Onyx and the F-Series

Rev 002

Document history :

Publication date :	**Release version**
June 2016	first revision release
July 2019	Changes for GoProduce, latest version ONYX 19

1 Version – driver installation:

ONYX version 19.0.0.1898 with patch for version 19.0.1 installed (date Summafseries.dll : 08/08/2019). This patch is not necessary any more for versions 19.0.1 and higher.

The driver for the F series is called **Summa F series**. All drivers for the cutters are by default included in ONYX. Onyx uses a separate program called CUT-Server to create cut data. RIP-Queue creates the cut information for the CUT-Server from the cut path you defined in your graphics application. This program can either send this cut data directly to a cutter or to a file.
In case of the F series driver, there is only the option to send the data to a file because the F series tables are driven by the program GoProduce. The cut data that is generated by other programs has to be opened by GoProduce.

The drivers themselves are installed in the program CUT-Server. While installing the program, the cutter driver also has to be configured. This can be done while installing the driver. However there is one part of the configuration for the driver that is not done in CUT-Server. That is the settings for the marks and barcode. These settings have to be done in the RIP itself.

After this is done, a quick set has to be created or an existing one has to be re-configured.

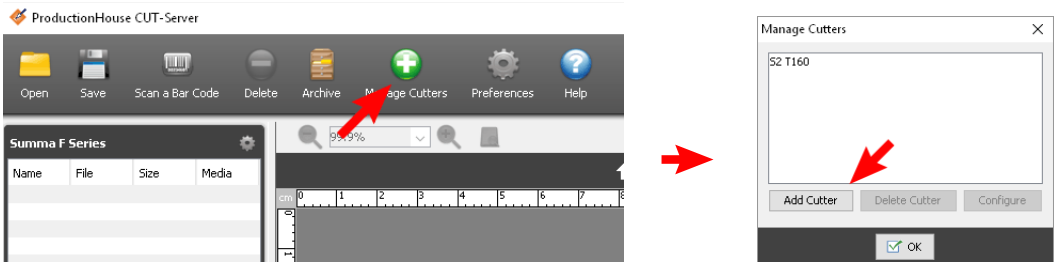
1.1 Installing driver

1. Launch the CUT-Server by double-clicking the icon on your desktop or selecting CUT-Server from the Windows Start menu. The first time you start the application, CUT-Server will prompt you to install a cutter

2. Choose the correct cutter from the dropdown list. There exists the possibility to change the display name to a custom name. Click OK to close to accept.

1.2 Adding a driver

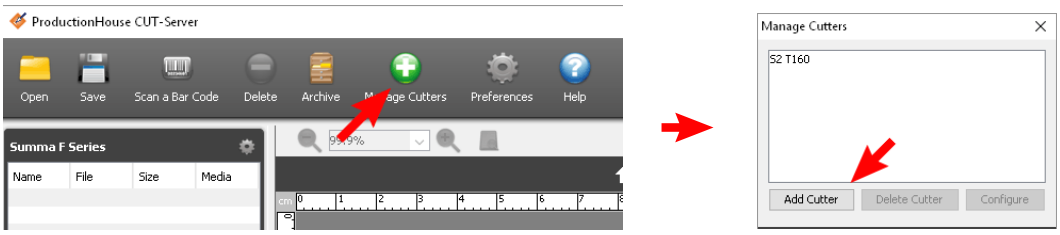
1. Click on the manage cutter icon and click on add cutter.



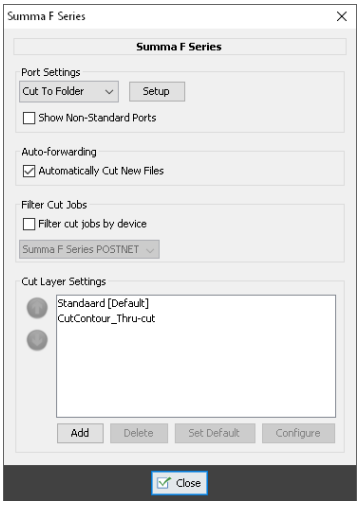
2. Choose the correct cutter from the dropdown list. There exists the possibility to change the display name to a custom name. Click OK to close to accept.

1.3 Configuration of the driver

1. Click on the manage cutter icon, select the cutter and click on configure

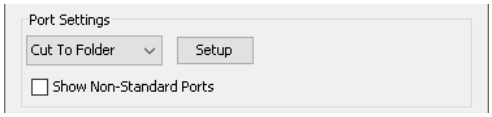


2. The configuration window opens. There are foure main settings.

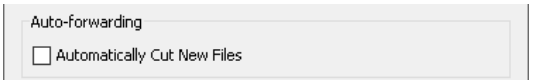


3. Port settings: leave the box in front of 'Show Non-Standard ports unchecked because none can be used anyway. Click on setup choose a directory where your cutting files (OXF files) will be saved

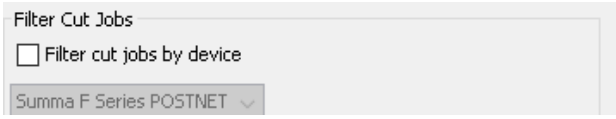
Note: It is recommended to use a folder that is shared with the computer that controls the table (computer where GoProduce is installed on).



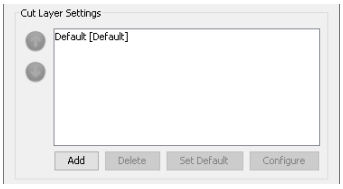
4. Auto forwarding: Check the box in front of 'Automatically cut new files'. Otherwise the files will be left in a queue and you will have to manually create the files.



5. Filter cut jobs: This can be used to split up the files with the cut data into groups . For instance all the files for use with barcode in one directory and all files for not using barcode in another directory. For this separate driver with separate settings need to be configured by copying driver ' see section 1.4).



6. Cut Layer settings: Here the link between the spot color and the method is set.
   Normally a driver program for the table, GoProduce, works with methods (SGP file type) and not tools (OXF file type). However, the current driver of ONYX still produces OXF files and not SGP files. OXF files work typically with tools. ONYX does have a predefined list of tools. So the spot colour names need to linked with tools. The default settings is that all spot colours beginning with “CutContour” will be recognized as lines to cut and not to print. However, in the setup of the quick sets other names (or prefix of names) can be added (see section1.5). To link a spot colour with a tool, click on Add to add a spot color name.



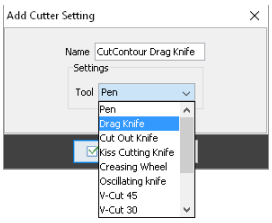
7. A new window will open. Fill in the spot color name and choose the correct tool from the dropdown list.

Note: It is recommended Fill in already all the spot color names and link of the available tools on the table.

Note: Set these links

Draw	Pen
Thru-cut	Cut Out Knife
Kiss-cut	Kiss Cutting Knife
Crease	Creasing Wheel
V-Cut45	V-Cut 45
V-Cut30	V-Cut 30
V-Cut22.5	V-Cut 22.5
V-Cut15	V-Cut 15

At the moment there are no diect links possible for following methods: Score, Engrave and all the Bevel methods. If such a method is needed use temporarely another link (of a none used method from the list above in that job) and change the method then in GoProduce itself.

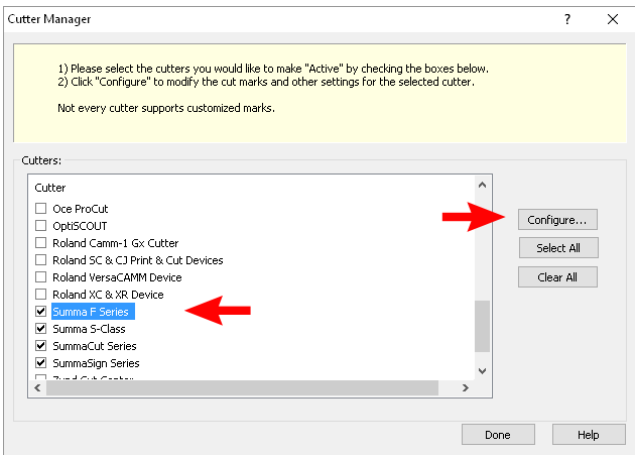


8. Press the close button to confirm.
9. Only when the CUT-Server is running in the background will the cut data be processed and the OXF file created.

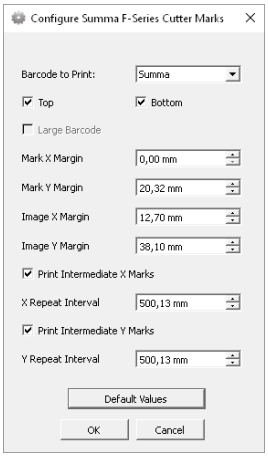
1.4 Marker, margins and Barcode settings

These settings are not done in the CUT-Server, but in the RIP-Queue.

1. Within RIP-Queue, click in the top menu, File, Manage Cutters. After a warning that printing will stop the Cut Manager appears.



2. Four Summa drivers are listed. The S Class, SummaCut and SummaSign, Summa's roll cutters, fall out of the scoop of this document (although similar principles are used). Select the Summa F-series and click on Configure.



Barcode to print: There are four settings for barcode: None, Summa, ONYX and both

- None is simple, no barcode will be printed in the job. This will make it more difficult to identify the job later when it is put on the table to finish. A label with a time stamp might help, but the barcode options are more useful.
- Summa Barcode. With this setting a POSTNET barcode will be printed. This POSTNET barcode is necessary for the production workflow with the barcode. This workflow makes it possible to do different jobs after one another without intervention of the user. The barcode is read by the camera on the table.
- ONYX Barcode. With this setting a barcode and label will be printed. The barcode is type code39 and can be read by a normal hand scanner if this scanner is connected to the computer where GoProduce is installed on. This option can still be useful even if there is no hand scanner available. The label that is printed can be used to identify the file with the correct cut data for the job.

- Both, when this is chosen the POSTENET barcode will be printed at the right side and the ONYX barcode at the left side.
- There is the choice to print the barcode at the top, or bottom or on both top and bottom.

The mark margins indicate the minimum distance of the marks to the edge of the media. (X: width of the media, Y: length of the media / feeding direction.)

- The default X-margin value (0) makes it possible to use the complete width of the printer. For long jobs it is advisable to use extra margin.
- The default Y-margin value (20.32mm / 0.8") is a minimum value to ensure a large enough space between successive jobs. However, at the end of a job more margin is recommended. This extra margin can also be achieved by changing the top margin parameter in the media-placement section of the RIP-queue). Or the Operator has to take care for extra margin when cutting the job off.

Note: There are extra placement settings available in the RIP to ensure there is enough space between the jobs and the margins of the media and between consecutive copies.

The Image margins indicate the minimum distance of the image to the edge of the media. (edge to mark + mark to image)

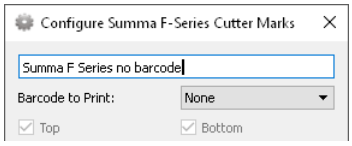
- The default Image-X-margin value (+/-12.5mm / 0.5") results in distance to the marks of 7.5mm (when using default settings). This should be considered as a minimum.
- The default Image-Y-margin value (+/-38.1mm / 1.50") is necessary to have place for printing the barcode. When not using any barcode, 1mm more than the Mark-Y-margin should be sufficient.

The default repeat interval of 50cm in the X direction is an adequate value. Smaller intervals will result in higher precision (use then values like 250mm or 350mm). Do not print intermediate marks in the X direction if the Summa Barcode is printed. This will result in marks on the barcode line and the camera will not be able to detect them.

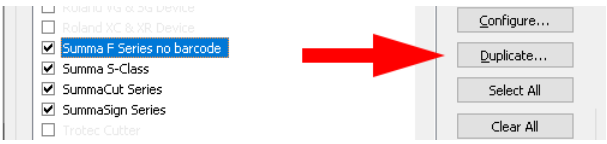
The default repeat interval of 50cm in the Y direction is an adequate value. Smaller intervals will result in higher precision (use then values like 250mm or 350mm). It is advised to always print the intermediate marks in the Y direction if the job is larger than 50 cm.

Extra tip: Copying of drivers.

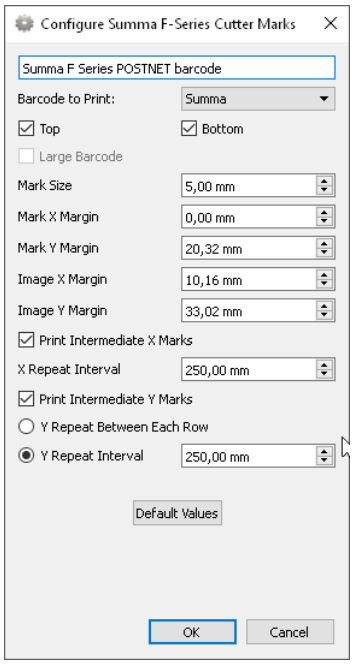
ONYX has the possibilities to “copy drivers”. This is useful for quick change of settings. For example: Sometimes the barcode has to be printed sometimes not. Normally the user has then to go each time to configuration and change the setting of the parameter controlling the type of barcode that needs to be printed. It is better to copy the driver.
Select the driver of which you need to settings. First set the parameters for printing without barcode as described above and rename the driver so the settings of this driver can easily be recognized and save it.



Then select that driver and select duplicate instead of configure.



Then set the parameters as needed, again change the name so it is easily recognizable and save it by clicking on OK.

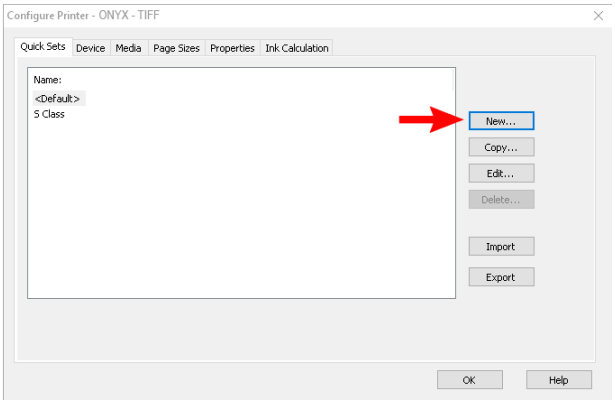


1.5 Creating an Onyx ProductionHouse – Thrive Rip-queue Quick Set

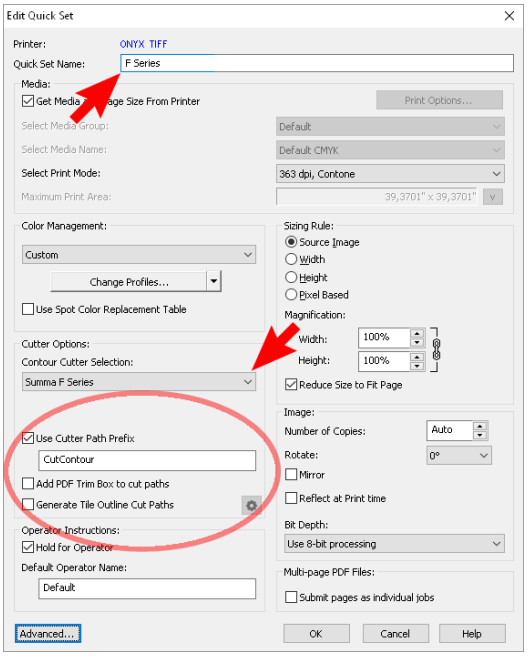
Before you can print a contour cut file, you must either modify an existing Quick Set or create a new one for your contour cut files. Using a specialized Quick Set for contour cutting allows you to include additional options.

To Create a New Quick Set for Contour Cutting:

1. Within RIP-Queue, highlight the desired printer and click Configure Printer to open the Configure Printer dialog. Within the Configure Printer dialog, click New on the Quick Set tab to display the Edit Quick Set dialog.



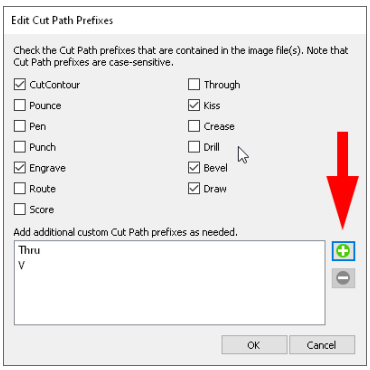
2. Set all appropriate printing options within the Edit Quick Set dialog.
3. Give the new quickset a name, in the Cutter Options section: Select Summa F Series.



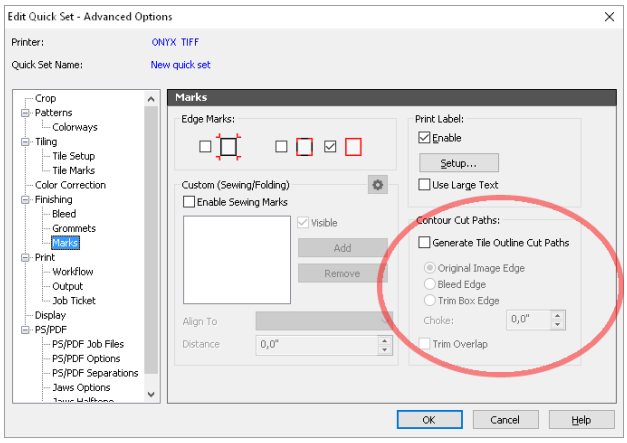
4. Enable the Use Cutter Path Prefix option by checking the box in front of it. This is required if you want to cut defined cut paths in your design.
5. Within the text field in the Use Cutter Path Prefix area, enter the name assigned to the cut path spot color in the vector based graphic application such as Adobe Illustrator. It is imperative that the text in this field match the prefix you assigned to the cut path spot color, including case and spaces if any. If this field does not match the prefix you assigned to the cut path spot color, RIP-Queue will not recognize the spot color as a cut path.

Note: Leave the prefix at its default value and use the color palette for Corel or swatch library for Adobe Illustrator that is provided by Summa.

6. If de methods swatch library or color palette is used then add following so that all the methods are recognized as cut lines by the RIP. Check the boxes as in fuguer below and click on the green plus sign to add “Thru” and “V”.



7. Generally, adding a cut path based on the trim box is not required. Although they might be useful in some applications. This falls out of the scope of this document.
8. Generate Tile Outline Cut Paths – Although, generally not used, this option is useful for (multiple copies of) a photo that doesn’t contain an embedded cut line, or for cutting around the edge of a large tiled image. When clicking on advanced, in the Marks tab is an extra option to trim the tile overlaps as well.



9. Click OK to close each dialog.
10. If deferent drivers have been configured, then make a quickset for each driver, also give it an easy recognizable name.

2 General Workflow for Contour cutting

The Workflow consists out of three main parts

1. Prepare the file by creating a cut path (in a specialized spot color) in a vector-based drawing program such as Adobe® Illustrator® or CorelDRAW®, …

2. Open the file in Productionhouse – Rip queue . Select the correct quickset so that the cut paths are processed separately by CUT-Server.

3. Import the file created by the CUT-Server in GoProduce to cut the image on the table (optionally the barcode can be used to import the correct file and automatically set the orientation.)

2.1 Preparing the File

The first step in the Contour Cut process is to prepare your file for contour cutting. To prepare your file, first you must define the cut path in a vector-based drawing program such as Adobe® Illustrator® or CorelDRAW®. The cut path may be as simple or complex, as you desire – it can range from a rectangle around a bitmap image or an outline of script text.

Creating a cut path in Adobe® Illustrator®, CorelDRAW®, … is simply defining an object with a specific stroke color. Once you create the cut path, you must assign a spot color to it. This spot color (specifically the name, not the color) is the most important part of preparing the file as it allows the GoProduce to determine where the table should cut the image and which tool will be used.

The name you assign to this spot color must have a unique name, which matches the name set in the CUT-Server. A swatch library for Adobe® Illustrator® and a color palette for CorelDRAW® is available from Summa.

When the RIP queue processes and prints the file (after it has added registration marks and an optional barcode). The path(s) with the specially named spot colour(s) will not be printed with the rest of the image. The CUT-Server processes the(se) cut path(s) in spot colour(s) as a cut path(s) and creates a separate file for GoProduce

Requirements of the Contour for proper detection:

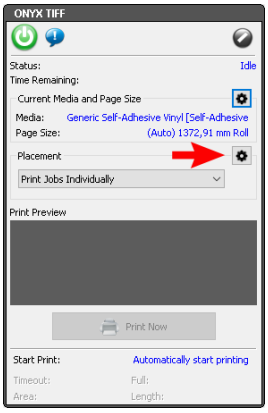
- Stroke with an 0.25 point line weight (illustrator setting) or hairline (CorelDRAW setting) to avoid double cuts.
- Stroke without special effects
- Stroke needs to be centered. Not set to the inside or the outside.
- Use the swatch library or colour palette provided by Summa.

2.2 Open the file, print it and create the OXF file for GoProduce

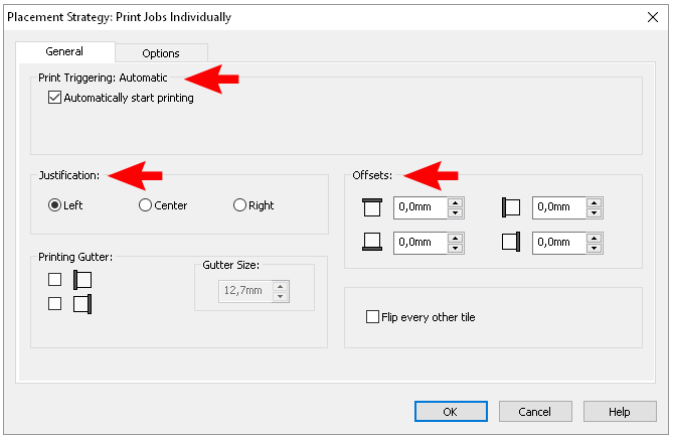
2.2.1 Extra printer settings

Following steps explain how to print each job individually. There exists also the possibility to group and nest jobs or choose to print multiple copies. For more info on how to do this refer to the manual of the RIP. Using the following steps you can print on any printer and cut on the F Series cutter. There is also some extra information on the placement of the job on the media.

1. In RIP-Queue, highlight the desired printer. In the right upper panel there are a couple of extra printer settings. If you click on the gear next to Current Media and Page Size to change media type and size.



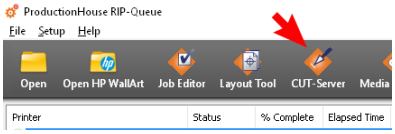
2. Within the “Placement” dialog, There is a dropdown box and a gear icon. Do not select ‘Fotoba, Dicus or Flexa Cutter Marks’. This selection would deactivate the Summa registration marks!. Grouping objects will only work if the jobs have the same Contour Cutter selected (opened with same quickset).
3. Click on the gear icon.

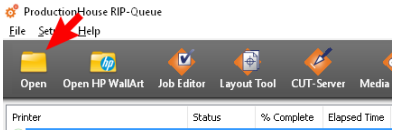


4. There is the choice to start the printing automatically immediately after that a file sis opened or to wait until the operator chooses to stat to print (this option is different when nesting is used). Then there is the choice to align the job left, right or centred. There are also some extra offsets that can be set to position the job on the media. When the option tab is clicked, then the distance between copies can be altered. Click OK to close both the “Placement Strategy” dialog and the “Change Media and Placement” dialog.

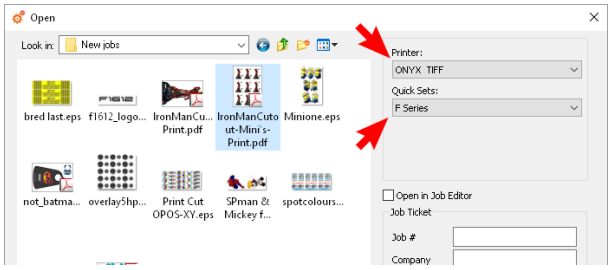
2.2.2 Open the file and print it

1. Before opening a file, make sure the CUT-Server is up and running. The file for GoProduce will then automatically be created once the file is ripped and printed. The CUT-Server can be started from within production house by clicking on its icon.





2. In the Open Dialogue, make sure the printer is set correct and the quick set is set correct. Then click on Open.



3. If the printer is set to start printing automatically, then the file will be opened and the printer will start automatically and the file for GoProduce will be created. If multiple copies or nesting is used, then the program will be set to start manually. Then click on the Print Now button.