

NiceCut Series

Plug-in Software for
Adobe Illustrator Version 7.0 and above

Cutting Plotter Output Engine
User Manual

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Introducing NiceCut

Thank you very much for your purchase of a NiceCut Series product. This product is an Adobe Illustrator® plug-in. As much as you may want to, you can't use it without a copy of Adobe Illustrator 7 or later.

NiceCut and NiceCut Professional Edition are plug-ins that enable Illustrator to plot data directly to a pen or cutting plotter, or any other device that can read vector data in HP-GL, MGL-1C, or GP-GL data formats. Now, you can design your images using Illustrator's award winning tools, then cut your signs directly. Gone is the fear or hassle of lost or corrupted data – all too often the result of converting your file and transferring it to another program!

Please make sure you have the following:

Installation CD

End User License Agreement

Copy Protection Key

User Manual

The NiceCut User Manual is also included on the installation CD-ROM in PDF format. In order to read it, you will need Adobe's Acrobat Reader. (If you do not already have a copy, it is provided on the installation CD-ROM.)

Please register your copy of NiceCut:

We don't just have a casual interest in who's using our software; by registering your copy of NiceCut you are entitled to technical support. Fill out the user registration card on the last page of this manual and send it to our technical support staff by fax or email. If you do not register your software, we cannot guarantee a prompt response to your questions.

Questions? Ask here.

If you have any technical questions about this product after purchase (could not be installed, the installation CD is defective, questions on operation, software defects, etc.), please let our technical support staff know by filling out and sending the trouble report form to:

Technical Support, COMNET Co.,LTD.

FAX: 06-6305-2191; e-mail: support@comnet-network.co.jp

Information about software upgrades and other product information can be found on the Comnet web site: <http://www.comnet-tokyo.com>

Extra features found in the Professional Edition:

Tiling tool. Using the tiling tool, you can divide your artwork into a series of tiles, each plotted separately. This is useful when your artwork is larger than the media supported by your cutting plotter. For detailed instructions, please see page 13.

Line or Arc approximation. The Bezier curves of your Illustrator artwork must be approximated before being cut or plotted; the professional edition allows you to choose either straight line approximation or arc approximation. (Standard edition only allows straight line approximation). For further details, please see page 5.

Sorting function. In Illustrator, your artwork consists of objects created in a certain order. Without the sorting function, data is plotted in the order it was created in Illustrator. If you use sorting, the plotting order is optimized to reduce plotting errors. For further details, please see page 4

Duplication feature. Without changing your artwork in Illustrator, NiceCut Professional Edition allows you to layout and plot multiple copies of your artwork in the same session. For further details, please see page 10.

Relative Plotting. Using NiceCut Professional Edition's relative plotting function, you can quickly cut a series of films or screens for use in screen printing. For further details, please see page

Section 1: New menus and tools.

After installing NiceCut, three new menu options will be added to Illustrator's file menu and one new tool will appear in the toolbox.



Plotter Setup

This menu allows you to configure your plotting device. See page 3.

Create Plotting Data

Using this menu, you manage what artwork is sent to the plotter. See page 6.

Plotter Output

This menu controls the layout of the plot. Using it, you can resize your artwork for plotting, set the number of copies, and manage offset among other things. See page 9.



Tiling tool.

Using this tool, you can divide your artwork into a series of tiles. Useful when your artwork is larger than your media size. See page 13.

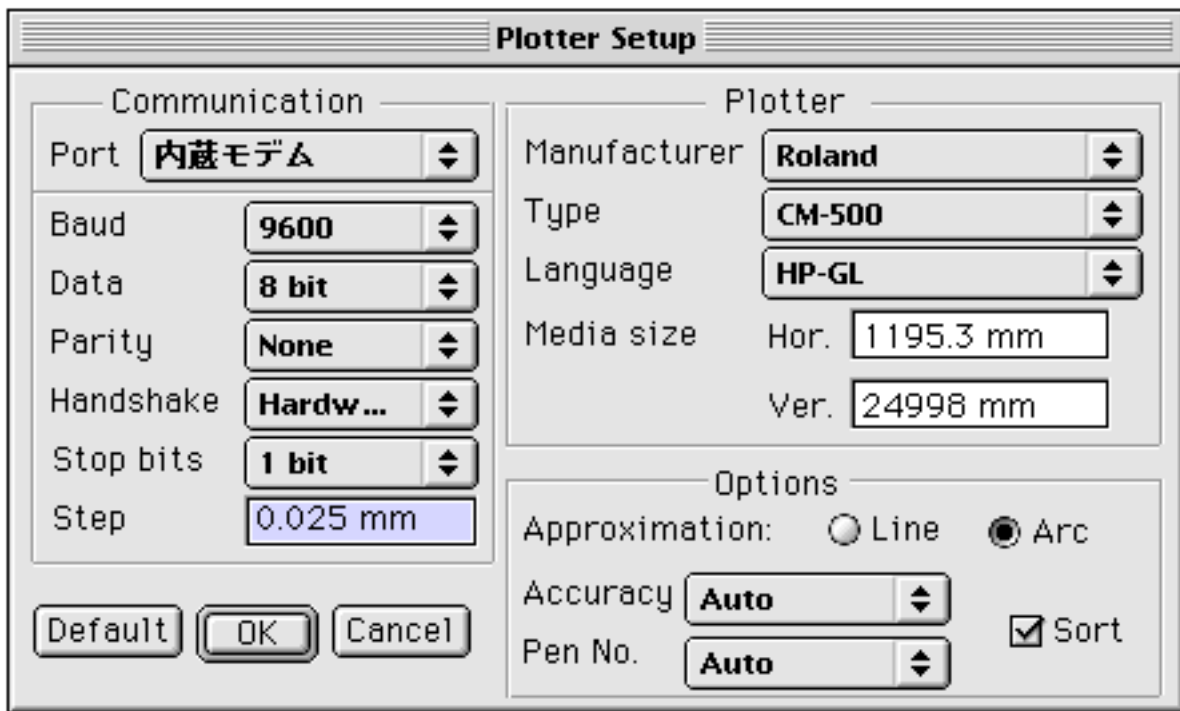
Section 2: Setting up the Plotter

Using NiceCut, you can plot or cut the outline of any artwork you have opened or designed in Illustrator. Using NiceCut's color separation feature, you can also cut individual sections of your artwork based on the color you used in Illustrator. Before cutting though, you need to set up your cutting plotter.

2.1 To set up your plotter:

- Check that the cutter/plotter is appropriately connected to the computer. Usually this means a cable from the plotter to the computer's serial or parallel port.

1. Chose **File > Plotter setup...**
2. A new dialog box appear with three main sections:



3. In the plotter section, select the plotter connected to your computer, in the **Manufacturer** and **Type** fields.
4. Click on the **Default** button. This sets default plotter **Language**, **Media Size** and communication settings for your plotter. If you have changed your plotter's configuration from the default, then you will need to change the settings yourself.
5. Next, you need to set the port. If you are using a Macintosh computer, then the correct port should automatically appear. If you are using a Windows system, then you will need to select the appropriate port from the provided list.
6. Click **Ok** to save your settings. These settings will be saved as your preferences; if you do not change your plotter, you do not need to change your plotter settings. If you do not want to save your settings, click **Cancel** to exit.

That's it. NiceCut is now configured to work with your plotter.

2.2 Options

NiceCut also offers options that affect accuracy, plotting or cutting order, and approximation methods. These are all found in the Options section of the **Plotter setup...** menu. Please remember that to save any changes, you must choose **Ok** when exiting.

Accuracy

All versions of NiceCut support different accuracy levels. In the interest of speed, you may choose to have less accurate output. Conversely, if you do not mind waiting, you may prefer to have higher accuracy.

Note: Setting accuracy to Auto lets NiceCut automatically determine the accuracy level, balancing output quality and speed. If you are not satisfied with the Auto output quality, we recommend setting your accuracy level to high.

Sort

If the sorting function is not selected, NiceCut plots data in the order that it was created in Illustrator. However, with sorting selected, NiceCut optimizes the plotting order to minimize slipping of the plotter sheet. How does it minimize slipping? Using two different sorting methods, **near to far** and **inside to out**. Both sorting methods organize your artwork's data before sending it to the plotter.

Near to far organizes the data so the shapes that are nearest to the plotting origin are plotted before those that are far away. This reduces the movement of the plotting tool (pen or knife), so there is less chance for your paper, vinyl or other media to slip.

Inside to out organizes the data so interior objects are cut or plotted before exterior objects. For example, consider a picture of a face. There are two circular eyes, a triangular nose, a half moon mouth, and the large ellipse that outlines the face. With inside to out sorting, the eyes, nose and mouth would be cut before the ellipse, since they are contained within the ellipse.

Note: Sorting is only offered in NiceCut Professional edition.

Approximation- Line or Arc

Whenever you send artwork to a plotter, regardless of the software used to create it, you need to convert the data displayed on your computer's screen to a format plotters can understand. NiceCut Professional Edition offers two different conversion methods, line segment and arc approximations. If you select arc approximation, then the plotter tool will move more smoothly, decreasing the possibility of your media slipping during cutting.

Note: Arc approximation is only offered in NiceCut Professional Edition.

Pen No.

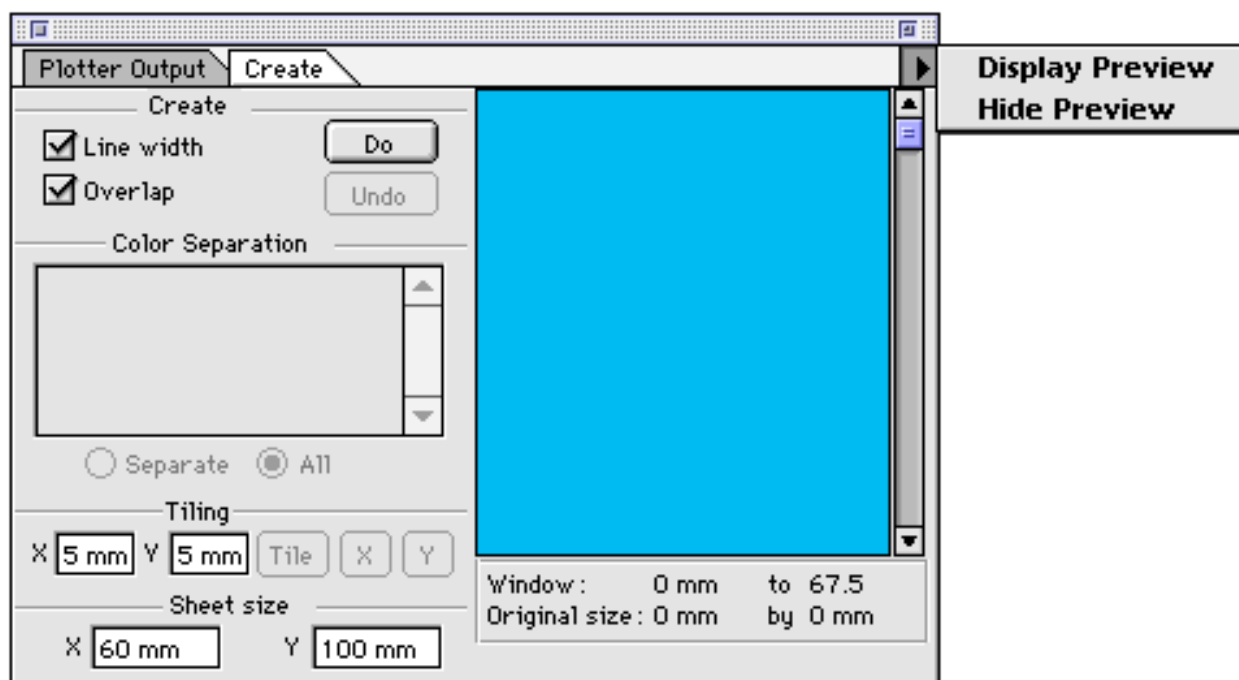
Currently, this function is not supported.

Section 3: Creating Plotter Data

Before you can plot any of the artwork you have painstakingly created in Illustrator, you must use NiceCut to create the plotting data.

3.1 How to create basic plotting data

1. Open the artwork you would like to plot.
2. Next, choose **File > Create Plotting data...** This opens the plotter data menu. (the figure below has the layout window displayed.)



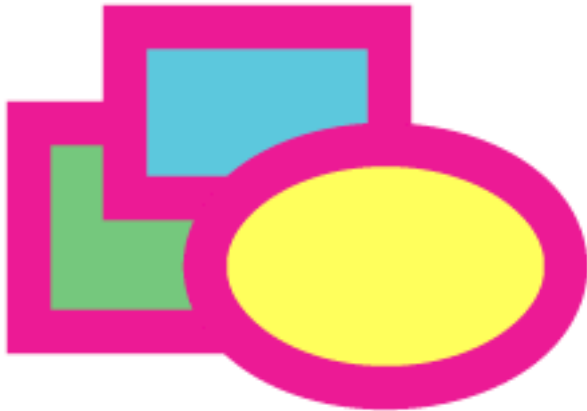
3. Using Illustrator's selection tool, select the data you would like to plot.
4. Making sure both the Line Width and Overlap boxes are checked, select the **Do** button.

This creates basic plotting data, which you can view in the right hand layout screen. If you wish to edit your artwork after creating plotting data, please select the Undo button on the create palette.

Caution: Plotting data for complex artwork with many anchor points may not always be created correctly. If a warning message is displayed, be sure to visually inspect the plotting data created in Illustrator and in NiceCut's preview screen before plotting.

3.2 Line Width and Overlap options

By choosing different combinations of Line Width and Overlap, you can vary the plotting data created. Let's look at the following example artwork and the plotting data created with the different options selected:



Neither **Line width** nor **Overlap** are checked



Only **Overlap** is checked



Only **Line width** is checked



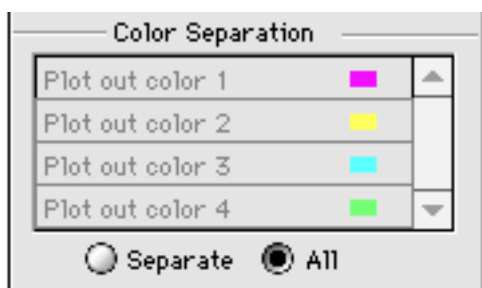
Both are checked



Note: The data in the diagrams were moved for easy viewing after plotter data creation

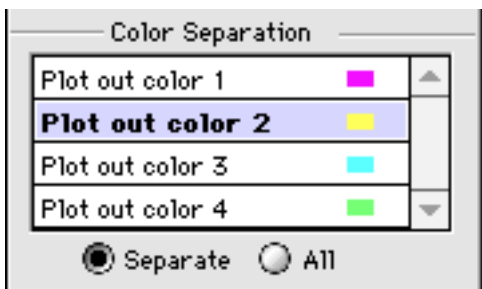
3.3 Plotting layers by color

When cutting vinyl or other media, you may want to cut different parts of your image on sheets of different colors. NiceCut's color separation function allows you to quickly select combinations of colors for plotting. Color separation is found on the **File > Create Plotting Data...** palette.



Plot all colors

If **All** is chosen, then regardless of color, every object will be plotted at the same time.



Plot colors separately

If **Separate** is selected, then you can choose one or more colors to plot simultaneously. In the figure to the left, only color 2 will be plotted.

Selecting individual colors

To select one or more colors, first choose **Separate** on the **Create** palette. Then, while holding the \square key in Macintosh versions (the Ctrl key in Windows), click on the desired colors. To deselect colors, again hold the \square key and click on the color you would like to remove from your selection.

3.4 Sheet size

NiceCut can plot to sheet sizes smaller than your plotter's default sheet size. You may set the sheet size as large as you would like, within one limitation: you cannot set the value larger than the sheet size value in the **Plotter Parameters...** menu.

When automatically creating tiling lines, the sheet size value is used to set the size of the tiles. For instructions how to create tiling lines (and what they are) see page 13.

Section 4: Plotter Output

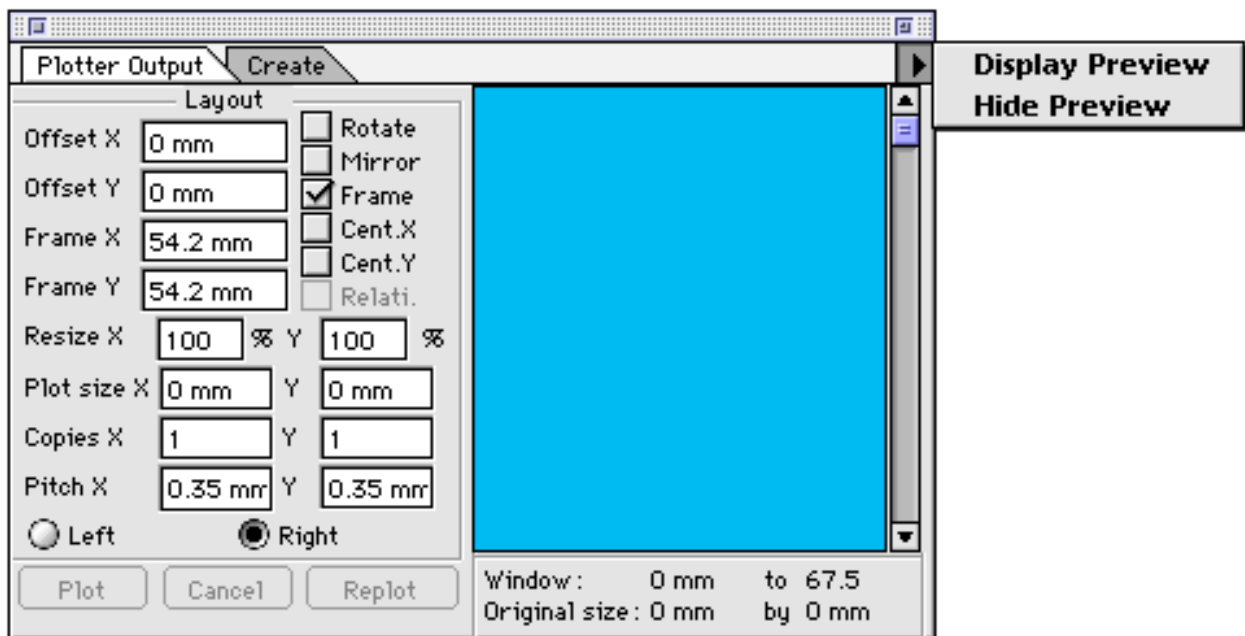
Now that you have created the data you would like to plot, all that remains is to layout the data and send it to the plotter.

4.1 Default plotting

To plot the selection immediately, all you need to do is press the Plot button on the **File > Plotter Output...** palette. However, we recommend looking at section 4.1 first.

4.2 Customizing your plotter output.

NiceCut offers a variety of ways to layout your data before plotting it. You can change the offset of your artwork, resize, rotate, and plot multiple copies. Each of these options are set on the **File > Plotter Output...** palette.



Pen Origin – left and right

At the bottom of the Plotter Output palette are **left** and **right**. If your cutting plotter's tool origin is on the right side of the plotter, then select **Right**. Perhaps obvious, but if it is on the opposite side, then select **Left**. Changing this setting in NiceCut does not affect plotter output, however it changes how data appears in the preview window.

Offset and Centering

You can set the **offset** in either the X or Y direction. If you choose to **center** your data on the sheet from left to right (in the X direction) or from top to bottom (in the Y direction), the offset option will not be available in the corresponding direction. Changes can be viewed on the preview screen. (This X and Y corresponds to NiceCut's preview screen, not to the artwork in Illustrator.)

Framing

By selecting the **Frame** check box, you can create a frame for your artwork. The frame is an additional rectangular cut (or drawn line) around your artwork. By adjusting the **Margin X** value, you adjust the margins to the left and right of your artwork (along the X axis). Correspondingly, by adjusting the **Margin Y** value, you adjust the top and bottom margin (along the Y axis). Without framing, no additional cut (or drawn line) will be made.

Resize and Plot size

It is possible to enlarge or reduce your artwork before cutting or plotting it. For example, if you want your plot to be twice as large as the size in Illustrator, set the X and Y values to 200%. Or, if you would like the plot to be twice as long, but just as high, then reset the X value to 200%. Plot size is linked to the resizing function; if you enlarge your artwork, then the plot size values will change accordingly. Similarly, if you manually set the Plot size values, the resize percentage will reflect that setting. (This X and Y corresponds to the X and Y directions in your artwork.)

Copies and Pitch

NiceCut allows you to easily change the number of copies you plot in a single session; you only need to set a value in either the X or the Y direction. If you increase the copies in the X direction, then you will create a single row of copies. If you do the same in the Y direction, you will create a column of copies. The pitch is the white space between the copies; this too can be set manually. (This X and Y corresponds to the Preview screen)

Note: This function is only available in the Professional Edition of NiceCut.

Mirror and Rotation

You can quickly mirror your plot by selecting the Mirror check box. Choosing the Rotate check box will rotate the artwork by 90° clockwise (as can be seen in the preview screen) before plotting.

Plot, Stop and Replot

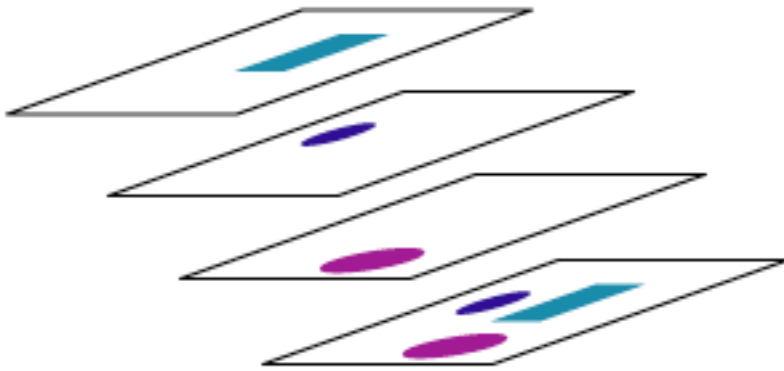
Pressing the plot button send the artwork data to the plotter. Pressing Cancel cancels the plotting process. If all of the data has already been sent to the plotter, however, you can no longer use the cancel button to stop the plotting process. Replot is only active when plotting tiles created by the tiling function. If you would like to plot a tile that has already been plotted once, use the replot button.

Relative Plotting

Relative plotting is used when cutting film for screen printing or other similar applications. When using relative plot, each section of artwork plotted will be plotted in its position relative to the other sections of the artwork. Then, a frame will be cut around the plotted object, which becomes the edges of the film sheet.

For example, if you have created the artwork to the right in Illustrator and want to create screen printing film for each of the colors, you can use relative plotting to quickly create the screens.





On the right are the three screens and the final output after screen printing. Within each of the three screens, the object is plotted in its position relative to the other objects in the original artwork.

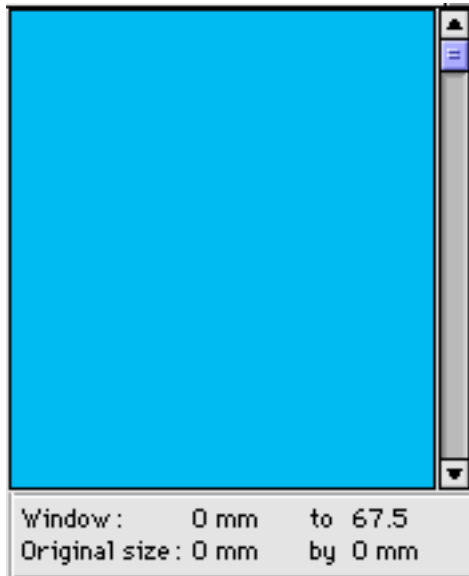
Using Relative Plotting

1. After creating your plotting data, click on the Plotter Output tab and check the **Relati.** Box.
2. Next, adjust the frame size.
3. Return to the Create palatte and select **Separate** in the Color separation area.
4. Select the color you would like to plot, then return to the layout tab and press **Plot**.

You can plot as many or as few colors as you would like.

Section 5: Viewing your Layout

Prior to plotting your artwork, you may want to preview how your data will appear. NiceCut allows you to do this with the preview screen, as seen below:



Imagine that Illustrator presents your data as “F.” However, the default plotter output is the reclining “F” as seen in the figure to the left. This represents the orientation of your data as it will be plotted on the plotter.

The X direction is to the left and right; the Y direction, up and down. This can be confusing, as the left side of your image in Illustrator lays along the bottom side of the layout screen, so please keep it in mind when setting your layout.

At the bottom of the layout screen is Window and Original size. Window shows you what portion of the sheet is currently being displayed in the preview window, and original size is the original size of your artwork in Illustrator, prior to any changes you may have made on the

Plotter Output palette. Often, the plotting media is larger than what can be displayed in the window. Using the scroll bar to the right of the preview window, you can view different sections. Moving the scroll bar down is equivalent to advancing the paper/printing media in your plotter.

More about F

The orientation of F is the orientation of your artwork when it is plotted. More than one copy of F means that more than one copy of your selected artwork will be plotted. The location of F in the screen also gives you an indication of where your artwork will be plotted on your sheet.

Section 6: The Tiling Line Tool

Occasionally, you may want to create artwork larger than your plotter can accommodate. Using NiceCut Professional Edition, you can quickly and easily divide your artwork into tiles, each of which can be plotted separately. This section describes the tiling line tool and its basic use. In the Tutorial section on page 16, a concrete example using the tiling line tool is presented.

Before using the tiling line tool

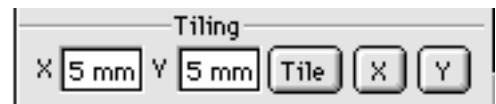
Create your plotting data in Illustrator. Tiling lines can only be created on the plotter output data layer.

Creating tiling data.

1. Select the tiling line tool from the Illustrator toolbox.
2. By clicking and dragging, you can draw a horizontal dividing line. This line will divide your artwork horizontally into two tiles. Pressing the shift key allows you to draw vertical dividing lines. To remove a dividing line, select it with Illustrator's selection tool and press delete.

3. After you have finished drawing your dividing lines, set the overlap.

Overlap is set in the tiling section of the Create data palette. The X controls the overlap with respect to the horizontal dividing lines; Y controls the overlap with respect to vertical ones.



4. To finish, press the **Tile** button on the Create palette. This creates the tiling data.

Plotting tiles

You have created your tiling data. Now you want to plot it. Using Illustrator's selection tool, choose the tile you want to plot, then press the Plot button on the Plotter Output palette. After a tile is plot, an X will appear in Illustrator on the tile that has been plot. To plot the same tile more than once, use the Replot button instead of the Plot button.

Automatically creating tiling lines

If your artwork is larger than the sheet size, you can automatically create tiling lines using the **X** and **Y** buttons located next to the **Tile** button. The lines will divide the artwork so it fits on your sheet size.

If you want to automatically create tiles of a certain size, change the sheet size on the Create palette to the size of tiles you desire, then press the **X** and **Y** buttons. By pressing **Tile**, NiceCut will automatically those tiles. If the tiles do not evenly divide the artwork, some of the tiles will be smaller than the sheet size.

Note: X and Y axis corresponds to the artwork's X and Y axis, not the preview's.

More about overlap

Tiles are created to slightly overlap adjacent tiles. This prevents the background from showing when assembling your artwork after plotting. NiceCut follows the English standard for reading text – left to right, top to bottom. So, tiles in the upper left-hand corner are assumed to be placed first.

Not all tiles are created equal

Some tiles have more overlap than others; this is done to minimize wasted media. As a general rule, overlap extends both below and to the left of a tile. So, tiles in the upper left hand corner will overlap both the tile to the right and to the bottom. The next tile will overlap the tile below it and, if it is not the last tile in the row, the tile to the left of it, and so forth. The tile in the bottom right hand corner? It doesn't overlap anything.

Section 7: Plotting Tutorial

No, we're not going to show you how to conspire. Instead, this section walks you through a few practical examples.

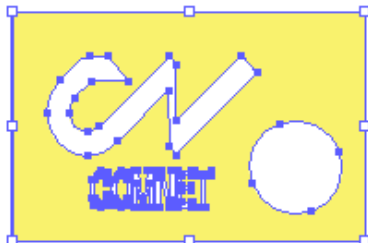
7.1 Basic plotting.



1. Create (or open) your artwork in Illustrator
2. Choose **File > Create Plotting Data...**

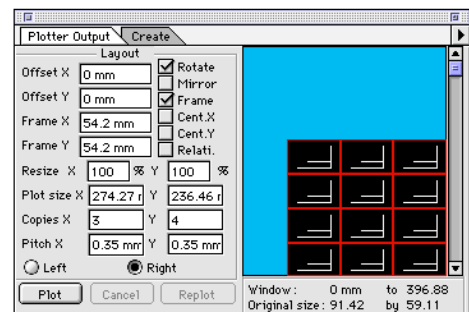


1. Making sure both the overlap and line width boxes are checked, click the Do button.
2. Note: Clicking the Do button creates a new layer in Illustrator. This layer is used by NiceCut; it is not the same layer as your original artwork.
3. Next, set the sheet size for your plot.



1. In our example, we have used color separation to select only the yellow portion of our artwork for plotting.

7. Click on the Plotter Output palette tab. In the example, we have set the number of X copies to 3, and Y copies to 4. We have also rotated the image.
8. When you are satisfied with your image settings, press the plot button.

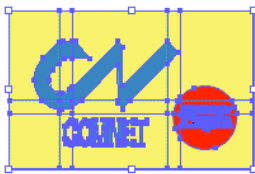
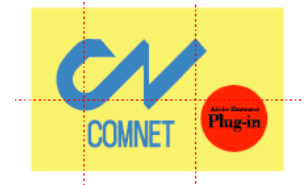


7.2 Tiled plotting.



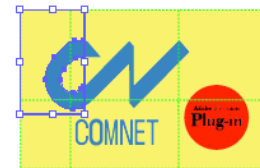
1. Follow steps 1-3 of the previous example.
2. Move to the Plotter Output palette and arrange your layout.
If you want to resize your output, you must do so before creating any tiling lines.
3. Create tiling lines using the tiling line tool, or automatically create them by setting the sheet size and pressing the X and Y buttons on the Create palette.

4. Using Illustrator's selection tool, delete or move the tiling lines (optional).



5. Again, using the selection tool, select the artwork on the current layer.
6. Set the X and Y overlap values (found on the Create palette).
7. Click on the Tile button (found on the Create palette).

8. Using Illustrator's selection tool, select the first tile you would like to plot.



9. Change to the Plotter output palette by clicking on the Plotter output tab, and select the plot button.
10. The first tile will now be plot. After plotting, an X will appear over the previously plotted tile. To plot the tile again, press the replot button. To plot the next tile, select it and press the plot button.

Section 8: Troubleshooting

This section addresses some of the most common problems encountered with the NiceCut series software. If you cannot find the answer to your question here, feel free to contact technical support at support@comnet-network.co.jp or fax a copy of the attached Support Request to +81-6-6305-2191.

8.1 Protect Error

Q: When I start Illustrator, a message appears saying I am running an Unlicensed version of NiceCut or NiceCut Professional edition.

A: Whenever a protect error occurs, make sure your protection key is firmly connected to the appropriate port (USB or ABS-2 on Macintosh, Parallel port in Windows).

8.2 No New Menus

Q: Illustrator starts, but NiceCut's menus and tools haven't been added. Where are they?

A: 1. If the menus do not appear, it is possible the software was not installed correctly. Try re-installing your version of NiceCut.

2. In Illustrator, open File > Preferences > Plug-ins and Scratch Disk, and confirm the plug-in folder is the same folder as where your version of NiceCut is saved.

In depth answer: Installing software from the NiceCut series places a plug-in in Illustrator's plug-ins folder. If the PlotEngineWinX.aip or PlotEngineMacX (where X is 7, 8, or 9) file is not in your Plug-in folder, then Illustrator will not know NiceCut exists. The 7, 8 and 9 correspond to which version of Illustrator the plug-in requires.

8.3 Plotting Output Issues

Q: After pushing the Plot button, "Serial Port cannot be opened" error is displayed.

A: There are two possible solutions:

1. The Port field of the Plotter Setup menu does not match the port used by your plotter.
2. On Macintosh computers, confirm that the Apple talk port and the plotter port are not the same.

Q: Plotter does not respond after pressing Plot button.

Q: Computer locks after pressing the "Plot" button.

Q: After pressing the "Plot" button, my plotter displays an error message.

A: Each of these issues have a variety of causes. Please try the following:

1. Confirm the plotter is connected appropriately to your computer.
2. Check your configuration in the Plotter Setup menu. Particularly, the language setting. If the language setting does not match the plotter's language setting NiceCut cannot plot your artwork. See your plotter manufacturer's manual for how to change the language setting on your plotter.
3. Is the cable connecting the plotter to your computer the one recommended by the plotter manufacturer? If not, then plotting may not work properly. Contact your plotter manufacturer if you are not sure.

Q: Output data is larger or smaller than expected.

A: The step size set in the plotter setup menu may not match the step size of your plotter. Verify your plotter's step size and change NiceCut's settings to match.

8.4 Questions about NiceCut's operation

Q: After making Plotter output data, I then changed my artwork in Illustrator. After pressing the "Undo" button, and canceling my plotting data, the changes I made to my artwork disappeared too. Why?

A: When you create Plotting data using NiceCut, a new layer is automatically created with the plotter data. If you make changes to your artwork on that layer and then "Undo" the plotting data, your changes will be erased along with the plotting data. If you want to change your artwork after creating Plotting Data, make sure your changes are made on the artwork layer.

Q: After creating plotting data, is it possible to preserve the relationship between objects when plotting separate colors?

A: If you are using NiceCut Professional Edition, select Relative plotting. However, if you are not using the professional edition, there is no automatic way to preserve the relationships. However, if you create a rectangle that encloses your artwork, and select both the rectangle and each color when printing, you can achieve an effect similar to relative plotting.

Q: Even though I've checked Relative plotting, when I plot separate colors they aren't in the right position. What's up?

A: Only check the Relati. box **after** selecting "All" in the color separation table. Then, return to the color separation table and choose "Separate." Order matter -- iff you choose "Separate" before checking the Relati. box, you will be setting one color relative to itself, not relative all the plotting data or the entire image.

Q: Even when switching the origin between left and right, the output doesn't change.

A: The left and right origin setting only affects the Preview window in NiceCut. To change the origin from left to right (or vice-versa) on your plotter, consult your plotter's manual.

Appendix: Cutting and Printing plotters.

Although performance and configuration varies between plotters, if NiceCut is not behaving normally, you may need to change the mode on your plotting device.

1. Set your plotting device to cutting mode.
2. If you have previously printed in print mode and then try to print again from the NiceCut series but cannot, try turning off and then turning on your plotter. Similarly, when changing from printing to cutting, you should again turn off and turn on your plotter.

To: Technical Support, COMNET Co. LTD.

FAX: 06-6305-2191; e-mail: support@comnet-network.co.jp

Support Request

NiceCut Series

Serial number	Found on top of box		
Name			
Company			
TEL		FAX	
Computing Environment	Operating System:	Computer:	
	Illustrator Version:	Plotter:	
	Other environment (Plug-in memory, hard disk size, etc.)		
Detailed description of difficulty:			

COMNET Co.,LTD.

To: Technical Support, COMNET Co. LTD.

FAX: 06-6305-2191; e-mail: support@comnet-network.co.jp

User Registration Card

NiceCut Series

Serial number	Found on top of box		
Name			
Title		Division	
Company			
Address			
TEL		FAX	
e-mail			
Would you like to receive email updates about product upgrades? Yes No			
Date of purchase		Where did you purchase?	
Computing environment	Illustrator Version		
	OS in use	Machine in use	
	Plotter manufacturer	Plotter in use	
Features you would like to see in the Plug-in:			
Other comments and requests:			