurement Chart

Only perform these procedures if necessary as described in the “Color Density Manual Control” section.

1. From the “Color Density Control” screen select Each Paper Type Color Adj.

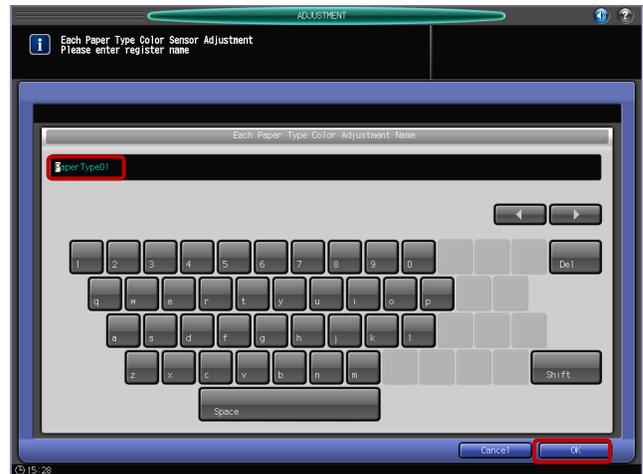


2. Select/highlight one of the empty rows (1-10).
3. Press Print Mode.



4. In the “Each Paper Type Color Adjustment Name” screen, enter the desired name of the substrate. (e.g. Mohawk Silk 28 lb bond) and press OK.

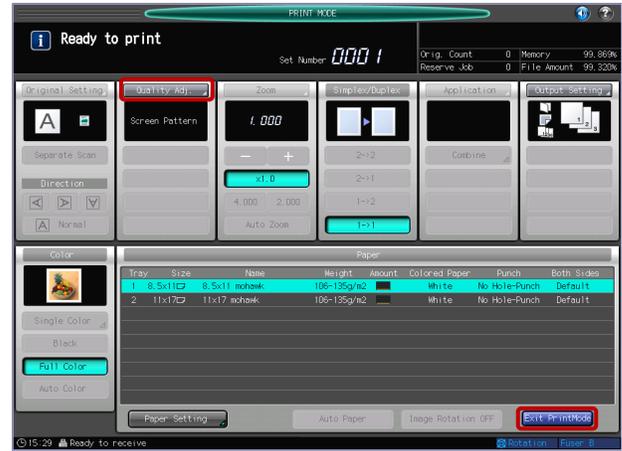
Note: This name can NOT be changed later.



2.6 CDC – Each Paper Type Color Adj. - Continued

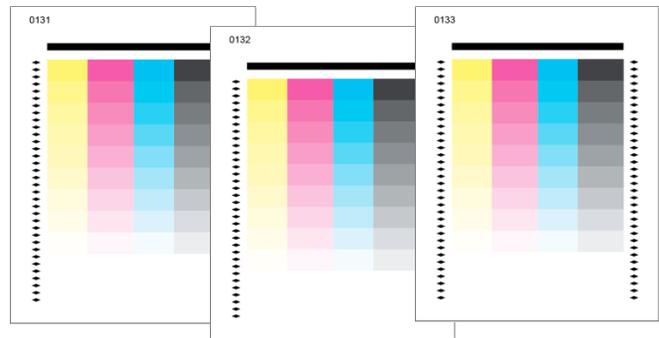
A. Print the CDC Measurement Chart - Continued

5. **Verify/Set** the screen (Screen1/Dot190).
 6. **Select** the appropriate paper tray with high quality coated substrate.
- Note:** Print the CDC charts on Letter-R (landscape) paper or you will have to cut down the larger paper if using an FD-9 \ i1-iSis XL.
7. **Press** the **Start** key to print the “**CDC Adjustment Charts**”.
 8. **Touch Exit Print Mode** when prints finish.



Next you will need to measure the CDC charts using the **Color Care Measure** tool.

For Letter-R and large substrates (13x19, 12x18, 11x17), you will get 3 charts (Letter-R) shown.

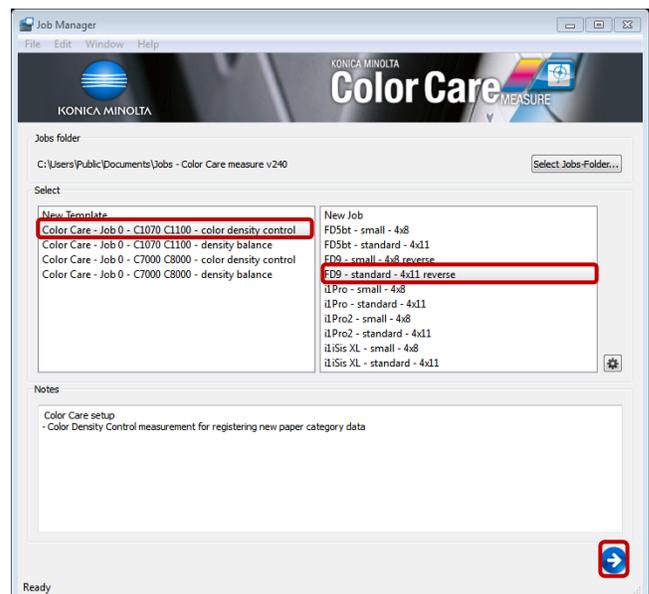


B. Measure the CDC charts using Color Care Measure

10. **Connect** the measurement device to your PC and launch “**Color Care Measure**”.
11. **Select Color Care - Job 0 – C1070 C1100 – color density control**.
12. **Select** the appropriate job from the list on the right according to the measurement device:
 - **FD5bt – standard – 4x11**
 - **FD9 – standard – 4x11 reverse**
 - **i1Pro2 – standard – 4x11**
 - **i1iSis XL – standard – 4x11**

Note: For 8.5 x 11 portrait, select “**small – 4x8**”.

13. **Click** the ‘**Right Arrow**’.



2.6 CDC – Each Paper Type Color Adj. - Continued

B. Measure the CDC charts using Color Care Measure - Continued

For FD-9 \ i1-iSis users, continue with the procedures below:
(C. FD-9 \ i1-iSis XL device users)

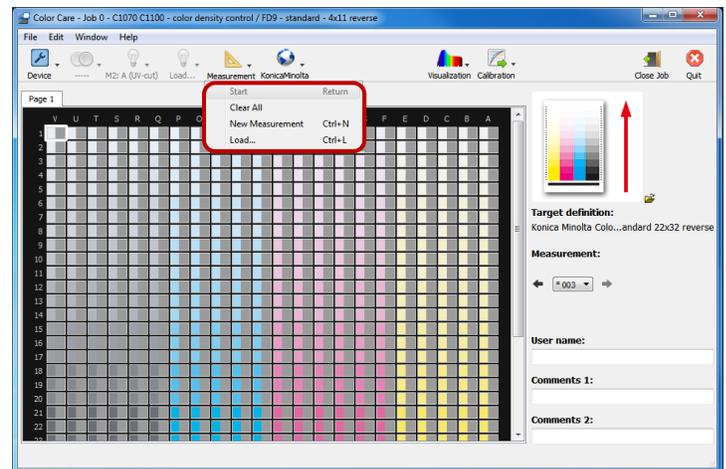
For i1Pro/i1Pro2 or FD-5bt users, skip ahead to section:
(D. i1Pro/i1Pro2/FD-5bt device users)

C. FD-9 \ i1-iSis XL device users

1. If using an **FD-9** you will be prompted on the device LCD to feed the chart; which is described in step 3. If you are using an **i1iSis XL**, click **Measurement** then **Start**.

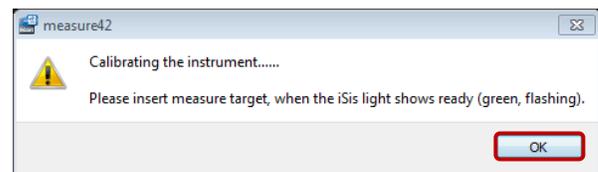
Important! When using large substrates (13x19, 12x18, 11x17) with an **i1iSis XL**, you will need to trim the left side of the substrate in order for the **i1iSis XL** to recognize the correct position of the patches on the chart. The **FD-9** does NOT require trimming since the chart is registered to the center with the alignment guides.

Note: If “**Start**” is not available, select “**Cancel**” from the “**Measurement**” drop-down which should restart the process.



At this point the **i1-iSis XL** will perform a calibration while the **FD-9** does not but will perform calibration as part of the measurement.

2. Read the prompt then click **OK**.



3. On an **FD-9**, align the paper guides for the appropriate paper width then feed the **CDC Chart** in REVERSE; making sure chart ID is first and to push the sheet far enough into the device for it to grab the chart. BE PATIENT, the **FD-9** will make several passes to recognize the chart before measuring begins.

Note: The chart is registered to the center with the paper guides.



2.6 CDC – Each Paper Type Color Adj. - Continued

C. FD-9 \ i1-iSis XL device users - Continued

4. On an **i1-iSis XL**, align the **CDC Chart** to the **left side** of the entrance, **feed** the chart in with the registration (black) bar in first; making sure to **push** the sheet far enough into the device for it to grab the chart.

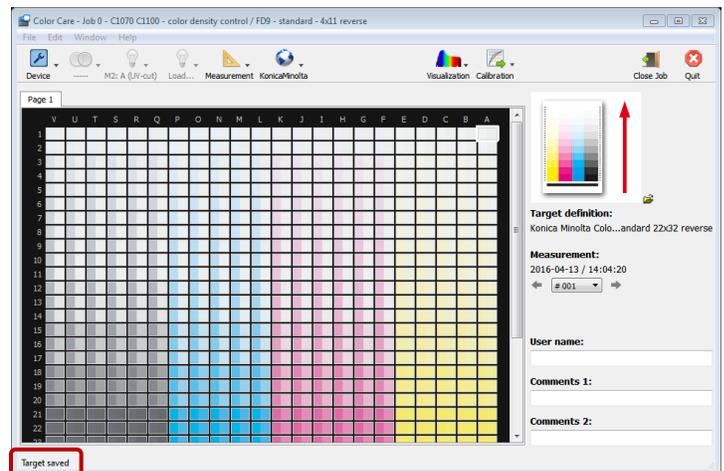
Note: There are no paper guides like there are on the **FD-9**.



5. **Wait** until you see ‘**Target saved**’ in the lower left hand corner of the **Color Care Measure Tool** display.

Note: Measurement data will not show up on the screen until all patches have been scanned. When the chart is finished, “**Target saved**” will appear in the lower left corner.

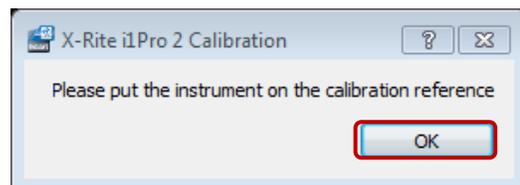
6. **Skip** ahead to **E. Saving the CDC Measurement Data**.



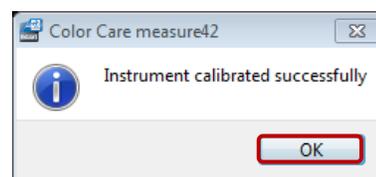
D. i1Pro/i1Pro2/FD-5bt device users

Color Care Measure will automatically ask to **calibrate the device**.

7. **Place** the device on its white reference plate and **click OK**.



8. At the prompt “**Instrument calibrated successfully**”, **click OK**.



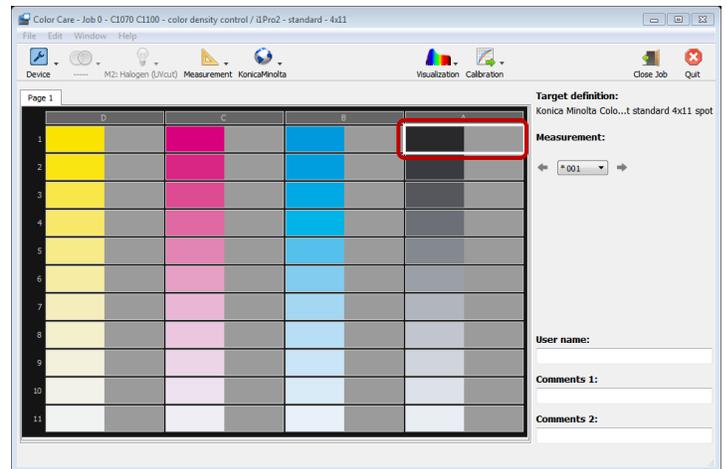
2.6 CDC – Each Paper Type Color Adj. - Continued

D. i1Pro/i1Pro2/FD-5bt device users - Continued

- For spot measurements, in “Color Care Measure” click on the black patch in the upper right-hand corner of the “Page 1” field.

Note: The white box that was around the whole row should now be around the black patch.

- Place several blank sheets of the same substrate under the chart while measuring

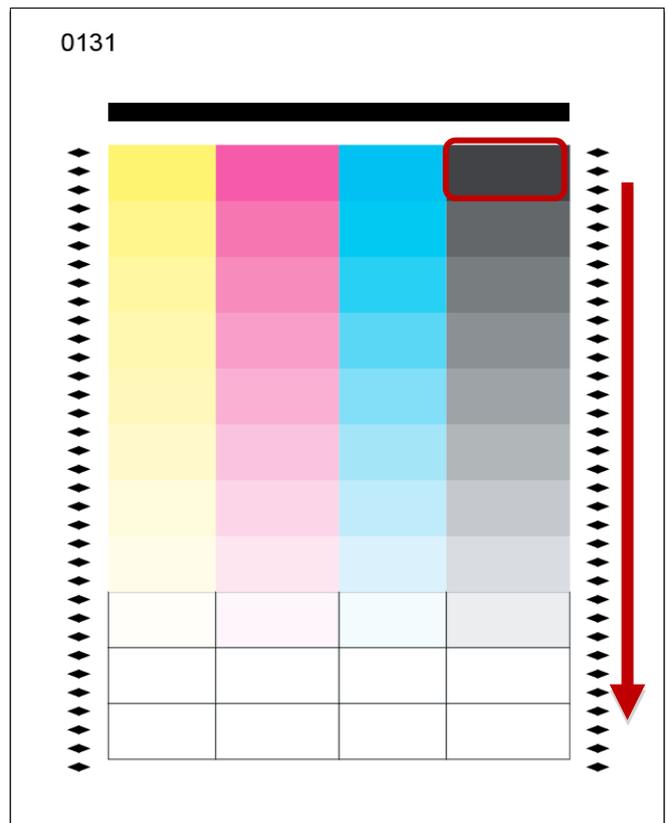


Important: You may want to draw a grid for the last three rows since they can be difficult to see. Shown in the Illustration.

- Start measuring the patches with your measurement device starting from the upper right-hand corner and working your way down the column one patch at a time.

Note: If you accidentally scan the wrong patch, simply use your mouse to click on the correct target patch then resume measuring the chart.

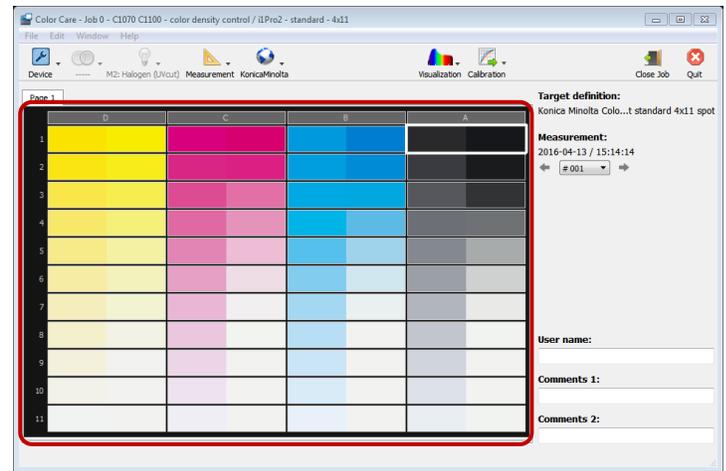
- Move left to the next column, starting at the top again, and work your way down until all patches are captured.



2.6 CDC – Each Paper Type Color Adj. - Continued

D. i1Pro/i1Pro2/FD-5bt device users - Continued

13. When finished measuring all the patches, proceed to the next task.

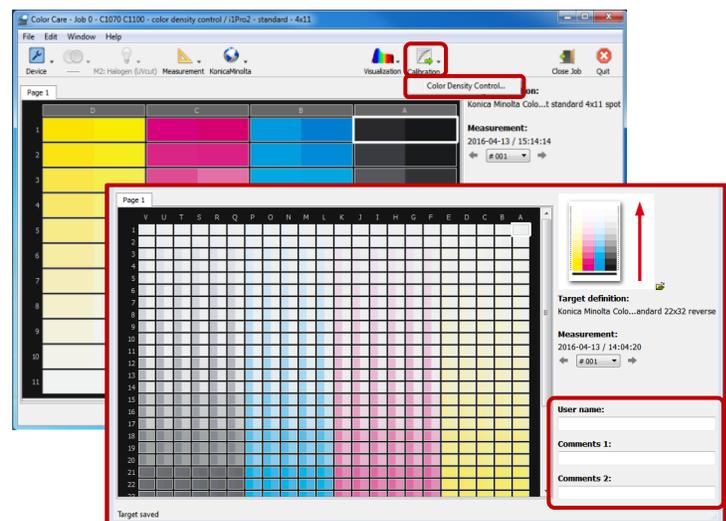


E. Saving the CDC Measurement Data

Regardless of which device and chart type you measured, the procedures for saving data to a USB drive or archiving data directly to the engine are the same.

Note: If the user likes, in the **User name**, **Comments 1** and **Comments 2** areas they can enter information such as the user's name, paper type, date, etc. but it is not necessary to complete the process.

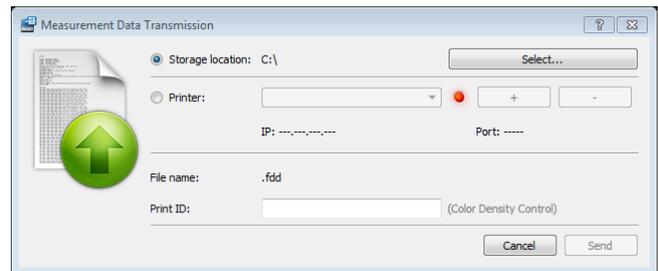
1. Click the **Calibration** drop-down menu and select **Color Density Control**.



From this screen the user has two options:

Storage location: For saving measurement data to a USB drive, continue with: (F. Saving CDC Measurement data to USB device)

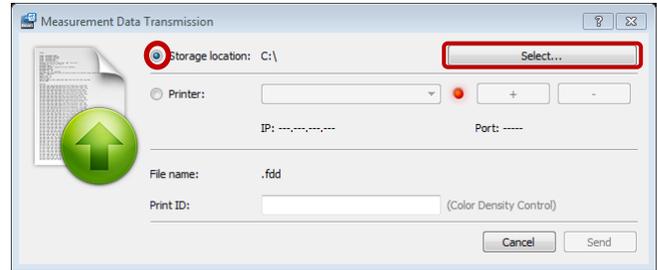
Printer: For archiving data directly to the engine over a network, skip ahead to: (G. Archiving CDC Measurement data directly to engine)



2.6 CDC – Each Paper Type Color Adj. - Continued

F. Saving CDC Measurement data to USB device

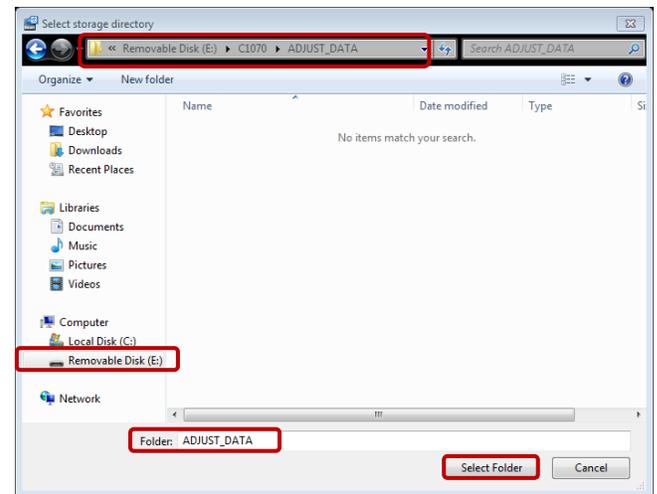
1. Connect your **USB flash-drive** to your PC.
2. In the “**Measurement Data Transmission**” window select the **Storage location:** radio button then click **Select...**



3. Select the appropriate “**USB drive**”.

Note: If the **USB Device** was just used for saving “**Density Balance**” data, then you can [skip](#) to **step 6**.

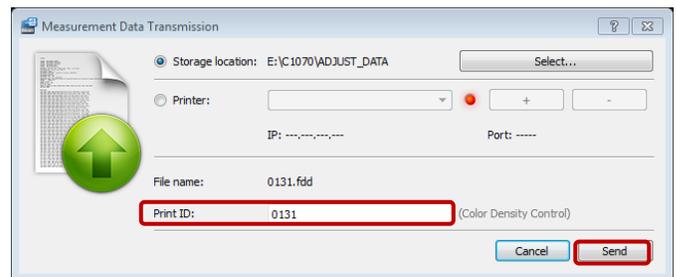
4. On the root of the “**USB drive**”, create a folder named **C1070** or **C1100**.
5. In the “**C1070**” or “**C1100**” folder, create a sub-folder named **ADJUST_DATA**.
6. Open the “**ADJUST_DATA**” folder and click **Select Folder**.



7. In the “**Print ID:**” field, enter the “**ID code**” printed on the bottom of the “**CDC Chart**” that was measured.

Note: The “**Print ID**” MUST match the chart “**ID code**”

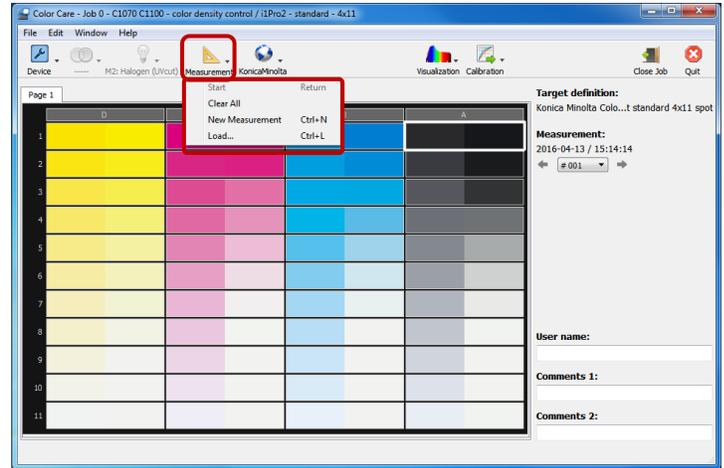
8. Click **Send**.



2.6 CDC – Each Paper Type Color Adj. - Continued

F. Saving CDC Measurement data to USB device - Continued

9. From the measurement screen, **click Measurement** then **select New Measurement**.
10. **Repeat** the process from either (C. FD-9 \ i1-iSis device users) or (D. i1Pro/i1Pro2/FD-5bt device users) and (F. Saving Density Balance Measurement data to USB device) to scan and save the second and third “CDC charts”.
11. When finished saving any and all data files, **click Quit** to close “Color Care Measure” then **skip** ahead to (H. Registering the CDC Measurement Data to the Engine).

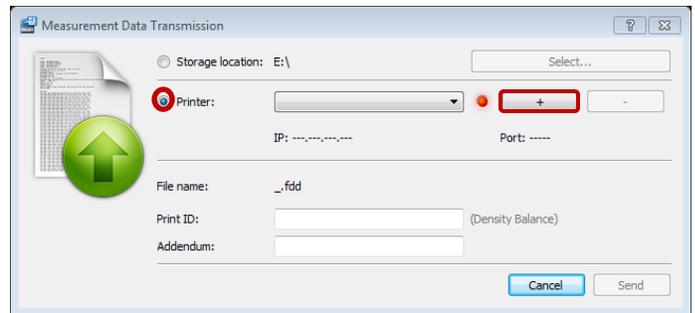


G. Archiving CDC Measurement data directly to engine

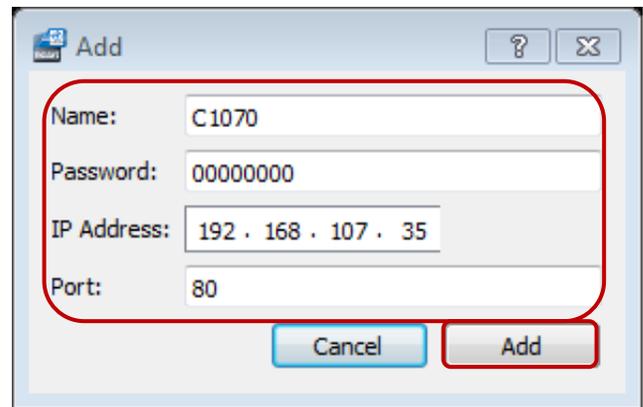
1. If not already done, **connect** your **PC/laptop** to the same network as the engine

Note: The engine NIC must be connected with a valid IP address on the network.

2. **Select** the **Printer:** radio button; if the engine is registered in the **Printer:** drop-down, then **skip** to **step 8**, otherwise **click** the **+** button.



3. **Enter** the **Name:** of the engine.
4. **Input** the engine **Password:**, in most cases it will be **00000000** (eight zeros).
5. **Type** the **IP Address:** of the engine’s NIC.
6. **Change** the **Port:** according to the following:
 - Fiery or Creo = 80
 - IC-602 = 30091
7. **Click Add.**



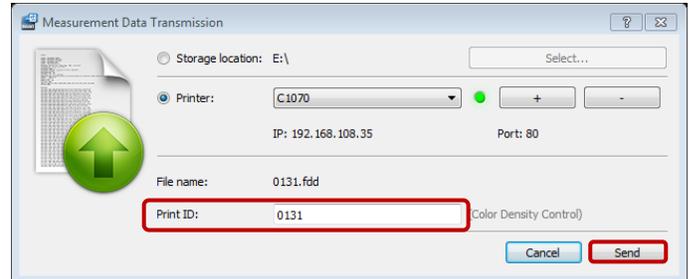
2.6 CDC – Each Paper Type Color Adj. - Continued

G. Archiving CDC Measurement data directly to engine

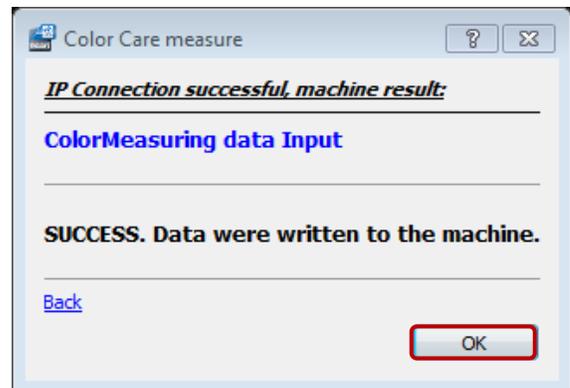
8. In the “Print ID:” field, enter the “ID code” printed on the bottom of the “CDC Chart” that was measured.

Note: The “Print ID” MUST match the chart “ID code”

9. Click Send.



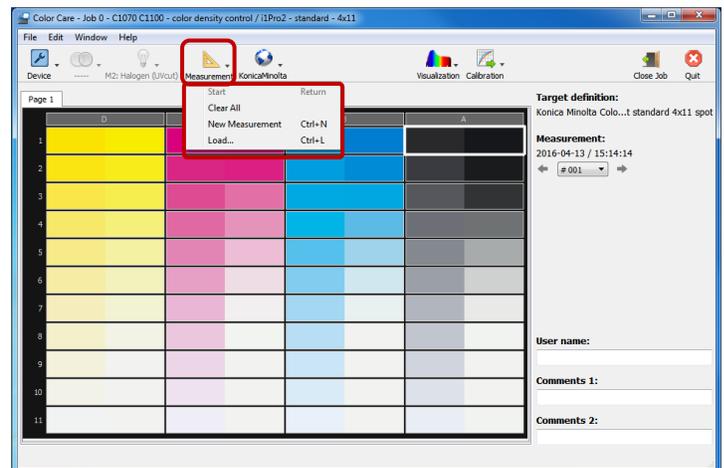
10. If done properly a message will signify a successful upload to the engine. Click OK.



11. From the measurement screen, click **Measurement** then select **New Measurement**.

12. Repeat the process from either (C. FD-9 \ i1-iSis XL device users) or (D. i1Pro/i1Pro2/FD-5bt device users) and (G. Archiving CDC Measurement data directly to engine) to scan and archive the second and third “CDC charts”.

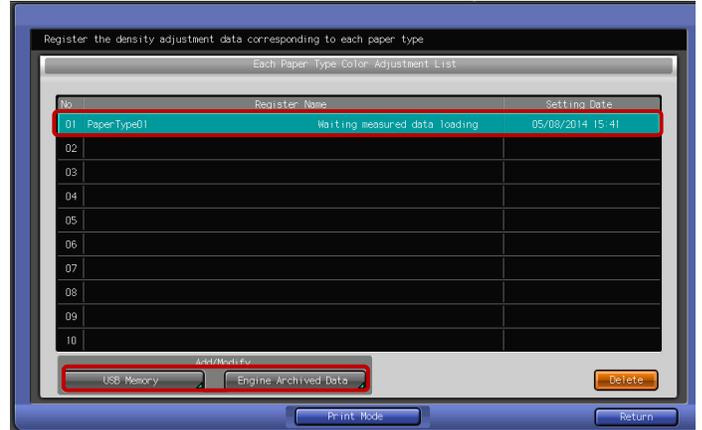
13. When finished saving any and all data files, click **Quit** to close “Color Care Measure” then continue.



2.6 CDC – Each Paper Type Color Adj. - Continued

H. Registering the CDC Measurement Data to the Engine

1. Back at the engine’s control panel, **select/highlight** the row with the message “**Waiting measured data loading**”.
2. **Touch USB Memory** if you saved the measurement data to a **USB device**, otherwise **select Engine Archived Data** if you uploaded the measurement data directly to the engine



3. If you chose “**USB Memory**”, **connect the USB flash drive** into the **USB port** of the machine and **press OK**, otherwise **skip** this step.

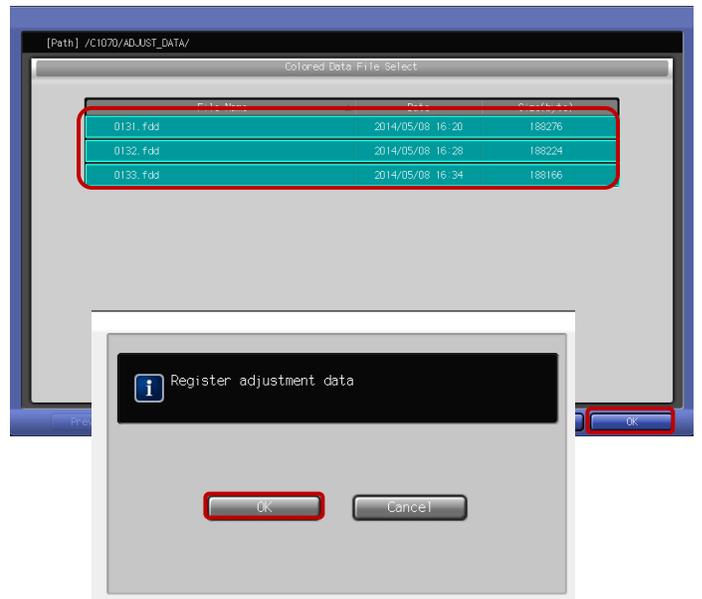
Note: It may take several seconds before the **USB device** is recognized, so you may have to press **OK** multiple times.



4. **Select/highlight** the appropriate measured data and **touch OK**.

Note: You should see three entries. Touching either entry will highlight all three if they were properly measured and saved/archived.

5. When prompted to “**Register adjustment data**”, **press OK**.

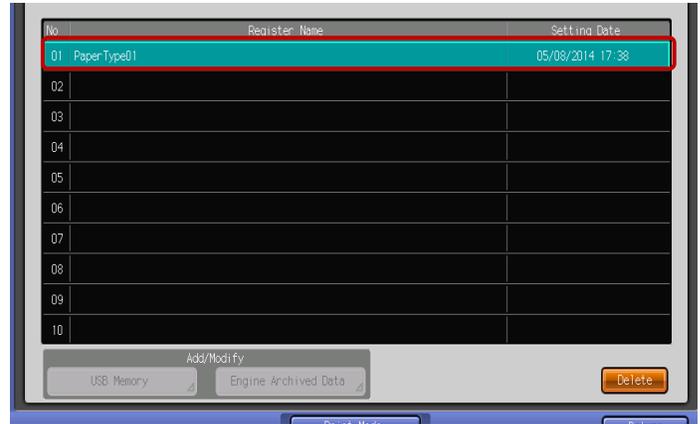


2.6 CDC – Each Paper Type Color Adj. - Continued

H. Registering the CDC Measurement Data to the Engine

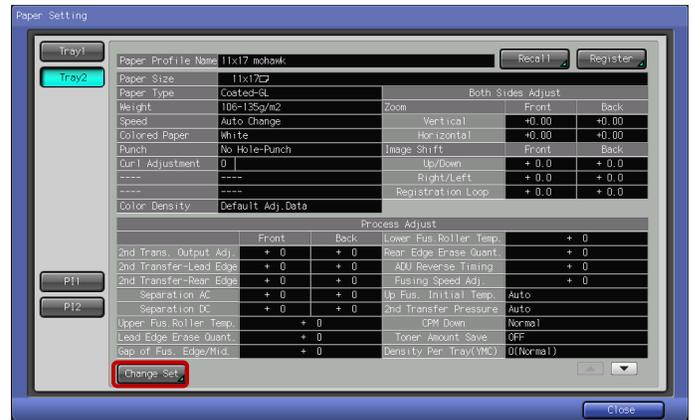
The “CDC” data is now available to be used in the desired tray.

6. Press **Return** then **Exit** to get back to the “Machine” status screen.
7. If necessary, **remove** your **USB device** from the engine.



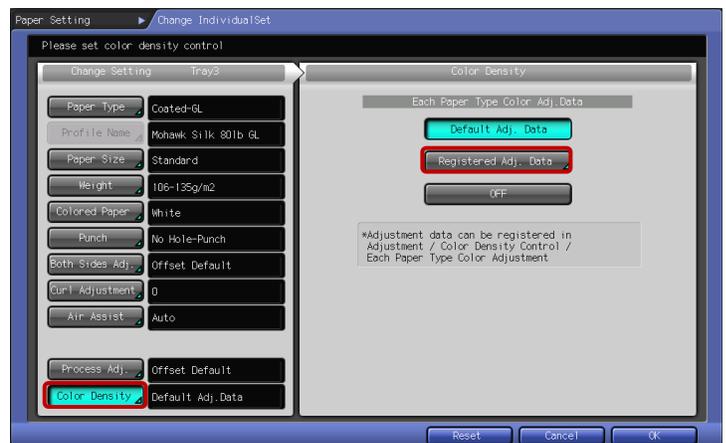
I. Applying the Each Paper Type Color Adj. to the specific tray

1. From the “Machine” status screen, **press Paper Setting** and **select** the proper tray.
2. **Select Change Set.**



3. **Touch Color Density**, then **Registered Adj. Data**.

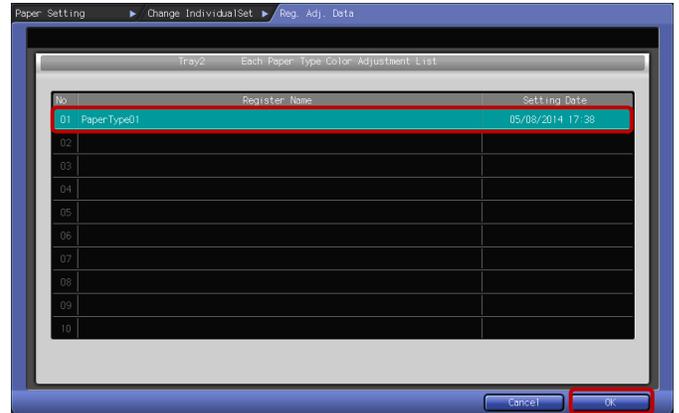
Note: If SW 56-2 is set to 1, users will have the option of disabling CDC (OFF) on a tray by tray basis. This could have adverse results when switching trays during a print run.



2.6 CDC – Each Paper Type Color Adj. - Continued

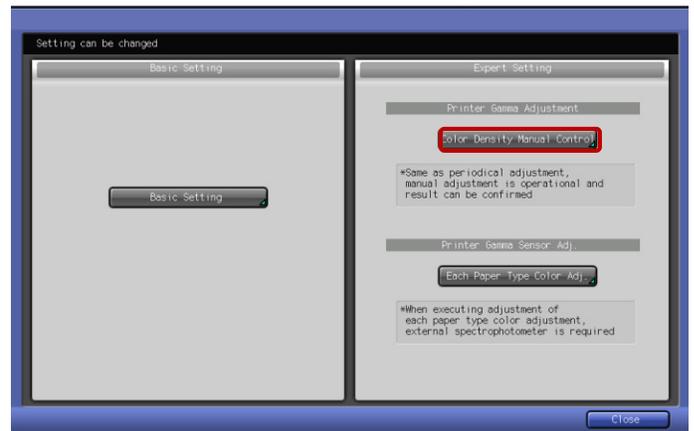
I. Applying the Each Paper Type Color Adj. to the specific tray - Continued

4. Select/highlight the appropriate registered data and touch OK twice.
5. Repeat the process to apply the “Registered Adj. Data” to any and all appropriate trays.
6. Finish by pressing Close to get back to the “Machine” status screen.



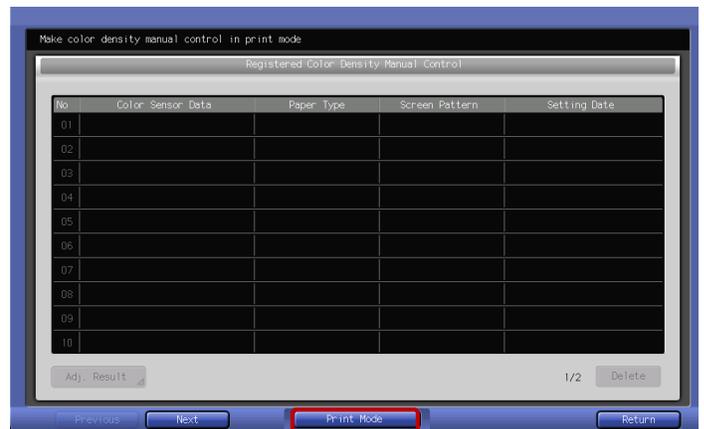
J. Initiate Color Density Manual Control for new Each Paper Type Color Adj.

1. From the “Color Density Control” screen select Color Density Manual Control.



Note: Do **NOT** select/highlight any of the rows.

2. Press Print Mode.



2.6 CDC – Each Paper Type Color Adj. - Continued

J. Initiate Color Density Manual Control for new Each Paper Type Color Adj. - Continued

3. Select the appropriate paper tray with high quality coated substrate.
4. Press the **Start** key to print the “CDC Adjustment Charts”.
5. When printing completes touch **Exit Print Mode**.



The **Color Density Manual Control** Screen will be restored and you should see the manual adjustment that was just made.

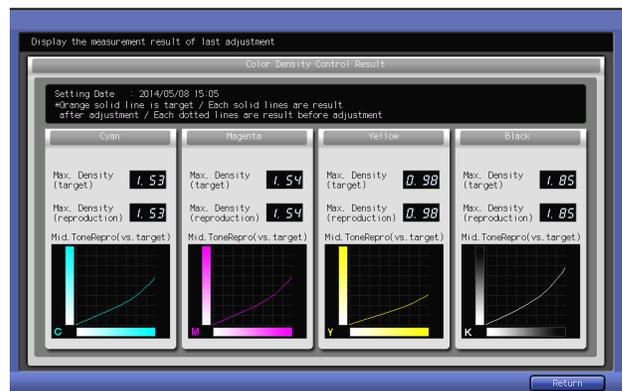
6. Select/highlight the new adjustment and press **Adj. Result**.



10. Verify that the **Tone Curves** are smooth.

Note: If the **Tone Curves** are **NOT** smooth, turn off **CDC** and repeat **Density Balance** and **Max Density Initial Adjustment**.

11. When finished, press **Return** twice, then **Exit**, and **Continue** ahead to the next section.



Section 3: Calibrate the RIP (Print Controller)

3. Print Controller Calibration

Calibrating the Print Controller is an integral part for completing the **Color Linearization** process. Since there are several RIP (Print Controller) options available please reference the appropriate documentation for the necessary procedures.

For IC-602 users, reference the document named below:

(IC-602 Color Centro Calibration - Exact Color_Lab)

For IC-415/IC-308 users, reference the document named below:

(FCC_PP_CWS_5.7.X_Sys_FS150_Color_Management_Lab)

For IC-309 users, reference the document named below:

(Creo IC-309 Controller Calibration_Lab)

Section 4: Maintaining Color Linearization and Calibration

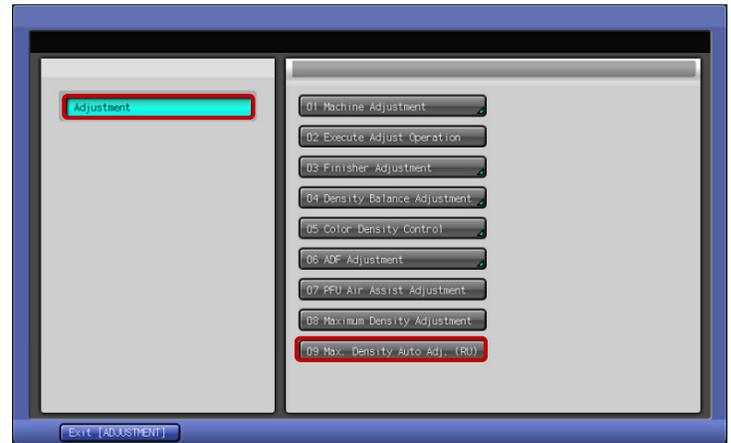
Once the engine has been properly linearized for color, you (or the customer) will only need to perform these procedures again when a major PM is completed or when color output is poor or inconsistent due to excessive wear and tear.

Customers can use the **Max. Density Auto Adj.** on a daily basis to verify, maintain, and adjust the values registered in **Max. Density Initial Adj.**; which should help to keep the engine properly linearized if used in conjunction with **CDC**.

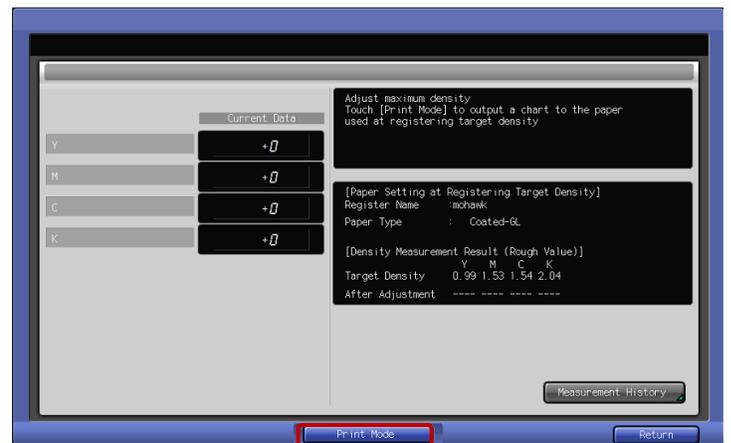
RIP Calibration sets and Custom Printer Profiles DO NOT go bad or expire, they simply become out of sync with the engines color output. So, RIP Calibration and Printer Profiling may be necessary after performing this adjustment if the engine became severely out of linearization.

4. Max. Density Auto Adj.

1. From the **Machine** screen of the Control Panel, **select Adjustment** then **Max. Density Auto Adj. (RU)**.



2. **Select Print Mode.**

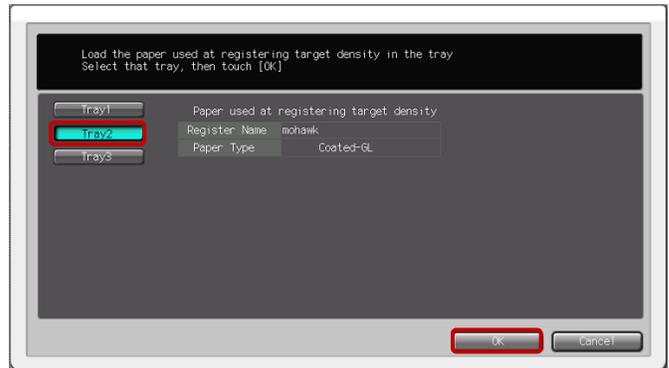


4. Max. Density Auto Adj. - Continued

3. Load the appropriate Paper Type (Coated GL, ML, or Color Specific, etc.) in to any tray; according to what was used when the Max Density Initial Adj. was established.

Note: If the user wants to adjust Max Density to a different Paper Type, then they would perform the “manual” Maximum Density Adjustment in Administrator or Adjustment mode.

4. Select the appropriate tray and press OK.



5. Verify that the correct paper tray and that Full Color are selected then press Start to output the Max. Density Auto Adj. chart.

Note: The paper tray will automatically switch to list the paper type that was used when creating the Max Density Initial Adj..



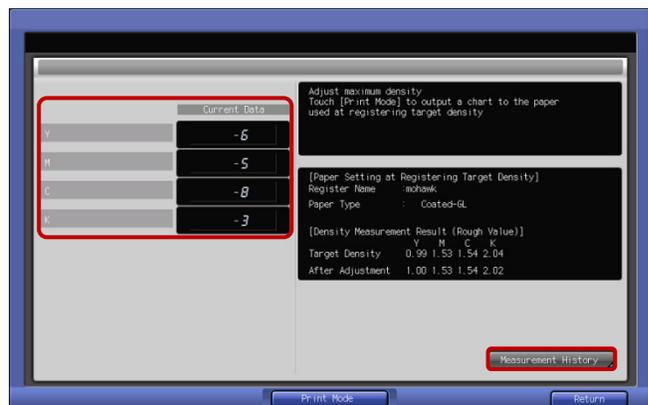
Notice that the Max. Density Auto Adj. chart is identical to the Max. Density Initial Adj. chart.

Important! It may take several prints and adjustments before the process completes.



Any adjustment values will be displayed on the left side of the screen.

6. Select Measurement History.



4. Max. Density Auto Adj. - Continued

This screen will show you the maximum density reached at the time of each adjustment.

7. Verify that the values in the history are consistent.
8. If there is a large jump in values, choose **Switch Display**.



This will display the **Paper Type** used for each adjustment. If there are different **Paper Types** listed, this could be because someone reset the **Max Density Initial Adj.** using a different **Paper Type** OR they made a “manual” **Maximum Density Adjustment** in the **Administrator** or **Adjustment** mode using a different **Paper Type**.

This screen will also display the adjustment values that were made at the time of each adjustment. If the values are continuing to rise or fall toward max. / min. values of +/- 10, this could be a sign that maintenance will be needed.

9. Take note if there are different entries for different **Paper Types** then touch **Switch Display**.



Note: If there is a large jump in values between the history data of the same **Paper Type**, it may be necessary to turn off **CDC** and repeat **Density Balance** and **Max Density Initial Adjustment**.

10. Touch **Close**.
11. Press **Return** and **Exit** out of the **Adjustments** screen.



Appendix: Expert Settings and Adjustments

The color linearization procedures detailed here are intended to linearize the engine to produce a predictable and consistent color output, while trying to achieve the best visual output possible.

In order to modify specific colors for a customer's output, it is recommended that you familiarize yourself with user settings, adjustments, expert color adj., controller color management (printer profiling, spot color matching, curve adj. etc.), application adjustments (MS, Adobe, etc.) and monitor calibration.

*If the customer requires a higher level of color management (i.e. to a known standard such as Gracol 2006 and/or G7), they can upgrade to the **Konica Minolta Color Care Suite**. The suite offers additional tools for creating ICC profiles, as well as, verifying against a known standard and performing quality control checks.*

EFI and Creo both also have profiling and validation software utilities available; refer to their websites or KM Fiery PP and Creo courses for any and all related materials.



KONICA MINOLTA



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