
Onyx[®] White Paper

Contour Cutting Using CUT-Server 2.0

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Contour Cutting

What is Contour Cutting?

Contour cutting allows you to print an image and then use a specialized device to cut portions of that image, such as: printing and cutting a life-size picture of your favorite film star. To do this, you prepare a file with a specialized spot color which acts as a cut path. You then print the job using RIP-Queue. Once RIP-Queue completes the print the cutting device uses the cut path to determine where the image needs to be cut.

Note: You must have the “Contour Cutting” group of bits enabled on your hardware key to use the proofing feature. Please refer to *Chapter 1 – Overview* for information on updating your key.

How do I use Contour Cutting?

To use the contour cutting feature, follow these steps. The following sections of this guild describe each step in further detail:

1. Prepare your file by creating a cut path in a vector-based drawing program such as Adobe® Illustrator®, CorelDRAW®, etc.
2. Create a special Quick Set that uses the cutter path prefix. This creates the cut file from the cut paths in the image.
3. Determine your cutting workflow and change your printers setup options accordingly. You must change the setup options to print the file with a bar code and registration marks. Depending upon your equipment, you can use one of three cutting workflows:
 - Print and cut on the same device (such as the Roland CammJet or Graphtec SignJet Pro). This workflow uses RIP-Queue to print and cut.
 - Print on any printer and use the I-Cut® digital die cutter. This workflow uses RIP-Queue to print and the I-Cut application to cut.
 - Print on any printer and use a separate cutter. **This workflow uses RIP-Queue to print and CUT-Server 2.0 to cut.**

Note: See the section titled Using CUT-Server 2.0 for further information about the application workflow.

Prepare a File for Cutting

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 circle around a bitmap image or an outline of script text.

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 cutter software to determine where the cutter should cut the image.

The name you assign to this spot color must have a unique prefix which matches the prefix assigned in RIP-Queue (see the next section, *Modifying a Quick Set for Contour Cutting* for information on where to set this prefix). In RIP-Queue, the default prefix for the cut path spot color is “CutContour”. Once you decide on a prefix you can append unique identifiers to the name – for example CutContour1.

When RIP-Queue processes and prints the file, the path with this specially named spot color will not be printed with the rest of the image. RIP-Queue processes the spot color as a cut path and creates a separate cut script file for your cutting device.

Note: Some cutters can use multiple cutting blades or cutting styles in one file (such as kiss cut or pouncing). One way to prepare your file for use with these devices is by assigning multiple cut paths with different spot color names such as CutContourKiss or CutContour-Pounce.

Define the Cut Path in Illustrator

The following steps are specific to Adobe Illustrator, however, most drawing programs use similar steps to achieve the same result. The most important part of creating a cut path is that you must create a “Spot Color” named “CutContour” and that you apply the color to the cut path.

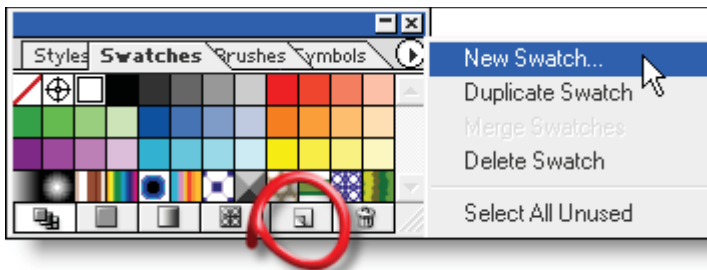
To define a cut path in Adobe Illustrator:

1. Open the desired file within Adobe Illustrator.
2. Create a new layer (Window > Layer > New Layer) and select that layer. With complex artwork we recommended creating a new layer for your cut path elements, with simple artwork this is not always necessary. For help on creating layers, please refer to the *Adobe Illustrator Help*.
3. Draw your cut path using the box/ellipse, pen, or pencil tool. Make sure you close all paths because you will either assign the spot color as a fill or as an outline.

Assign a Spot Color

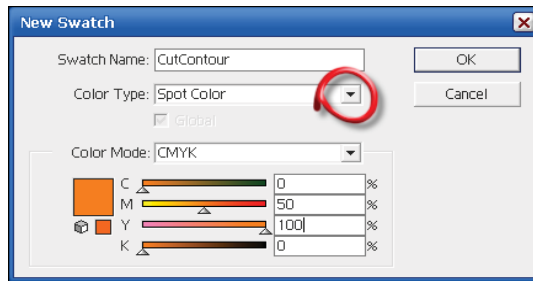
To assign a spot color to the cut path in Adobe Illustrator:

1. Within Illustrator open the Swatches palette. If the Swatches palette is not visible, select Swatches from the Window menu.
2. Click the arrow on the upper right-hand corner of the Swatches palette to display a secondary menu and select New Swatch to display the New Swatch dialog or click the New Swatch icon on the Swatches toolbar.



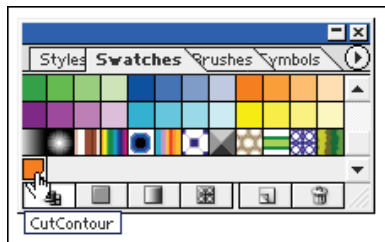
*Select New Swatch from the Swatches Palette menu
or click the New Swatch icon (circled)*

3. Within the New Swatch dialog, enter a name for the swatch color using “CutContour”. Whatever you select here must match what is entered into RIP-Queue, “CutContour” being the default name. See the next section, *Modifying a Quick Set for Contour Cutting* for information on where to set this prefix in RIP-Queue if you choose to use a different name.
4. Select Spot Color from the Color Type drop-down menu.
5. Use the slider bars to create a CMYK color. The color is not important, only what you name the color.
6. Click *OK* to close the New Swatch dialog.



Adobe Illustrator New Swatch dialog

7. Select your cut paths and assign the new swatch color.



CutContour Swatch

Save Your File

Now that you have defined the cut path and assigned a spot color to the cut path, save your file in either .eps or .pdf format – we recommend the EPS file type.

Define the Cut Path in Corel Draw

The following steps are specific to Corel Draw, however, most drawing programs use similar steps to achieve the same result. The most important part of creating a cut path is that you must create a “Spot Color” named “CutContour” and that you apply the color to the cut path.

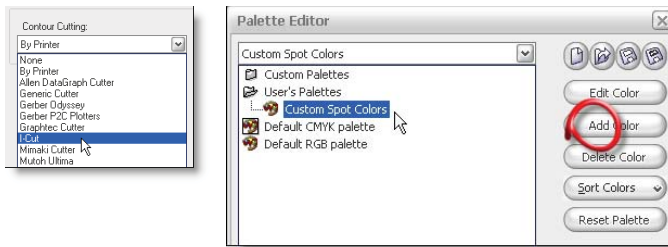
To define a cut path in Corel Draw:

1. Open the desired file within Corel Draw.
2. Create a new layer (Tools > Object Manager > New Layer) and select that layer. With complex artwork we recommended creating a new layer for your cut path elements, with simple artwork this is not always necessary. For help on creating layers, please refer to the *Corel Draw Help*.
3. Draw your cut path using the box/ellipse, pen, or pencil tool. Make sure you close all paths because you will either assign the spot color as a fill or as an outline.

Assign a Spot Color

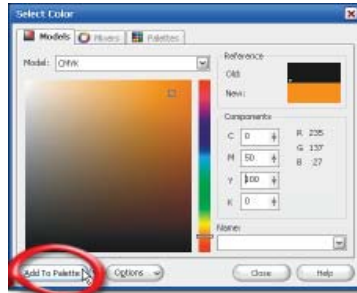
To assign a spot color to the cut path in Corel Draw:

1. Within Corel Draw open the Palette Editor (Tools > Palette Editor).
2. Locate the Users Palette, select > Custom Spot Colors and click *Add Color*.



Select Custom Spot Colors from the Palette Editor menu

3. Select the Models Tab to define the color values for your new spot.
4. Click *Add to Palette*, then click *Close*.

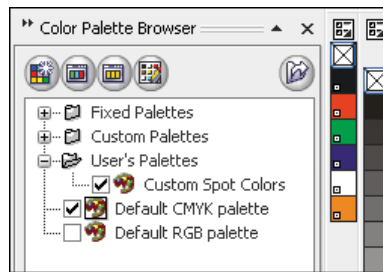


Add to Palette

5. Within the Palette Editor dialog, select the new spot color and enter a name for the swatch color using “CutContour” and click *OK* to close.



Name the spot color “CutContour”



Open Palette

6. The best way to open the Custom Spot Color palette is to select *Window > Color Palette > Color Palette Browser*.
7. Expand the *User's Palette* and check *Custom Spot Colors*. This docks the new palette next to your existing palettes. Click *X* to close docker group.
7. Select your cut paths and assign the new spot color from the palette.

Save Your File

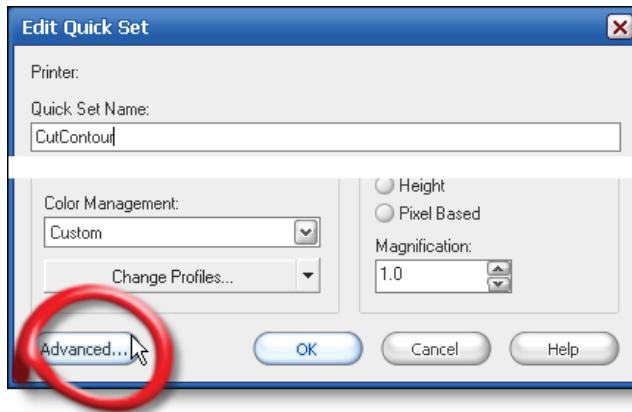
Now that you have defined the cut path and assigned a spot color to the cut path, save your file in either .eps or .pdf format – we recommend the EPS file type.

Modifying a Quick Set for Contour Cutting

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:

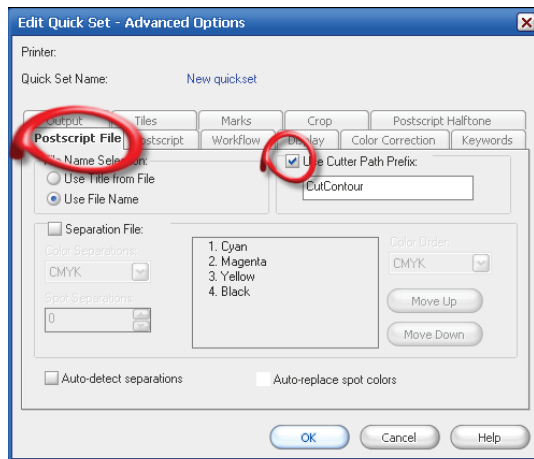
1. Within RIP-Queue, highlight the desired printer and click *Configure Printer* to open the Configure Printer dialog.
2. Within the Configure Printer dialog, click *New* on the Quick Set tab to display the Edit Quick Set dialog.
3. Set all appropriate options within the Edit Quick Set dialog. Click the arrow next to the page size for further print area options. For more information on setting your Quick Set options, refer to *Chapter 3 – Quick Sets*.
4. Click *Advanced* to open the Edit Quick Set – Advanced Options dialog.



Edit Quick Set dialog

5. Within the Advanced Options dialog go to the Postscript File tab and enable the Use Cutter Path Prefix option.
6. Within the text field in the Use Cutter Path Prefix area, enter the prefix you assigned to the cut path spot color in the vector based graphic application such as Adobe Illustrator. If you opted to use the default spot color prefix, then leave this field at its default setting.

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.



Postscript File tab of the Edit Quick Set – Advanced Options dialog

7. To set additional cutter options, select the Marks tab within the Advanced Options dialog. In this dialog, you can enable the following options:
 - Generate Tile Outline Cut Paths – 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 tiled image.
 - Trim Overlap – This option configures RIP-Queue to place cut lines in the center of the overlap. For more information on different types of marks, refer to *Chapter 3 – Quick Sets*.
8. Click *OK* to close each dialog.

Contour Cutting Workflows

Depending upon the type of equipment you have, your workflow will fall into one of three categories:

- Print and cut on the same device.
- Print on any printer and cut on the I-Cut digital die cutter.
- Print on any printer and cut on a separate cutter.

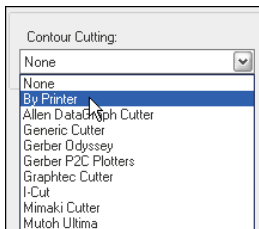
Print and Cut on the Same Device

There are many devices which act as both a printer and a cutter – for example, the Roland CammJet.

Follow these steps to print and cut a job on the same device:

1. In RIP-Queue, highlight the desired printer and click *Change* to open the Change Media and Placement dialog.
2. Within the Change Media and Placement dialog, click *Setup* to open the Placement Strategy dialog.
3. On the Options tab select **By Printer** in the Contour Cutting drop-down menu.
4. Click *OK* to close both the Placement Strategy dialog and the Change Media and Placement dialog.
5. Within RIP-Queue, open your file and be sure to apply the new Contour Cutting Quick Set. For more information on opening an image, refer to *Chapter 2 – Opening Images*.

Once RIP-Queue finishes printing the file, the cutter automatically cuts along the cut path.



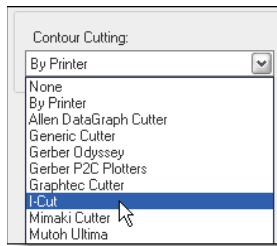
Select By Printer to print and cut on the same device

Print on Any Printer and Cut on the I-Cut Digital Die Cutter

In this workflow, you may print on any printer, for example an HP Designjet 5000 and then use the I-Cut digital die cutter. When you print an image to cut on an I-Cut digital die cutter, the software automatically prints a bar code which the cutter uses to find the corresponding cut file. This prevents you from having to know which cut file belongs to which print.

Follow these steps to print on any printer and cut using the I-Cut digital die cutter:

1. In RIP-Queue, highlight the desired printer and click *Change* to open the Change Media and Placement dialog.
2. Within the Change Media and Placement dialog, click *Setup* to open the Placement Strategy dialog.
3. On the Options tab, select **I-Cut** in the Contour Cutting drop-down menu.



Select I-Cut to print on one device and cut on the I-Cut device

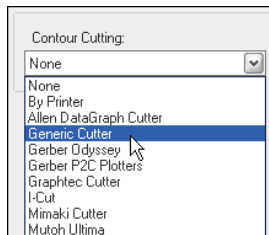
4. Click *OK* to close both the Placement Strategy dialog and the Change Media and Placement dialog.
5. Within RIP-Queue, open your file and be sure to apply the new Quick Set. For more information on opening an image, refer to *Chapter 2 – Opening Images*.
6. Once RIP-Queue finishes printing the file, place the finished print on the cutting table.
7. Launch the I-Cut application and go to Options > File Location.
8. Browse your network and select the shared Hot Folder (machine name)\cutter\I-Cut)
9. Start the cutting process. The cutter automatically reads the printed bar code and finds the corresponding cut script file.

Print on Any Printer and Cut on a Separate Cutter

This workflow allows you to print your job on any printer, for example an HP Designjet 5000, and then cut on any cutting device, such as the Graphtec.

Use the following steps to print on any printer and cut on a separate cutter:

1. In RIP-Queue, highlight the desired printer and click *Change* to open the Change Media and Placement dialog.
2. Within the Change Media and Placement dialog, click *Setup* to open the Placement Strategy dialog.
3. On the General tab, set the top offset to 2 inches. This adds an extra margin the cutter needs when moving the media back and forth during the cut process.
4. On the Options tab select the **desired cutter** from the Contour Cutting drop-down menu. If this menu does not list your specific cutter, select Generic Cutter.



*Select either the desired cutter or Generic Cutter
to print one device and cut on another device*

5. Click *OK* to close both the Placement Strategy dialog and the Change Media and Placement dialog.
6. Within RIP-Queue, open your file and be sure to apply the new Contour Cutting Quick Set. For more information on opening an image, refer to *Chapter 2 – Opening Images*.
7. Once RIP-Queue finishes printing the file, use the CUT-Server to cut the print. For more information on using the CUT-Server, see the next section of this chapter, *Using CUT-Server2.0*.

Using CUT-Server 2.0

What is CUT-Server?

CUT-Server is an Onyx application that sends cut information to your specific cutter. RIP-Queue creates the cut information for the CUT-Server from the cut path you defined in your graphics application.

What's new in CUT-Server 2.0?

For optimal performance, we recommend that you run AutoUpdate for the latest revision of the software. AutoUpdate displays a message for further information and the link (<http://www.onyxgfx.com/fileupdate.pl?cmd=list&category=6.5>) to download the CUT-Server update. Extract the file and run the executable to install. This installs as a new application with a new desktop icon.

CUT-Server 2.0 includes the following new features:

- Easier user interface
- Multiple cutter settings
- Rotation support of cut jobs
- Advanced preview functionality with rulers and zoom/pan tools
- Improved cut accuracy and efficiency
- Support for additional cut devices
- Archive job capabilities
- Keyboard shortcuts

How do I use CUT-Server?

CUT-Server only works with the specific cutters listed in the Placement Strategy dialog in RIP-Queue; however, there is also a Generic Cutter option which works with most cutting devices.

The following sections cover configuring CUT-Server 2.0, different workflow options for adding cut files and application settings.

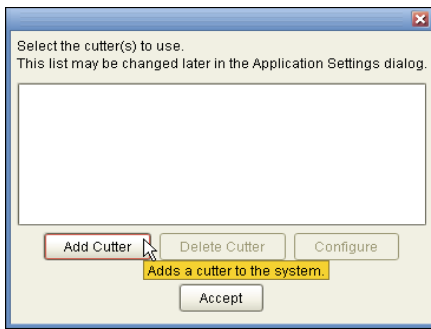
Configuring CUT-Server 2.0

Once you've run the executable to install the new application, 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 displays the Add Cutter dialog.

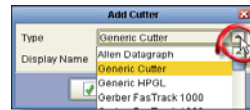
Use the following steps to add a cutter to CUT-Server.

Adding a Cutter

1. Within the Add Cutter dialog, click *Add Cutter*.
2. Use the Cutter Type drop-down menu to select the desired cutter, click *OK*.

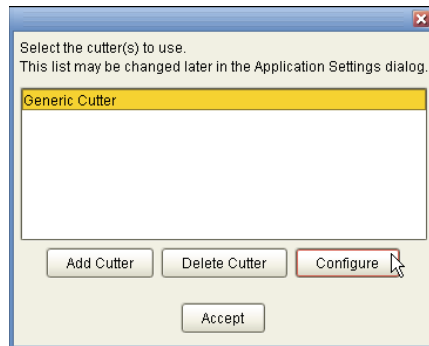


CUT-Server Add Cutter dialog



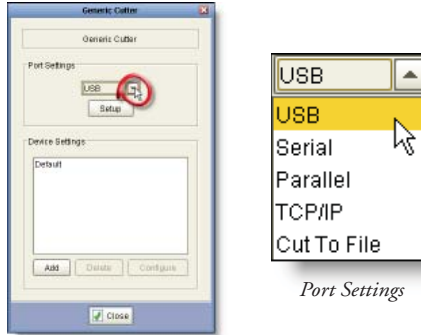
Cutter Type drop-down menu

3. Highlight the device and click *Configure*.



CUT-Server Add Cutter dialog

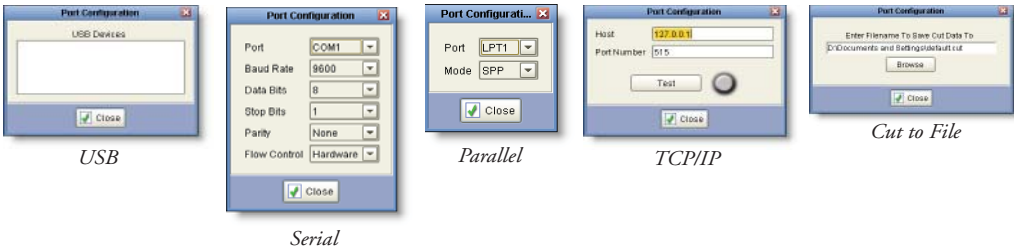
4. Within Port Settings, use the drop-down menu to select the port type, click *Setup* to open the Port Configuration dialog.



Port Settings

Cutter Configuration dialog

5. Use the Port Configuration dialog to setup your specific device, click *Close*.



USB

Serial

Parallel

TCP/IP

Cut to File

6. Within Device Settings, select the Default cut setting and click *Configure* to open the Edit Cutter Settings dialog. These setting are the cutting equivalent to Quick Sets.



Cutter Configuration dialog

Note: To create a new cutter setting Quick Set, click *Add* to open the Add Cutter Settings dialog.

7. The Edit Cutter Settings dialog displays the current default settings. The Cutter Settings dialog for a specific cutter displays the setting name, knife pressure and cut velocity. The Cutter Settings dialog for a generic cutter displays common HP-GL/2 commands to drive a variety of cutters. If you know the specific commands unique for your cutter, you can modify the settings here.

8. Modify the default settings as desired and click *OK*.



Generic Cutter Default Settings



Specific Cutter Default Settings

Note: The first time you use the generic cutter, you must calibrate your specific cutter to recognize the generic cutter alignment marks on your print. Contact Tech Support if you need help calibrating a generic cutter.

9. When you're done modifying the device settings, click *Close*. This returns you to the main screen. This displays the cut device on the left-hand side of the screen and you're ready to use CUT-Server.

Tip: If you need to add a new cutter or manage your existing device, select Application Settings on the main tool bar and then select the Cutters icon. Within the Device Management dialog you can Add, Delete and Configure cutters.

This concludes the initial configuration for adding a cutter. The following section covers the different workflow options for adding cut files.

Workflow Options for Adding Cut Files

There are several workflow options for adding cut files to the job list. Cut jobs will display in the job list for the intended cutter. When you add a cut file using any of these methods, the file will display under the correct device heading. If you add a cut file for a cutter that's not configured, you will be prompted with a message to add that specific cutter.

Cutter Hot Folder

This is the most common workflow. Once RIP-Queue processes the print, it creates the cut file and stores it in the Hot Folder for that cutter. CUT-Server recognizes cutter Hot Folders automatically so the job displays in the CUT-Server job list.

Opening Cut Files Manually

To open a cut file manually, click *Open* from the tool bar and browse to the cut file. The recognized file extension for cut files is .xml.

Scanning a Bar Code

To add a cut file using a bar code reader, click *Scan a Bar Code* from the tool bar and scan the bar code or type in the number of the bar code located on the print.



Drag and Drop

You can drag and drop cut files into CUT-Server. To do this, select the file and drag and drop the file onto the application.

Custom Hot Folder

You can configure custom Hot Folders for CUT-Server to recognize a network folder or another known location. To do this, select *Jobs > Add and Browse* from the Application Settings dialog.

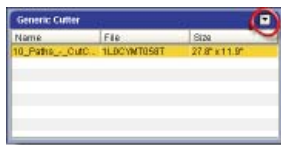
Archive

To open a job from a previously archived file, click *Archive* from the tool bar, highlight the file and click *Restore*. This moves the job from the Archive into the job list for the intended cutter. See the section titled *Archiving Options* for further information.

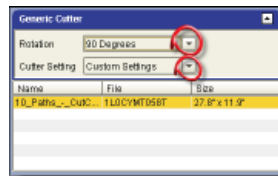
Cutting Workflow

Once you have installed the cutter and cut files displayed in the job list, you're ready to cut. Use the following steps to send a cut job to the cutter:

1. Within the CUT-Server window, highlight the desired cut job from the job list to display the cut paths in the preview area.
2. If you want to change the rotation or apply a different cutter setting, use the mini-arrow in the right-hand corner of the cutter heading. This expands and contracts the rotation and cutter setting options. Use the drop-down arrows to make your selection.



Mini-arrow



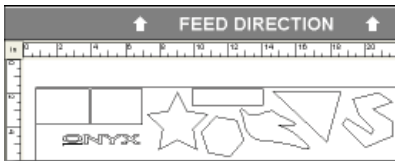
Expanded Options

3. If you want to inspect your cut paths, use the zoom and pan tools. To reset the preview, use the zoom drop-down and select Fit to Window.



Zoom and Pan Tools

4. Load the print into the cutter. If you've made a change to the rotation, check the preview area to verify the correct orientation.

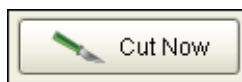


No Rotation



90 Degree Rotation

5. Click *Cut Now*.



Cut Now

Application Settings

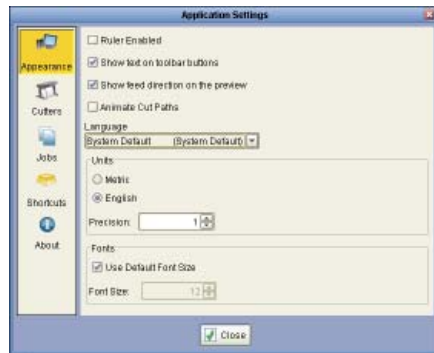
The Application Settings dialog controls the general appearance of the program as well as device and job settings. You can access the dialog using the Application Settings icon on the tool bar of the main window.



CUT-Server Tool Bar

Changing the Appearance

Appearance is the first dialog displayed within Application Settings. Use these settings to change the general appearance of the program.



Application Settings - Appearance

- Ruler Enabled – this displays rulers along the top and left-hand side of the preview screen.
- Show text on toolbar buttons – this displays text under the tool bar icons.
- Show feed direction on the preview – this displays feed direction arrows above the preview screen. If you rotate cut jobs this indicates the media orientation.
- Animate Cut Path – this displays cut paths as an animated dashed line.
- Language – this displays the current language for the user interface. Use the drop-down menu to select your desired language. You'll be prompted to restart the program for the changes to take effect.
- Units – this displays the units of measurements.
- Fonts – this displays the font size for the user interface. Font size does not control fonts in the image.

Managing Cutters

Select the Cutters icon on the left-hand side to display the cutter window within Application Settings. Use these settings to manage your devices.



Application Settings - Cutters

Device Management

The Device Management section of the Cutters window displays a list of current devices.

- Add Cutter – click here to add a new cut device.
- Delete Cutter – if you want to delete a cutter from the list, highlight the device and click *Delete*.
- Configure Cutter – if you want to configure a cutter from the list, highlight the device and click *Configure*. This will display the Port Settings if you need to change the physical connection and Device Settings if you want to Add or Configure cutter settings.

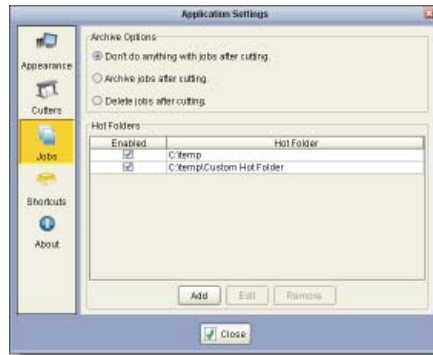
Application Settings

The Application Settings section of the Cutters window displays a checkbox for Sort CutPaths.

- Sort Cut Paths – this is checked by default and improves cut accuracy and efficiency by sorting cut paths in a logical manner to reduce media feed adjustment while cutting.

Managing Jobs

Select the Jobs icon on the left-hand side of the Application Settings dialog to display the job options. Use these settings to configure Archive Options and Hot Folders.



Application Settings - Jobs

Archive Options

Use the radio button to control how jobs are handled after cutting.

- Don't do anything with jobs after cutting – this option leaves the job in the job list until you manually delete the file. You can manually delete files from the job list by highlighting the job, and then either selecting Delete from the right-click menu or the Delete icon located on the tool bar.
- Archive jobs after cutting – this automatically moves jobs to the Archive list. You can manually archive jobs from the job list by highlighting the job, and selecting Archive from the right-click menu. Restore or delete archived jobs using the Archive icon on the tool bar.
- Delete jobs after cutting – this deletes the job from the list after cutting.

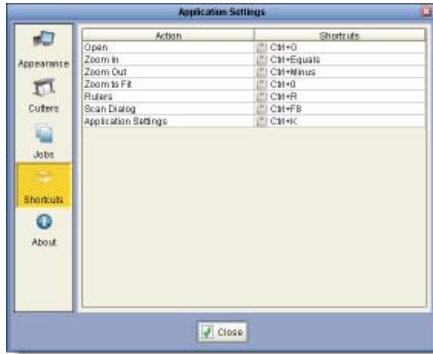
Hot Folders

CUT-Server automatically recognizes Onyx Hot Folders and cut files display in the job list for the intended cutter. This window displays a list of custom Hot Folders allowing you to recognize cut files from the network or a different known location. Use the checkbox to enable active Hot Folders.

- Add – if you want to add a custom Hot Folder, click *Add* and browse to the location. You can add an unlimited number of Hot Folders and any cut jobs in the defined Hot Folders will display in the job list.
- Edit – if you want to edit a Hot Folder from the list, highlight the entry and click *Edit*. This allows you to browse to a new location.
- Remove – if you want to remove a Hot Folder from the list, highlight the entry and click *Remove*.

Viewing Shortcuts

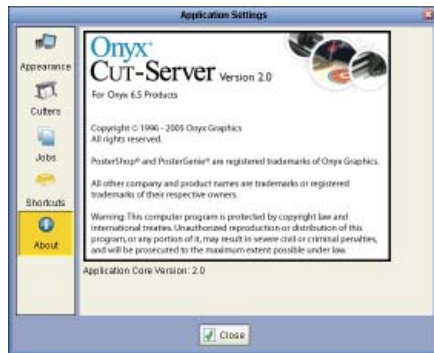
Select the Shortcuts icon on the left-hand side of the Application Settings dialog to view the shortcut key strokes. These are only for display and are not editable.



Application Settings - Shortcuts

Viewing About

Select the About icon on the left-hand side of the Application Settings dialog to view the CUT-Server information.



Application Settings - About