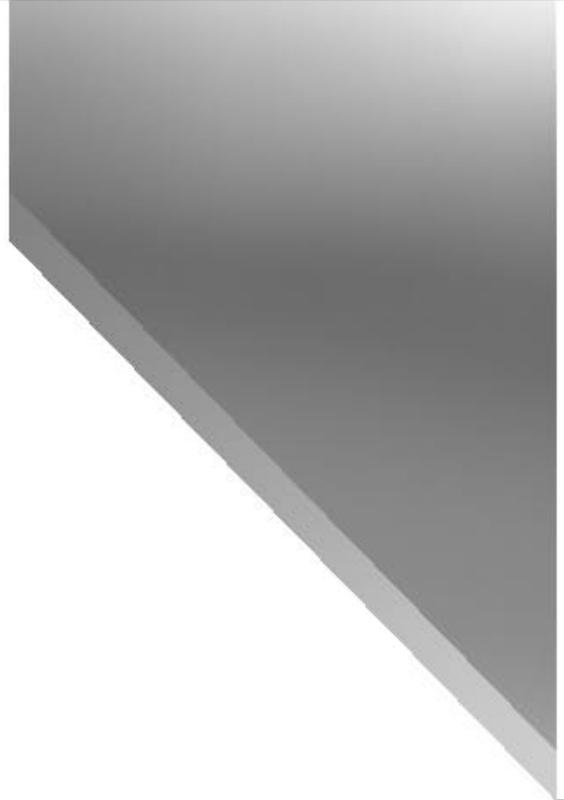# WinPlot

SOFTWARE UTILITY for all SUMMA CUTTING DEVICES

Welcome

Welcome to WinPlot

WinPlot is a "bridge" program that allows you to open and either cut or plot the following types of files[1]:

- Adobe Illustrator (*.ai)
- Encapsulated PostScript (*.eps)
- Drawing eXchange Format (*.dxf) (simple dxf only).
- ISI Design File (*.isi)

WinPlot's advanced integration of the Summa Optical Positioning System (OPOS) simplifies the contour cutting process. Precise contour cutting is now easier than ever!

Installation

Installing WinPlot

The Manual/WinPlot CD includes an Autorun file that initiates the installation process by simply inserting the CD into the CD-ROM drive.

Installing WinPlot

When the installation (manual) CD is inserted in the computer, then it start normally automatically. If not, launch the routine manually from the "Run" command line in the Windows Start menu. Type "D:\autostart.exe" (where D is the CD-ROM drive).
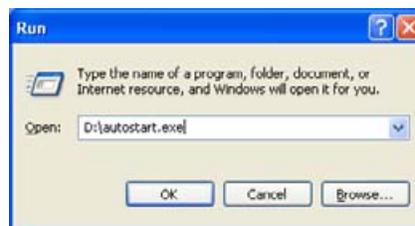
After that the start-up screen appears with flags to choose the desired language. Choose a language. The following installation Window will appear:

Click on the button to start installation of the cutter tools.
If the program is downloaded from the internet, then just double click it (name of the file is SetupWinPlot.exe – the extension might be hidden due to a setting in the folder options menu in Windows explorer.

Installing the WinPlot plug-in

Plug-in is available for CorelDraw (from version 11 on) and Adobe Illustrator (from version CS on).
The plug-in for Corel installs an extra toolbar. Clicking on an icon in this toolbar automatically exports the current drawing into the program indicated in the toolbar.
The plug-in for Illustrator creates an extra menu under the 'file menu' called summa.


Corel Toolbar

Script added in
Illustrator file
menu
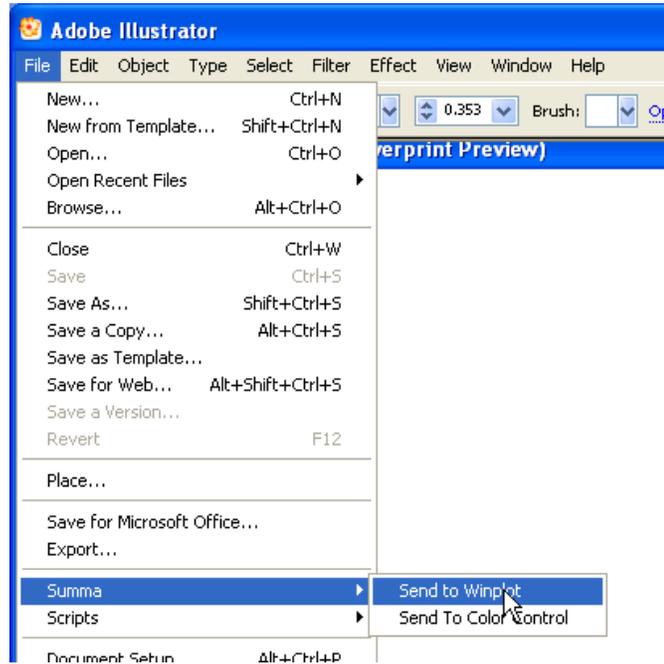
The plug-in can be installed from the program 'Summa Cutter Tools'. This program is available on the CD and on the Summa site.

Installing Summa Cutter Tools

When the installation (manual) CD is inserted in the computer, then it start normally automatically. If not, launch the routine manually from the "Run" command line in the Windows Start menu. Type "D:\autostart.exe" (where D is the CD-ROM drive).
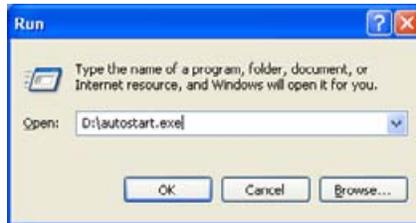

After that the start-up screen appears with flags to choose the desired language. Choose a language. The following installation Window will appear:

Click on the button to start installation of the cutter tools.
If the program is downloaded from the internet, then just double click it to start it.
This installation just puts all the tools on your hard disk, ready for installation. It is recommended just confirm the proposed options and to install the individual tools directly afterwards.
The individual cutter tools can be installed directly after installation of the cutter tool program, or at a later date.
To install later, just click on start -> All Programs -> Summa -> Summa Cutter Tools.
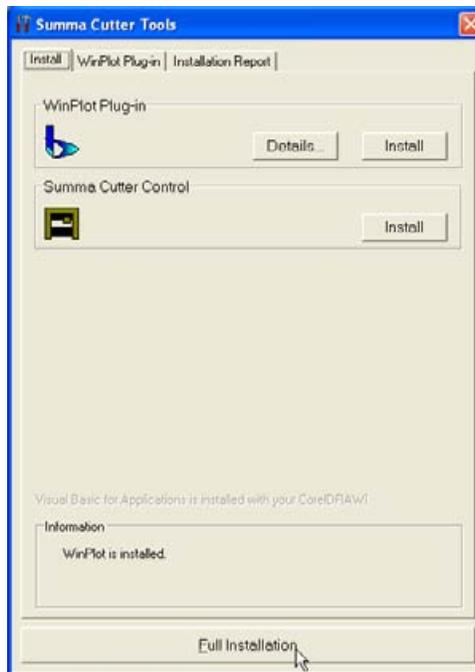
To install the cutter tools immediately leave 'Launch Summa Cutter Tools' checked.
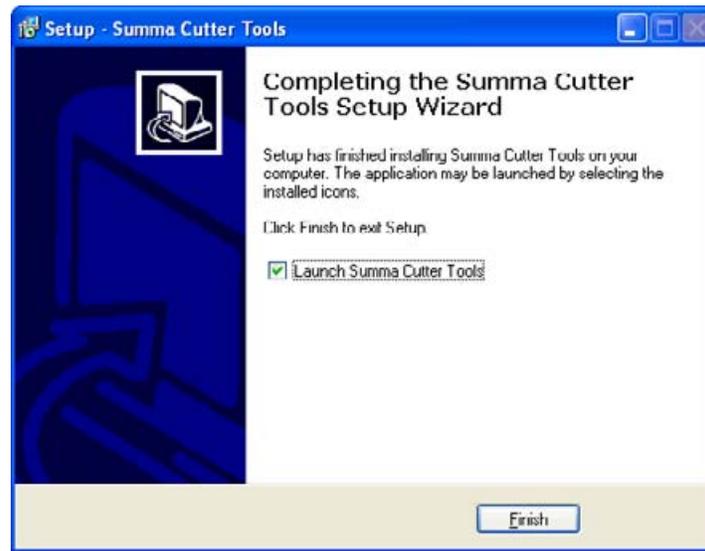
INSTALLATION OF SOFTWARE

The Cutter tools program starts up.
Click on the individual install button to install either the plug-in or on the full installation button to install all.

INSTALLATION OF SOFTWARE

Security in Corel

When installing the WinPlot Toolbar a cdr-file with macros is opened. This file must open with macros enabled; else VBA-script can not complete installation.
If Corel is installed, then the default security setting for VBA scripts is medium.
So the program will give a warning that the toolbar contains macros.
If security level is set low, then no message will appear on screen and the toolbar will work without any problems unless the security setting is changed.
In other cases do following:
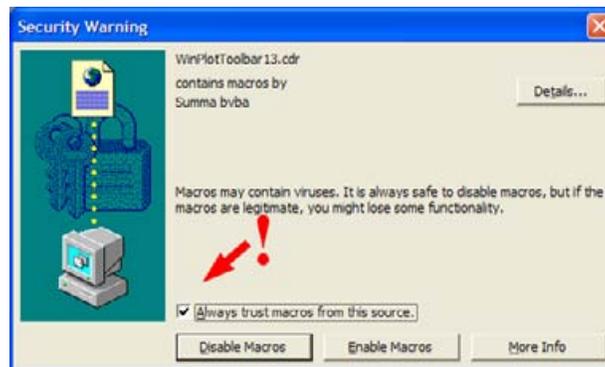
SECURITY SETTINGS

Select "Always trust macros from this source" and click "Enable Macros".
The next time the toolbar is run, the above message will not appear any more.

WinPlot

Setup

Configuration

After WinPlot is installed, it must be configured to work with a Summa cutter/plotter.
This can only be done when there is no file is opened.

Installing a cutter

1. Start WinPlot.

    The "Install Cutter" window opens if WinPlot has been started fro the first time.

2. (If the "Install Cutter" window does not open, click **Design** // **Cutters** // **Install Cutter**.)

3. Click on your cutter model inside the "Install Cutter" window and then click **OK**.

4. Click **Setup Port**.

    The "Communication Setup" window opens.
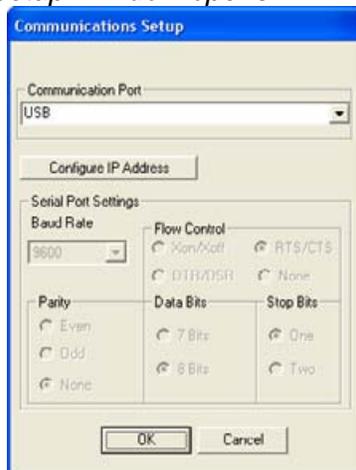
For USB connection

USB connection is the default connection. This means that no port settings need to be changed if the cutter is installed out of the box. If that is the case go to step 6. There exists also the possible to connect multiple cutters (up to 4) to one computer. Then the chosen USB connection in WinPlot has to be the same as the chosen USB class in the cutter.

5. Click the on the drop down box underneath "Communication Port" and choose the correct USB connection.

6. Click **OK**. Then click **OK** again to exit the setup configuration. WinPlot is now ready to communicate with the cutter.

For wireless connection

Some cutter models can be connected wireless with the computer. If the cutter is set up for such a connection, then the used IP address for this connection will be shown on the touch screen of the cutter if media is loaded.

5. Click the on **Configure IP address**.

6. Fill in the correct IP address.
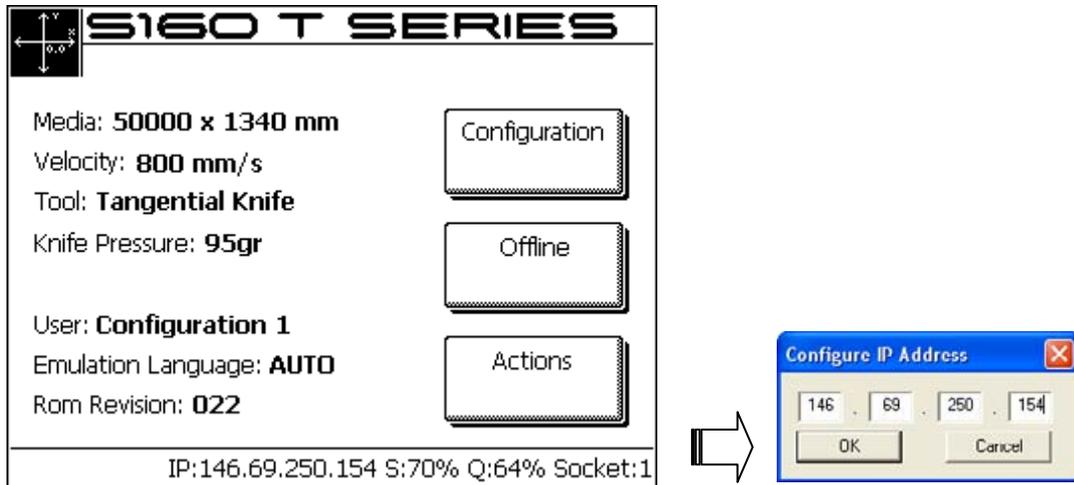
7. Click **OK** three times to exit the setup configuration. WinPlot is now ready to communicate with the cutter.

For serial connection

5. Select the appropriate COM port from the list.

The "Port Settings" will not be grayed-out and can be modified. The default settings are:

- Baud Rate = 9600
- Flow Control = RTS/CTS
- Parity = None
- Data Bits = 8 Bits
- Stop Bits = One

The standard settings work with any Summa cutter that is installed out of the box

6. Click **OK**. Then click **OK** again to exit the setup configuration. WinPlot is now ready to communicate with the cutter.

NOTE: If the cutter type is not available in the list, then use Summa Legacy as cutter model. All drivers use the DMPL emulation language for communication (see cutter user manual)

Transferring a
graphic to WinPlot

Working with Plug-in

The easiest way to get the graphic into WinPlot is using a plug-in, if it exists.

Plug-in for Corel

The WinPlot toolbar in Corel contains two icons.
First one is to set OPOS markers around selected objects.
The other one is to start WinPlot and import all selected objects into it. If there are no objects selected, then automatically all objects are selected.

Plug-in for Illustrator

When the plug-in is installed then a script is installed to open WinPlot automatically and import the selected objects into it.
Click on **File // Summa // Send to WinPlo**t. Make sure all text has been converted to curves If no objects are selected, then automatically all objects are selected.

Exporting a Graphic by hand

Exporting from CorelDraw for WinPlot

Make sure all objects are outlines and preferably not filled (if objects are both filled and have an outline with a color, then all objects will appear twice upon one another in WinPlot and thus be cut twice).
Click on **File** // **Export**. Choose as type eps. Make sure that in the export filter the option convert text to curves is checked. It is also recommended to set post script level to level1.

Exporting from Illustrator for WinPlot

Make sure all objects are outlines and preferably not filled.
Select all text and click on **Type** // **Create outlines**. It is also recommended to make sure that the text is either filled or has a colored outline with a hairline thickness, not both at the same time.

Make sure to export to the correct version of Adobe Illustrator.
- For Illustrator versions up to 10: click on **File** // **Save As**. In the Illustrator Native Format Options window, choose Illustrator 7.
- For Illustrator versions CS: click on **File** // **Export**. Choose as file type Adobe Illustrator Legacy. In the Illustrator Legacy Options window, choose Illustrator 3.
- For Illustrator versions CS2 on: click on **File** // **Save As**. Choose as file type Adobe Illustrator. In the Illustrator Options window, choose Illustrator 3.

Exporting from FreeHand for WinPlot

Make sure all objects are outlines and preferably not filled.
Select all text and click **Text** // **Convert to paths**. It is also recommended to make sure that the text is either filled or has a colored outline with a hairline thickness, not both at the same time.
Click on **File** // **Export**. Choose as type ai. In The Export Document window choose Adobe Illustrator 3.0/4.0.

Using another design program

Make sure all objects are outlines and not filled.
Text has to be converted to curves or they will not show up in WinPlot. If the text is converted to curves while designing, then choose to export as an adobe illustrator file (ai) version 3 if possible. If converting text to curves is used while exporting, then convert text to curves in the eps export filter. Use postscript level 1 if possible.

Importing a graphic

Importing a graphic in WinPlot

1. Start WinPlot.

5. Click **Design // Open…**

    The "Open" window appears.

6. Set file type to the same type as chosen while exporting the design.

7. Navigate to the file that was saved or exported in the design software.

8. Open the file.

Cutting a graphic

The following procedure lists the basics about cutting a graphic.

New Roll

The new roll icon can be used to define a new working space on the roll of vinyl. It is used when a new roll is loaded or to advance beyond a job that has been cut.

Click [icon] to start a new roll.

If more than one cutter is installed, WinPlot will ask to select the desired cutter. Click if necessary on the desired cuter.
If WinPlot was just opened, then a window will open showing the size of the loaded media or working space. Click OK to confirm.
If a job has already been send to the cutter and the feed option was not chosen (see output setup details options below), then WinPlot will ask the user whether the media has to be transported to the end of the previous job or not. Select OK to move to the end of the previous job, or cancel to work further in the same working space.
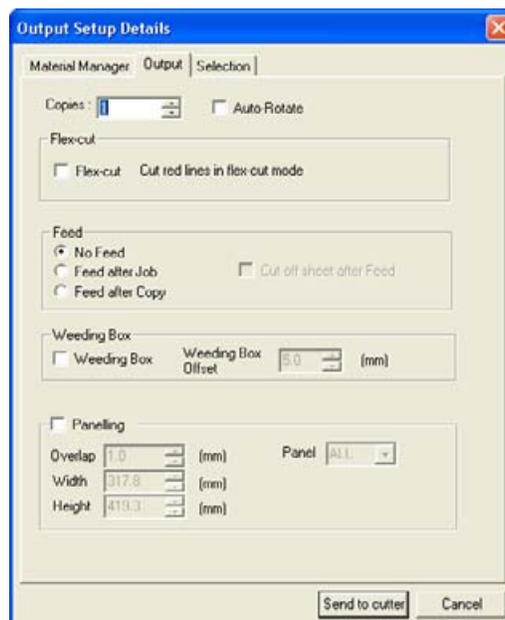
Cutting a graphic

Transfer a graphic to WinPlot.
Click [icon] to send the graphic to the cutter.
The "Output Setup Details" window opens. It has three tabs.
First tab gives extra info of the destination.

The second tab:

Use copies if more then one copy of the design is needed the option Autorotate is only useful when nesting is used.

Flex-cut activates the flex-cut option in the cutter (check cutter user manual for more info on Flex-cut)

> **NOTE:** "red" lines means that lines are created as 100% Magenta and 100% yellow in a CMYK space. There is no support for RGB colors or spot colors.

No feed activates the internal nesting option of WinPlot (see Nesting).
Feed after job moves the media forward after the job is cut and defines a new origin point.
Feed after copy does the same, but now after each copy (when multiple copies are asked for). This disables the nesting option.
Cut after feed is only for S class type cutter. WinPlot send a cut off command just before it defines the new origin when a feed after job or copy is chosen.

Weeding box cuts a rectangle around the bounding box of the job. There exists the possibility to define a margin between this bounding box and the weeding box.
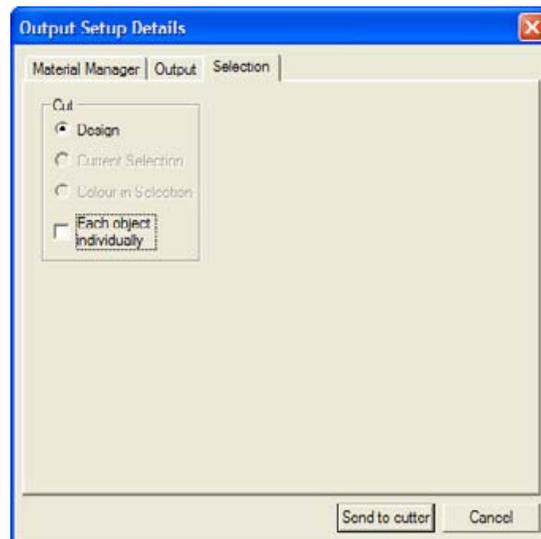
Paneling is used if the width of the design is larger then width of the loaded media.
The size of the panel can be set and also the overlap.
Panels can be cut out separately also.
! Do not use feed option or set a weeding box when paneling!

The third tab:

The third tab can be used to cut by color, cut only the selected object , cut all or cut each object separate.
To cut by color, choose an object of the color that needs to be cut out and then select 'colour in selection' in the third tab.

Click on 'send to cutter' to send the data to the cutter.

Nesting

To conserve material, WinPlot evaluates the size of each graphic and determines whether it can be cut out of material left over from previous cuts. In the following example, two copies of a graphic have been cut side by side in the material (1). WinPlot then places the next two copies in a row above the first (2). The next graphic is small enough that WinPlot can place it in the uncut material to the left of the larger graphics (3, 4).

This feature will work if…

- No Feed is chosen in the output option menu
- The "New Roll" button (⊙) has not been clicked.
- WinPlot was not closed between cuts.
- The cutter's origin was not moved using the cutter's keypad.
- SummaCut cutters are using firmware higher then revision 10.
- SummaSign Pro cutters are using firmware higher then revision 22
- This feature works well on all SummaSign Pro SL and S class cutters.
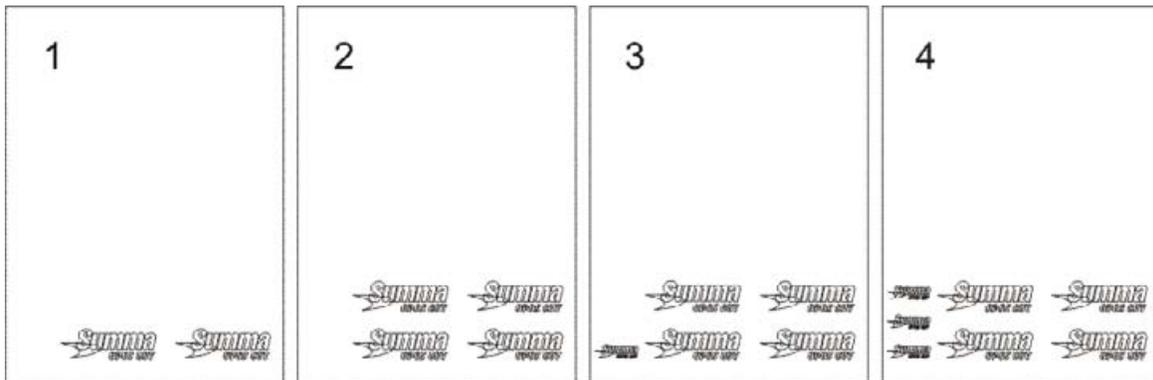
Graphic placement

WinPlot

Preparing a graphic for OPOS contour cutting

Creating a graphic

See Sections 3 in the User manuals for more detailed information about preparing a graphic for OPOS contour cutting.

Creating a graphic

1. Use your design software to create the graphic that you want to print and cut.

Graphic to be printed and cut

9. Insert OPOS registration markers around the graphic.

Inserting OPOS markers

- The markers must be square.

- Each of the markers' four sides should measure 3mm (not less than 1.5mm or more than 10mm).

- The markers should be dark in color (preferably black) so that they are easy to see when printed.

- The markers…

  - Should *not* be more than 1.3m apart along the X-Axis (the axis along which the media travels)

  - Should *not* be more than 1.6m apart along the Y-Axis (the axis along which the head travels)

  Add additional markers if necessary. Please see the illustrations at the top of the next page.

- If imaginary lines are drawn from marker to marker around the graphic (forming a box around the graphic), it is important that no part of the graphic cross any of the lines.
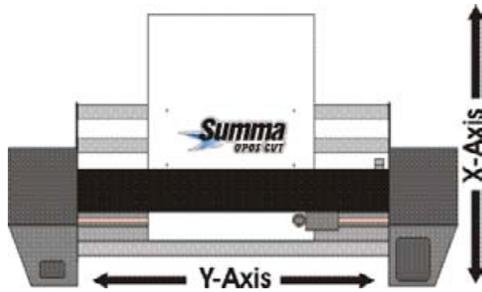
Cutter axis diagram

Graphic axis diagram

Printing a graphic

Printing a graphic

1. Make sure there is <u>at least</u> a 1cm (0.4in) margin beyond each of the graphic's four OPOS markers. A 2cm (0.8in) margin is preferable.

2. Leave a margin of <u>at least</u> 8cm (3.15in) following the print when using sheets or when cutting the print off a roll.

3. Print the graphic and its markers with a printer (scale = 100%).

Defining a cut contour

Determine whether a cut contour should be created:

- Sending the entire graphic from WinPlot to the cutter will result in every vector element in the graphic being cut.

<u>Without</u> a defined cut contour, all elements will be cut

- Sending a contour-only file from WinPlot to the cutter will result in only the contour being cut. This technique will result in the contour being cut around the graphic, leaving the internal elements uncut.

*<u>With</u> a defined cut contour, only the contour will be cut*

Defining a cut contour

1. Create the cut contour as a separate layer (or file) and assign it a unique color. This is the layer (or file) that will be brought into WinPlot and then sent to the cutter. The documentation supplied with your design software should provide additional instruction about creating contours.

2. Leave space between the graphic's contour and the cut contour. This buffer will allow for slight cut deviations should the material shift during cutting.

Cutting a graphic with OPOS

1. Load the printed graphic into the cutter.

10. If necessary, rotate the graphic so that its orientation on the screen matches its orientation in the cutter.

   A. Click **Edit // Select All** to select the entire graphic.

   B. Click ⟳ and then press **N** on your keyboard.

      The "Rotate" window opens.

   C. Place a check mark in the **Preview** box.

   D. Click the radio buttons for the 8 degree values until the graphic's orientation matches its orientation in the cutter.

   E. If necessary, click on the **Free** radio button and fine-tune the orientation.

   F. Click **OK** when the graphic is properly oriented.
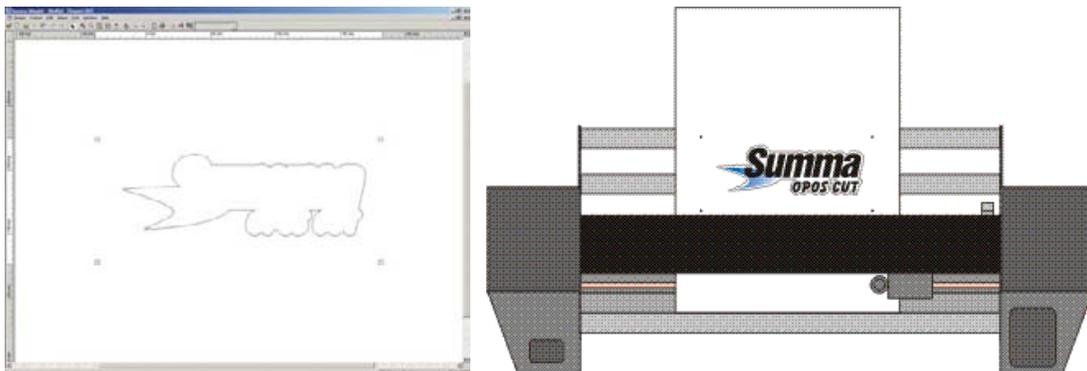
The graphic's orientation on the screen must match its orientation in the cutter

11. Click ▣ to send the graphic to the cutter.

The "Output Setup Details" window opens

12. Click **Send to Cutter**.

The cutter's LCD displays "SET SENSOR ABOVE FIRST MARKER".

13. Lower the OPOS sensor onto the material.

14. Using the cutter's four navigation keys, position the OPOS sensor above the graphic's origin marker (the marker at the bottom right-hand corner of the graphic).

15. Press the cutter's "Enter" key.

The cutter will register the OPOS markers and then cut out the graphic.

Note

The plug-in for ColorDraw has also to option to set the opos marker automatically around a drawing.