

Creating Sandwich White jobs for Tauro v3.x

This tutorial demonstrates how to create sandwich white jobs for different applications that need to be printed concurrently. It also explains how you can control the order of the printer layers using the correct calibrated print modes. Download the Asanti Sample Files via the Asanti Client (Help > Asanti Online > Download Sample Files).

Tauro 3.x software needs to be installed on the printer.

1. Intro: The concept of Print Task and Layers on Tauro

- Tasks are printed sequentially
- Layers are printed concurrent

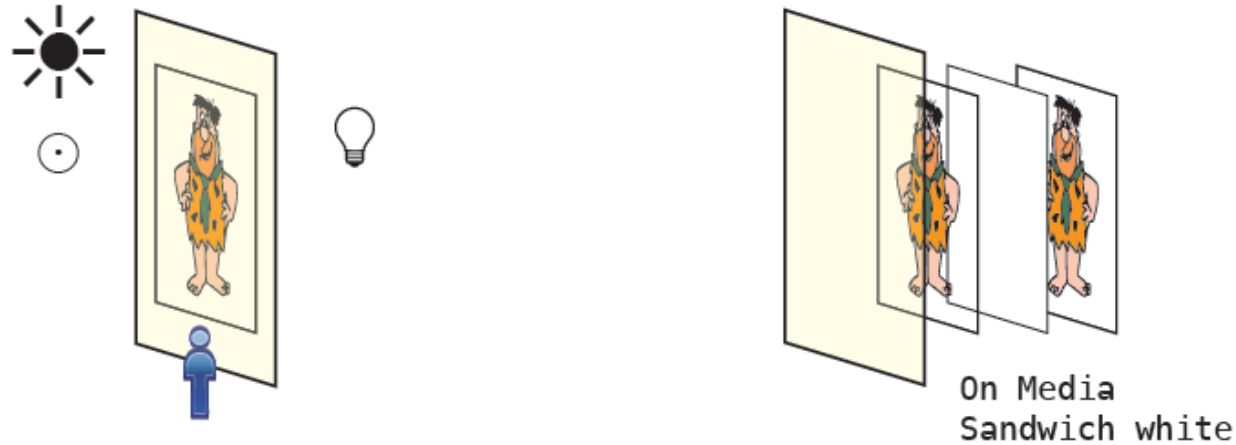
The screenshot illustrates the configuration for a sandwich white print job. It shows the job list, the print preview, and the detailed task and quality settings. The 'PrintTasks' panel shows two sequential tasks, both set to 'HIGH_DEFINITION' with 12 passes. The 'Quality' settings are configured for 'HIGH_DEFINITION' with 'Number of Passes' set to 12. The 'Mask' section is highlighted, showing two layers: '1 COLOR' and '2 WHITE', which are printed concurrently.

Tauro can print up to 4 layers concurrently; Primer-Color-White-Color.

To improve the overall adhesion and in combination with more than 2 print runs it is advised to end the separate print runs where possible with a white layer.

2. Sandwich White Printing: Color 1 – White – Color 1 (Use Case1)

Day/Night application: Printed at the back side of transparent media. The image is viewed through the media.



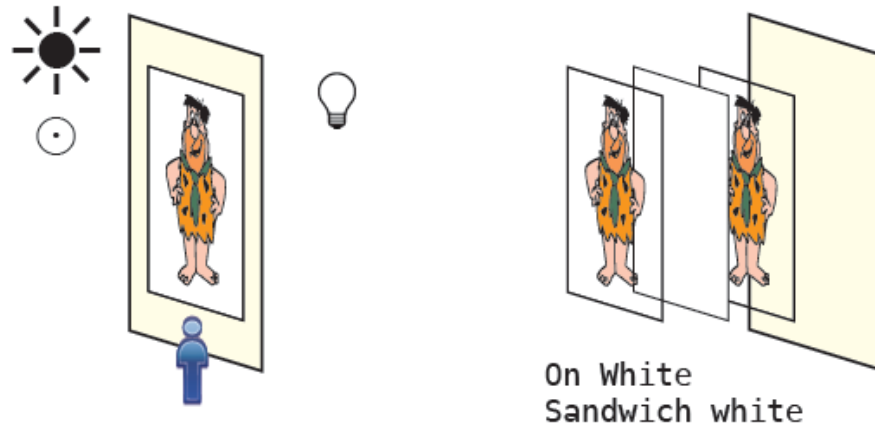
Sandwich White on Transparent media. You look through the media to the print. The image is mirrored. The first image is printed on the media; the second layer is a post white layer. During the day the first 2 layers produce a good print & color result. The 3th layer increases the image density when the light at the back is enabled during the night. The color output during the night and day should look equal. Normally the 3th layer is not visible.



The CPM to be used is on media and a post white layer.

3. Color1-White-Color1 (Use Case 2)

Day/Night application printed at front side of transparent media.



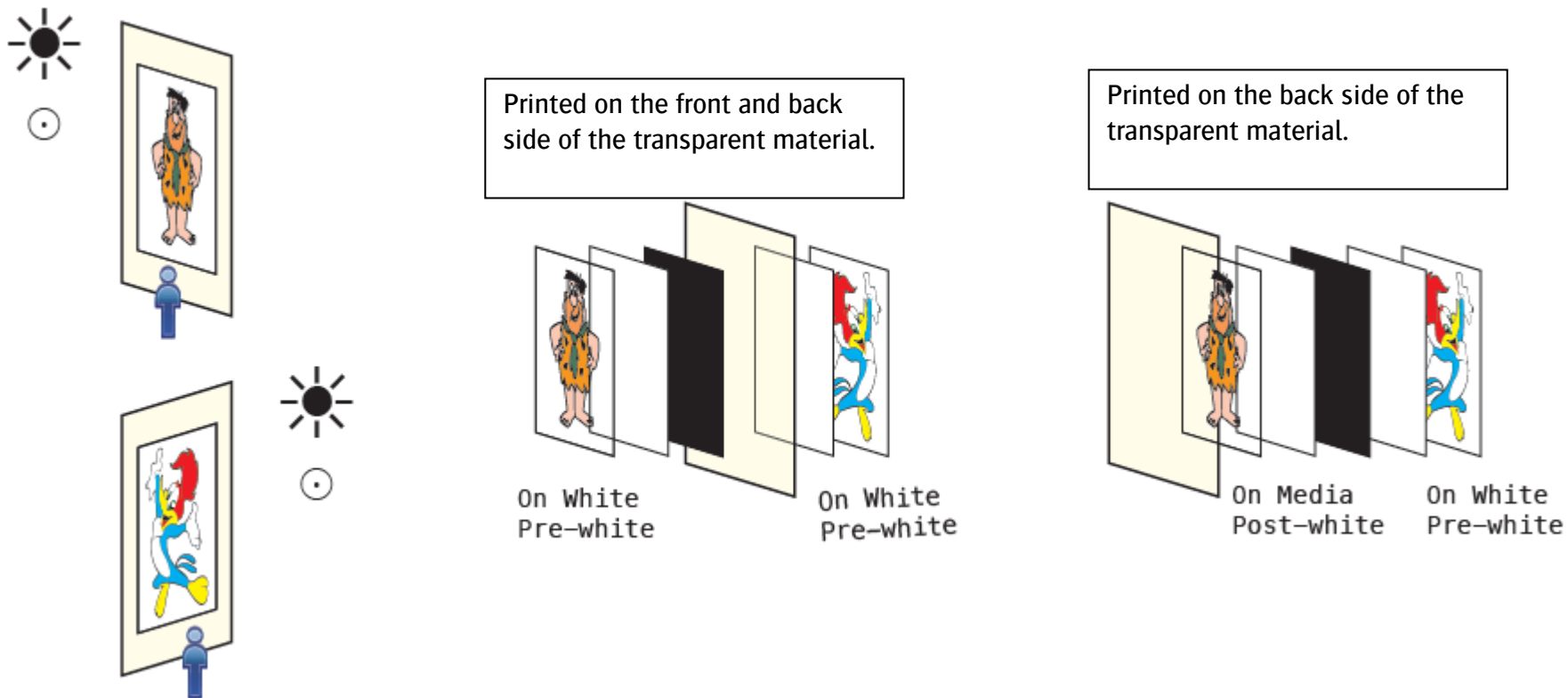
Sandwich White: **the 3 layers are printed** on the media and you look directly to the printed image. The first image is printed on the media but is not directly visible because a white layer is printed on top. This second layer is a pre-white layer and the 3th layer is printed on the white layer. During the day the first 2 layers produce a good print result. The 3th layer increases the image density when the light at the back is enabled during the night. The color output during the night and day should look equal. A different approach in job creation is needed here because the CPM to be used is the on white CPM.



4. Color 1 – White – Color 2 – White – Color 3 (Color – White – Black – White – Color 3, [Use Case 3](#))

Block out application printed on transparent media.

Typically, these type of jobs are finished with white as layer 4 and another cmyk image as layer5. This can be done on Tauro in 2 print runs thus by printing 2 jobs.



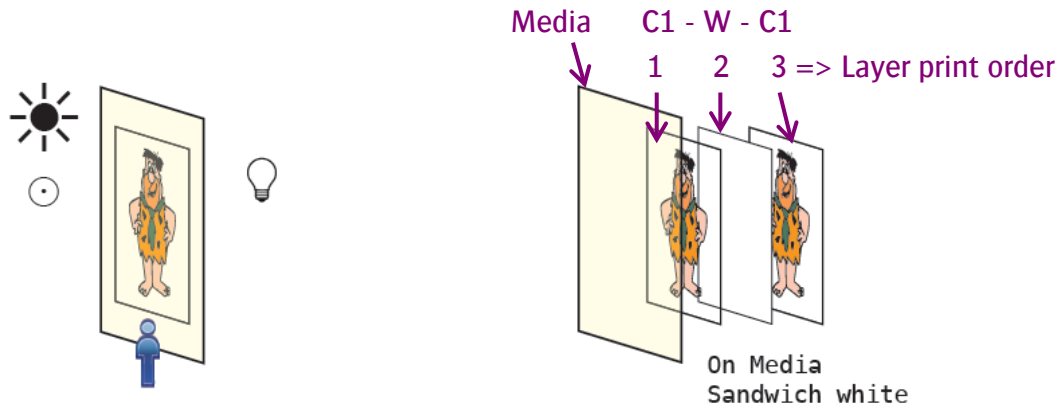
E.g. Print on the Back: C-W-K-W-C: Color uses the on media CPM – White uses the post-white layer- Black uses on media cpm – White use the pre-white layer – Color use the on white CPM. The black layer acts as a block out layer.

5. Use Case 1 – C1WC1 – Day & Night application printed on the back side of transparent media.

Layer 1 and layer 2 are using the same print data and are equal for color and content.

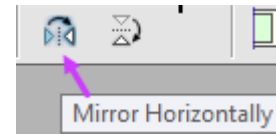
The print result

How it will be printed.




The first layer is mirrored and printed directly on the back side of the transparent media. The second layer is the white layer and has typically a lower opacity. This layer will be printed on the first cmyk layer. Layer 3 is the same print data as layer 1.

It is advised to create a dedicated on Media Calibrated Print Mode using for transparent media. If no dedicated CPM is available the generic can be used.

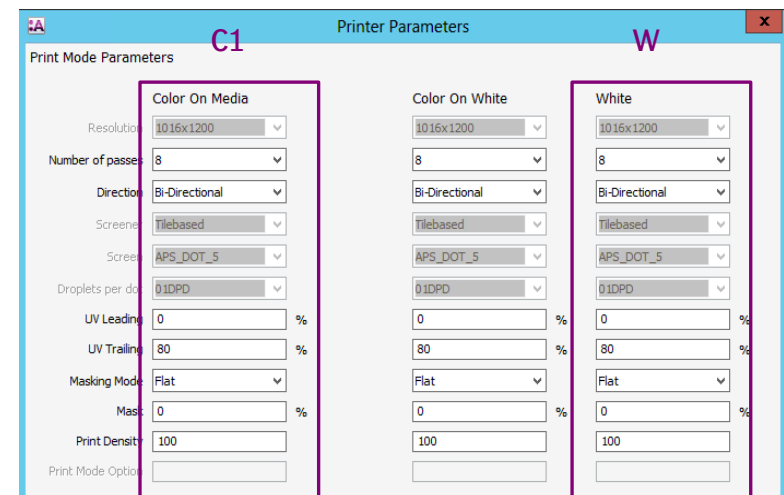
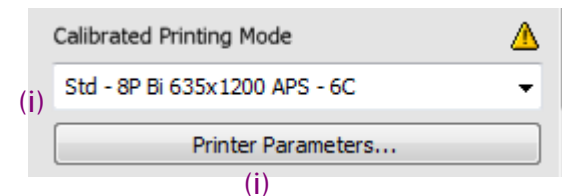
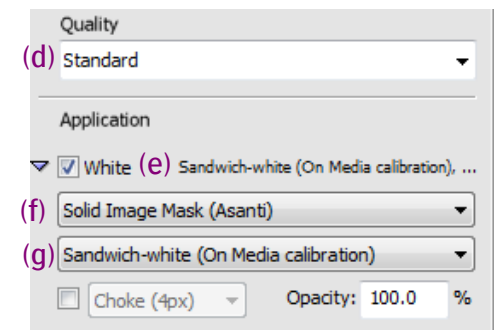
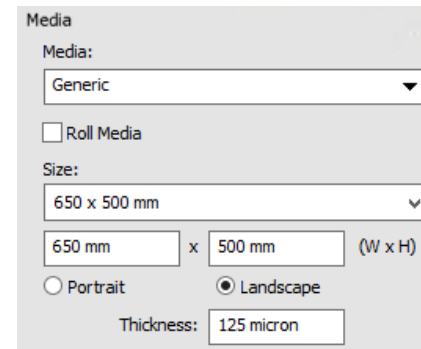


Create a sandwich white C1WC1 job.

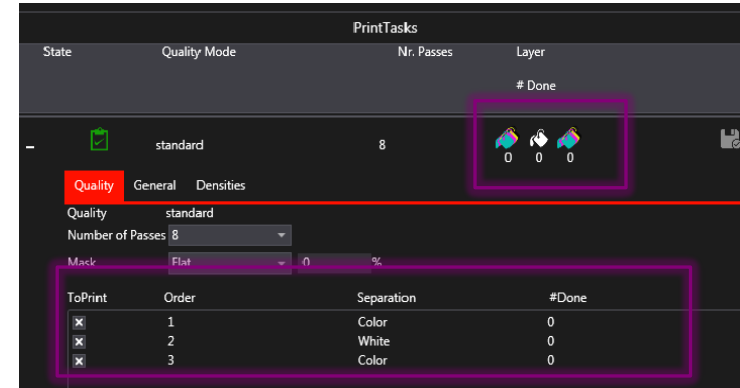
1. Create a new layout job- drag your image to the sheet.
2. Mirror your image 
3. Job Inspector
 - a. Set Tauro as printer
 - b. Set Media to the transparent media with a custom CPM or Set Generic.
 - c. Set the correct media size and thickness.
 - d. Set the Quality to Standard.
 - e. Enable White.
 - f. Set Solid Image Mask (Asanti).
 - g. Set Sandwich-white (On Media Calibration).
 - h. Set Calibrated Print Mode to Std- 8P Bi 635x1200 APS – 6C.
 - i. Click on Printer Parameters.

The printer parameters need to be identical for Color on Media and white to create concurrent sandwich white jobs for Tauro.

 - j. Submit your job, make and send to print; use the name UC1-SandwichWhiteOnMedia.



- k. Select and Print your job on the Tauro GUI. The Print Task result on Tauro includes 3 layers.



What CPM and printer parameters are used in Asanti to create this job.

CPM

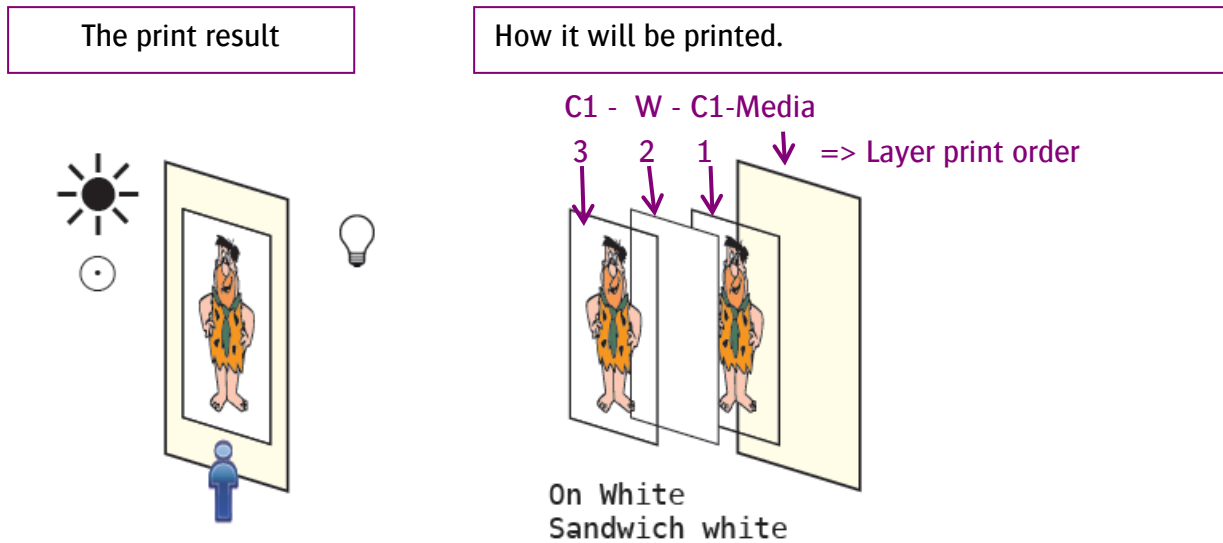
Asanti will use the on media CPM and print mode parameters to create the Color1 layer (C1). Asanti will use the print mode parameters of the white(W).

The screenshot shows the 'Quality' and 'Application' settings in Asanti. The 'Quality' dropdown is set to 'Standard'. Under 'Application', 'White' is checked, and 'Sandwich-white (On Media calibration), ...' is selected. The 'Choke' is set to 4px and 'Opacity' is 100.0%. To the right, a 'High Quality on Generic' section shows parameters for 'C1' and 'W':

- C1 (Color1):** On Media: 8P Bi 725x1200 APS, Profile: embedded, PST/TAC: WF-LightGCR / 300%
- W (White):** On White: 8P Bi 725x1200 APS, Profile: embedded, PST/TAC: WF-LightGCR / 300%; White: 8P Bi 725x1200 APS / 85%; Primer: 8P Bi 725x1200 APS / 25%

Annotations include a purple box around the C1 parameters with the label 'C1', a purple box around the W parameters with the label 'W', and a purple arrow pointing from the 'White' application setting to the W parameters. Text on the right states: 'CPM and print mode parameters used for C1.' and 'Print Mode parameters used for white.'

6. Use Case 2- Day & Night Application printed on the front side of the media.



Create a sandwich white C1WC1 job

1. Create a new layout job.
2. Add cleaning white.pdf to the image pane, place it on the sheet.
(this image contains white data, if no white data is available choose to generate white by Asanti)
3. Job Inspector
 - a. Set Media to Generic
 - b. Set the correct media size and thickness
 - c. Set the quality to High Definition
 - d. Enable White.
 - e. Set from Image (Asanti).
 - f. Set Sandwich-white (On White Calibration).

(c) Quality: High Definition

Application

(d) White Sandwich-white (On White calibration), F...

(e) From Image (Asanti)

(f) Sandwich-white (On White calibration)

Choke (4px) Opacity: 100.0 %

Primer

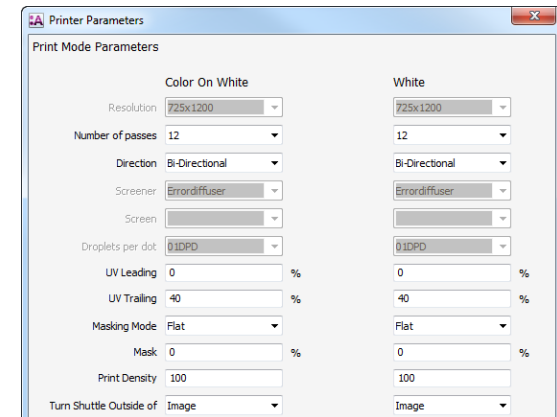
Calibrated Printing Mode

(g) HighD - 12P Bi 725x1200 AQS - 6C

(h) Printer Parameters...

High Definition on Generic
 Colors: CMYKcm
 On Media: 12P Bi 725x1200 AQS
 Profile: embedded
 PST/TAC: WF-LightGCR / 300%
 On White: 12P Bi 725x1200 AQS
 Profile: embedded
 PST/TAC: WF-LightGCR / 300%
 White: 12P Bi 725x1200 AQS / 85%
 Primer: 12P Bi 725x1200 AQS / 25%

- g. Set Calibrated Print Mode to HighD- 12P Bi 725x1200 AQS – 6C.
- h. Click on Printer Parameters. The print mode parameters for Color On White and White need to be identical to create concurrent sandwich white jobs on Tauro.
- i. Submit your job, make and send to printer; use the name UC2-SandwichWhiteOnWhite.
- j. Select and Print your job on the Tauro GUI.
The Print Task result on Tauro includes 3 layers.

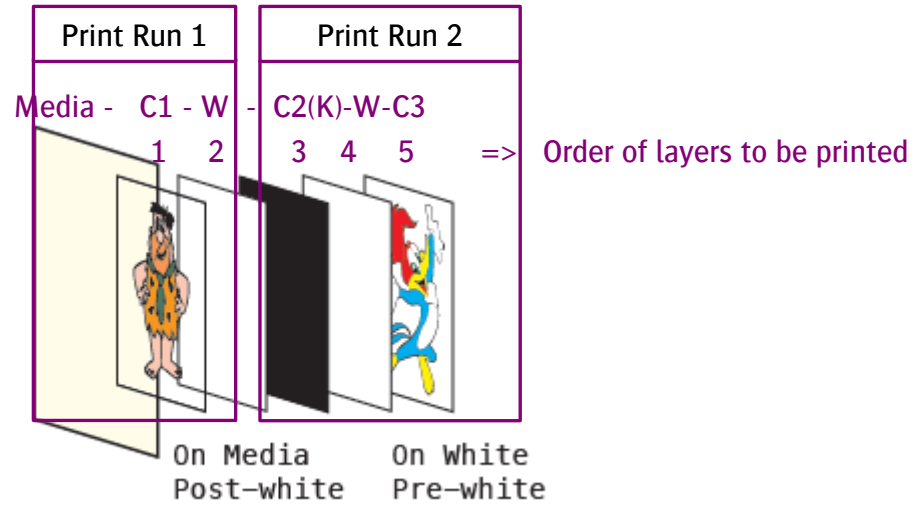


7. Use Case 3 – Block out application

The print result



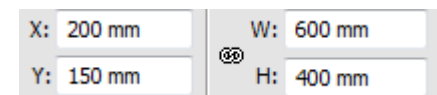
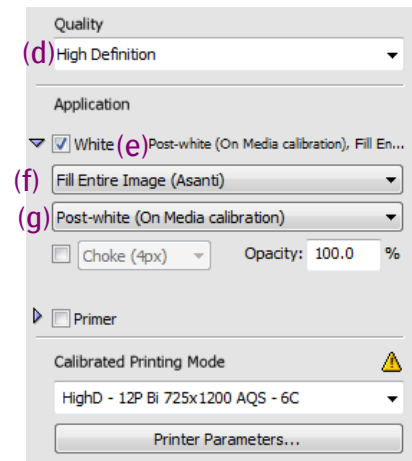
How it will be printed.



Create a Sandwich White job with a block out layer and 2 content different CMYK layers

Create the print run1; Color1-White job.

1. Create a new layout job to print the first 2 layers. Thus the color image layer and a post white layer. To achieve optimal adhesion in this application it is advised to end the first print run with a white layer.
2. Job Inspector
 - a. Set Tauro as Printer.
 - b. Set Media to Generic or a transparent media having a dedicated CPM.
 - c. Set the correct media size and thickness. In this exercise we will use 1000 mmx700 mm.
 - d. Set the quality to High Definition.
 - e. Enable White.
 - f. Set Fill Entire Image.
 - g. Set Post-White (On Media calibration).
 - h. Set Calibrated Print Mode to HighD-12p Bi 725x1200 AQS – 6C.
3. Add image disco_ball_600x400.jpg to image pane and place it on the sheet. Mirror your image.
4. Set the x position to 200 mm and the Y position to 150 mm.
5. Write down the X and Y coordinates and the Width and Height of the disco_ball_600x400.jpg.



6. Submit your job give it the name:
UC3 PR1 Sandwich PostWhite.
7. Make and send to printer – submit.

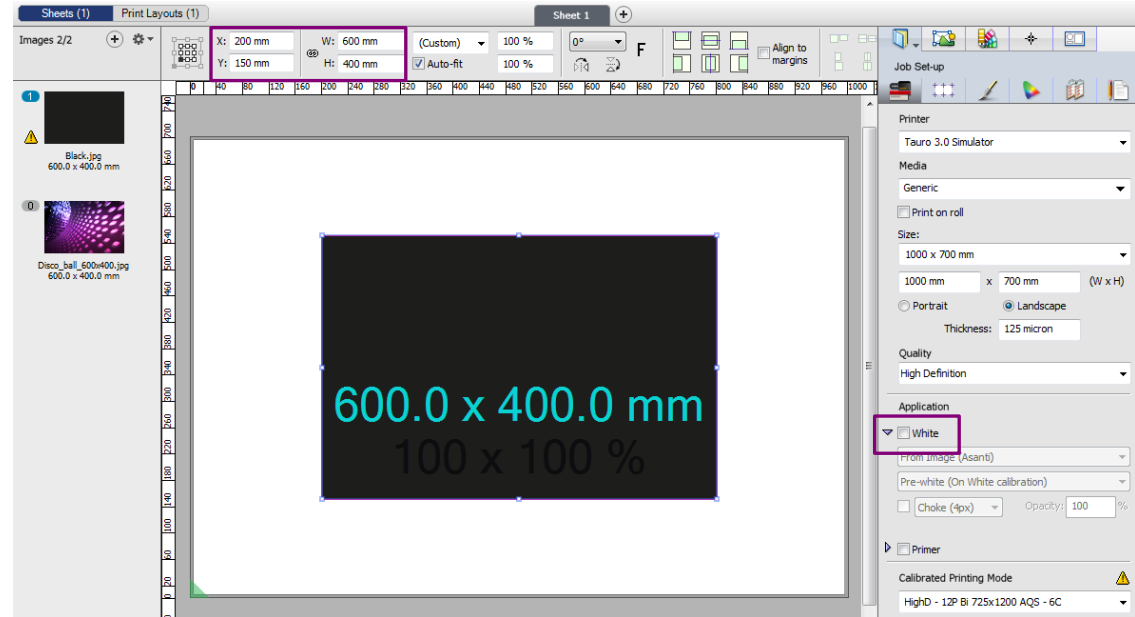
Create the print run2; Color2-White-Color3 job

These jobs can be created by following the procedure below. The concept is fairly straightforward. Jobs that need to be merged need to be **identical** and their name needs to end with an **#**. The first job forma the first layer(s) to be printed.

8. Duplicate the job UC3 PR1 Sandwich PostWhite
9. Remove the image disco_ball_600x400.jpg from the sheet 1 layout.
10. Add black.jpg to the image pane and place the image on the sheet.
11. Set the X position to 200 mm and the Y position to 150 mm. Verify that the black image has the same size and X&Y coordinates as the disco_ball_600x400.jpg.
12. Job Inspector - Disable White.
13. Submit – make and send to printer.
14. Give it the name UC3 PR2 Sandwich#K;

This will create the first layer to be printed on the media.

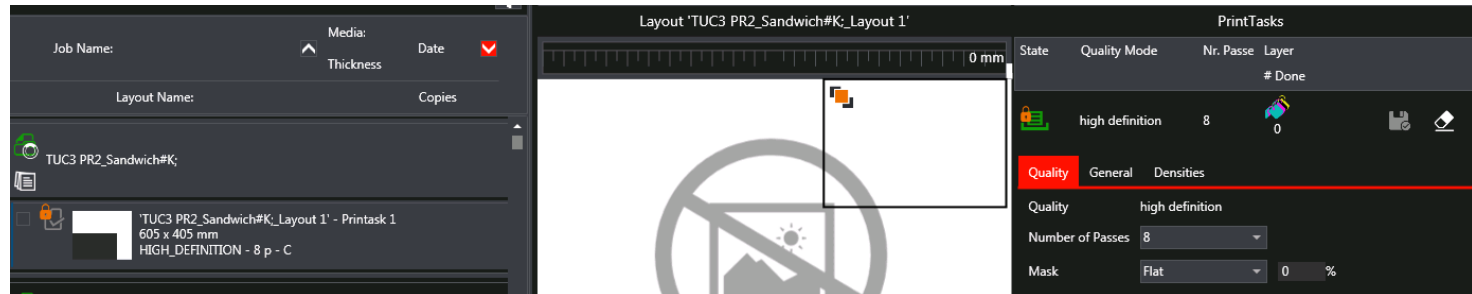
- a. Jobs to be merged need to end with a **#**
- b. The name used before the **#** has to be **identical** for the jobs that need to be merged.
- c. A comment field can be added after the **#** and this comment needs to end with a **;**
- d. This can be used to indicate the print layers and the print order. The comment field is not mandatory





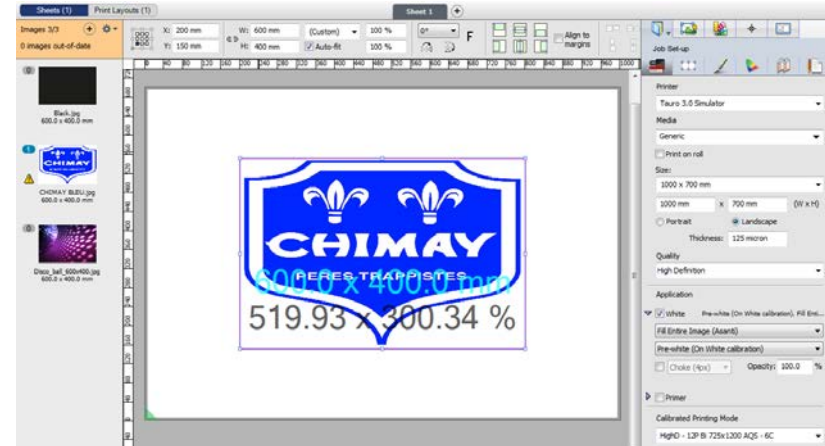
- e. The first to be merged job submitted will be printed as **layer 1**.
- f. The to be merged jobs need to use identical for
 - i. Sheet size and position
 - ii. Image size and position
 - iii. CPM's
 - iv. Printer Parameters
 - v. Name used before the #

15. Select the UC3 PR2 Sandwich#K; on the Tauro GUI

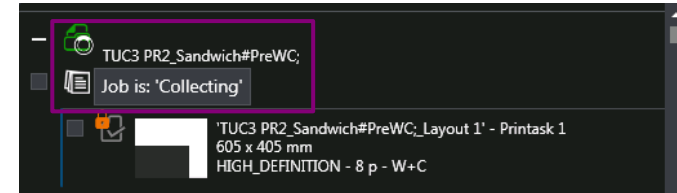
The job is locked and no preview is displayed



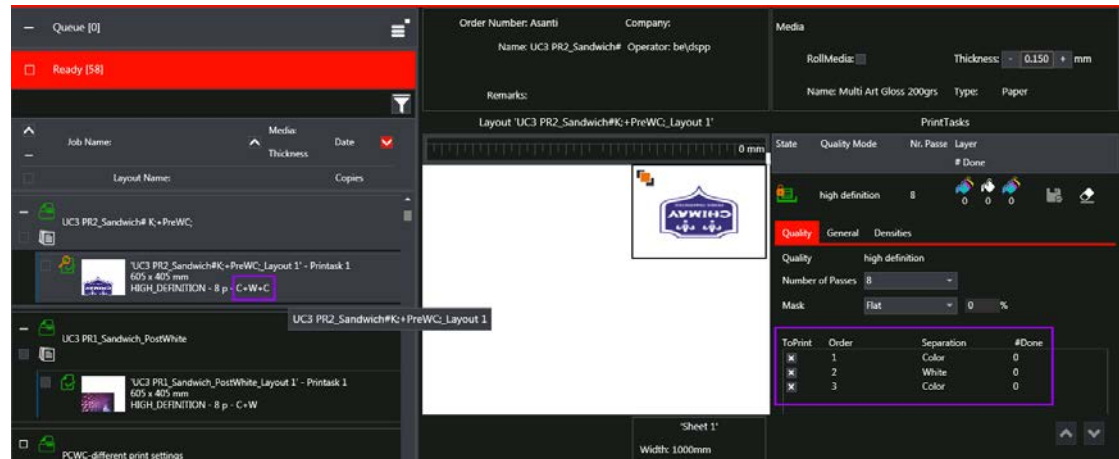
16. Duplicate the job UC3 PR2 Sandwich#K;
17. Remove the black.jpg from the sheet 1 layout.
18. Add CHIMAY BLEU.jpg to the image pane.
19. Select chimay blue.jpg in the image pane.
20. Select the  to deactivate the constrain aspect ratio. 
21. Change the width of the image to 600mm and height to 400mm.
22. Add your chimay blue to the layout.
23. Check if the chimay blue uses the same X and Y coordinates as the 2 previous jobs.
24. The quality was set to High Definition.
25. Enable White.
26. Set Fill Entire Image (Asanti).
27. Set Pre-white.
28. Submit – make and send to printer.
29. Give it the name UC3 PR2 Sandwich#PreWC;



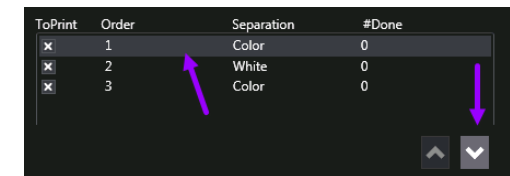
30. Select the job UC3_PR2 Sandwich#K;PreWC; in the ready job list of Tauro.
31. Tauro has merged these 2 jobs, the first of the to be merged job generates the black layer, the second job generates the Pre-white layer and the color 3.
 - a. The job will get a job is collecting status during merging and is locked.



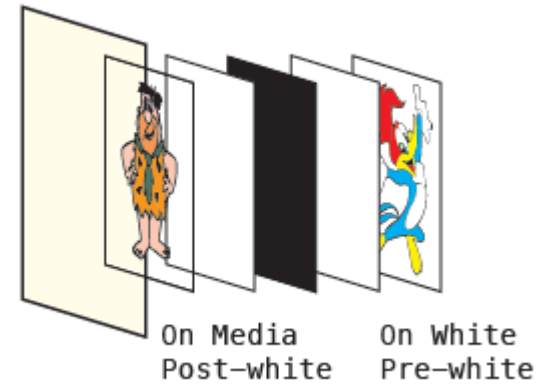
- b. Once merged, the job displays the CWC in the job list and 3 layers are active



- c. By selecting one layer you can use the arrows to change the order of the print layers on Tauro.



- 32. Print job UC3 PR1 Sandwich PostWhite
- 33. Print job UC3 PR2 Sandwich#KPreWC to achieve this sandwich block out result.

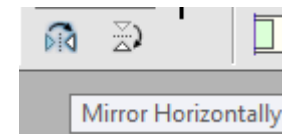


8. Other Use Cases

a. Use Case 4: Day Application: Color1-White-MirroredColor1 on Transparent media,

The image is viewed from both sides and will be printed on the back side of the transparent media.

1. Create a new layout job.
2. Job Inspector
 - a. Set Media to the transparent media with a custom CPM or Set Generic.
 - b. Set the correct media size and thickness
 - c. Set the quality to High Definition or the quality selected to your custom CPM.
 - d. Disable white.
3. Add cleaning white.pdf to the image pane, place it on the sheet, mirror the image, submit
4. Make and send to printer, use the name: **UC4 SandwichDay#C;** and submit.
5. Duplicate job **UC4 SandwichDay#C;**
 - a. Enable White.
 - b. Set Fill Entire Image.
 - c. Set Pre-white.
6. The image placed on the layout is mirrored, reselect the mirror button to undo the mirror.
7. Make and send to printer, use the name: **UC4 SandwichDay#PreWC;** and submit.
8. Tauro will merge these 2 jobs, print the merged job.

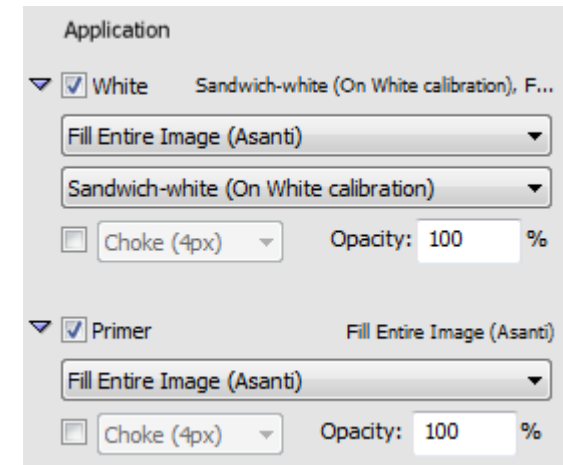


b. Use Case 5: Primer-Color-White-Color

1. Create a new layout job.
2. Job Inspector
 - a. Set media to generic
 - b. Set the correct media size and thickness
 - c. Set the Quality to High Definition
 - d. Enable White – Fill Entire Image – Sandwich White (On Media or On White)
 - e. Enable Primer – Fill Entire Image
3. A job with 4 layers will be created and Tauro
4. Print your job

c. Use Case 6: Color 1 and Color 2 can be different in

1. On white or on media CPM usage
2. Color Corrections done through raster preview
3. Image Content



9. Tips and Tricks to create sandwich white jobs

a. Order of print layers

1. When using the # method to merge jobs the first submitted job will be the first layer and this layer is printed on the media. This is important to select the correct CPM.
2. The choice between on media or on white determines how the user see the color printed. E.g. If the image is viewed through the transparent media, then the first layer should use the one media CPM.
3. To improve adhesion and when the sandwich job is printed in separate print runs it is advised to always end with the white layer per print run.
4. Following Combinations are advised

Print Result	Print Run 1	Print Run 2
Media-C1-W-B-W-C2	Color1-Postwhite	Black-Prewhite-Color 2
C1-W-B-Media-W-C2	Color1-PreWhite-Black	PreWhite-Color1
C1-W-Media-Black-W-C2	Color1-PreWhite	Black-PreWhite-Color1

b. Jobs can only be merged if they fulfill following requirements:

The 2 be merged jobs **must have**

1. An identical **name** before the #
e.g. **SandwichFront#CPostW**; and **SandwichFront#K**;
2. The **name should end** with an #
SandwichFront#CPostW; and **SandwichFront#K**;
3. The data between the # and ; is a comment field is not mandatory. E.g. **SandwichFront#CPostW**; and **SandwichFront#K**;
The comment field can be used to track the layers on Tauro.
4. The comment should end with ;. E.g. **SandwichFront#CPostW**;
and **SandwichFront#K**;

5. The **same position and the same image and sheet size**
 - a. The job error status message is: Error Merging Job Incompatible Sheets, Incompatible Sheet positions or alignment
6. The **same printer parameters.**
7. In **total 2 colour layers and 1 white layer**
 - a. If the 2 jobs each contain a color and a white layer, then the job in Asanti will error:
The job error status message is: Error Merging Job Merged PrintTask has <4> Layers, expected <3> :
<COLOR><WHITE><COLOR><WHITE>
 - b. If the 2 jobs contain not enough layers then the job in Asanti will error: The error status message is: Error Merging JobMerged PrintTask has <2> Layers, expected <3> : <COLOR><COLOR>