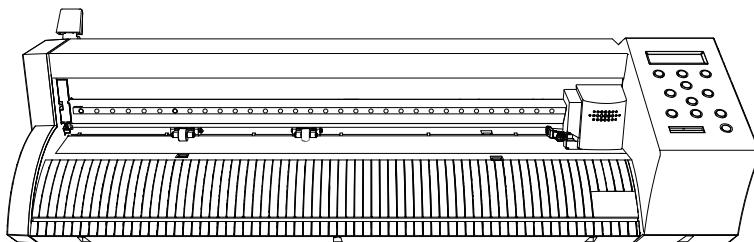


# CAMM-1 GS-24

## USER'S MANUAL For Windows



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Thank you very much for purchasing this product.

- To ensure correct and safe usage with a full understanding of this product's performance, please be sure to read through this manual completely and store it in a safe location.
  - Unauthorized copying or transferral, in whole or in part, of this manual is prohibited.
  - The contents of this manual and the specifications of this product are subject to change without notice.
  - This manual and the product have been prepared and tested as much as possible. If you find any misprints or errors, please inform Roland DG Corp.
  - Roland DG Corp. assumes no responsibility for any direct or indirect loss or damage that may occur through use of this product, regardless of any failure to perform on the part of this product.
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-



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# About the User's Manuals

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The following manuals are included with the machine.

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## **GS-24 Setup Guide (paper manual)**

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This manual provides instructions for machine setup and software installation.

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## **GS-24 User's Manual (this manual)**

---

This manual provides instructions for basic machine operation and maintenance.

---

## **CutStudio Help (electronic-format manual)**

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This documentation explains details for functions of the included CutStudio software. To open the Help files, from the Help menu in CutStudio, click Contents.

# Getting Started

Thank you very much for purchasing this product.

## Important Notes on Handling and Use

- This machine is a precision device. Handle it carefully, and never subject it to impact or excessive force.
- Install in a location having the specified temperature and relative humidity. For details, refer to "Specifications."
- Connect the AC adapter and USB cable securely.
- When moving the machine, always support the bottom with your hands. If the machine is held elsewhere, it may be damaged when moved.

## Usage Location/Usage Space

- Install the machine on a stable stand in a stable location. An unsuitable location can cause faulty operation or breakdown.
- The following locations are not suitable for installation:
  - Locations where the floor is tilted, not level, or unstable
  - Dusty locations
  - Locations exposed to considerable electrical or magnetic noise, or other forms of electromagnetic energy
  - Locations with poor heat dissipation
  - Locations exposed to direct sunlight
  - Locations where there are obstacles behind the machine

## Important

Roland DG Corp. assumes no liability for any loss or damage of data resulting from computer malfunction or damage. (Always back up important data.)

## Support

Support information made available via the Roland DG Corp. website is updated regularly to provide a useful reference in the event of a problem. Before contacting us, refer to the information on the website together with "What to Do If."

<http://www.rolanddg.com>

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### MEMO

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# What the GS-24 can be Used For

## Cutting Characters and Shapes Cleanly



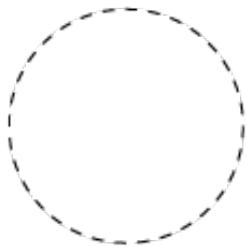
- ☞ P. 15 "2. Simple! Basic Cutting"
- ☞ P. 41 "3. Sending Data from Illustrator/CorelDRAW"

## Making Simple Stickers by Connecting to a Printer



- ☞ P. 51 "4. Printing & Cutting"
- ☞ P. 53 "Preparations for Printing and Cutting (CutStudio)"
- ☞ P. 70 "Preparations for Printing and Cutting (When Using Illustrator)"

## Cutting Perforated Lines on a Variety of Materials



- ☞ P. 106 "Cutting Perforated Lines"
- ☞ P. 111 "Outputting Perforated Line Data from Illustrator (CS5 and later)"

## Handling Large Output Smoothly



☞ P. 116 "Tiled Output"

# Loadable Materials/Cuttable Area

## Loadable Material Sizes

Width	Length
50 to 700 mm (2 to 28 inches)	Flat Material: 100 mm (3-15/16 in.) or more
	Roll Material: no restriction

### ⚠ CAUTION

Never load media that weighs over 5 kg (11 lb.).

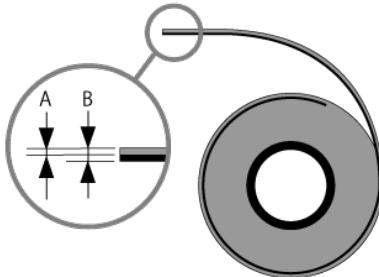
The machine may fail to withstand the weight and tip over or cause the material to fall.

#### (A) Cuttable material thickness

Material thickness of 0.1 mm or less\*

#### (B) Maximum material thickness (including carrier paper)

0.3 mm or less (material of up to 1.0 mm thick can be loaded)\*



### NOTE

Conditions differ according to the type of blade. Refer to P. 155 "General Guide Regarding Cutting Conditions".

## Cuttable Area

Maximum cutting area	Width: 584 mm(22 in.)* Length: 25000 mm (984-1/4in.)
----------------------	---

### NOTE

Maximum width can be extended up to 604 mm (23-3/4 in.) depending on settings. However, this may cause the pinch roller to leave marks on the deliverables. Exercise caution. For instructions on how to extend the cutting area, refer to P. 148 "Extending the Cutting Area (EXTEND)".

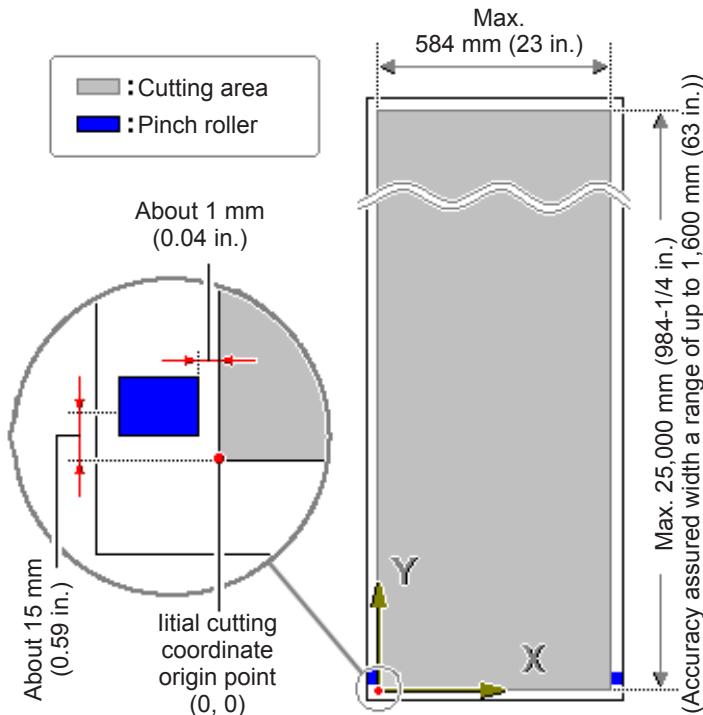
## Explanation of Cutting Area

The cutting area along the horizontal plane (the direction in which the cutting carriage moves) is determined by the position of the pinch rollers. The cutting area spans the length between the two rollers, minus approximately 1 mm on each side.

Type of specified material	Cutting area	
ROLL or EDGE	Width	Distance between the two pinch rollers minus approximately 1 mm on each side
	Length	Approx. 25000 mm
PIECE	Width	Distance between the two pinch rollers minus approximately 1 mm on each side
	Length	Detected length (*1)

\*1: If the detected length is 1600 mm or more, the machine determines the material to be ROLL, and the length of the cutting area is set to approximately 25000 mm.

However, the display does not show the length.

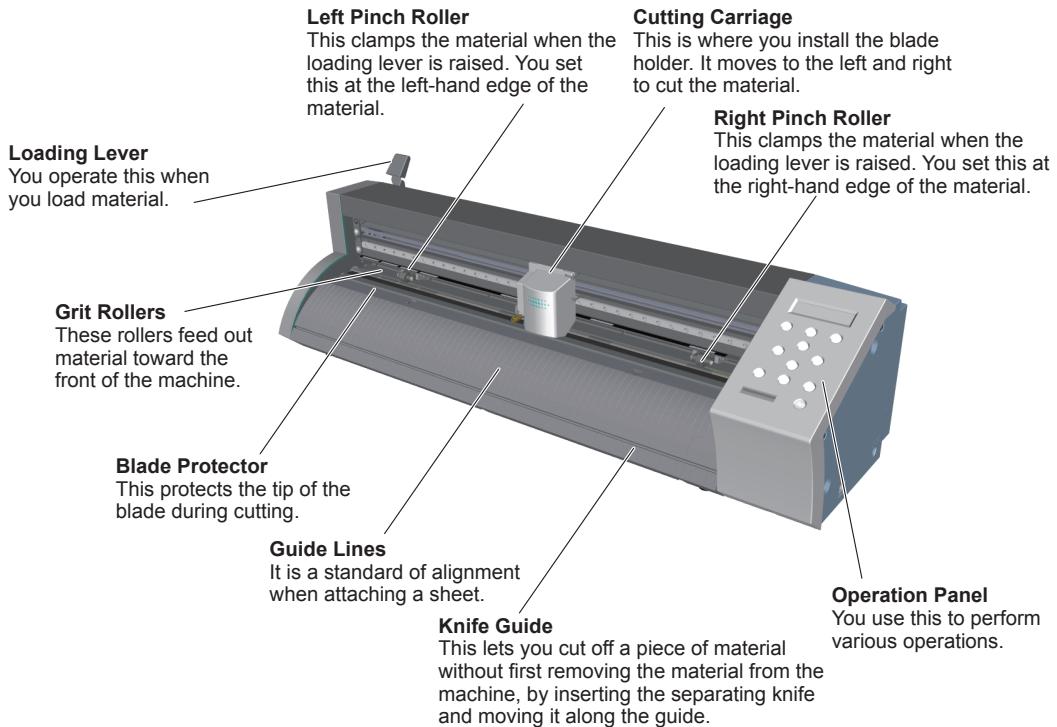


☞ P. 134 "Using a Variety of Materials"

# Part Names and Functions

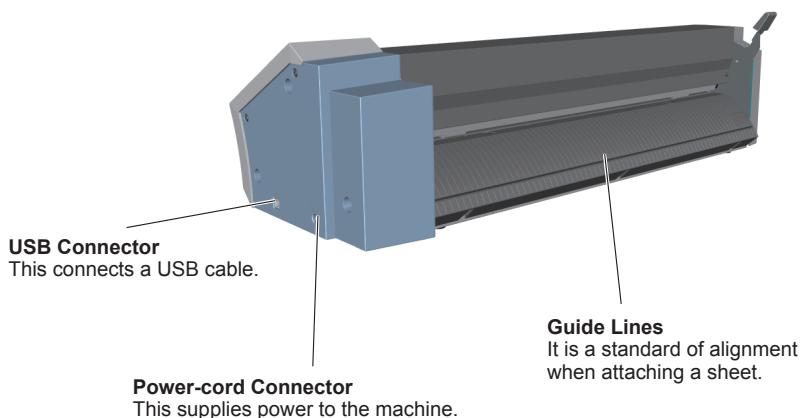
## Main Unit

### Front



☞ P. 14 "Carriage LED Lamp"

### Back



## Operation Panel

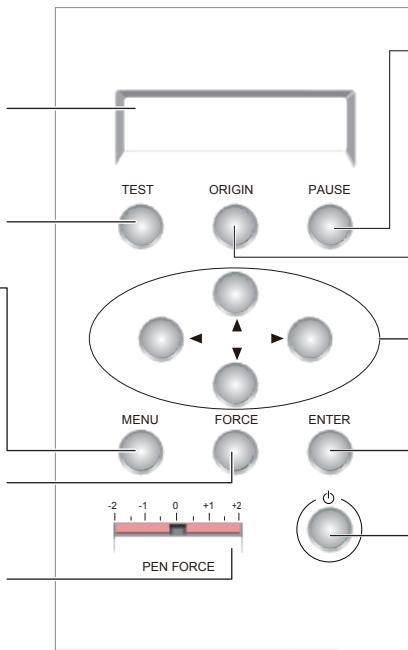
**Display**  
This displays various setting menus and other information.

**TEST Key**  
Pressing and holding this for one second or longer cuts a pre-registered test pattern.

**MENU Key**  
Pressing this repeatedly switches sequentially among the presently set cutting conditions, the menu mode, and the width-display screen.

**FORCE Key**  
This displays the menu for adjusting the blade force.

**PEN FORCE Slider**  
This lets you fine-tune the blade force. You can even perform adjustment while cutting is in progress.



**PAUSE Key**  
This interrupts the operation in progress. Pressing it a second time resumes the operation.

**ORIGIN Key**  
Pressing and holding this for one second or longer sets the origin point at the present location of the blade.

**Cursor Keys**  
You use these to perform such operations as moving the cutting carriage or material, and selecting and setting various menu items.

**ENTER Key**  
This is used to choose menu items and confirm settings.

**POWER Button**  
Pressing this switches on the power, making the button light up blue. To switch off the power, you hold it down for one second or longer.

### Panel notation

Keys on the operation panel are indicated by the following images.

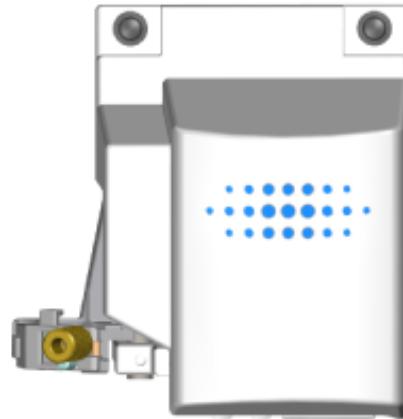
	POWER Button
	TEST Key/ORIGIN Key/PAUSE Key
	Cursor Keys
	MENU Key/FORCE Key/ENTER Key

## Carriage LED Lamp

### Normal

---

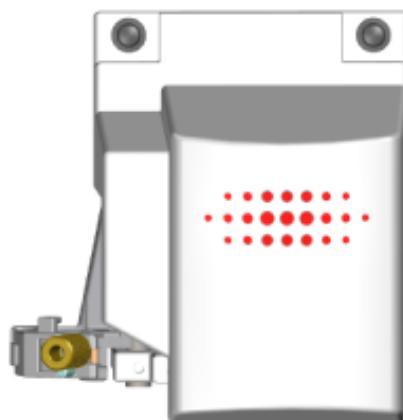
The blue lamp is steadily lit or flashes.



### Error

---

The red lamp flashes. Refer to P. 197 "Error Message List" and clear the error.



## ***2. Simple! Basic Cutting***

---

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# Performing Cutting

Now let's learn basic cutting operations. When you follow the procedure, you can create a sticker like the one shown in the figure below.



## Items required other than the machine

A computer monitor displaying the Roland CutStudio software interface. The interface shows a preview window with a design and various toolbars and panels.	An A4 size sheet of material, represented by a yellow rectangle with the text "A4" in the center. It has a small white triangular cutout at the bottom right corner.
The Computer with which CutStudio is installed	Materila (210 x 298 mm)

### CutStudio

Be sure to install this program.  
<http://startup.rolanddg.com/>

### Material

☞ P. 10 "Loadable Materials/Cutable Area"

## Step 1: Load the Material

This example uses flat, A4-size material.

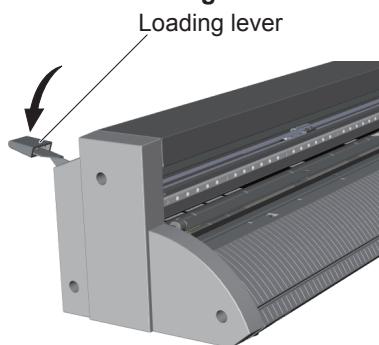


### MEMO

If using roll material or other material, refer to P. 134 "Using a Variety of Materials" and load the material.

## Procedure

**1 Lower the loading lever.**

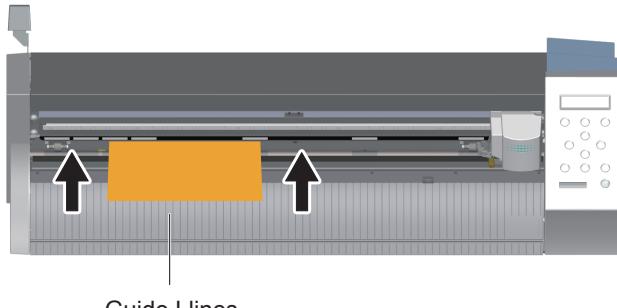


**NOTE**

Do not use excessive force when moving the loading lever. Doing so may damage it.

**2 Load the material.**

With the short edge of the material toward the front, pass the material through the front of the machine.



Guide Llines

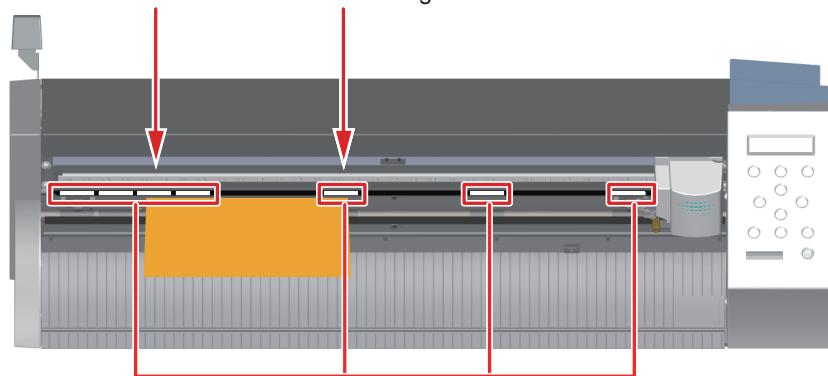
**3 Set the material in the position shown in the figure below.**

The position differs according to the size of the material to be loaded.

☞ P. 156 "Loading Position of Material"

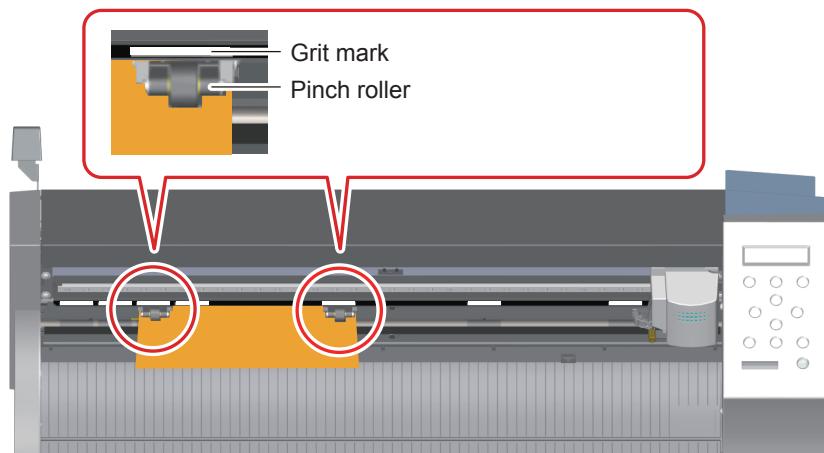
From the left to the 3rd

From the right to the 3rd



## Performing Cutting

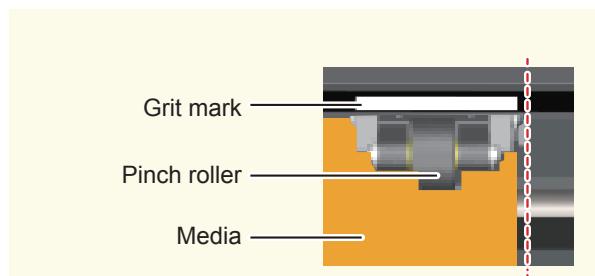
- ④ Move the pinch rollers to the edges of the material so that each one is within the grit marks.



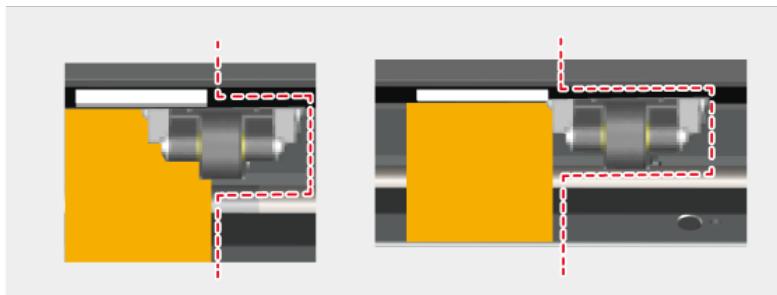
### MEMO

The pinch rollers must not extend beyond the grit marks

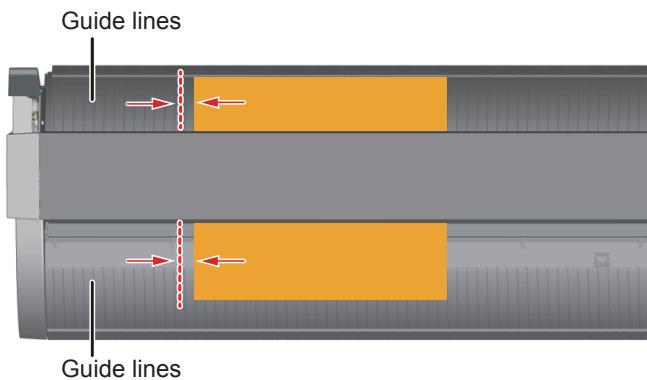
# OK



# Not OK

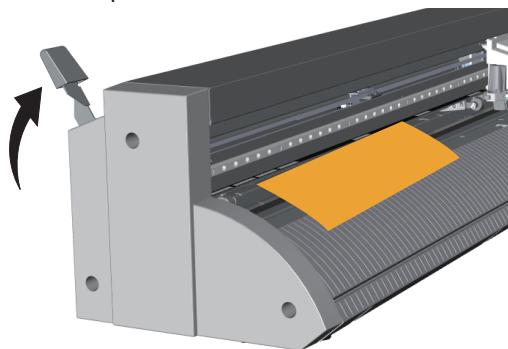


- 5 Align the left edge of the material so that it lies approximately parallel to the guide lines.**



- 6 Raise the loading lever.**

The material is secured in place.



**NOTE**

If the condition of the material is as described below, then stretch or flatten it before use.

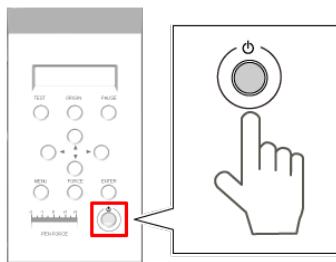
- The material is curled upward.
- The leading edge of the material is bent or creased

### Step 2: Turn on the Machine

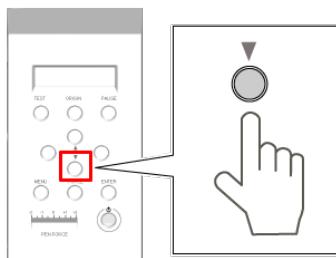
Get the machine ready to receive data from the computer.

#### Procedure

- 1 Press the power button .



- 2 Press , and select PIECE.

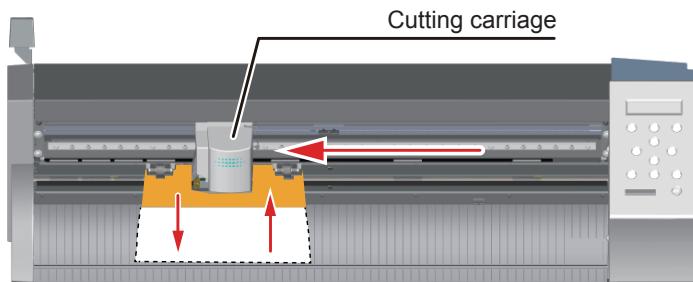


#### MEMO

If using roll material or special material, refer to "Using a Variety of Materials."

- 3 Press .

The cutting carriage moves to the left pinch roller position, and the material moves forward and backward.



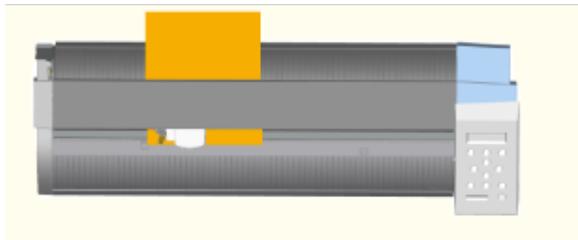
The cuttable width and length then appear on the display.

W : 180mm
L : 250mm

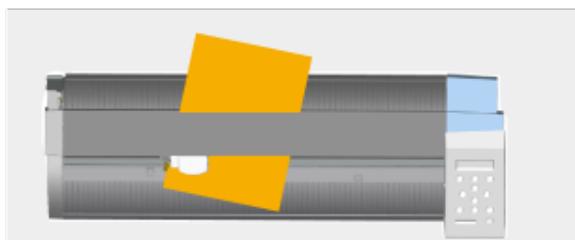
**4 After operation stops, check that the material has not come loose.**

☞ P. 22 "If the material has come loose"

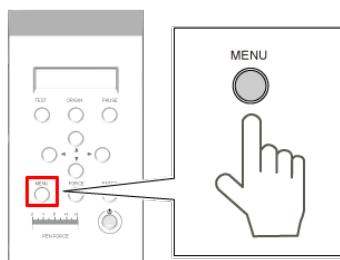
**OK**



**Not OK**



**5 Press .**



Cutting speed

Cutting direction

20cm/s
--------

50gf 0.250mm
--------------

∠A

Blade offset

Cutting force

This completes the loading of the media.

## Performing Cutting

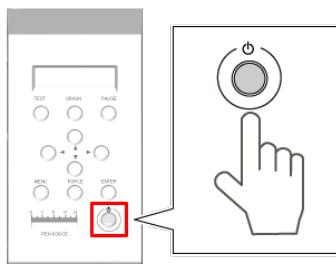
### If the material has come loose

If the material has come loose from the pinch rollers, complete the following procedure, and then redo this step from the beginning.

#### Procedure

- 1 Hold down the power button  for one second or longer.

If the power does not turn off, disconnect the AC adapter from the machine.



- 2 Lower the loading lever and remove the material.

- 3 Perform "Step 1: Load the Material."

☞ P. 16 "Step 1: Load the Material"

## Step 3: Prepare the Blade



### CAUTION

Never touch the tip of the blade with your fingers.

Doing so may result in injury.

#### Items required

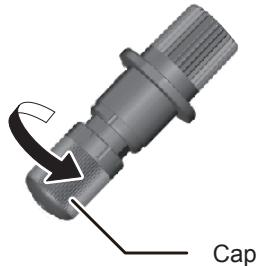
 Blade holder / Pin	 Blade
---	--

---

### Procedure

---

- 1** Turn the blade holder cap clockwise, and tighten it until it stops rotating.



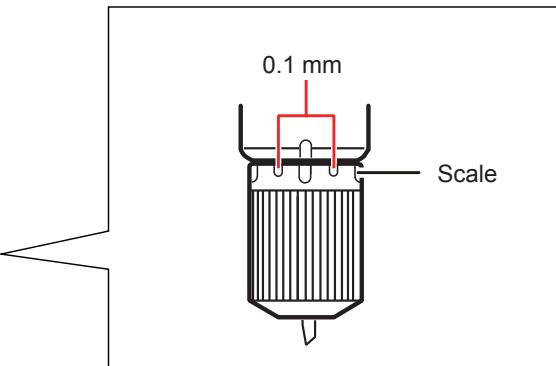
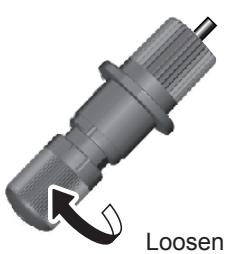
- 2** Insert the blade.



- 3** Adjust the amount of blade extension according to the material.

The amount of blade extension can be adjusted by 0.1 mm for each scale mark on the cap, and by 0.5 mm for a full turn.

☞ P. 144 "Adjusting the Cutting-in Amount"



### Material Types and Blade Adjustment

It may be necessary to adjust the amount of blade extension for some types of material, such as material with thin carrier paper. If you are not able to obtain stable cutting results, changing the amount of blade extension can yield better results. For more information, refer to the pages indicated below. For more information, refer to the pages indicated below.

☞ P. 155 "General Guide Regarding Cutting Conditions"

☞ P. 142 "Changing the Blade Force"

☞ P. 144 "Adjusting the Cutting-in Amount"

### Step 4: Install the Blade Holder

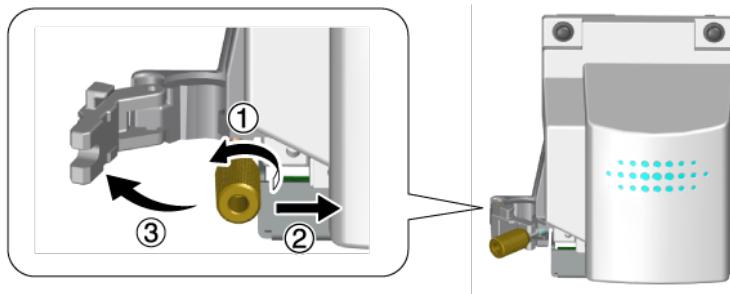
#### ⚠ CAUTION

Never touch the tip of the blade with your fingers.

Doing so may result in injury.

#### Procedure

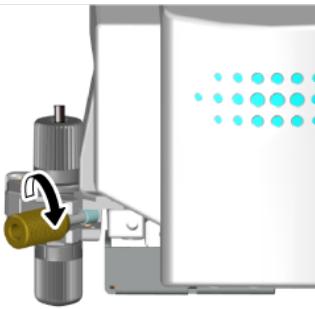
- ① Loosen the cutting carriage screw shown in the figure.



- ② Insert the blade holder.



- 3 Tighten the screw.

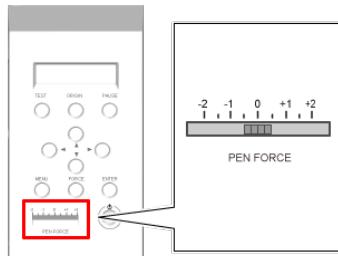


## Step 5: Perform a Cutting Test

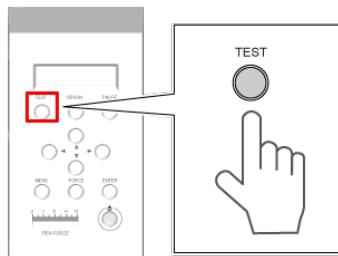
To obtain high-quality cutting results, carry out a cutting test to check the cutting quality for the material before you perform the actual cutting.

### Procedure

- 1 Check that the PEN FORCE slider is in its center setting (at "0" on the scale).

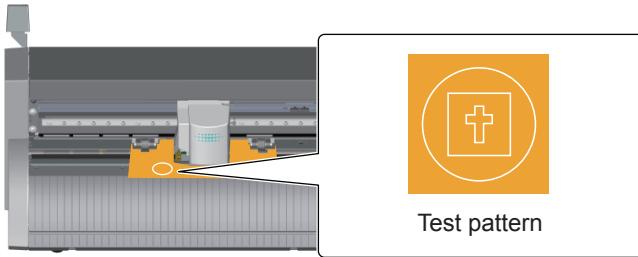


- 2 Hold down key for one second or longer.



## Performing Cutting

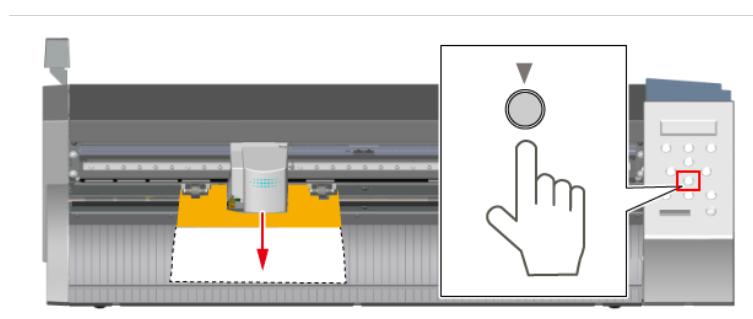
The test pattern is cut.



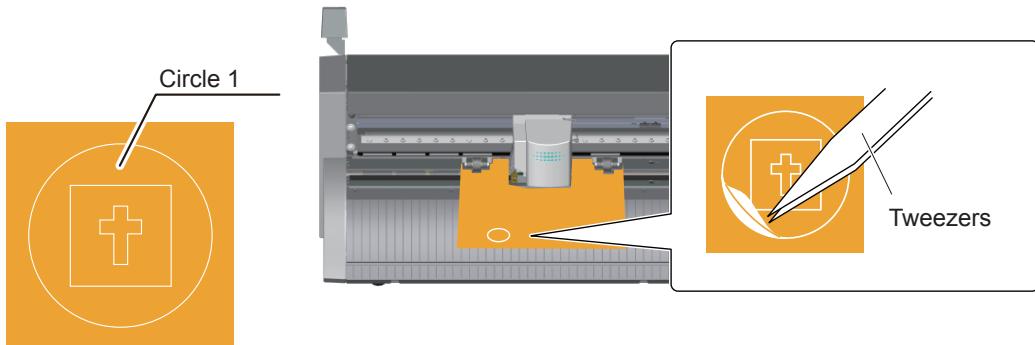
### MEMO

The position of the blade at the time the button is pressed is the cutting test start position. The position can be set as desired using the cursor keys.

- ③ Press to feed the material forward.



- ④ Peel off circle 1.



If circle 1 peels off alone  $\Rightarrow$  Step 5.



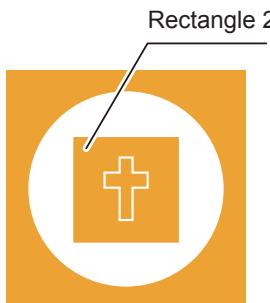
**OK**

If other shapes also peel off / The Machine Cuts the Carrier Paper  $\Rightarrow$  "Changing the Blade Force"

$\Leftrightarrow$  P. 142 "Changing the Blade Force"

## 5 Peel off rectangle 2.

Use the tweezers or a similar tool to peel off the cut shape, and check the cutting quality.



Rectangle 2

If the blade leaves faint traces on the material's carrier paper  $\Rightarrow$  Step 6: Set the Origin

$\Leftrightarrow$  P. 28 "Step 6: Set the Origin"

A cutting line remains thinly

**OK**



If the traces left by the blade are indistinct/too deep  $\Rightarrow$  "Changing the Blade Force"

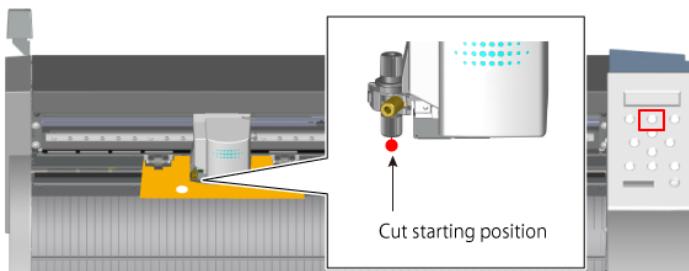
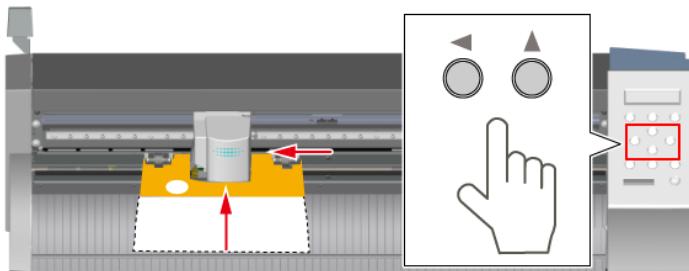
$\Leftrightarrow$  P. 142 "Changing the Blade Force"

### Step 6: Set the Origin

The origin is set in order to determine the cutting position. Move the cutting carriage to a place where it does not overlap the location where you made the cutting test.

#### Procedure

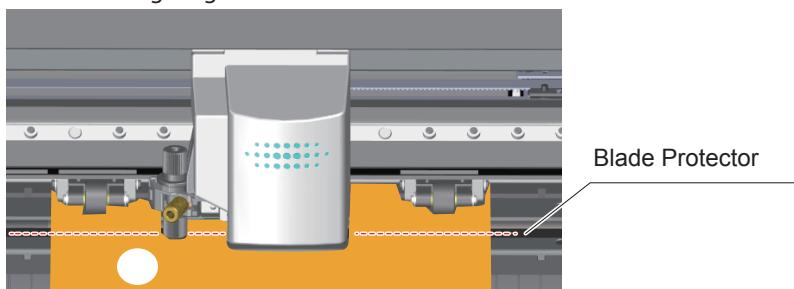
- 1 Press to move the cutting carriage to the location you want to set as the origin.



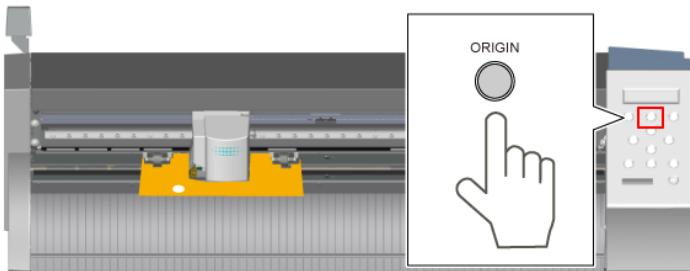
☞ P. 131 "Moving the Cutting Carriage at High Speed"

- 2 Press to move the material backward, and ensure that the cutting test traces are in front of the blade protector.

The blade moves over the blade protector. When the origin is set, the side behind the red line is set as the cutting range.



- 3 Hold down  for one second or longer.**



The display flashes.

**ORIGIN SET**

This completes all preparations for printing.

## Step 7-1: Create Cutting Data

### 1. Start CutStudio.

Use CutStudio cutting software to create cutting data.

- 1 Start CutStudio.**

#### Windows 8.1

At the bottom left of the Start screen, click  to display the Apps screen. Click .

#### Windows 8

Click on an empty area of the Start screen to display the app bar, and then click All apps. Click .

#### Windows Vista / 7

In the Start menu () , click All Programs (or Programs),click Roland CutStudio and

then click Cutstudio.

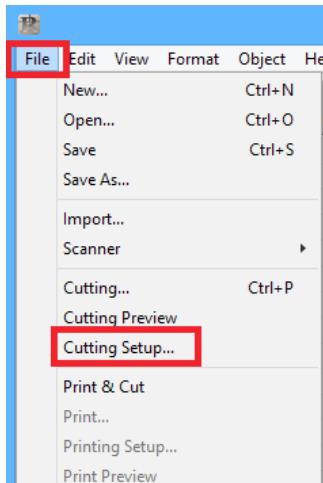
CutStudio starts.

## Performing Cutting

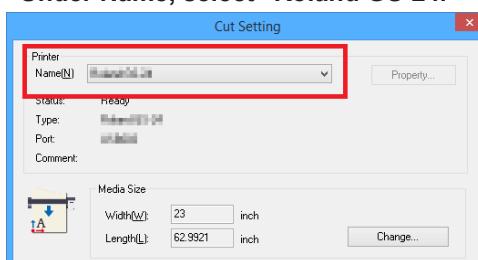
### 2. Set the Model

- From the File menu, click Cutting Setup.

The Cut Setting window appears.



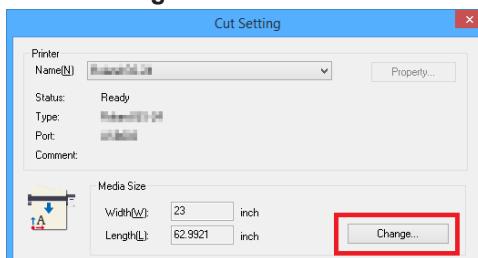
- Under Name, select "Roland GS-24."



## Step 7-2: Set Material Size

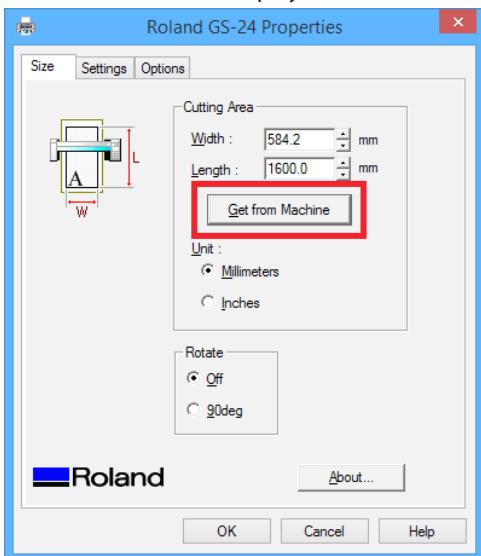
### Procedure

- Click Change of Media Size.



**② Click Get from Machine.**

The cuttable area is displayed.

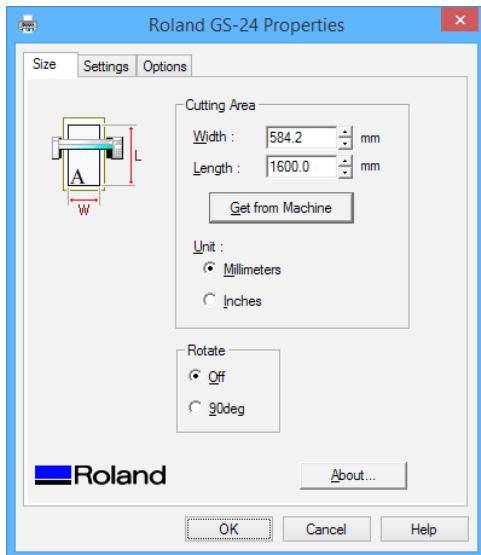
**MEMO**

If a message saying "The machine is not responding" is displayed, refer to P. 174 "The Machine Doesn't Run" and check the machine and computer settings.

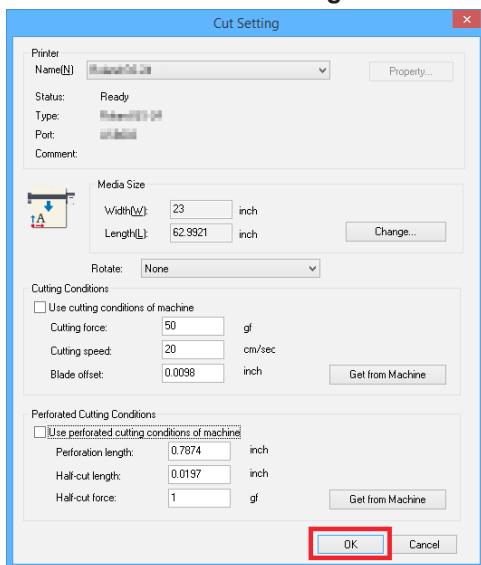


## Performing Cutting

### ③ Click OK.



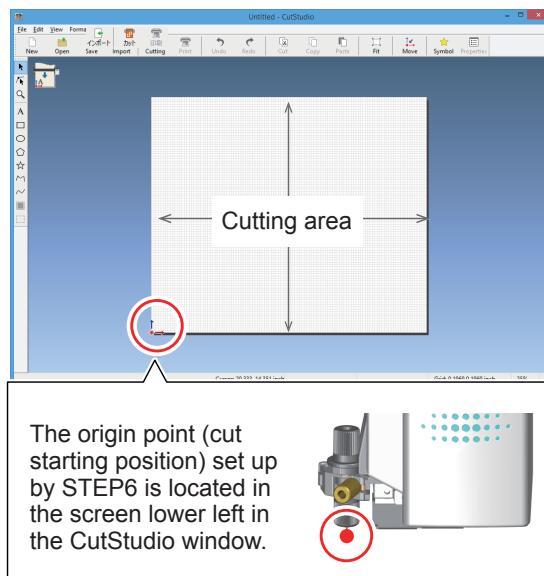
### ④ Click OK in the Cut Setting window.



The cutting area is set.

**MEMO**

The white area is the cutting area. Characters and shapes outside this area will not be cut.

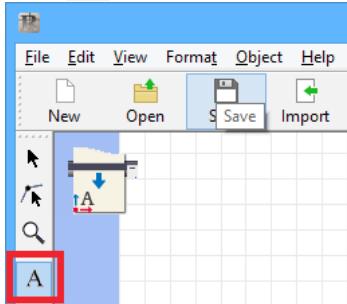


### Step 7-3: Enter Characters and Shapes

This example explains the procedure for entering the word "SALE" and creating a frame to make it easy to peel off afterward.

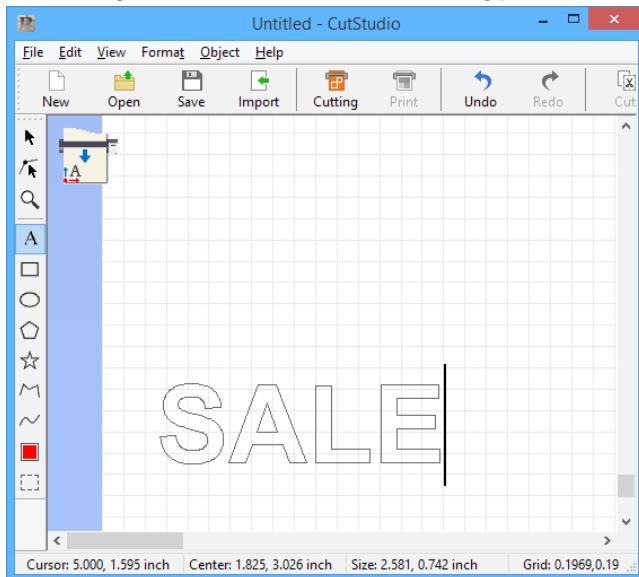
#### Procedure

- 1 Click A.



## Performing Cutting

- ② Click anywhere in the white area, and type "SALE."



- ③ Click , and change the size of the characters.

and appear around the characters. Drag the and around the text box to change the size of the characters.

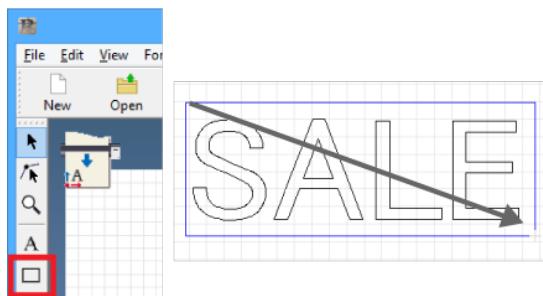


### MEMO

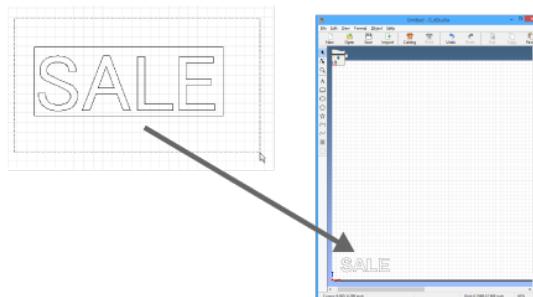
Select the object, and click in the menu bar. You can configure advanced settings in the Properties window.

**4 Click □ and draw a rectangle around "SALE."**

Click the upper left corner of the box, and drag it to the bottom right until it is the required size.

**5 Click ↗, select the characters and rectangle with the mouse, and move them.**

Move the object to the bottom of the screen close to the origin.

**MEMO**

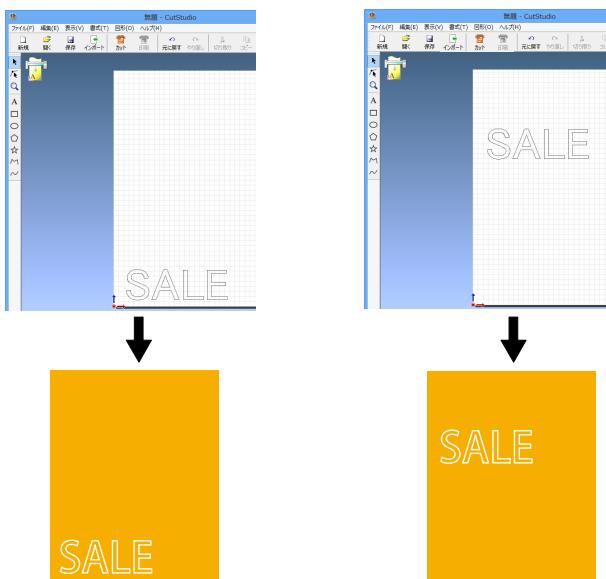
Select the object that you want to move to the origin, and then click in the menu bar to move it to the origin.

## Performing Cutting

### Position characters and shapes at the bottom of the screen

When positioning characters and shapes in CutStudio, it is better to position them starting from the bottom of the screen. This makes it possible to prevent feeding more of the material than needed. The leading edge of the loaded material is the bottom edge of the cutting area in the CutStudio screen. Therefore, positioning characters at the bottom of the CutStudio screen means the characters will be cut close to the leading edge of the material.

CutStudio screen



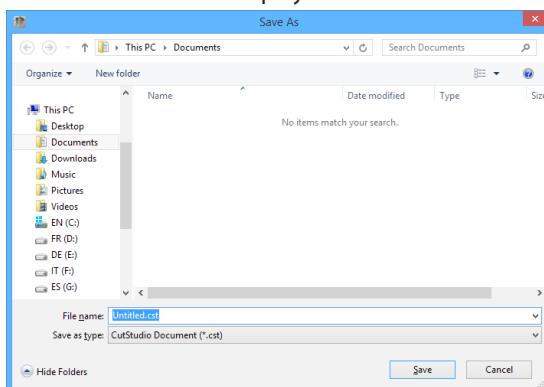
## Step 7-4: Save Cutting Data

### Procedure

- 1 Click .



The screen below is displayed.



**2 Select a folder where you want to save the data.**

Enter a file name, and click Save. The data you have created is saved.

**Important: The cutting area is not saved.**

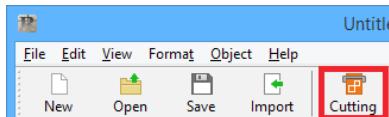
The cutting area you set in this procedure is not saved. The next time data is loaded, the cutting area must be set again from the Cut Setting menu.

## Step 8: Perform Cutting

Once the data has been prepared you are ready to start cutting.

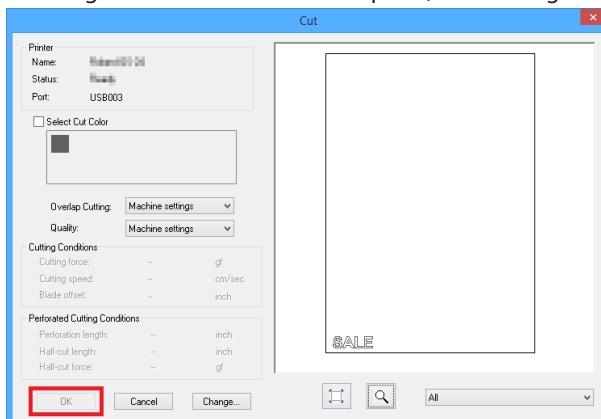
### Procedure

**1 Click** 



**2 Click OK.**

Cutting data is sent from the computer, and cutting starts.



## Performing Cutting

### MEMO

To change the cutting conditions, click Change, clear the Use cutting conditions of machine check box, and enter values.

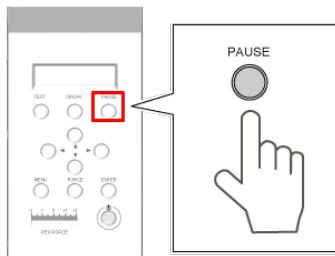
This completes the cutting procedure for the characters "SALE" and the rectangle.



## To Cancel Cutting

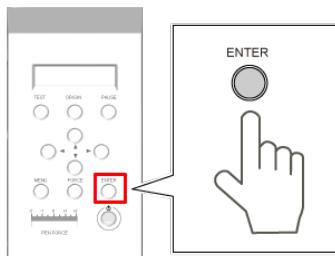
### Procedure

- 1 Press .



- 2 Hold down for one second or longer.

The data is canceled.

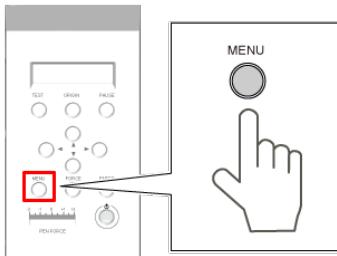


## Step 9: Remove the Material

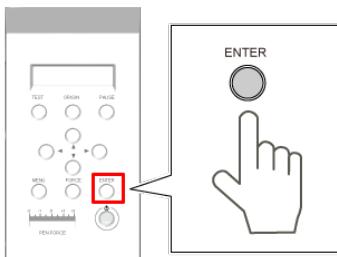
When cutting has finished, remove the material.

### Procedure

- 1 Press  several times to display the screen shown below.



- 2 Press .



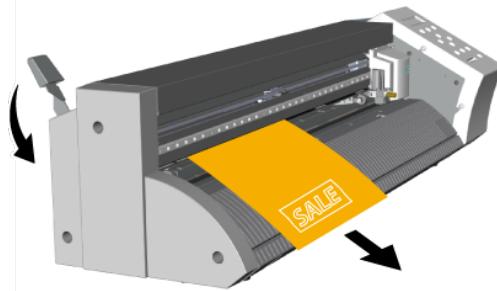
The cutting carriage returns to the home position.



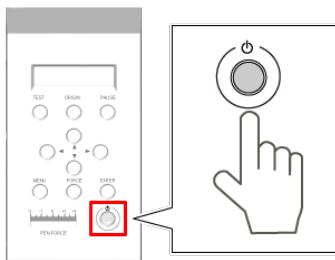
## Performing Cutting

---

- ③ Lower the loading lever and remove the material.



- ④ Hold down the power button  for one second or longer.  
The power to the machine is switched off.



- ⑤ Remove the unnecessary areas of the cut material.  
The cutting procedure is complete.

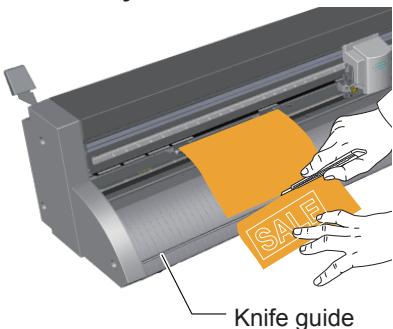


---

### To Remove Only the Cut Area

---

Use a utility knife or similar tool to cut along the knife guide.



### **3. Sending Data from Illustrator/CorelDRAW**

---

You can output cutting line data drawn with Adobe Illustrator or CorelDRAW to CutStudio. To output data it is necessary to install a plug-in.

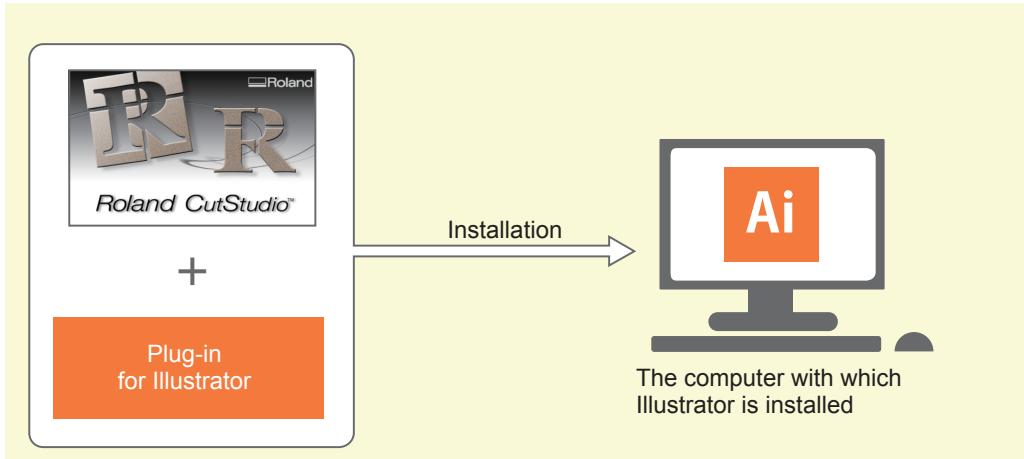
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# When Using Illustrator

## Required Items

- CutStudio
- Plug-in for Illustrator

☞ P. 42 "Installing Plug-in for Illustrator"



☞ P. 43 "Outputting Data Created in Illustrator (for CS5 and later)"

☞ P. 47 "Viewing Help (Illustrator)"

## Installing Plug-in for Illustrator

### Installation Procedure

Install from the following link.  
<http://startup.rolanddg.com/>

### Supported Versions

For information regarding the latest supported versions, visit the Roland DG Corp. website (<http://www.rolanddg.com/>).

## Outputting Data Created in Illustrator (for CS5 and later)

- \* The screenshots show an example of Illustrator CC, but the operation procedure is the same for other versions.

### NOTE

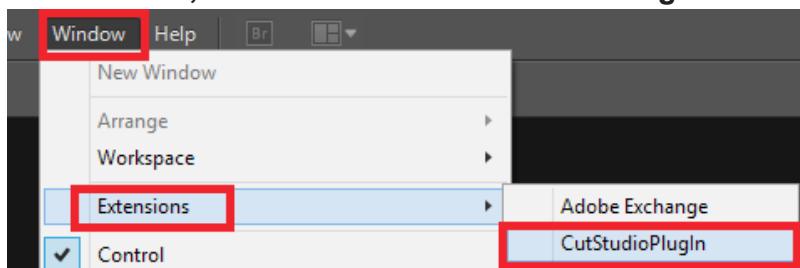
You must install Plug-in for Illustrator before proceeding.

☞ P. 42 "Installing Plug-in for Illustrator"

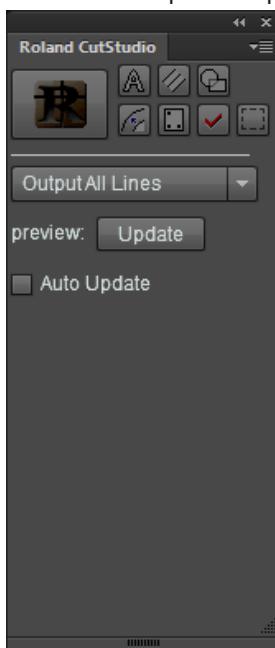
### Procedure

#### 1 Start Illustrator.

#### 2 In Illustrator, click Extensions > CutStudioPlugIn from the Window menu.



The "Roland CutStudio" palette appears.



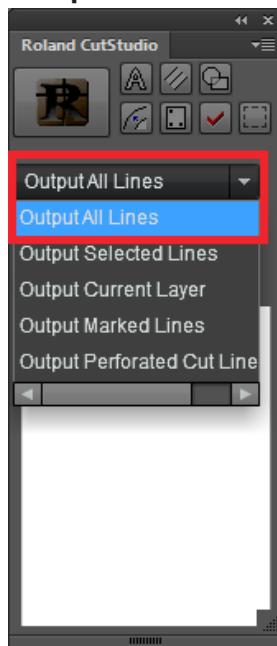
③ Create a new file and create a new design, or open an existing file.

In this example, you will create the design shown in the window below. Change the character to an outline.

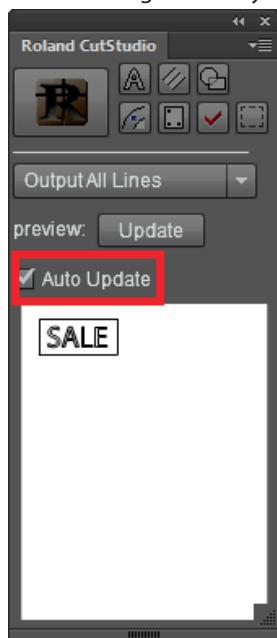


**MEMO**

When the character is chosen and of a palette is clicked, it'll change outline data.

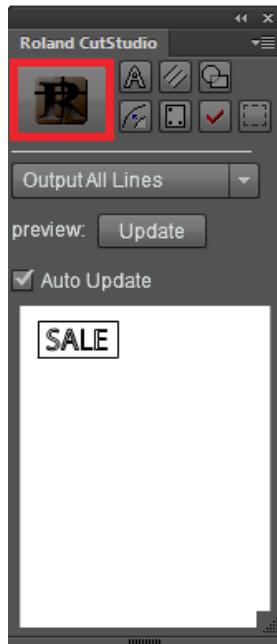
**④ Select Output All Lines.****⑤ On the Roland CutStudio palette, select the Auto Update check box.**

Check that the cutting line that you wish to output is shown on the preview screen.

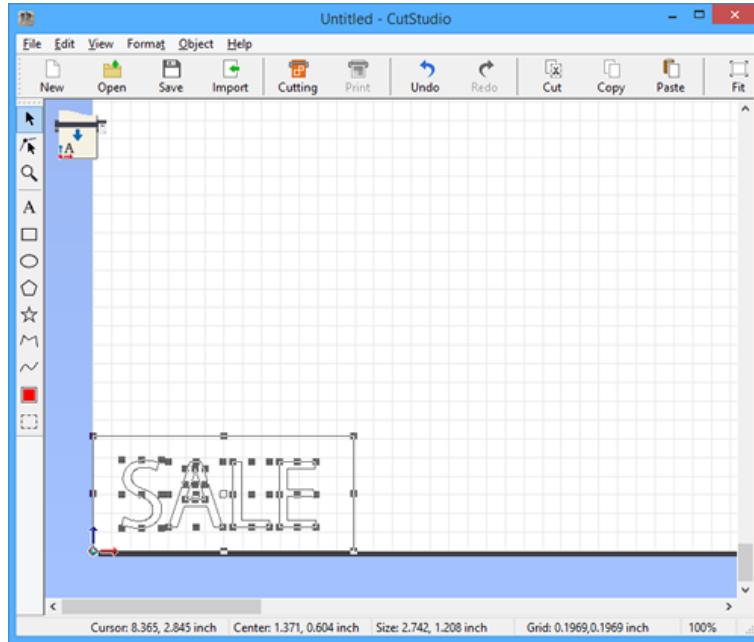


## When Using Illustrator

⑥ Click .



CutStudio starts, and the cutting line data is sent to CutStudio. The output data is always aligned at the origin of CutStudio regardless of the position on Illustrator. (Data with a crop mark is excluded.)



⑦ Perform cutting.

☞ P. 37 "Step 8: Perform Cutting"

When perform cutting from CutStudio, refer to the procedure of P. 16 "Performing Cutting".

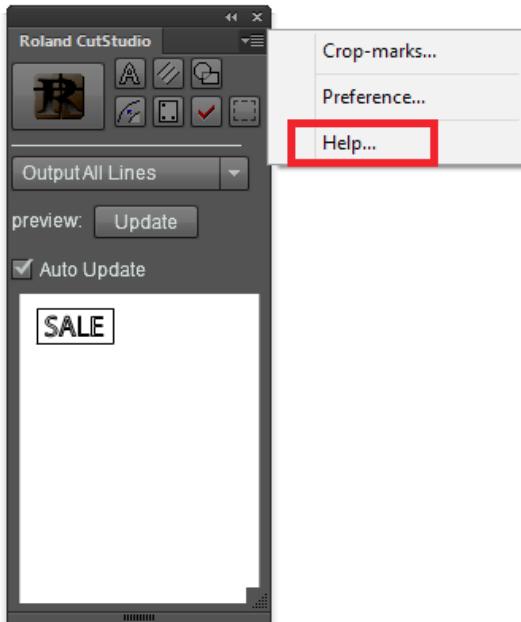
---

## Viewing Help (Illustrator)

---

For CS5 and later versions

On the Roland CutStudio palette, click , and then click Help.

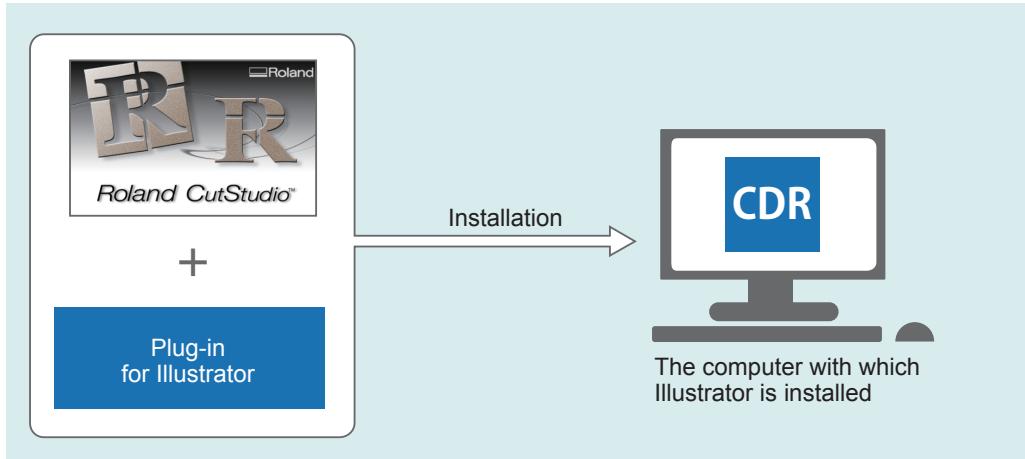


# When Using CorelDRAW

## Required Items

- CutStudio
- Plug-in for CorelDRAW

☞ P. 48 "Installing Plug-in for CorelDRAW"



☞ P. 48 "Outputting Data Created in CorelDRAW (for X3 and later)"

## Installing Plug-in for CorelDRAW

### Installation Procedure

Install from the following link.  
<http://startup.rolanddg.com/>

### Supported Versions

For information regarding the latest supported versions, visit the Roland DG Corp. website (<http://www.rolanddg.com/>).

## Outputting Data Created in CorelDRAW (for X3 and later)

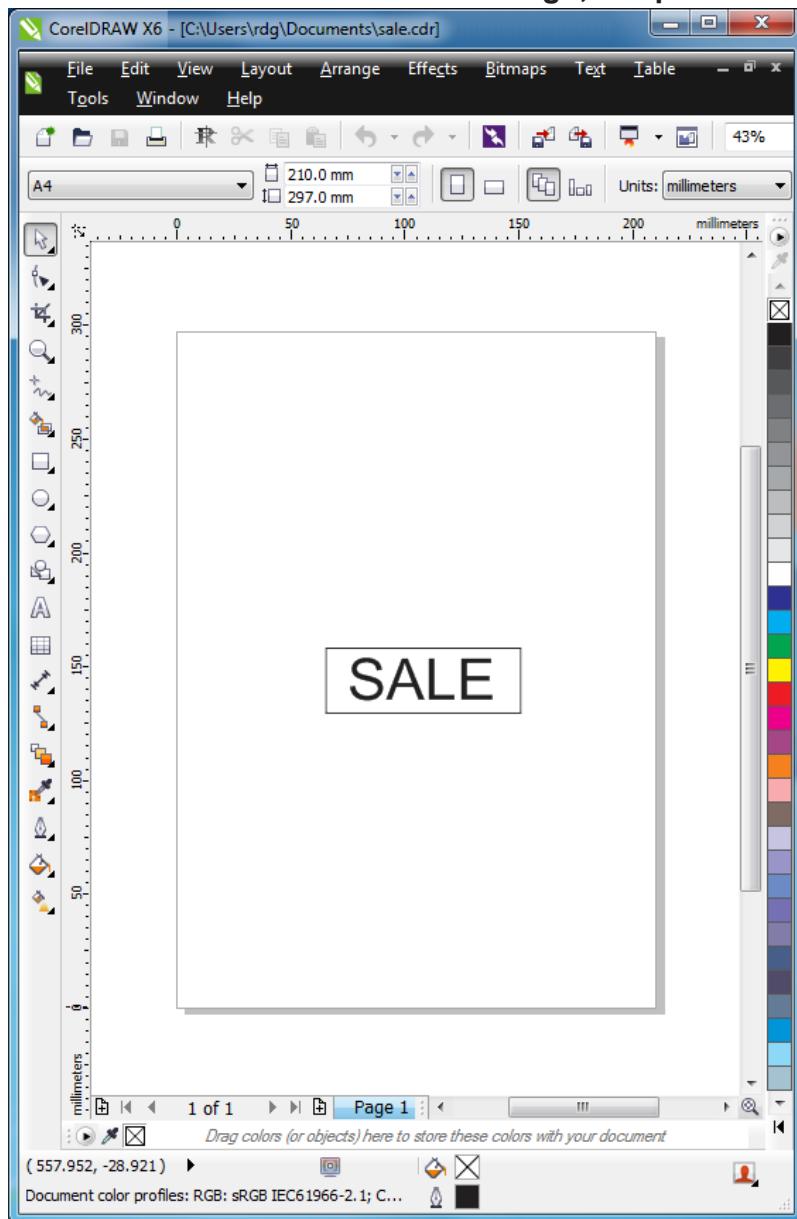
### NOTE

You must install Plug-in for CorelDRAW before proceeding.

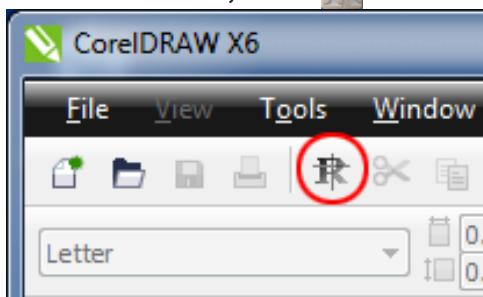
### Procedure

#### ① Start CorelDRAW.

**2 Create a new file and create a new design, or open an existing file.**

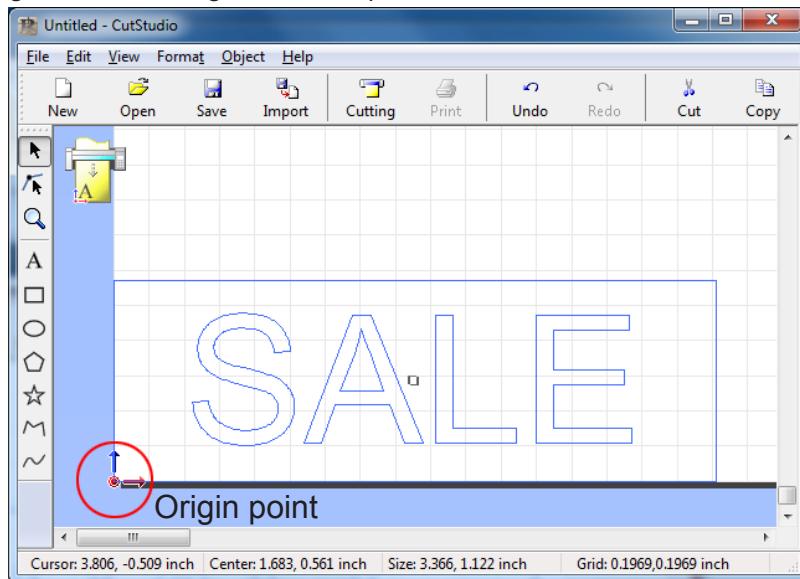


**3 On the toolbar, click .**



## When Using CorelDRAW

CutStudio starts, and the cutting line data is sent to CutStudio. The output data is always aligned at the origin of CutStudio regardless of the position on CorelDRAW.



### MEMO

The data created in CorelDRAW is output to CutStudio according to the following conditions.

- All graphics and text that are drawn are output to CutStudio.
- Text is automatically outlined when output to CutStudio.
- Line width, fill, dashed line, and arrow of lines are ignored.
- Lines without width are not output.
- Images are not output.

### ④ Perform cutting.

When perform cutting from CutStudio, refer to the procedure of P. 16 "Performing Cutting".

# **4. Printing & Cutting**

---

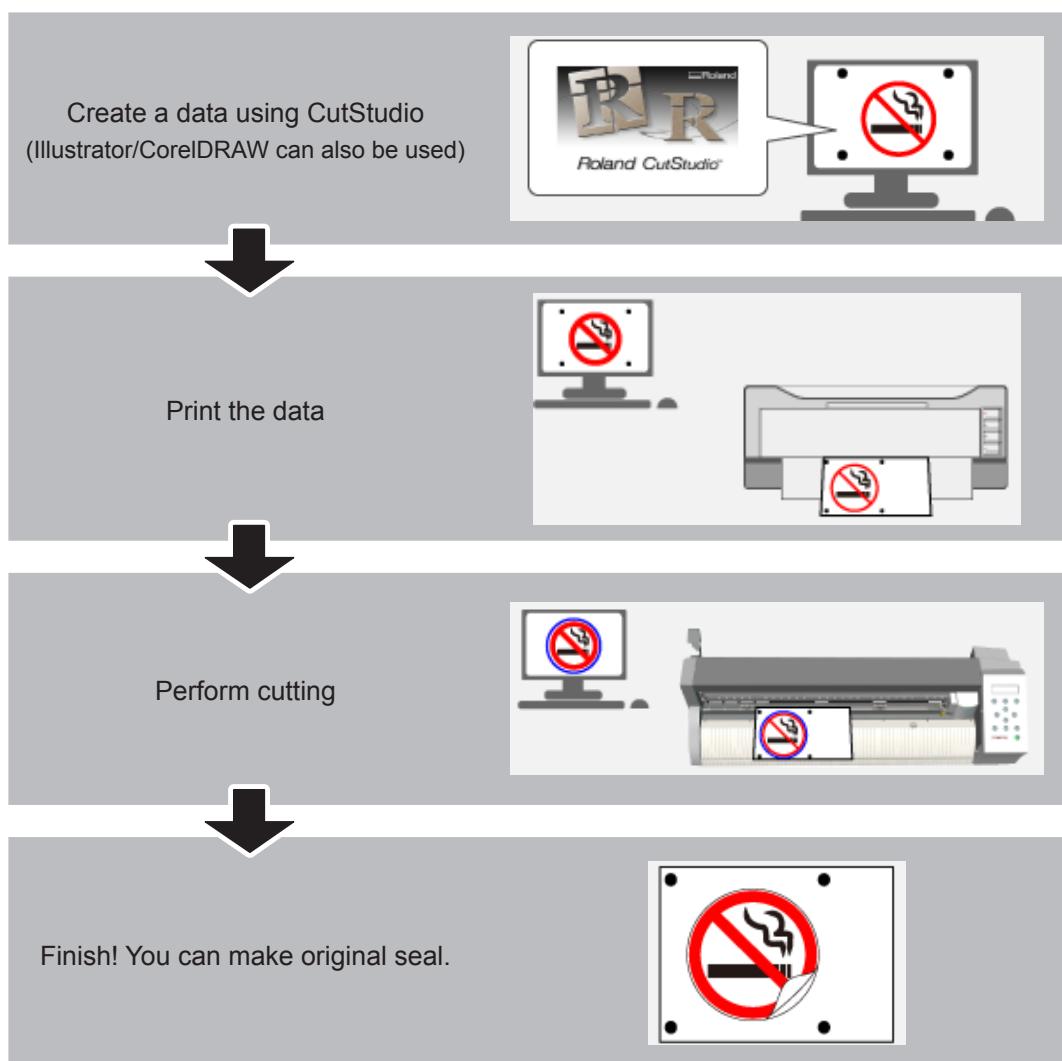
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# Printing and Cutting Overview

Your favorite picture can be printed and cut. This makes it easy to create your own original stickers.



## Flowchart



# Printing & Cutting Sample Data (CutStudio)

## Preparations for Printing and Cutting (CutStudio)

We recommend that you get comfortable with the printing & cutting procedure by using the sample data first. In this procedure, you will create the sticker shown below.



### Items required other than the machine

<b>Printer</b>	<b>The computer with which CutStudio is installed</b>
<b>Material (210 x 298 mm)</b>	<b>Sample data</b>

### Printer Requirements

You must use a laser or inkjet printer with a resolution of 720 dpi or greater.  
If the printed filled sections are blurred, crop marks will not be read correctly.

### Cut Studio

Be sure to install this program. Printing and cutting operations can be performed using only CutStudio.  
<http://startup.rolanddg.com/>

### Materials that can be Used for Printing & Cutting

This example uses A4-size material.

☞ P. 95 "Materials that can be Used for Printing & Cutting"

### Sample Data

Open the Sample.bmp file found in the CutStudio installation folder (usually located in the CutStudio folder under Program Files on the C drive).

☞ P. 177 "Sample Data Cannot be Found"

## Step 1: Set the Printing and Cutting Areas

### Procedure

#### ① Start CutStudio.

##### Windows 8.1

At the bottom left of the Start screen, click to display the Apps screen. Click .

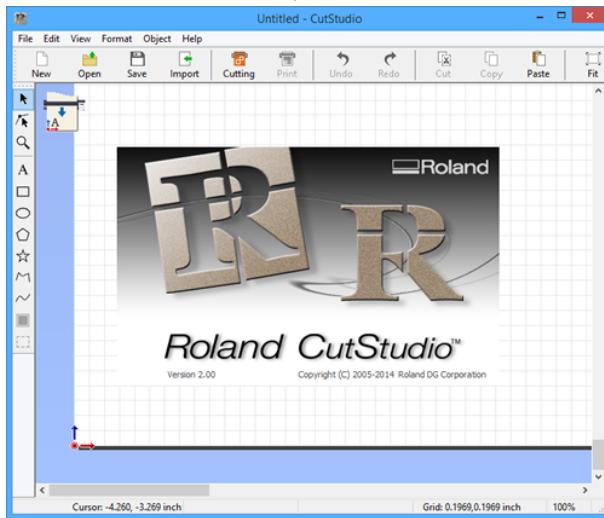
##### Windows 8

Click on an empty area of the Start screen to display the app bar, and then click All apps. Click .

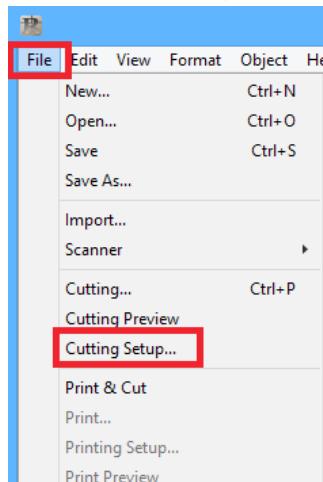
##### Windows Vista / 7

In the Start menu () , click All Programs (or Programs), click Roland CutStudio and then click Cutstudio.

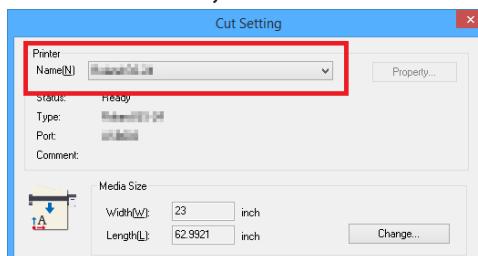
The screen below is displayed.



**2** From the File menu, click Cutting Setup.

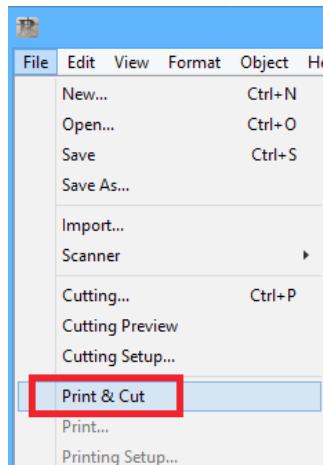


**3** Printer Name, select "Roland GS-24."



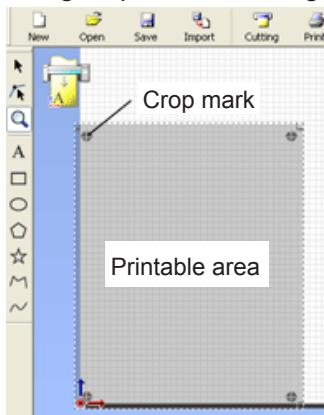
**4** Click OK.

**5** From the File menu, click Print & Cut.

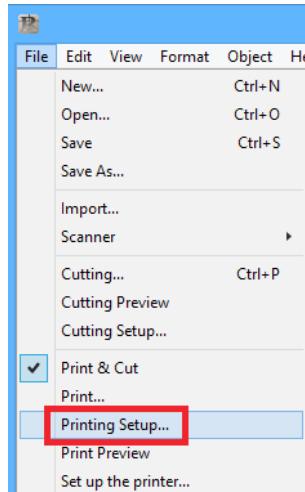


## Printing & Cutting Sample Data (CutStudio)

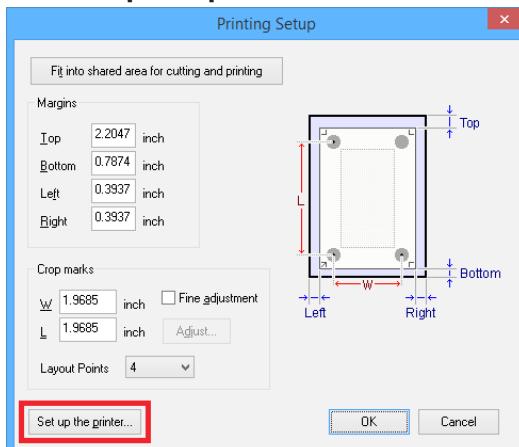
The printing area and crop marks are displayed on the screen. The printing area is displayed with dotted lines. This area corresponds to the paper size specified in Set up the printer excluding the margins specified in Printing Setup.



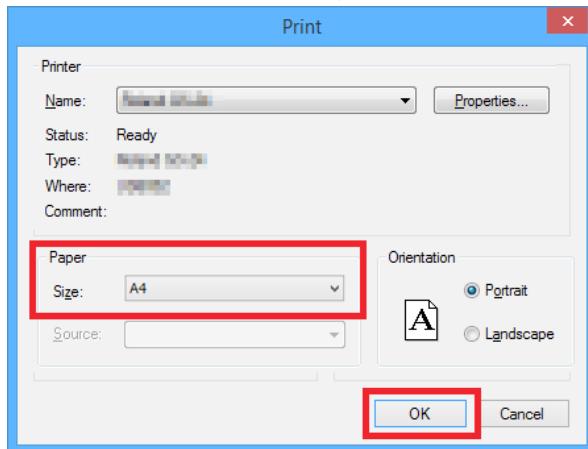
- 6 From the File menu, click Printing Setup.



- 7 Click Setup the printer.

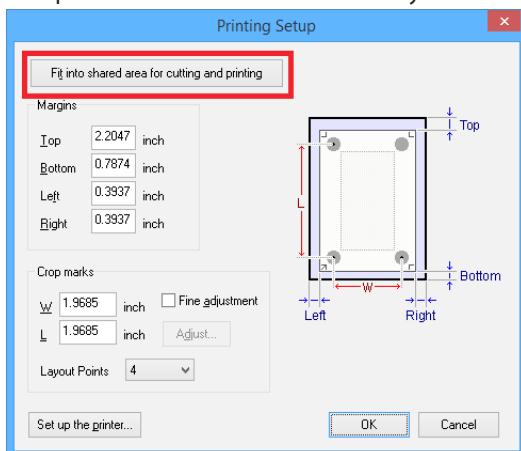


**8 Set the document size, Click OK.**



**9 Click Fit into shared area for cutting and printing.**

The cropmark location is set automatically.

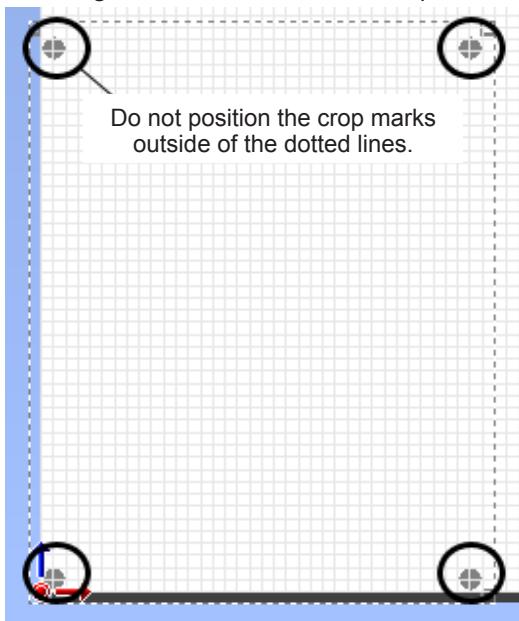


**MEMO**

When you set the margins and cropmarks, refer to P. 155 "General Guide Regarding Cutting Conditions".

### ⑩ Click OK.

After setting the values, check that the crop marks are within the printing area.



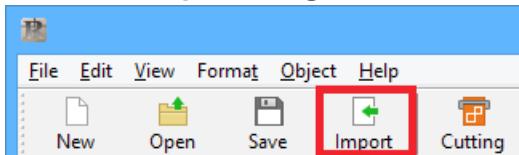
## Step 2: Import the Sample Data

### File Formats that can be Imported into CutStudio

- JPEG
  - JPEG files saved in CMYK format cannot be imported.
- BMP
- AI and EPS (Illustrator 8.0 versions)
  - Only Illustrator 8.0/EPS 8.0 versions can be imported. If using a higher version, save files as a lower version before importing.

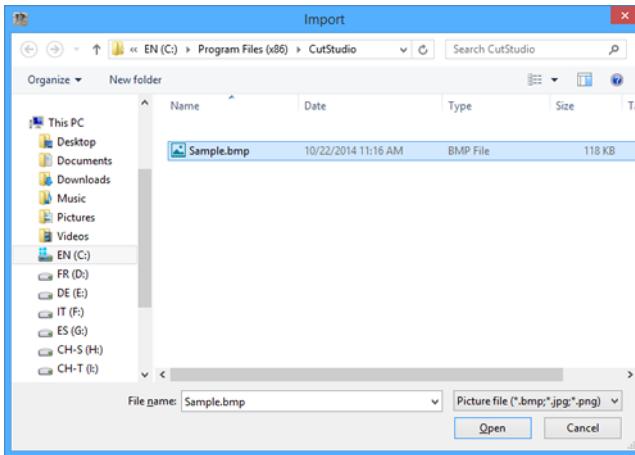
### Procedure

#### ① Click to import image data.



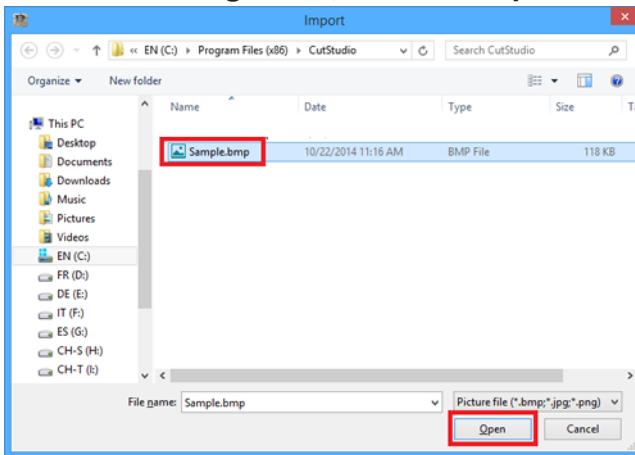
In this example, you will open the Sample.bmp file found in the CutStudio installation folder (usually located in the CutStudio folder under Program Files on the C drive).

The screen below is displayed.

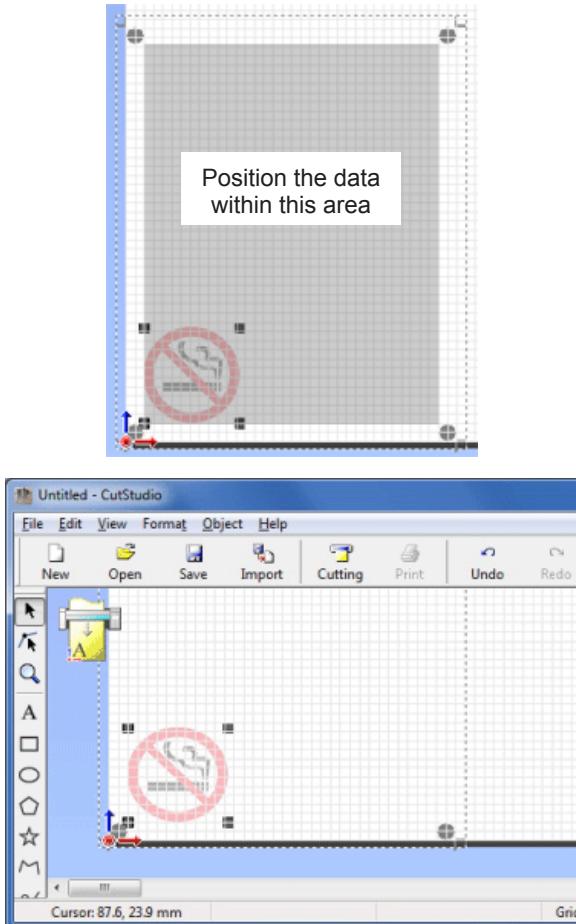


- ☞ P. 177 "Sample Data Cannot be Found"
- ☞ P. 176 "Illustrator Data Cannot be Imported"

## ② Select the image data, and click Open.



**③ Position the image data in the area within the crop marks.**



**MEMO**

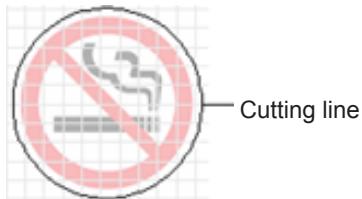
You can change the density of the imported image. For more details, refer to P. 176 "Changing the Darkness of an Aligned Image".

## Step 3: Draw the Cutting Lines

### Procedure

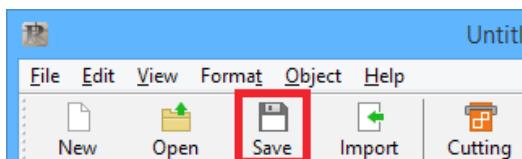
- 1 Select , and draw the cutting lines.

If using the sample data, draw the line as shown below.



- 2 Click .

Save the data.

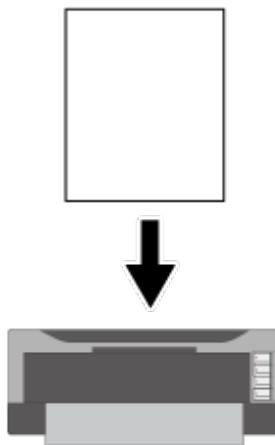


## Step 4: Perform Printing

### Procedure

- 1 Load the material in the printer.

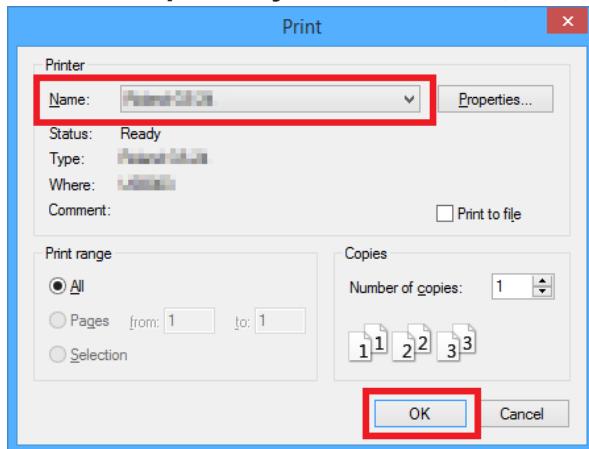
For details on how to load the material, see the instruction manual for your printer.



\* When expanded/reduced printing is enabled, disable it. Print at 100% scale.

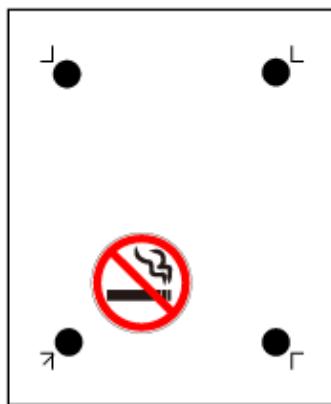
② Click .

③ Select the printer you want to use, and click OK.



The image is printed as shown in the figure below.

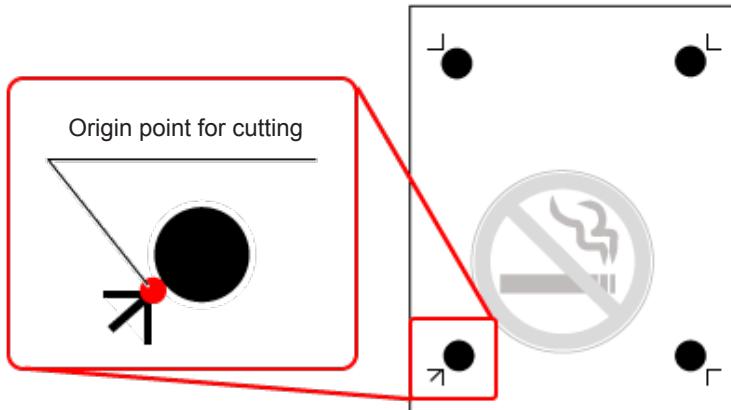
\* Cutting lines are not printed.



## Step 5: Load the Printed Material

### Procedure

- 1 Check the origin point for cutting of the printed material.

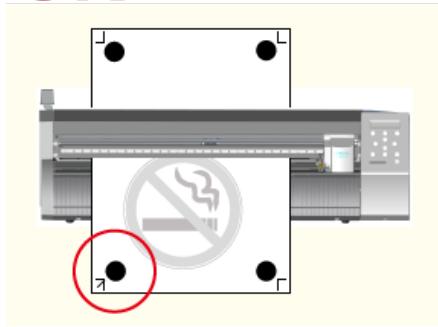


- 2 Set the origin point for cutting at the bottom left of the material, and load the material in the machine.

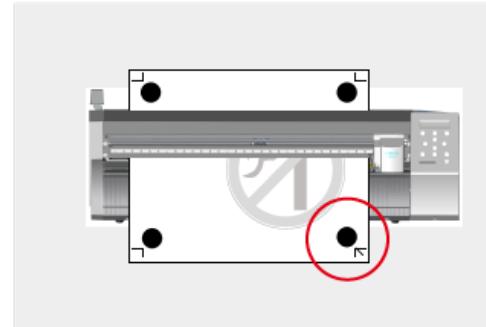
#### NOTE

If the material is loaded in the wrong direction, the machine cannot read the crop marks.

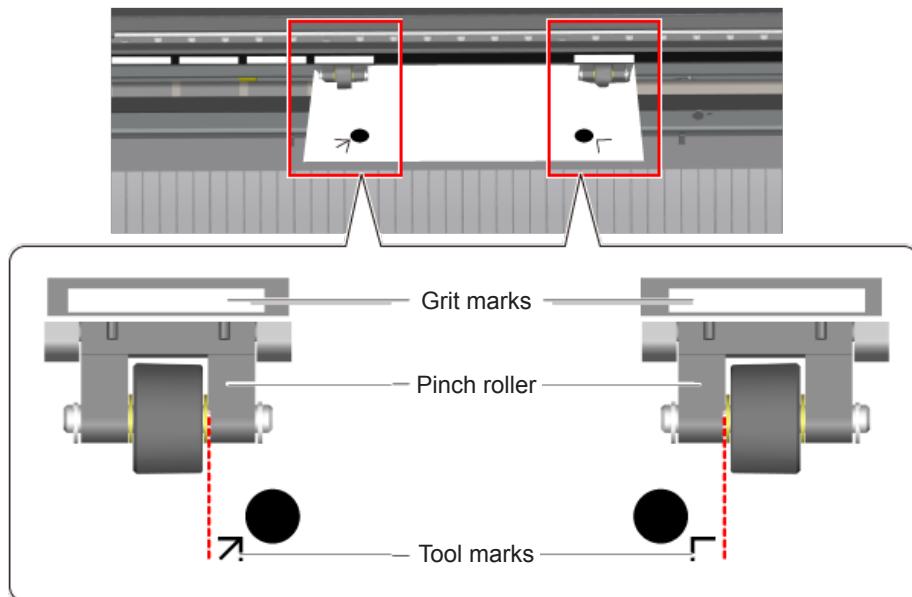
**OK**



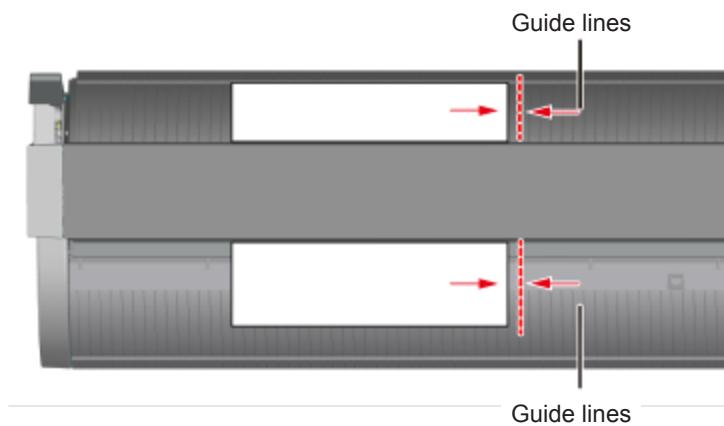
**Not OK**



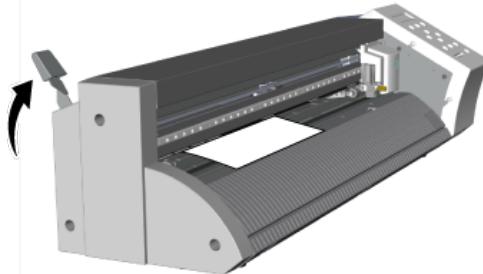
- ③ Position the pinch rollers as shown in the figure.**
- ① Position the pinch rollers outside the tool marks.
  - ② Be sure that both edges of the material and the pinch rollers are inside the grit marks.



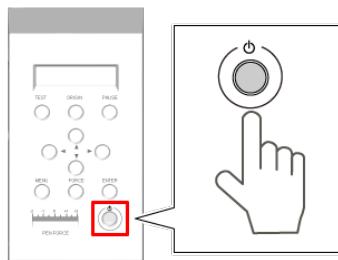
- ④ Align the left edge of the material so that it lies approximately parallel to the guide lines.**



- 5 Raise the loading lever to secure the material in place.



- 6 Press to turn on the power.



- 7 Select the type of material.

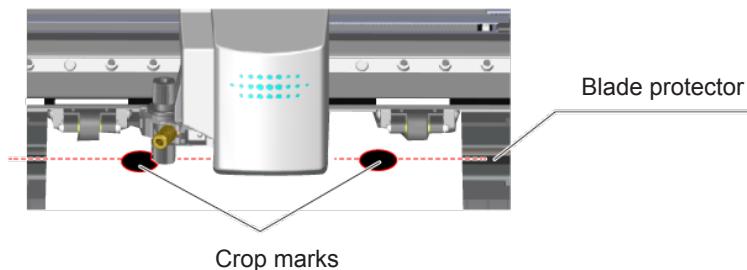
SELECT SHEET	▲
*PIECE	▼

- 8 Press .

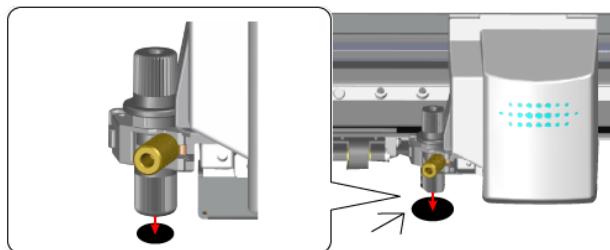
The cuttable width and length are displayed.

W : 180mm
L : 250mm

- 9 Press to move the material and position the crop marks above the blade protector.



- ⑩ Press to position the tip of the blade over the center of the bottom left crop mark.



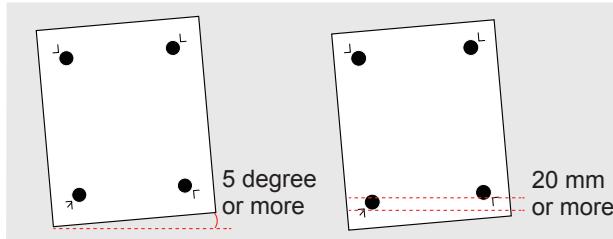
**NOTE**

Crop marks cannot be read in the situations indicated below.

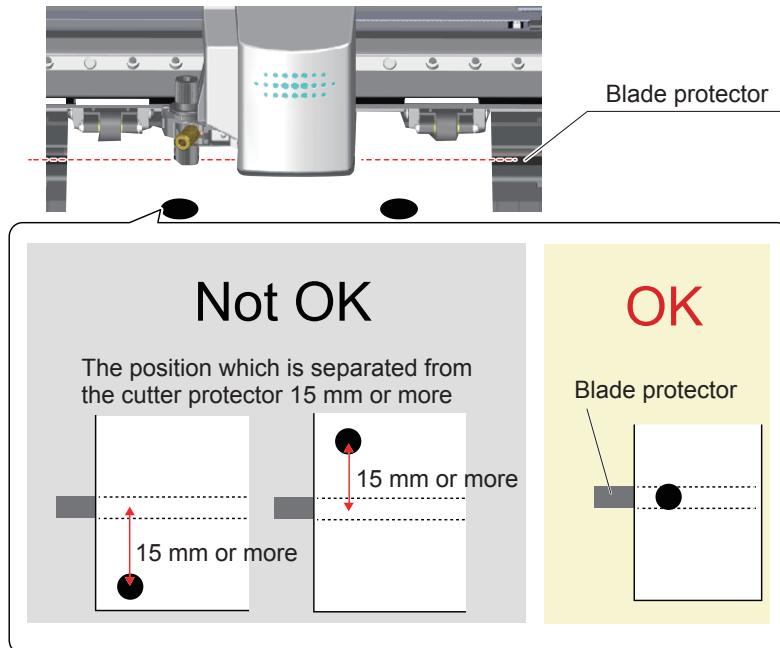
If any of the following situations occur, remove the material and then reload it.

- The left and right crop marks are slanted by 5 degrees or more with respect to the moving direction of the cutting carriage.
- The crop marks are offset by 20 mm in the material-feed direction.

## Not OK

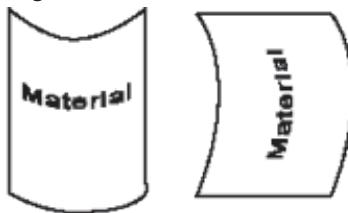


- The crop marks are separated from the blade protector by a distance of 15 mm or more.



The material sometimes curls when it is printed on the printer.

Do not use material that is curled as shown in the figure. The crop marks may not be read. If this happens, straighten out the material before loading it on the GS-24.



## Step 6: Set the Alignment Method (Sensor Mode)

Position the crop marks automatically using the machine's integrated sensor.

### Procedure

- Press several times to display the screen shown in the figure.

UNSETUP		
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- Press several times to display the screen shown in the figure.

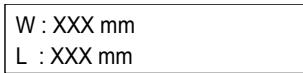
CROP MARK		
<SENSOR MODE>		

- ③ Press the button, and select SENSOR MODE.



- ④ Press to select the setting.

Press to return to the screen shown in the figure.



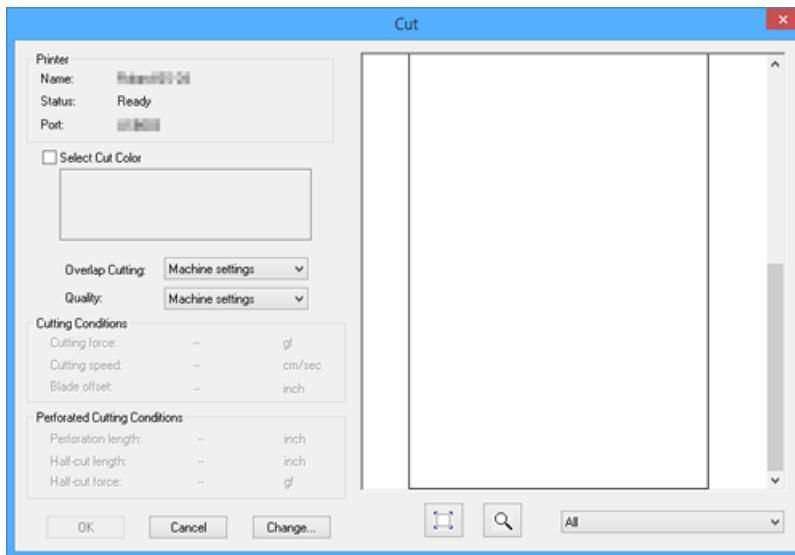
## Step 7: Perform Cutting (Sensor Mode)

### Procedure

- ① Set the size of the material.

☞ Step 7-2: Create Cutting Data

- ② Click .



### MEMO

To change the cutting conditions, click Change, clear the Use cutting conditions of machine check box, and enter values.

**③ Click OK.**

The cutting data is sent to the machine. When the machine receives the data, it automatically reads the crop marks using a sensor, and then starts cutting.

**NOTE**

If the sensor fails to read the crop marks

If the sensor fails to read the crop marks, the screen in the figure appears. If this screen appears, proceed to P. 181 "Crop Marks Cannot be Read". If this does not resolve the issue, refer to P. 91 "Cutting in Tool Mode (1)", and perform positioning in tool mode.

**④ Remove the cut material.**

☞ P. 39 "Step 9: Remove the Material"

The cutting procedure is complete.



# Printing & Cutting Sample Data (Illustrator)

## Preparations for Printing and Cutting (When Using Illustrator)

We recommend that you get comfortable with the printing & cutting procedure by using the sample data first. In this procedure, you will create the sticker shown below.



### Items required other than the machine

Printer	Material (210 x 298 mm)	Sample Data
<p>The computer with which Plug-in for Illustrator and Illustrator are installed.</p>		

### Printer Requirements

You must use a laser or inkjet printer with a resolution of 720 dpi or greater.  
If the printed filled sections are blurred, crop marks will not be read correctly.

### Cut Studio/Plug-In for Illustrator

Be sure to install this program.

[P. 42 "Installing Plug-in for Illustrator"](#)

### Material

This example uses A4-size material.

[P. 95 "Materials that can be Used for Printing & Cutting"](#)

## Sample Data

Open the Sample.bmp file found in the CutStudio installation folder (usually located in the CutStudio folder under Program Files on the C drive).

☞ P. 177 "Sample Data Cannot be Found"

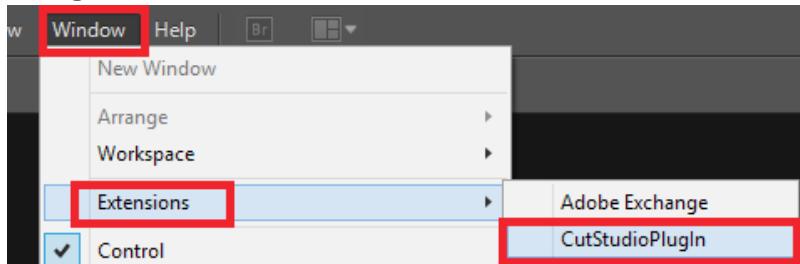
## Step 1: Set the Printing and Cutting Areas

### Procedure

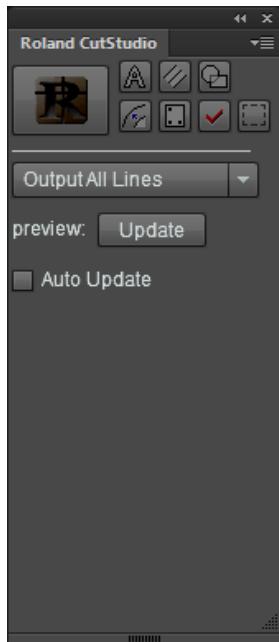
**1 Start Illustrator and open a new document.**

Set the artboard.

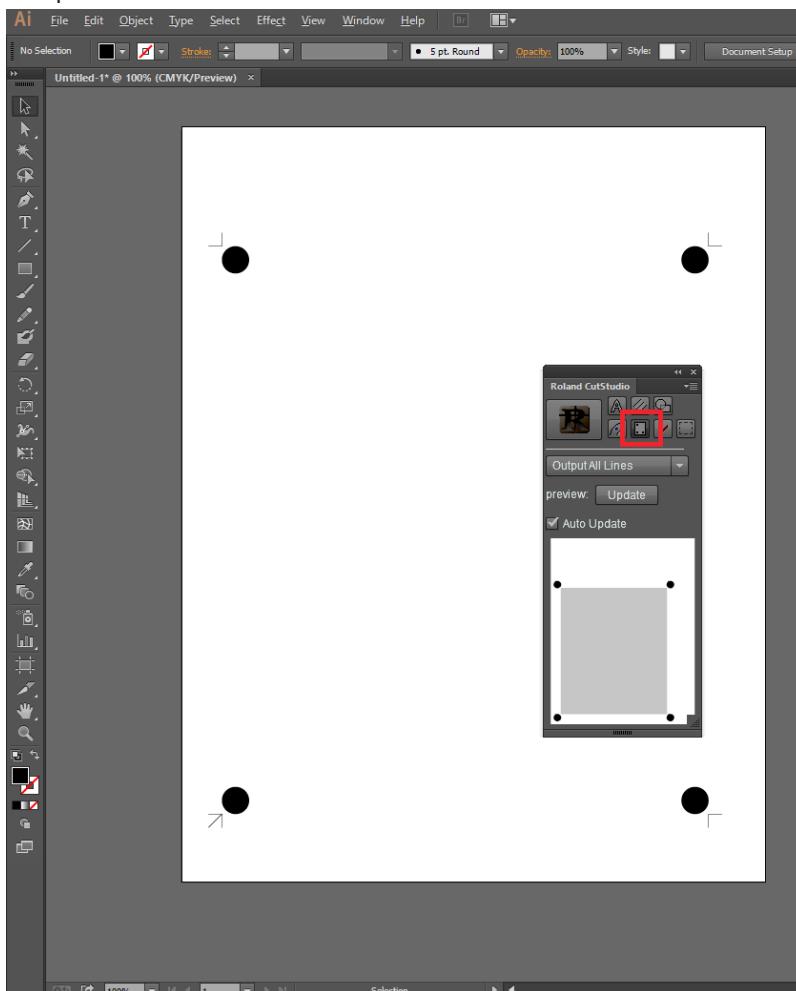
**2 From the Window menu, click Extensions, and then click CutStudio-Plugin.**



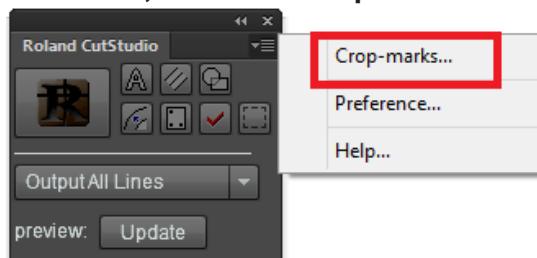
The "Roland CutStudio" palette appears.



- ③ On the palette, click .
- Crop marks are inserted in the artboard.

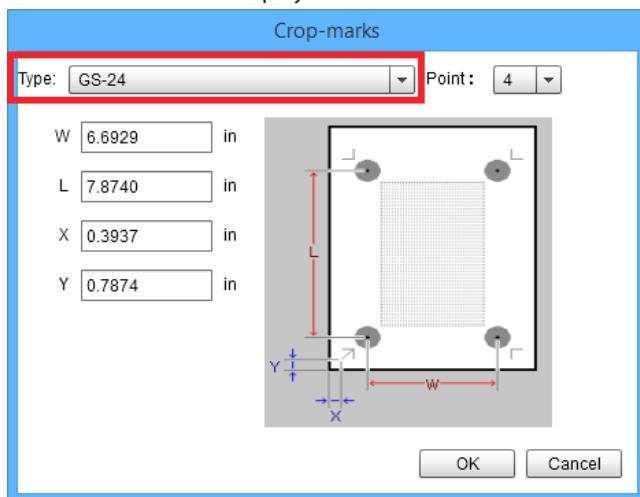


- ④ Click , and click Crop-marks.



**5 In the Type menu, select "GS-24." In the Point, select "4."**

The screen below is displayed.



**MEMO**

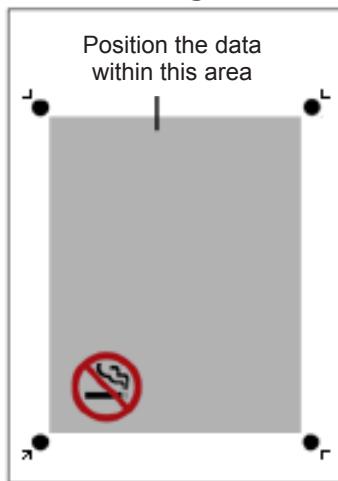
Set the number of the crop marks.

**6 Set the margins.**

☞ P. 85 "Setting the Margins and the Distance between Crop Marks"

## Step 2: Position the Sample Data

Position the image data in the area within the crop marks.

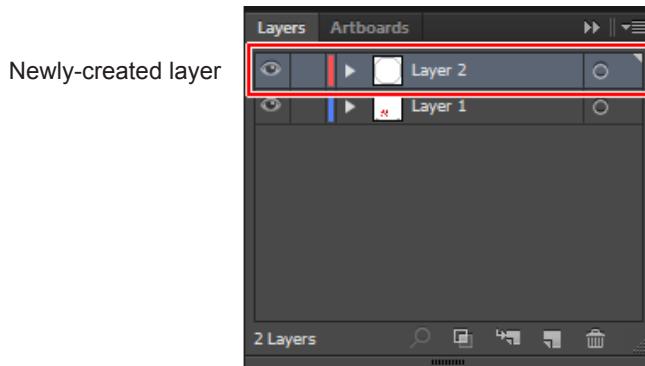


## Step 3: Draw the Cutting Lines

### Procedure

#### 1 Draw the cutting lines.

Create a new layer for the cutting lines and draw the cutting lines there.



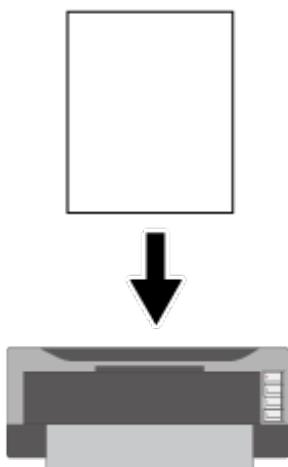
#### 2 Save the data.

## Step 4: Perform Printing

### Procedure

#### 1 Load the material in the printer.

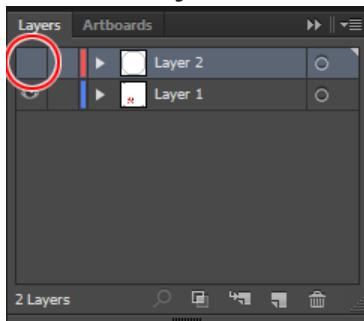
For details on how to load the material, see the instruction manual for your printer.



#### Note

When expanded/reduced printing is enabled, disable it. Print at 100% scale.

#### 2 Hide the layer containing the cutting lines.



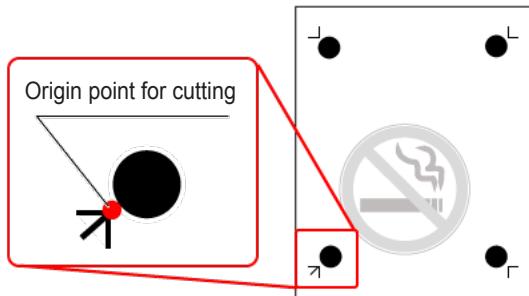
#### 3 From the File menu, click Print.

The image is printed as shown in the figure below.

## Step 5: Load the Printed Material

### Procedure

- 1 Check the origin point for cutting of the printed material.

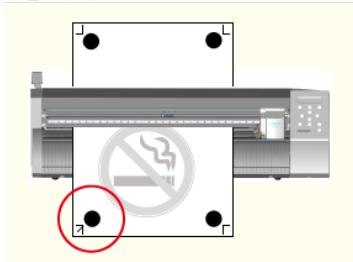


- 2 Set the origin point for cutting at the bottom left of the material, and load the material in the machine.

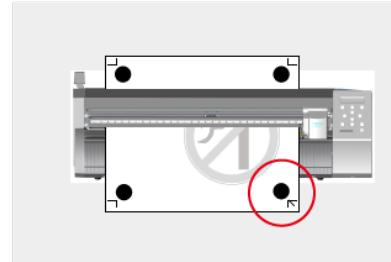
#### NOTE

If the material is loaded in the wrong direction, the machine cannot read the crop marks.

**OK**

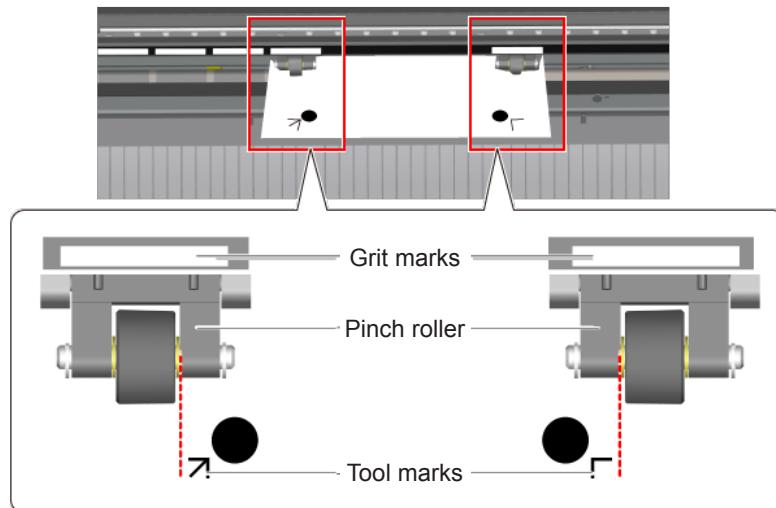


**Not OK**

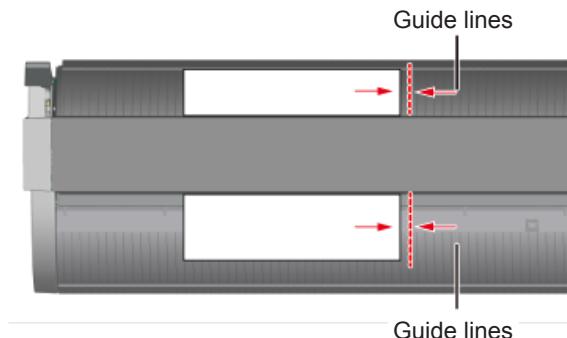


**3 Position the pinch rollers as shown in the figure.**

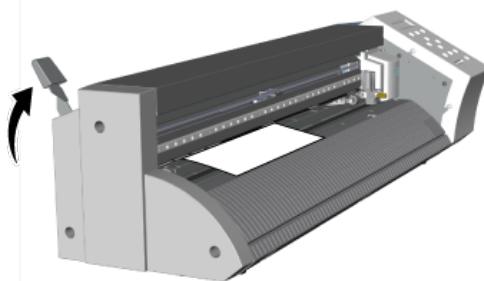
- ① Position the pinch rollers outside the tool marks.
- ② Be sure that both edges of the material and the pinch rollers are inside the pinch-roller position-verification marks.



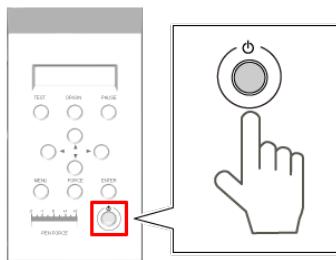
**4 Align the right edge of the material so that it lies approximately parallel to the guide lines.**



**5 Raise the loading lever to secure the material in place.**



- 6 Press the power button .



- 7 Select the type of material.

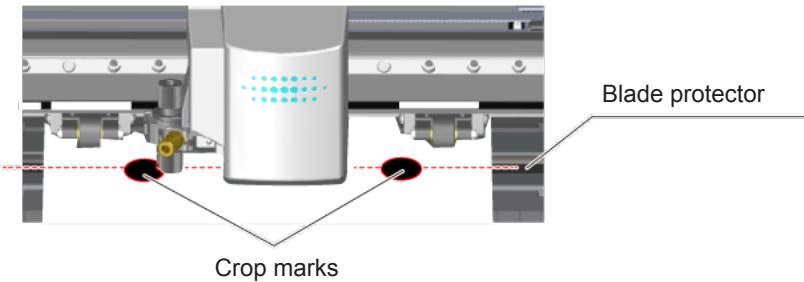
SELECT SHEET	◆
*PIECE	◀

 P. 134 "Using a Variety of Materials"

- 8 Press .

The cuttable width and length are displayed.

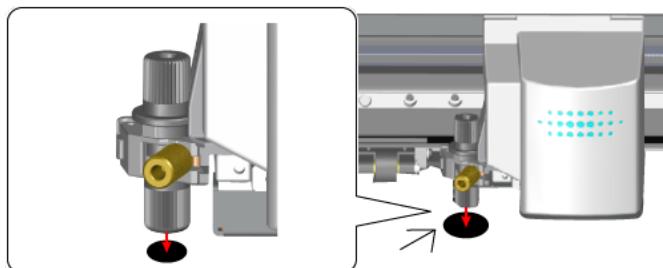
W : 180mm
L : 250mm

- 9 Move the material using  

Blade protector

Crop marks

- 10 Press   to position the tip of the blade over the center of the bottom left crop mark.

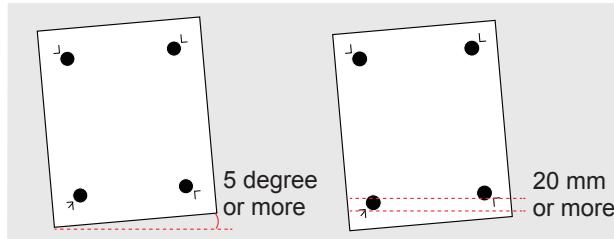


**NOTE**

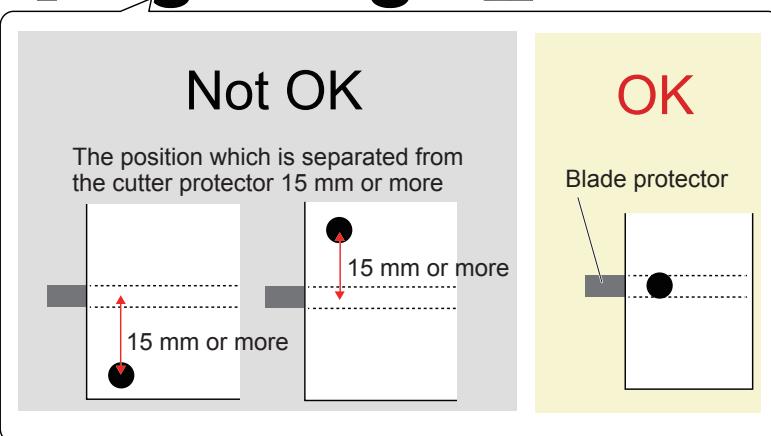
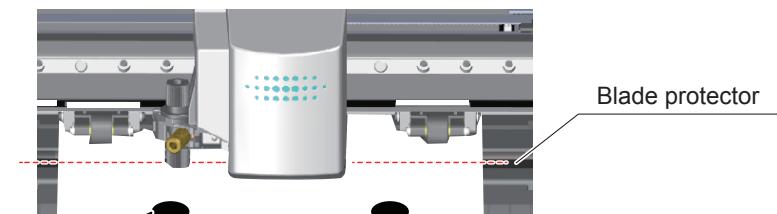
Crop marks cannot be read in the situations indicated below.

If any of the following situations occur, remove the material and then reload it.

- The left and right crop marks are slanted by 5 degrees or more with respect to the moving direction of the cutting carriage.
- The crop marks are offset by 20 mm in the material-feed direction.

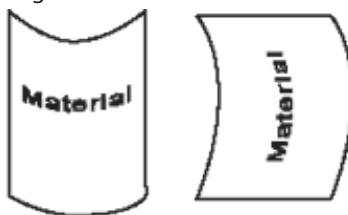
**Not OK**

- The crop marks are separated from the blade protector by a distance of 15 mm or more.



The material sometimes curls when it is printed on the printer.

Do not use material that is curled as shown in the figure. The crop marks may not be read. If this happens, straighten out the material before loading it on the GS-24.



## Step 6: Set the Alignment Method (Sensor Mode)

Position the crop marks automatically using the machine's integrated sensor.

### Procedure

- 1 Press several times to display the screen shown in the figure.



- 2 Press several times to display the screen shown in the figure.



- 3 Press , , to select SENSOR MODE.



- 4 Press to select the setting.

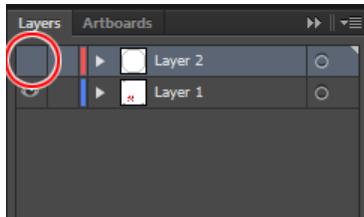
Press to return to the screen shown in the figure.

## Step 7: Perform Cutting (Sensor Mode)

### Procedure

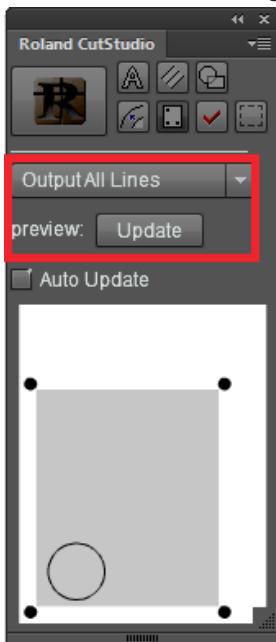
- 1 Show the layer containing the cutting lines and select it.

Check that all the cutting lines that you wish to cut are shown on the preview screen.



- 2 On the Roland CutStudio palette, select Output Current Layer, and then click Update.

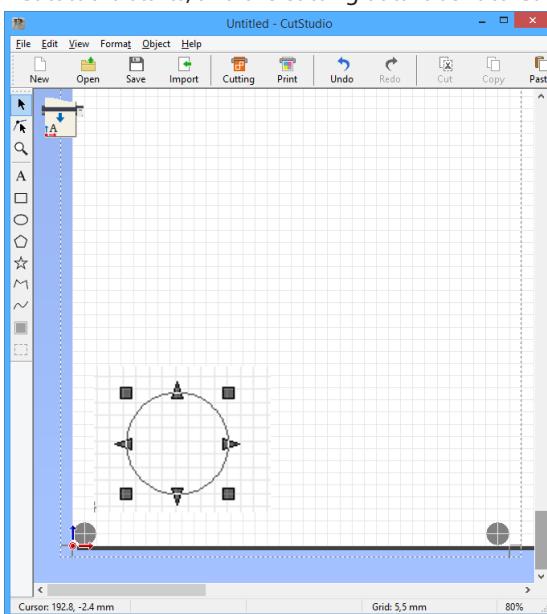
Check that all the cutting lines that you wish to cut are shown on the preview screen.



- 3 Click

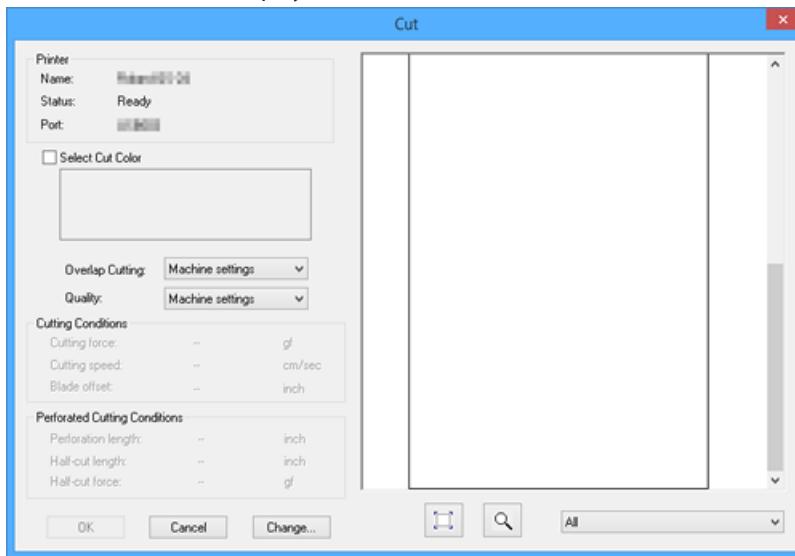


CutStudio starts, and the cutting data is sent to CutStudio.



**④ In CutStudio, click .**

The screen below is displayed.



**⑤ Click OK.**

The cutting data is sent to the machine. When the machine receives the data, it automatically reads the crop marks using a sensor, and then starts cutting.

☞ P. 181 "Crop Marks Cannot be Read"

**NOTE**

If the sensor fails to read the crop marks

If the sensor fails to read the crop marks, the screen in the figure appears. If this screen appears, proceed to P. 181 "Crop Marks Cannot be Read". If this does not resolve the issue, refer to P. 91 "Cutting in Tool Mode (1)", and perform alignment in Tool Mode.



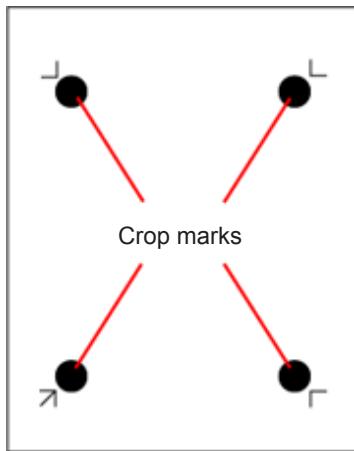
**⑥ Remove the cut material.**

Remove the material to complete the cutting procedure.

# Crop Marks/Tool Marks

## Crop Marks

Crop marks are used for alignment when cutting printed material on the cutting machine. Having the machine remember the positions of the crop marks printed together with the image makes it possible to correct cutting positions.



### When to use 4 crop marks vs 3 crop marks

In most cases you should use 4 crop marks. If you use 3 crop marks, it is not possible to use Tool Mode.

☞ P. 89 "Switching between 3 and 4 Crop Marks"

### Readable crop marks

The sensor of the machine is only able to read crop marks like the circle shown below.

Diameter: 10 mm  
Color: Black

#### NOTE

The machine may not be able to read the printed crop marks correctly depending on the printer ink.

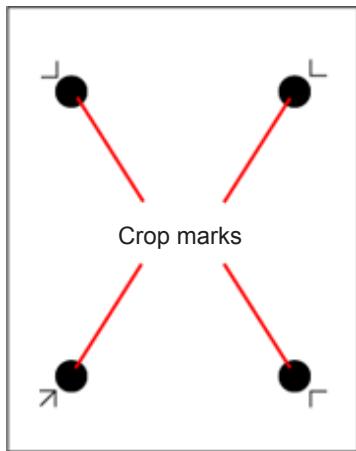
### Setting the margins and the distance between crop marks

Take into account the margin necessary for cutting the material, and set the crop mark position.

☞ P. 85 "When Using CutStudio"  
☞ P. 42 "When Using Illustrator"

## Tool Marks

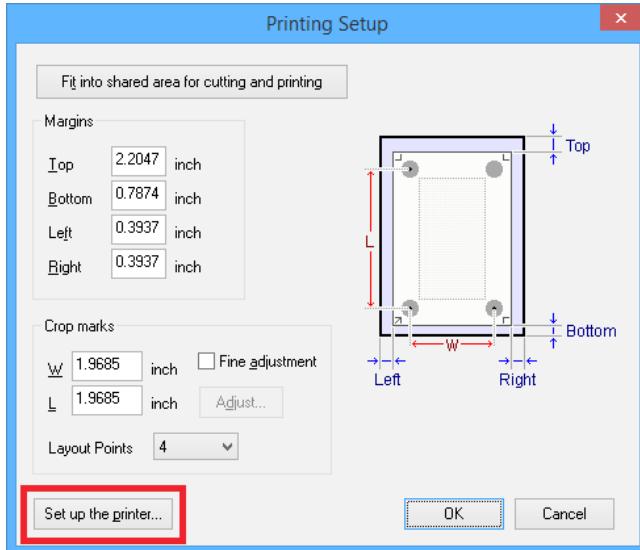
Tool marks are used for manual alignment when it is not possible to perform automatic alignment using crop marks. Tool marks are printed around the crop marks when using the included CutStudio software.



## Setting the Margins and the Distance between Crop Marks

Set the margins and the distance between crop marks. Take into account the margin necessary for cutting the material, and set the crop mark position.

### When Using CutStudio



### cropmark : 3 points

Size	Margin and crop mark settings
<b>A4 portrait</b>	Top: 56 mm, Bottom: 20 mm, Left: 15 mm, Right: 15 mm W: 170 mm, L: 210 mm
<b>A4 landscape</b>	Top: 60 mm, Bottom: 20 mm, Left: 30 mm, Right: 17 mm W: 240 mm, L: 120 mm
<b>A3 portrait</b>	Top: 60 mm, Bottom: 20 mm, Left: 30 mm, Right: 17 mm W: 240 mm, L: 330 mm
<b>A3 landscape</b>	Top: 62 mm, Bottom: 20 mm, Left: 15 mm, Right: 15 mm W: 380 mm, L: 205 mm
<b>B4 portrait</b>	Top: 59 mm, Bottom: 20 mm, Left: 15 mm, Right: 17 mm W: 215 mm, L: 275 mm
<b>B4 landscape</b>	Top: 57 mm, Bottom: 20 mm, Left: 15 mm, Right: 14 mm W: 325 mm, L: 170 mm

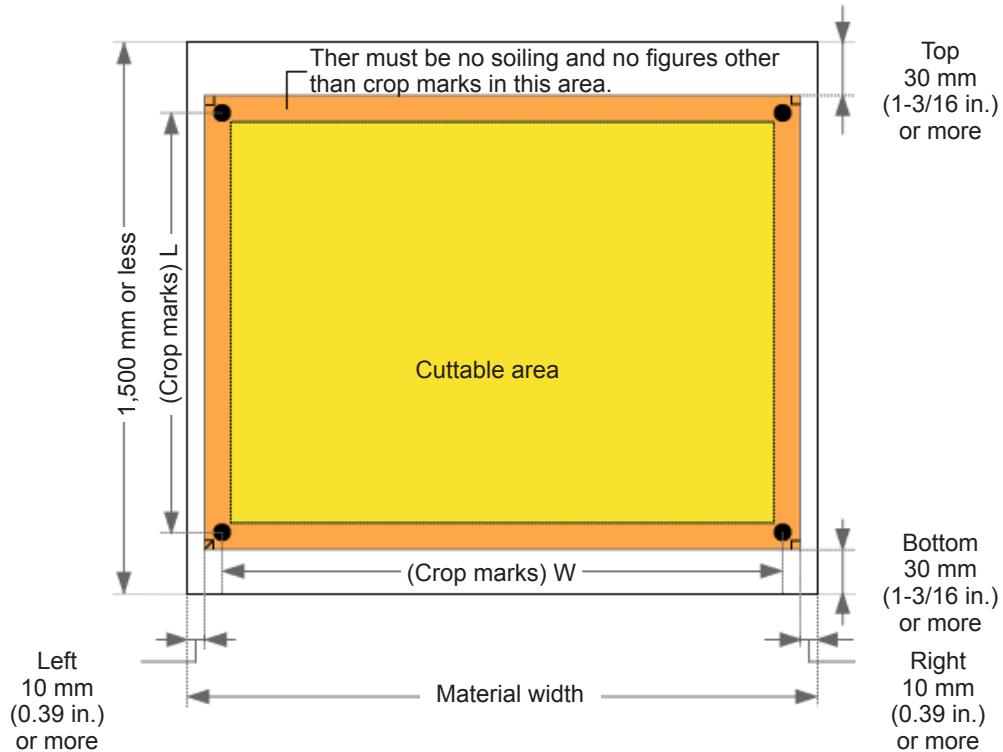
**cropmark : 4 points**

Size	Margin and crop mark settings
<b>A4 portrait</b>	Top: 56 mm, Bottom: 20 mm, Left: 10 mm, Right: 10 mm W: 170 mm, L: 200 mm
<b>A4 landscape</b>	Top: 59 mm, Bottom: 20 mm, Left: 30 mm, Right: 16 mm W: 230 mm, L: 110 mm
<b>A3 portrait</b>	Top: 59 mm, Bottom: 20 mm, Left: 30 mm, Right: 16 mm W: 230 mm, L: 320 mm
<b>A3 landscape</b>	Top: 61 mm, Bottom: 20 mm, Left: 15 mm, Right: 14 mm W: 370 mm, L: 195 mm
<b>B4 portrait</b>	Top: 58 mm, Bottom: 20 mm, Left: 15 mm, Right: 16 mm W: 205 mm, L: 265 mm
<b>B4 landscape</b>	Top: 56 mm, Bottom: 20 mm, Left: 14 mm, Right: 14 mm W: 315 mm, L: 160 mm

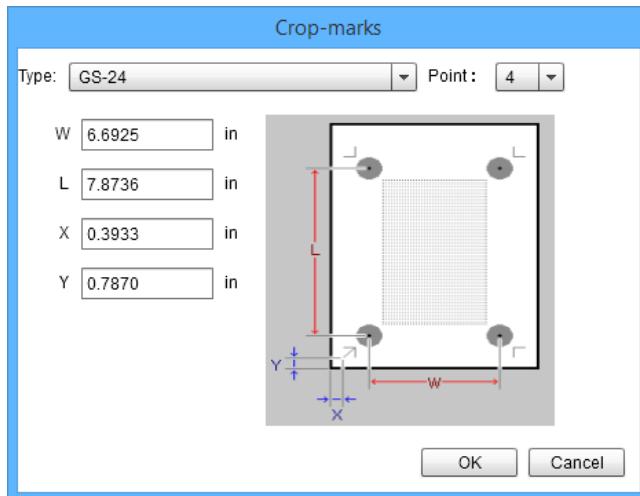
\* When using material with a large amount of feed, it is recommended that the left and right margins are set at around 25 mm.

**NOTE**

If you are using material of size larger than A4 that is not listed above, set the values by referring to the figure below.



## When Using Illustrator



- \* When using material with a large amount of feed, it is recommended that the left and right margins are set at around 25 mm.

### cropmark : 3 points

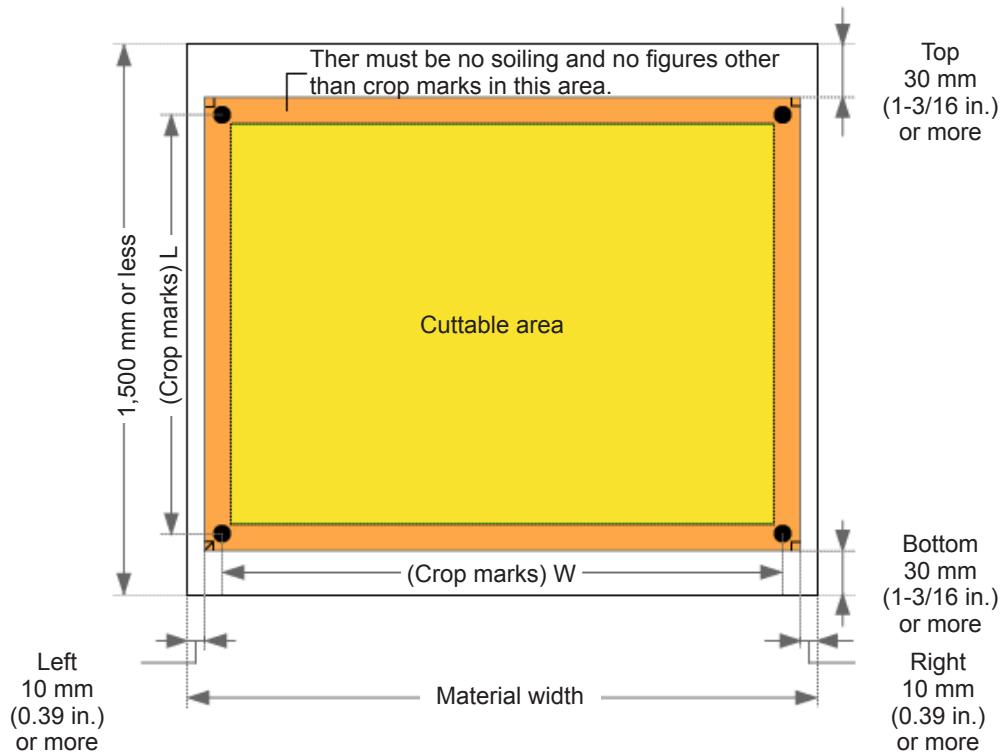
Size	Margin and crop mark settings
<b>A4 portrait</b>	X: 15 mm, Y: 20 mm W: 170 mm, L: 210 mm
<b>A4 landscape</b>	X: 30 mm, Y: 20 mm W: 240 mm, L: 120 mm
<b>A3 portrait</b>	X: 30 mm, Y: 20 mm W: 240 mm, L: 330 mm
<b>A3 landscape</b>	X: 15 mm, Y: 20 mm W: 380 mm, L: 205 mm
<b>B4 portrait</b>	X: 15 mm, Y: 20 mm W: 215 mm, L: 275 mm
<b>B4 landscape</b>	X: 15 mm, Y: 20 mm W: 325 mm, L: 170 mm

**cropmark : 4 points**

Size	Margin and crop mark settings
<b>A4 portrait</b>	X: 10 mm, Y: 20 mm W: 170 mm, L: 200 mm
<b>A4 landscape</b>	X: 30 mm, Y: 20 mm W: 230 mm, L: 110 mm
<b>A3 portrait</b>	X: 30 mm, Y: 20 mm W: 230 mm, L: 320 mm
<b>A3 landscape</b>	X: 15 mm, Y: 20 mm W: 370 mm, L: 195 mm
<b>B4 portrait</b>	X: 15 mm, Y: 20 mm W: 205 mm, L: 265 mm
<b>B4 landscape</b>	X: 15 mm, Y: 20 mm W: 315 mm, L: 160 mm

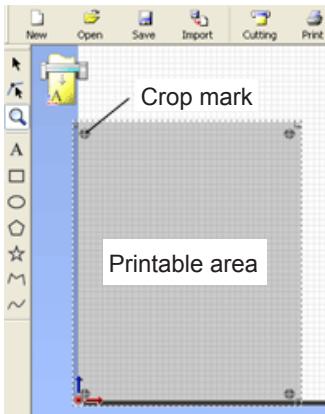
**NOTE**

If you are using material of size larger than A4 that is not listed above, set the values by referring to the figure below.



## Switching between 3 and 4 Crop Marks

In most cases you should use 4 crop marks.

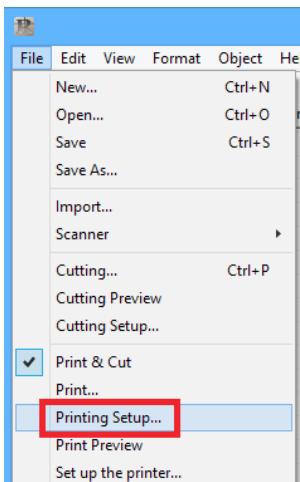


### Switching to 3 Crop Marks

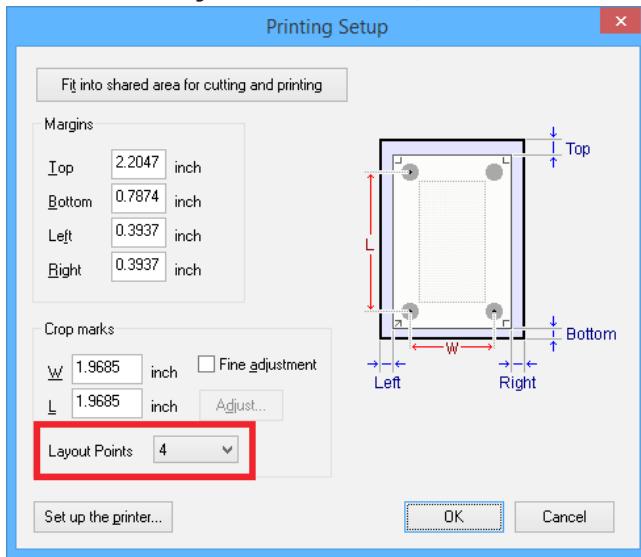
#### CutStudio

#### Procedure

- 1 From the File menu, click Printing Setup.

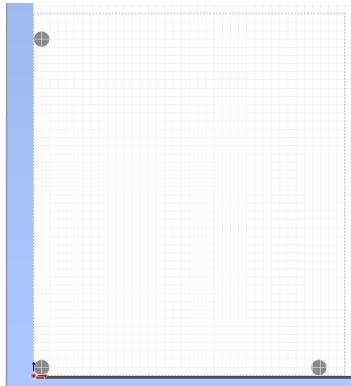


- ② From the Layout Points list, select 3.



- ③ Click OK.

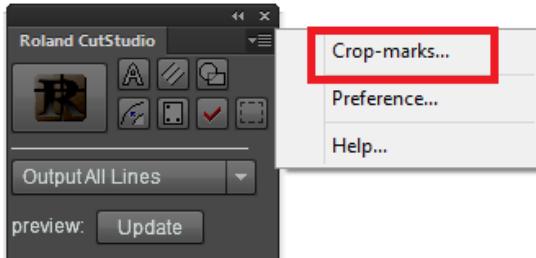
After setting the values, check that the crop marks are within the printing area.



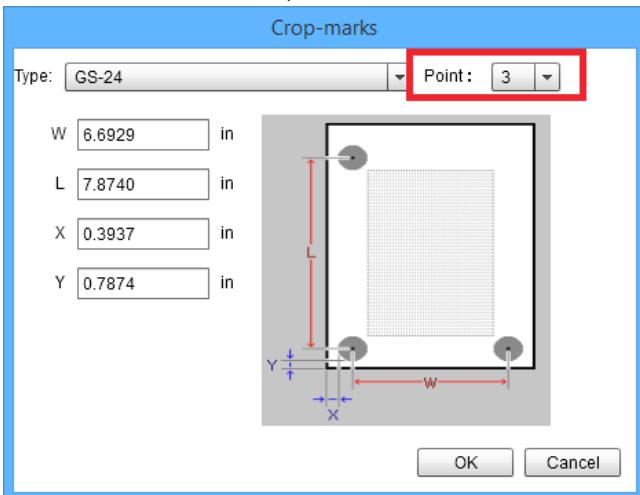
☞ P. 85 "Setting the Margins and the Distance between Crop Marks"

**Illustrator****Procedure**

**1** Click , and click Crop marks.



**2** From the Point list, select 3.



**3** Click OK.

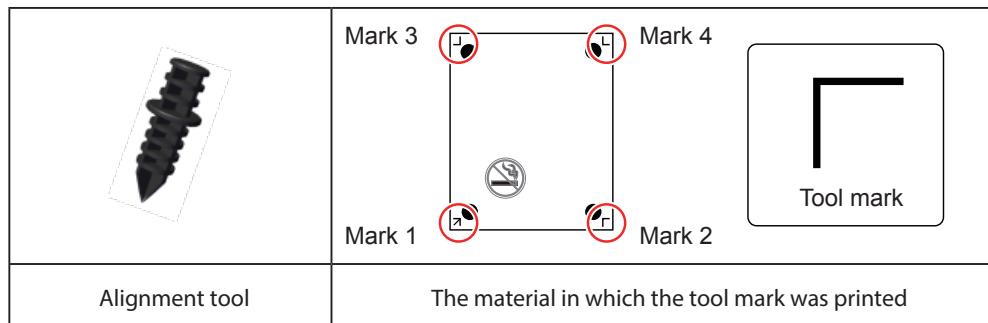
**Cutting in Tool Mode (1)****When to Use Tool Mode**

- When it is not possible to perform alignment in Sensor Mode
- When printing and cutting without selecting the type of material

**NOTE**

It is not possible to use Tool Mode when using only 3 crop marks.

### Required items



### (1) Load the Material

Perform preparations for cutting.

Complete the procedures below from Step 1: Load the Material to Step 6: Set the Origin.

☞ P. 16 "Step 1: Load the Material"

### (2) Set Tool Mode

#### Procedure

- ① Press several times to display the screen shown in the figure.

UNSETUP	◀ ▶
↓	

- ② Press several times to display the screen shown in the figure.

CROP MARK	◀ ▶
<SENSOR MODE>	▶

- ③ Press .

CROP MARK	◀ ▶
*SENSOR MODE	↓

- ④ Press to select TOOL MODE.

CROP MARK	◀ ▶
<TOOL MODE>	▶

- ⑤ Press .

CROP MARK	◀ ▶
*TOOL MODE	↓

## Cutting in Tool Mode (2)

Send Cutting Data and Perform Alignment

### Procedure

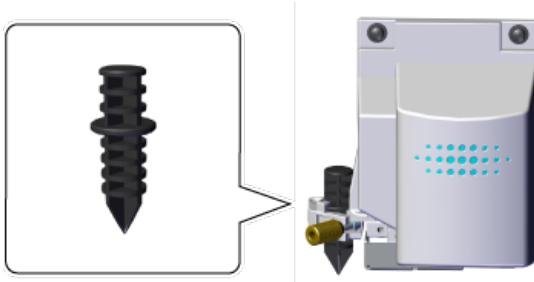
- 1 Send cutting data.**

- 2 The screen shown in the figure appears.**



- 3 Remove the blade holder and install the alignment tool.**

The alignment tool is installed in the same way as the blade holder.



☞ P. 24 "Step 4: Install the Blade Holder"

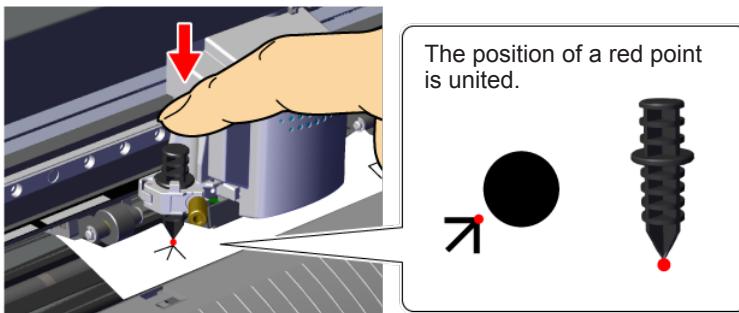
- 4 When installation is complete, press .**

The tool moves to a position near the bottom left crop mark and stops, and the screen shown in the figure appears.



- 5 Use the    

Hold down the alignment tool gently from above, and check that the tip of the alignment tool overlaps with the tool mark.**



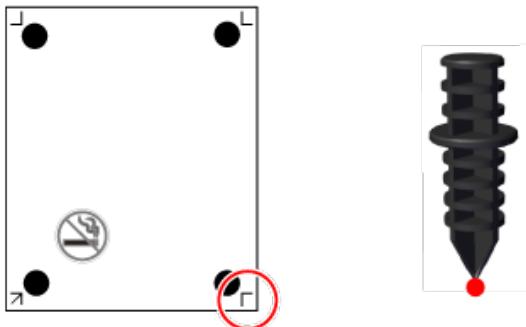
**6** Press .

The tool moves to a position near the bottom right crop mark, and the screen shown in the figure appears.

SET MARK 2
( RETURN ▶ MENU )

☞ P. 95 "To redo alignment"

**7** Align the tip of the alignment tool with tool mark 2.

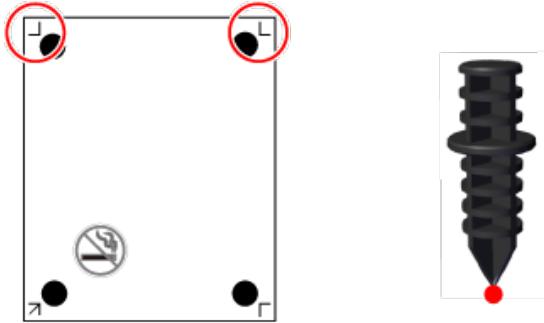


**8** Press .

The tool moves to a position near the upper left crop mark, and the screen shown in the figure appears.

SET MARK 3
( RETURN ▶ MENU )

**9** Align the top left and top right tool marks in the same way.

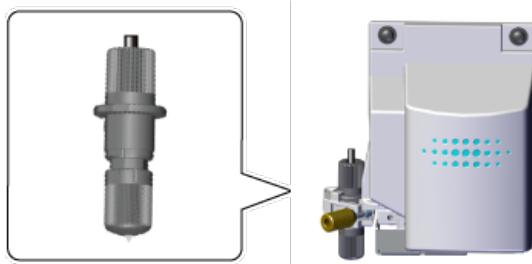


**10** After aligning mark 4, press .

The screen shown in the figure appears.

REPLACE WITH BLADE
( RETURN ▶ MENU )

**⑪ Remove the alignment tool and install the blade holder.**



**⑫ Press .**

COMPLETE ▶ ENTER
QUIT ▶ MENU

**⑬ Press .**

Cutting starts.

**NOTE**

To redo alignment

Pressing the key during alignment makes it possible to return to the previous screen and redo the alignment procedure.

## Materials that can be Used for Printing & Cutting

Use material with carrier paper that can be printed on a laser or inkjet printer.

Material portion type	
<b>Laser printer</b>	Fine paper, coated paper, and PET (Polyethylene Terephthalate)
<b>Inkjet printer</b>	Fine paper and coated paper
<b>Colors</b>	White

\* Automatic detection may not be possible for some materials, such as laminated or glossy materials.

If automatic detection is not possible, align the crop marks using the alignment tool.

☞ P. 91 "Cutting in Tool Mode (1)"

# Printing & Cutting (Manual Mode)

## Printing & Cutting Sample Data

When using a manual mode, you can do printing & cutting without CutStudio and Illustrator. We recommend that you get comfortable with the printing & cutting procedure by using the sample data first.



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### Items required other than the machine

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Printer	Material (210 x 298 mm)	Sample Data

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### Printer Requirements

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You must use a laser or inkjet printer with a resolution of 720 dpi or greater.

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### Materials that can be Used

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☞ P. 95 "Materials that can be Used for Printing & Cutting"

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### Sample Data

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Open the Sample.bmp file found in the CutStudio installation folder (usually located in the CutStudio folder under Program Files on the C drive).

☞ P. 177 "Sample Data Cannot be Found"

## Step 1: Create Crop Mark Data Manually

### Create Crop Mark Data in Software other than CutStudio or Illustrator

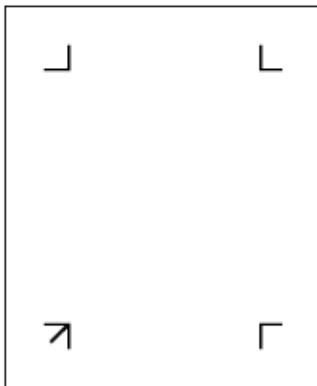
When drawing crop marks to add to an illustration in application software, take into account the margin necessary for cutting the material when setting the crop mark position.

⇒ P. 83 "Crop Marks/Tool Marks"

#### Procedure

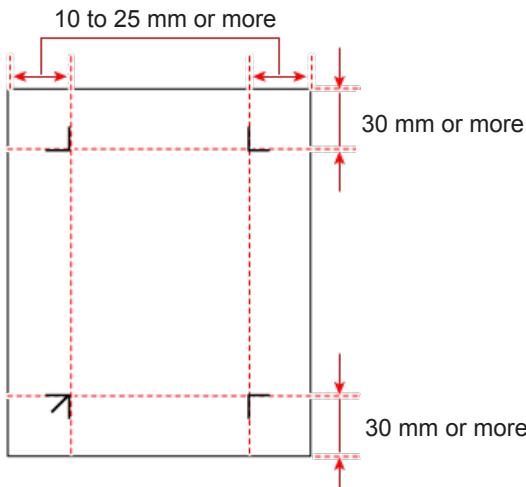
##### ① Draw crop marks.

There is no particular design that should be used for crop marks, but using shapes with corners as shown in the figure below facilitates alignment.



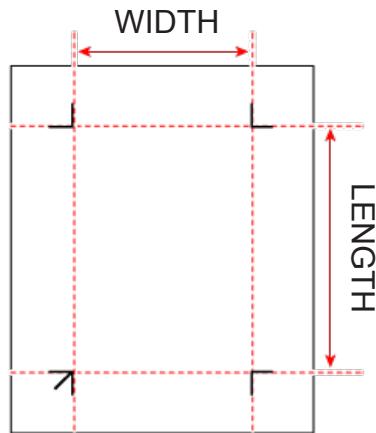
##### ② Set the margins.

When using material with a large amount of feed (long material length), it is recommended that the left and right margins are set at around 25 mm.

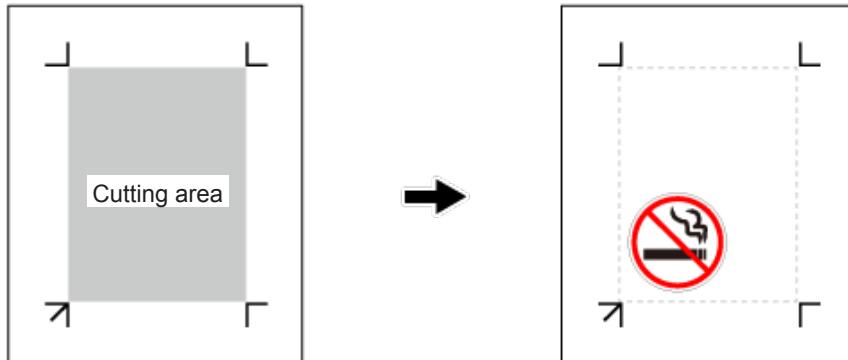


- ③ Make a note of the distance between the crop marks (WIDTH and LENGTH).**

You will enter these values into the machine later.



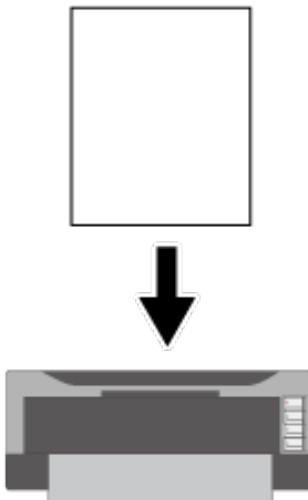
- ④ Draw the illustration in the cutting area within the crop marks.**



## Step 2: Perform Printing

**Load the material in the printer.**

For details on how to load the material, see the instruction manual for your printer.

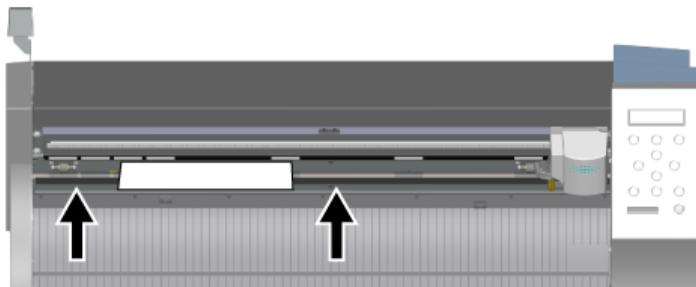


\* When expanded/reduced printing is enabled, disable it. Print at 100% scale.

## Step 3: Load the Printed Material

**Load the material.**

Refer to P. 76 "Step 5: Load the Printed Material".



## Step 4: Set the Alignment Method (Manual Mode)

### MEMO

Referring to P. 204 "Menu Flow Chart" as you proceed will help the setting procedure go smoothly.

### 1. Select Manual Mode

- ① Press  several times to display the screen shown in the figure.

UNSETUP	◀ ▶
	↓

- ② Press  several times to display the screen shown in the figure.

CROP MARK	◀ ▶
<SENSOR MODE>	▶

- ③ Press .

CROP MARK	◀ ▶
*SENSOR MODE	↓

- ④ Press  to select MANUAL.

CROP MARK	◀ ▶
<MANUAL>	▶

- ⑤ Press .

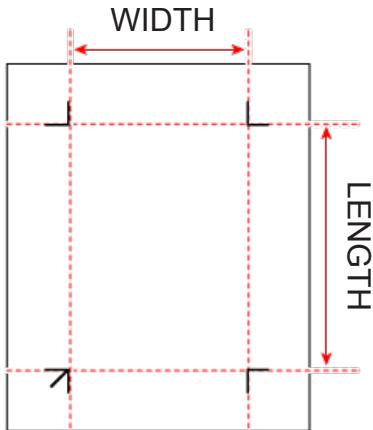
CROP MARK	◀ ▶
*MANUAL	↓

- ⑥ Press  twice.

MANUAL	◀ ▶
*BASIC SETTING	↓

## 2. Enter the Distance between the Crop Marks

Enter the values that you made a note of in Step 1, No. 3.



- 1 Press to display the screen shown in the figure.

WIDTH 160	◀ ▶
*160mm	↓

- 2 Press to enter the distance (width) between the crop marks

WIDTH 160	◀ ▶
*180mm	↓

- 3 Press to confirm.

WIDTH 180	◀ ▶
	▶

- 4 Press .

LENGTH 200	◀ ▶
*200mm	↓

- 5 Press to enter the distance (length) between the cutting position origin and the printing position origin.

LENGTH 200	◀ ▶
*230mm	↓

- 6 Press  to confirm.

LENGTH 230	 
------------	--

### 3. Enter the Offset Value

- 1 Press  .

OFFSET W 0.5	 
--------------	--

- 2 Press   to enter the distance (width) between the cutting position origin and the printing position origin.

In most cases enter 0 mm.

OFFSET W 0.5	 
--------------	--

- 3 Press  to confirm.

OFFSET W 0	 
------------	--

- 4 Press  .

OFFSET L 0.5	 
--------------	--

- 5 Press   to enter the distance (length) between the cutting position origin and the printing position origin.

In most cases enter 0 mm.

OFFSET L 0.5	 
--------------	--

- 6 Press  to confirm.

OFFSET L 0	 
------------	--

## Step 5: Perform Cutting (Manual Mode)

### MEMO

Referring to P. 204 "Menu Flow Chart" as you proceed will help you complete the setting procedure smoothly.

### Procedure

#### 1 Press to select 4-POINT START.

If using 3 crop marks, select 3-POINT START. The screen below is displayed.



#### 2 Press .

The screen below is displayed.



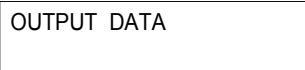
#### 3 Press .

#### 4 Perform steps 3 to 12 in "Cutting in Tool Mode (2)."

☞ P. 93 "Cutting in Tool Mode (2)"

#### 5 When the figure below is displayed, send data from the computer.

When the machine receives the data, it starts cutting.



☞ P. 181 "Crop Marks Cannot be Read"

#### 6 Remove the cut material.

Remove the material to complete the cutting procedure.

☞ P. 39 "Step 9: Remove the Material"



# **5. Cutting Perforated Lines**

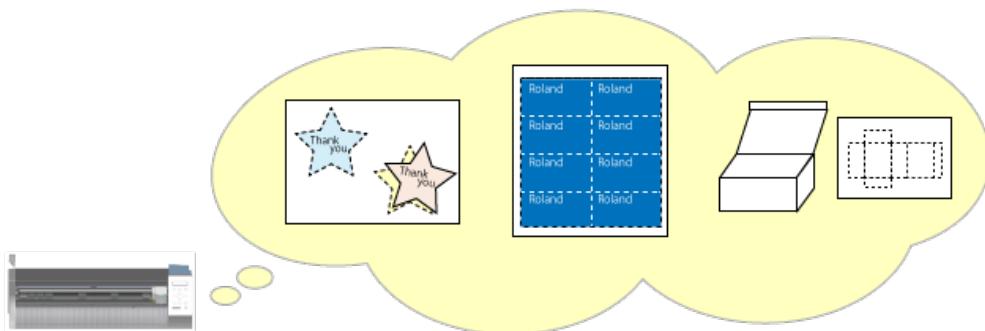
---

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# Cutting Perforated Lines

## Overview of Cutting Perforated Lines

The machine can also cut material without carrier paper, such as coated paper. This function makes it easy to create point-of-purchase advertisements, cards, and other materials.



## Step 1: Perform Preparations for Cutting

### Perform preparations for cutting.

Click the link below and complete the procedures from Step 1: Load the Material to Step 7-2: Create Cutting Data.

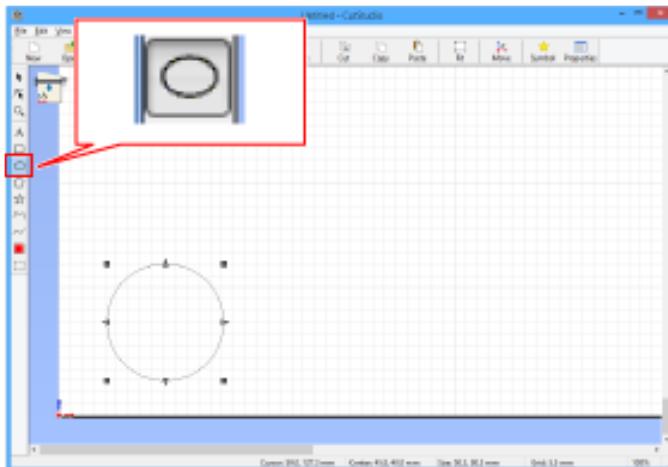
☞ P. 16 "Step 1: Load the Material"

## Step 2: Create Perforated Line Data

### Procedure

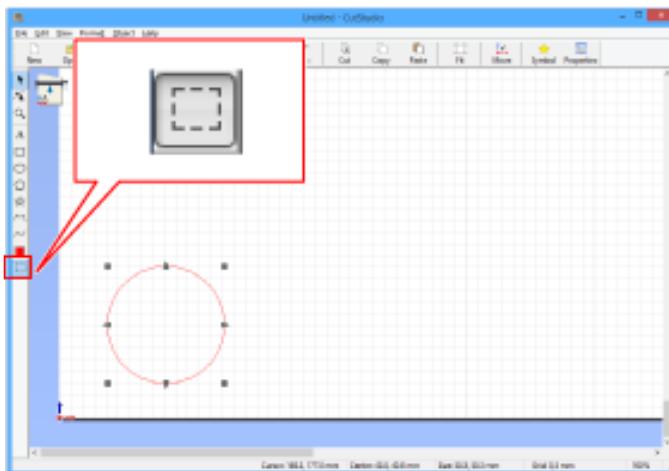
#### ① Create a shape or similar object.

In this example, you will create the design shown in the figure below.



**② Click .**

Objects set with perforated lines are displayed in red.

**MEMO**

From the File menu, click Preference displays the Preference dialog box. This lets you set the color and display of perforated lines.

---

**Canceling Perforated Line Settings**

---

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**Procedure**

---

**① Use the tool  to select the shape for which you want to cancel perforated line settings.**

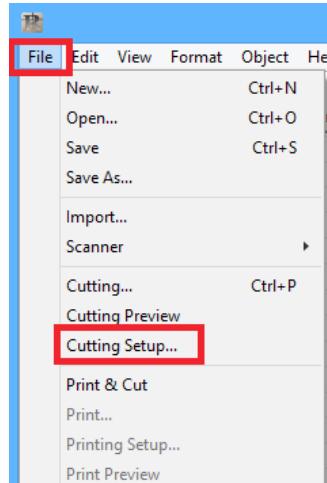
**② Click .**

The cutting lines turn black.

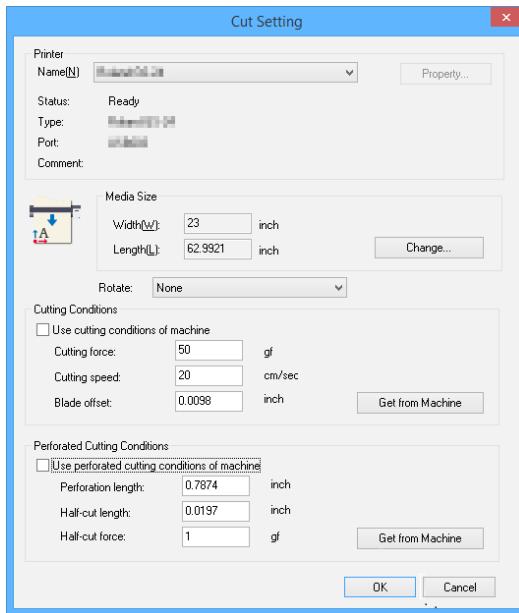
### Step 3: Set Perforated Cutting Conditions

#### Procedure

- From the File menu, click Cutting Setup.



Printer name: Roland GS-24



**2 Uncheck the checkbox of Use perforated cutting conditions of machine.**

Cutting Conditions

Use cutting conditions of machine

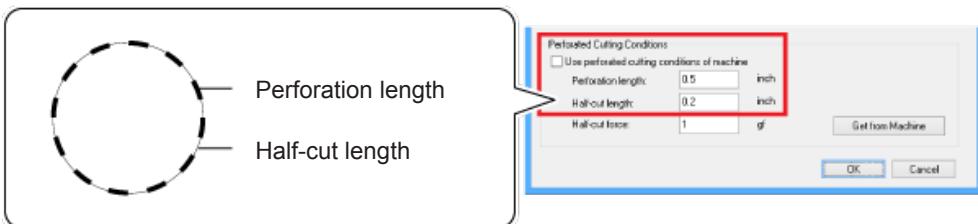
Cutting force: 50 gf  
Cutting speed: 20 cm/sec  
Blade offset: 0.0098 inch

Get from Machine

The values can be input.

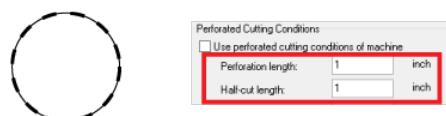
**3 Input the values of Cutting Conditions.**

**Perforation Length/Half-cut Length**

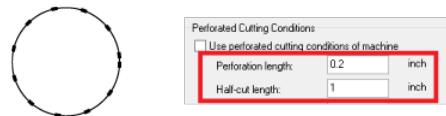


- \* Adjust half-cut force to suit the type of paper used.
- **Perforation length > Half-cut length**

- **Perforation length = Half-cut length**



- **Perforation length < Half-cut length**

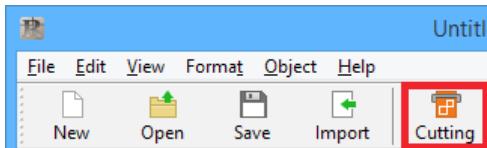


**4 Click OK.**

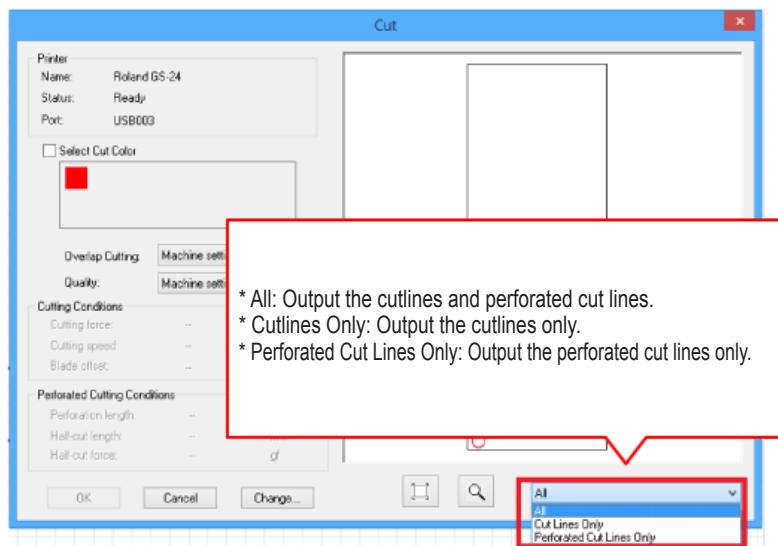
### Step 4: Cut Perforated Lines

#### Procedure

- 1 Click .



The screen below is displayed. Select the type of cut lines you want to use from the list.



- 2 Click OK.

Cutting starts.

#### Adjusting Perforated Cutting Conditions

Select optimum cutting conditions based on the cutting results.

☞ P. 142 "Optimizing the Cutting Quality for the Material"

## Outputting Perforated Line Data from Illustrator (CS5 and later)

- \* The screenshots show an example of Illustrator CC, but the operation procedure is the same for other versions.

### NOTE

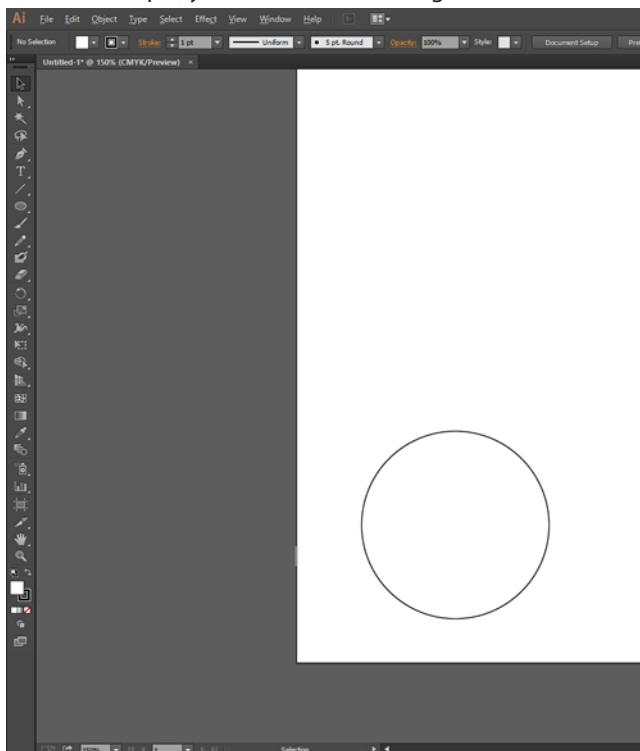
You must install Plug-in for Illustrator before proceeding.

☞ P. 42 "Installing Plug-in for Illustrator"

### Procedure

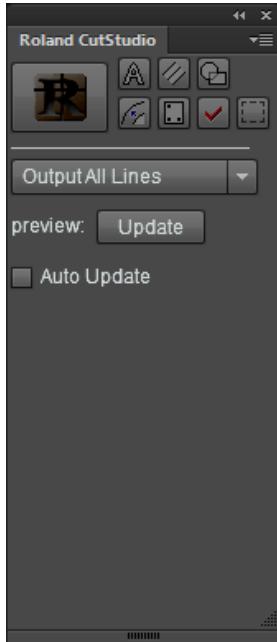
#### 1 Create a new file and create a new design, or open an existing file.

In this example, you will create the design shown in the window below.

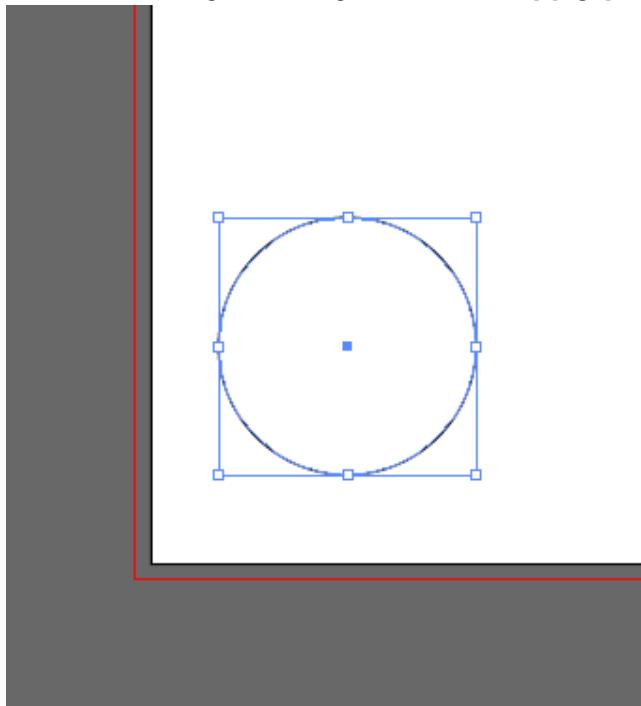


- ② From the Window menu, click Extensions, and then click CutStudio-Plugin.

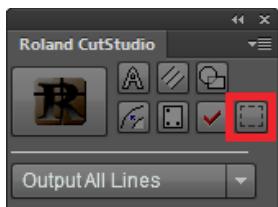
The Roland CutStudio palette appears.



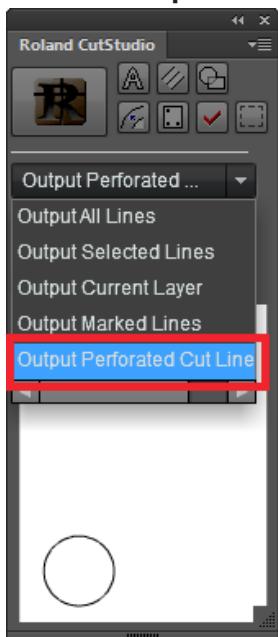
- ③ Select the object that you want to apply perforated lines to.



- ④ Click .

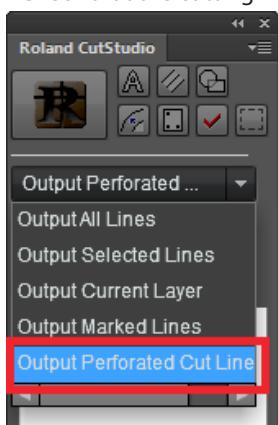


- ⑤ Select Output Perforated Cut Lines.



- ⑥ On the Roland CutStudio palette, select the Auto Update check box.

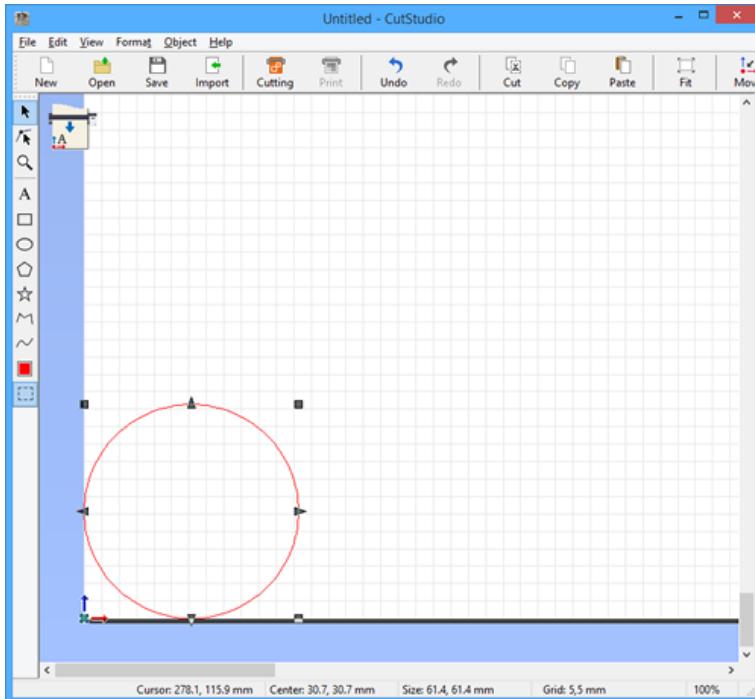
Check that the cutting line that you wish to output is shown on the preview screen.



### 7 Click

CutStudio starts, and the cutting line data is sent to CutStudio.

The output data is always aligned at the origin of CutStudio regardless of the position on Illustrator.  
(Data with a crop mark is excluded.)



### 8 Perform cutting.

☞ P. 37 "Step 8: Perform Cutting"

# ***6. Tiled Output***

---

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# Tiled Output

## Overview of Tiled Output

Tiled output lets you split up data that is larger than the cutting area over multiple sheets.

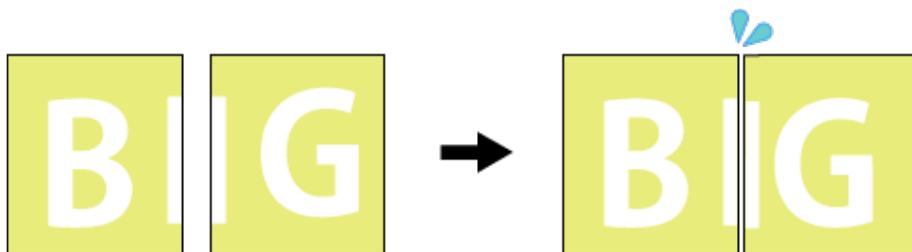


### NOTE

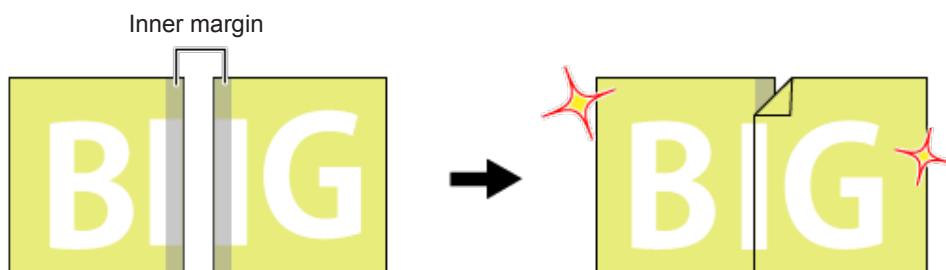
Tiled output does not support Print & Cut operation.

## Inner margin function

- With inner margin: Gap between edges



- Without inner margin: No gap between edges

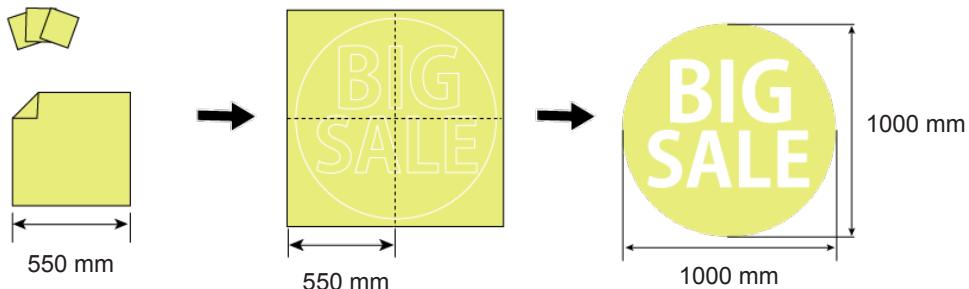


## Step 1: Determine Output Size

Remember the basic procedure for tiled output while creating a large sticker like the one shown below. Follow the procedures below.

### Overview

In this example, you will create an image with the dimensions indicated below.

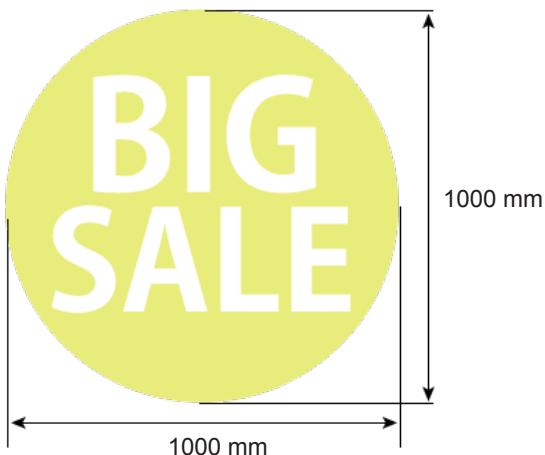


### MEMO

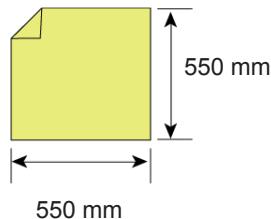
Keeping the completed size in mind when working will help the setting procedure go smoothly.

### Procedure

#### ① Determine the output size.



- ② Check the size of the material to be used.



### Step 2: Load the Material

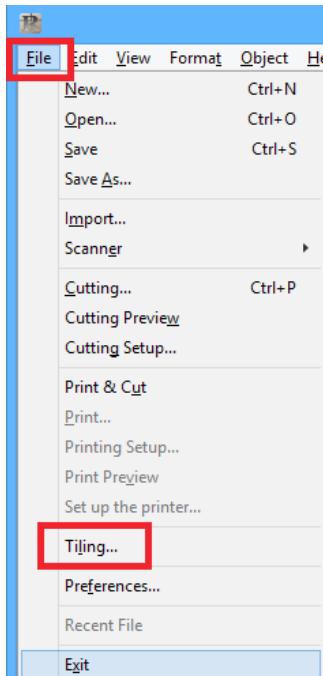
Load the material in the machine ready for cutting. Complete steps 1 and 6 below.

☞ P. 16 "Step 1: Load the Material"

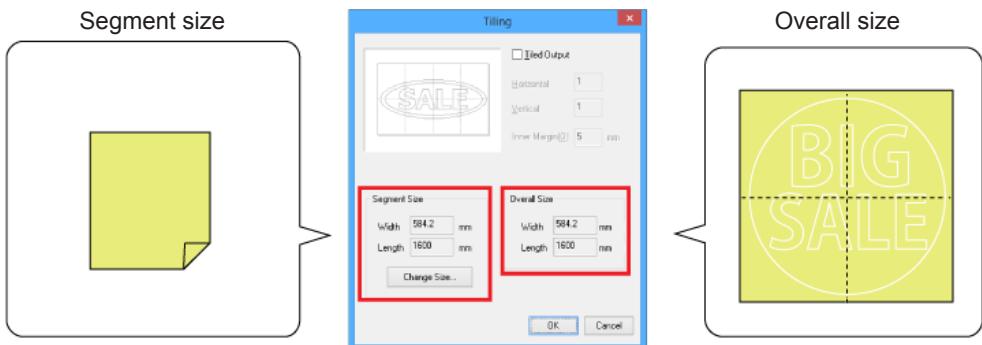
### Step 3: Set Tiled Output Conditions

#### Procedure

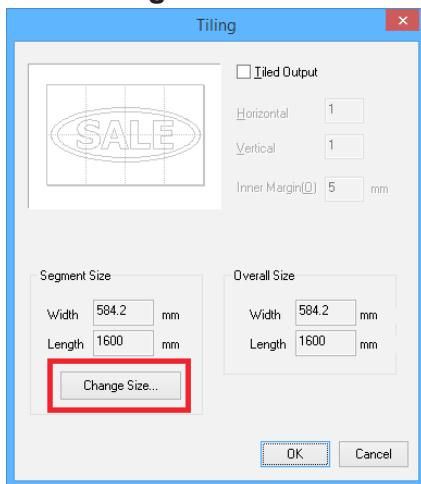
- ① Start CutStudio.
- ② From the File menu, click Tiling.



The screen below is displayed.

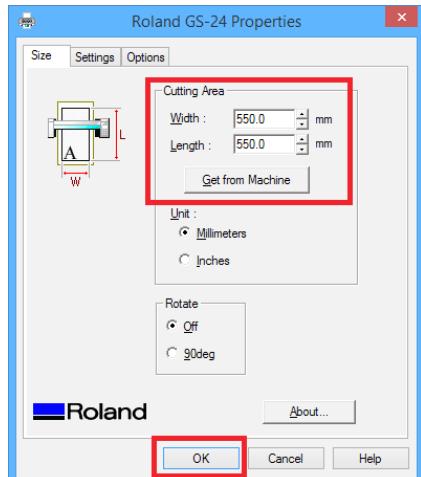


### 3 Click Change Size.



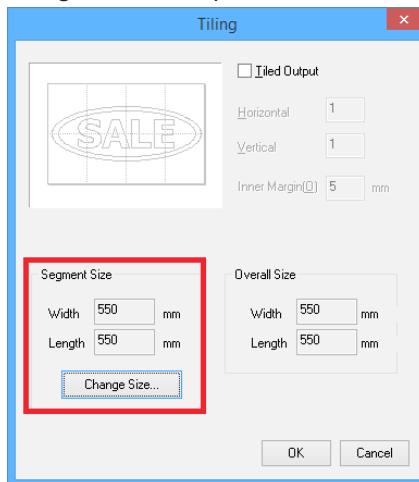
### 4 Click Get from Machine.

The cutting area is entered automatically. Once the cutting area has been entered, click OK.



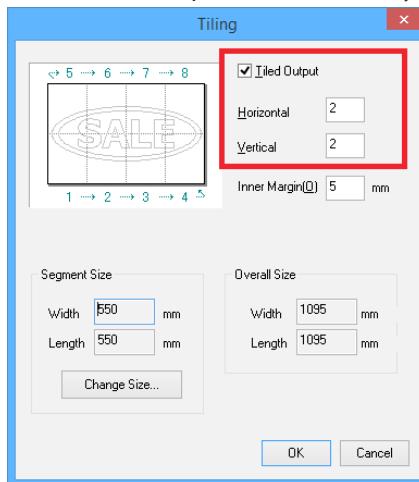
## Tiled Output

The segment size is updated.



### 5 Select the Tiled Output check box, and enter the number of tiles.

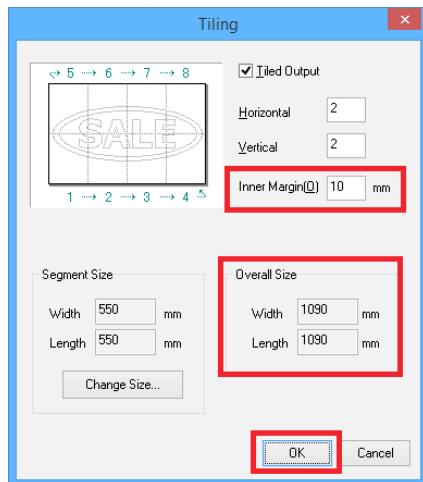
The overall size is updated automatically. Click OK.



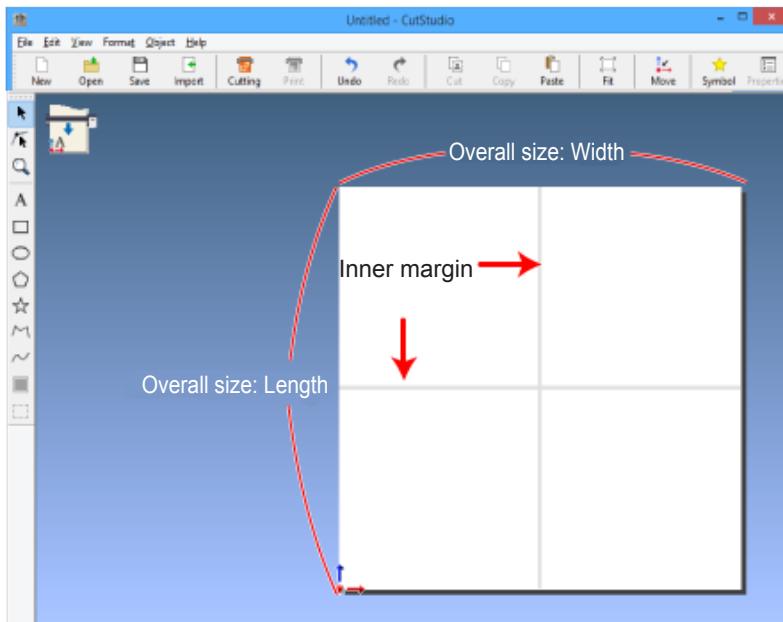
## 6 Enter a value for the inner margin.

Make sure Overall Size is larger than the size of the data determined in Step 1.

☞ P. 116 "Inner margin function"



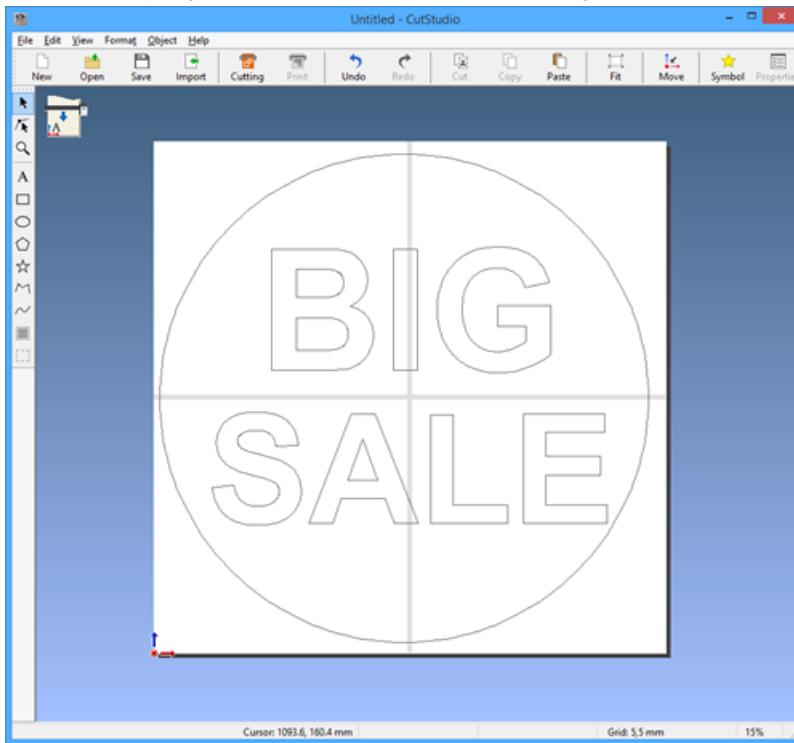
The document is displayed. The edges of the segments are displayed even if an inner margin has not been set.



## Step 4: Enter Text and Shapes

Enter text and/or shapes as desired.

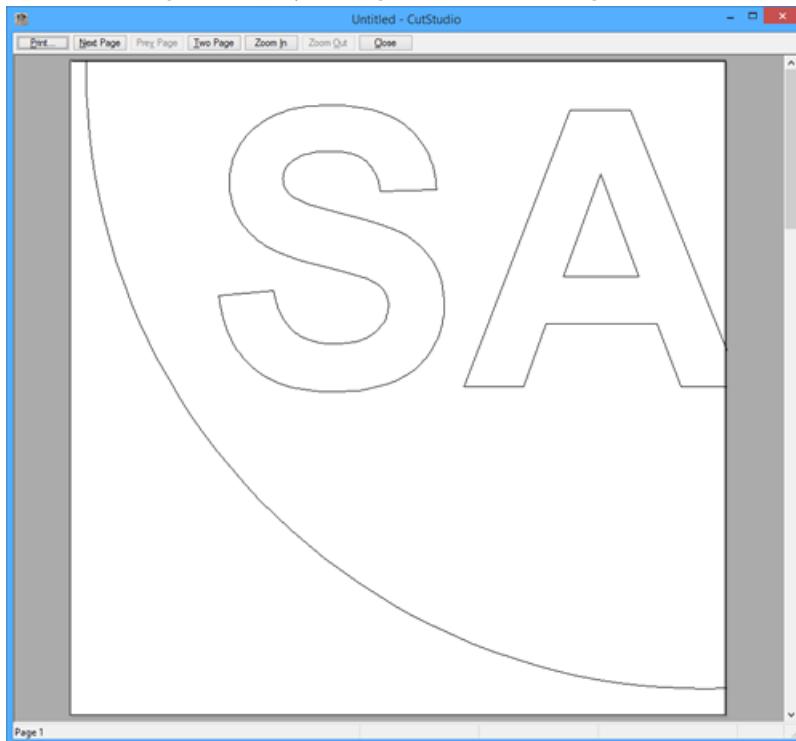
In this example, you will enter the text shown in the figure below.



## Step 5: Check Preview

From the File menu, click Cutting Preview.

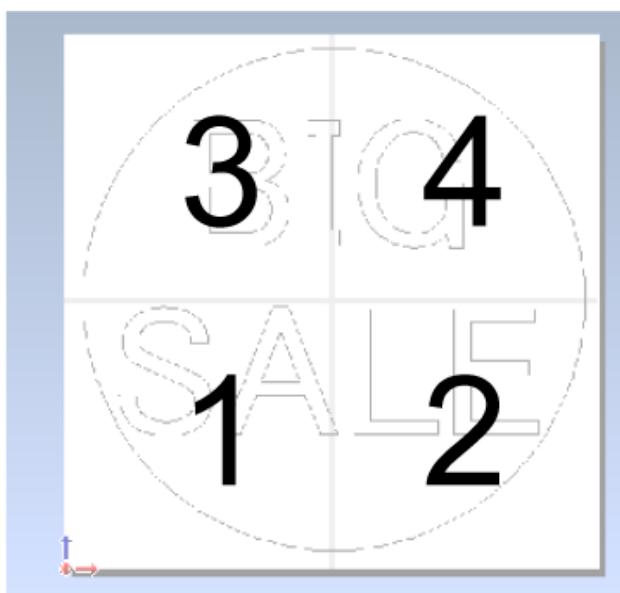
Click "Next Page" to display the segments in the cutting order.



---

### Cutting order

---



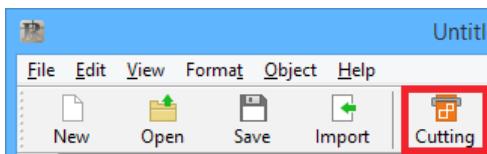
## Step 6: Perform Cutting

### Procedure

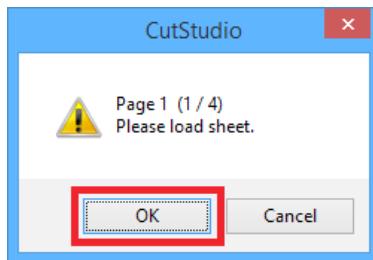
#### NOTE

Make sure the material is loaded in the machine.

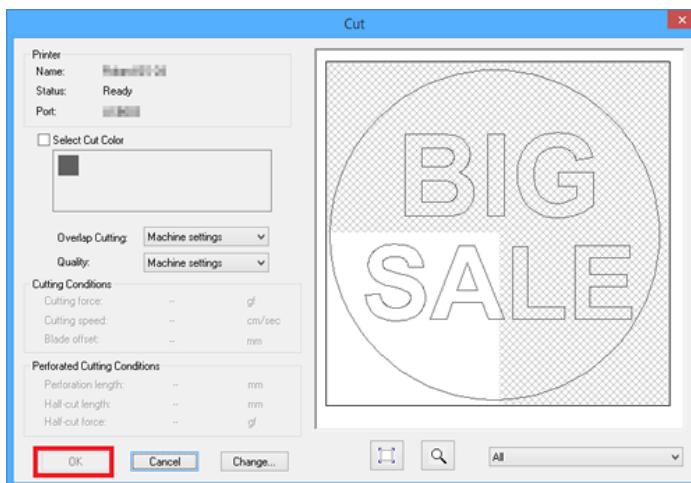
- 1 Click .



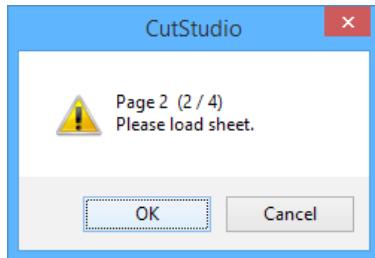
- 2 Click OK.



- 3 Click OK.



Cutting starts. When cutting is complete, the following window appears.

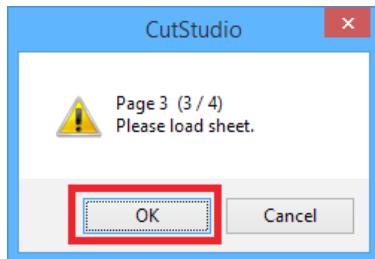


**4 Remove the material.**

☞ P. 39 "Step 9: Remove the Material"

**5 Load new material, and click OK.**

☞ P. 16 "Step 1: Load the Material"



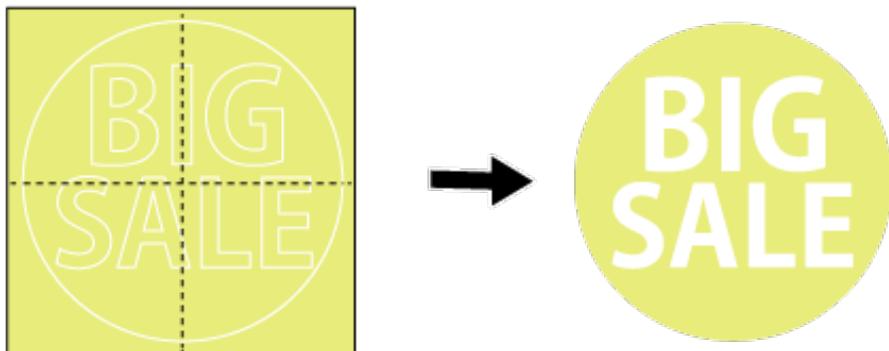
Cutting starts.

**6 Repeat procedures 3 to 4.**

Output the set number of tiles.

**7 Combine the output media.**

Align the margins to complete.





# **7. Other Functions**

---

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# Changing the Language Used for the Display

The language for messages on the display can be selected.

## Procedure

- 1 Hold down  and press the power button .

LANG. ENGLISH  
\*ENGLISH

- 2 Press  to select the desired language.

LANG. ENGLISH  
\*ENGLISH

- 3 Press  to select the setting.

## Setting the Displayed Unit

The units used for messages on the display can be selected.

## Procedure

### NOTE

Make sure that the material is load to the machine.

- 1 Press  several times to display the screen shown in the figure.

UNSETUP



- 2 Press  several times to display the screen shown in the figure.

OTHERS



- 3 Press , , .

The screen shown in the figure below is displayed.

UNIT mm



\*mm

- 4 Press ,  to select the units.

It is possible to select millimeters or inches.

**5 Press  to select the setting.**

Press the  key to return to the screen shown in the figure.

W : XXX mm
L : XXX mm

## Initializing All Settings to Their Default Values

This procedure returns all settings to their factory default values. However, the language setting remains unchanged.

### Procedure

**NOTE**

Make sure that the material is load to the machine.

**1 Press  several times to display the screen shown in the figure.**

UNSETUP	 
---------	--

**2 Press  several times to display the screen shown in the figure.**

OTHERS	 
--------	--

**3 Press    .**

The screen shown in the figure below is displayed.

FACTORY DEFAULT	 
*PRESET	

**4 Press  to execute.**

The screen returns to the screen in the figure.

SELECT SHEET	 
*ROLL	

## Checking the Machine Status (Self Test)

Execute a self test to check the status of the GS-24. Use this to check the GS-24 when it appears to be not operating correctly. A computer is not required in order to carry out the self test. If the self test cannot be executed, the machine may have malfunctioned. Contact your authorized Roland DG Corp. dealer.

### Procedure

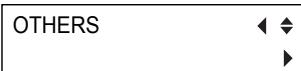
#### NOTE

Make sure that the material is load to the machine.

- 1 Press  several times to display the screen shown in the figure.



- 2 Press  several times to display the screen shown in the figure.

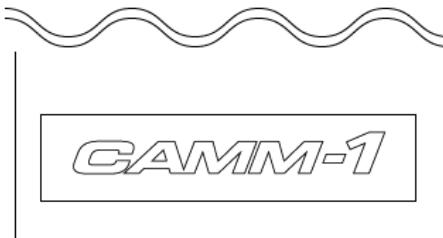


- 3 Press , , , .



- 4 Press .

Operation is normal if the figure shown below is cut.



## Changing the Contrast of the Display Screen

### Procedure

**NOTE**

Make sure that the material is load to the machine.

- 1 Press  several times to display the screen shown in the figure.

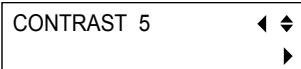


- 2 Press  several times to display the screen shown in the figure.



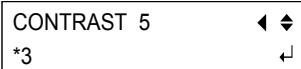
- 3 Press .

- 4 Press  several times to display the screen shown in the figure.



- 5 Press .

- 6 Press   to display the screen brightness.



Setting Range: 1 to 5

- 7 Press .

## Moving the Cutting Carriage at High Speed

Press   to move the cutting carriage. Press   to move the material.

**MEMO**

This function can be used when the screen shown below is displayed.

Press  and one of the cursor keys (   ) at the same time.

# Cutting the Same Object Repetitively

## REPLOT

The data received from the computer can be saved to the machine's memory, and then used to recut. To recut, use the REPLOT menu in the display menu.

- All the data received from the time the machine is put in the setup condition to the time the setup condition is canceled is saved.
- The data is not cleared even when the setup condition is canceled.
- If the setup condition is canceled and the machine is then put back in the setup condition again, the data that was saved is overwritten with the new data if data is sent from the computer.
- All data is cleared when the power is turned off.
- If the data stored in the machine's memory exceeds 2 MB, recutting cannot be performed until the data has been cleared. If REPLOT is carried out in this condition, DATA OVERFLOW appears. If no data is in the machine, NO DATA appears when REPLOT is selected from the menu.

## Step 1: Prepare the Data for Recutting

Clear all data remaining in the machine, and then send new data, so that only the required data is stored in the machine.

### Procedure

- ① Press  several times to display the screen shown in the figure.

UNSETUP	◀ ▶
↓	

- ② Press  several times to display the screen shown in the figure.

REPLOT	◀ ▶
<DATA EXISTS>	▶

If NO DATA is displayed, proceed to step 6.

- ③ Press .

REPLOT	◀ ▶
*START	↓

- ④ Press   to select CLEAR.

REPLOT	◀ ▶
*CLEAR	↓

- ⑤ Press .

The data is cleared.

REPLOT	◀ ▶
<NO DATA>	

- ⑥ Send data from the computer.

## Step 2: Perform Recutting

### Procedure

- 1 Press  several times to display the screen shown in the figure.



- 2 Press  several times to display the screen shown in the figure.

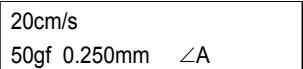


- 3 Press .



- 4 Press .

The screen returns to the screen in the figure, and cutting is performed.

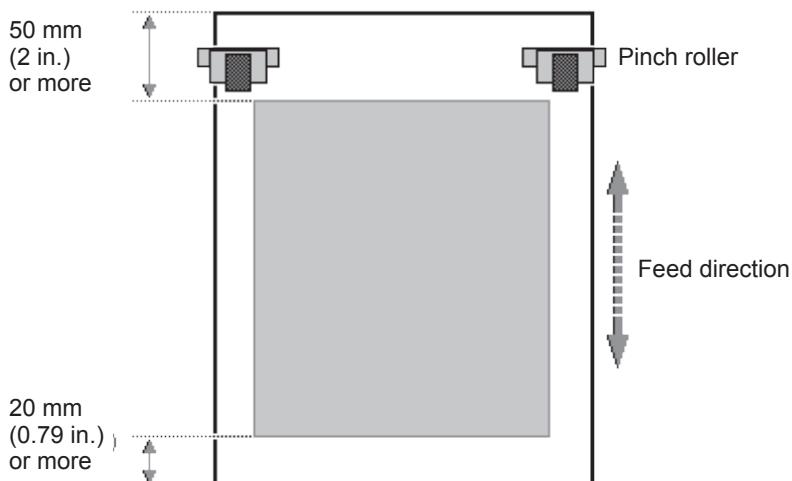


# Using a Variety of Materials

## Using Flat Material

If flat material is used, it must be at least 70 mm longer than the vertical size of the cutting data. This is the length required for the pinch rollers to feed out the material to the front and rear.

Refer to the figure below and ensure that there are sufficient margins at the front and rear of the material.



☞ P. 16 "Step 1: Load the Material"

## Using Roll Material

### ⚠ CAUTION

**Never load media that weighs over 5 kg (11 lb.).**

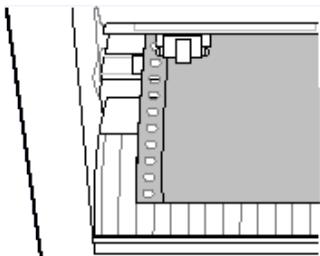
The machine may fail to withstand the weight and tip over or cause the material to fall.

Be sure to use the roller base to load the material. If you are not using the roller base, cut the required length of material before loading the material.

☞ P. 135 "Loading Roll Material (1)"

## Using Material with Perforations for Sprocket Feed

Sprocket-fed material has perforations along each edge. If the pinch rollers are positioned over the perforations, the material cannot be fed correctly. Load the material as shown in the figure.



## Loading Roll Material (1)

### ⚠ CAUTION

Roll media weighs about 5 kg (11 lb.).

To avoid injury, handle with care.

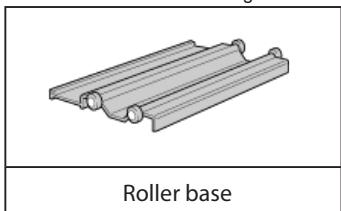
### ⚠ CAUTION

Never load media that weighs over 5 kg (11 lb.).

The machine may fail to withstand the weight and tip over or cause the material to fall.

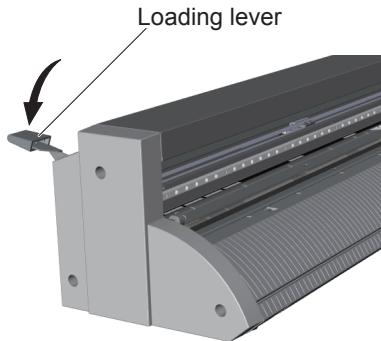
When loading roll material, the roller base is required.

☞ P. 137 "When not using the roller base"



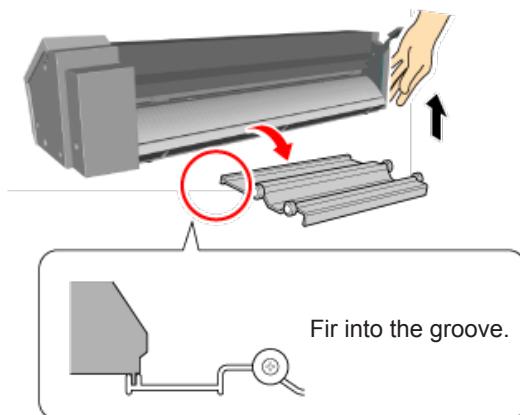
### Procedure

#### 1 Check that the loading lever is lowered.



#### 2 Attach the roller base onto the machine.

Hold the end of the machine when lifting.



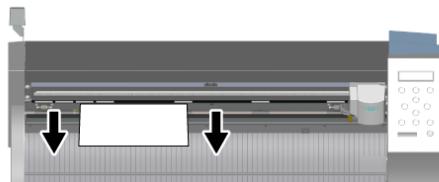
### ⚠ CAUTION

### Load roll media correctly.

Otherwise the media may fall and cause injury.

### ③ Load the material.

☞ P. 156 "Loading Position of Material"

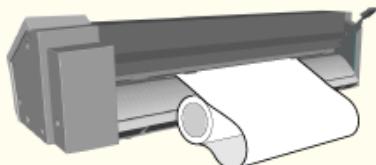


#### NOTE

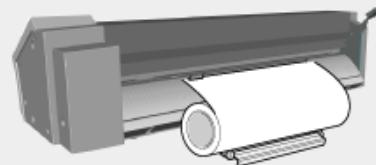
Pull out a length of material that is slightly longer than the amount needed for cutting, leaving some slack.

If you load the material without creating some slack, the material cannot be fed correctly.

OK

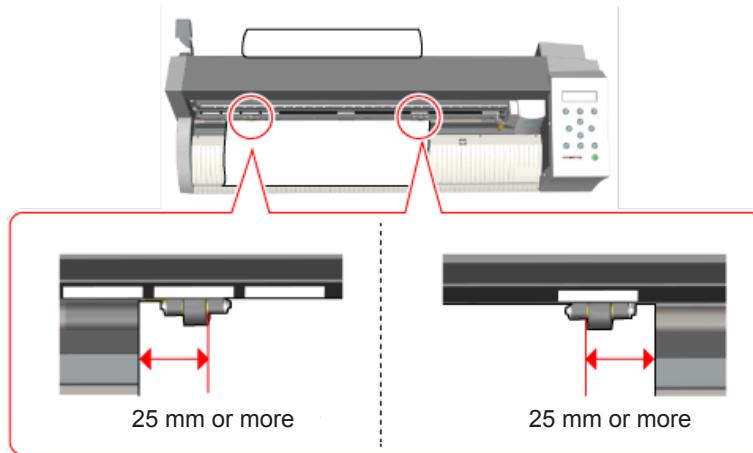


Not OK

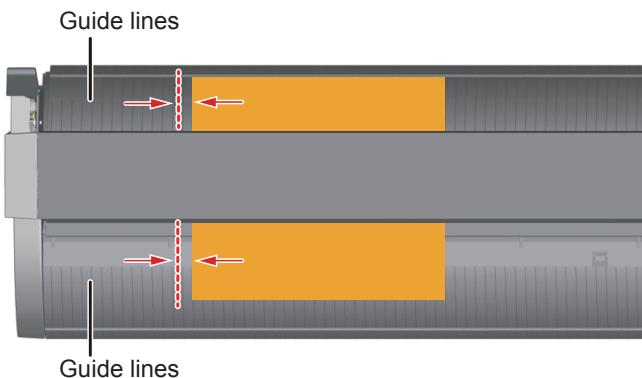


### ④ Move the pinch rollers to the edges of the material so that each one is within the grit marks.

Position the pinch rollers so that each one is 25 mm or more from the respective left or right edge of the material.



- 5 Align the left edge of the material so that it lies approximately parallel to the guide lines.**

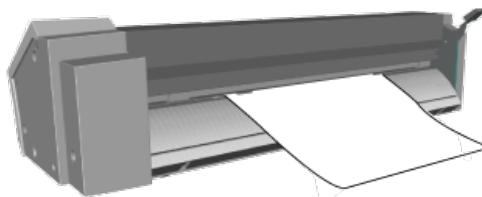


- 6 Raise the loading lever.**

The material is secured in place.

#### When not using the roller base

If using roll material, cut off the amount of material needed for cutting.



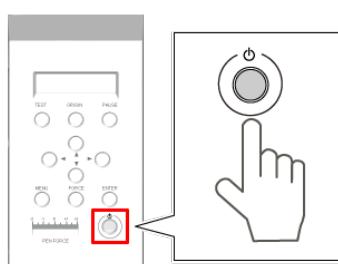
## Loading Roll Material (2)

Get the machine ready to receive data from the computer.

#### Procedure

- 1 Press the power button .**

☞ P. 174 "The Machine Doesn't Run"



The screen below is displayed.

SELECT SHEET	◀ ▶
*ROLL	◀ ▶

### MEMO

Set SELECT SHEET to EDGE

If SELECT SHEET is set to EDGE and the material is loaded, the area from the top edge of the material to 25 mm is reserved for the margin.

- ② Press .

The cutting carriage moves to the left edge. The cuttable width and length then appear on the display.

W : 250 mm
L : ----- [ 0 mm]

- ③ After operation stops, check that the material has not come loose.

☞ P. 139 "If the material comes loose"

## Loading Roll Material (3) (Material Feeding)

Be sure to perform material feed if it is required. If you start cutting without checking the material feed, correct cutting results may not be obtained. In the worst case, it may cause an error or malfunction or damage to the material.

### MEMO

Materials that Require Feeding

Roll material and long, flat material that is longer than 1.6 m (63in.)

☞ P. 139 "If the material comes loose"

☞

### Procedure

- ① Press  several times to display the screen shown in the figure.

UNSETUP	◀ ▲ ▼ ▶
---------	---------

- ② Press  to display the screen shown in the figure.

CONDITION	◀ ▲ ▼ ▶
-----------	---------

- ③ Press  .

The screen shown in the figure below is displayed.

AREA 1.0 m	◀ ▲ ▼ ▶
------------	---------

**4** Press .

**5** Press the keys to set the value for the required length of the material.

It is a good idea to set a value that is about 0.2 m (7-7/8in.) longer than the required material length.

AREA 1.0 m	
*0.5m	

**6** Press .

The set length of the material moves out to the front, then is immediately pulled back and taken up again.

Press the key to return to the screen shown in the figure.

W : XXX mm
L : XXX mm

### If the material comes loose

If the material comes loose from the pinch rollers, press the key to stop operation. Then reload the material, starting over from the beginning.

## Using the Material with Minimal Waste

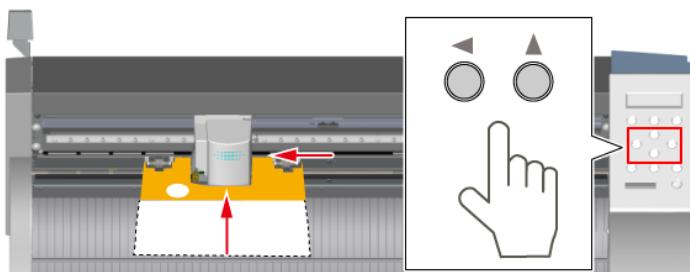
### MEMO

#### Setting the Origin

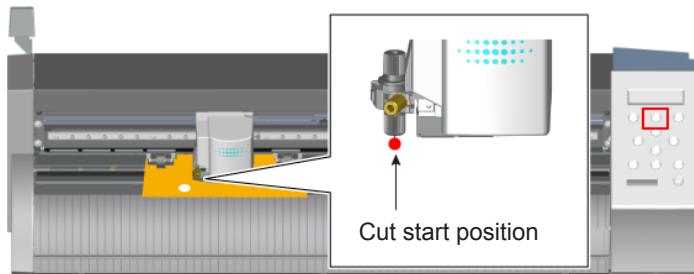
The origin point can be set arbitrarily using the key. You can use the material with minimal waste by setting the origin to an uncut position of the material.

### Procedure

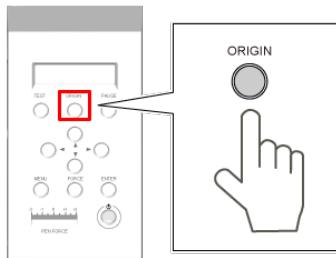
- 1** Load the material in the machine, and make it ready for cutting (setup condition).
- 2** Press to move the cutting carriage to the location you want to cut.



- ③ Align the center of the blade to the position you wish to make the origin.



- ④ Hold down **ORIGIN** for one second or longer.



ORIGIN SET flashes on the display.

ORIGIN SET

When the setting is complete, the following screen appears.

W : XXX mm

L : XXX mm

Send the cutting data from the computer. Cutting is performed using the specified origin.

# ***8. Optimizing the Cutting Quality for the Material /Preventing Misaligned Cutting***

---

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# Optimizing the Cutting Quality for the Material

## Performing a Cutting Test

☞ P. 25 "Step 5: Perform a Cutting Test"

## Changing the Blade Force

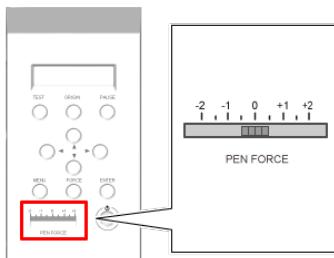
If the material was not cut correctly (for example, if two shapes peeled off together as a result of the cutting test), change the blade force.

### Procedure

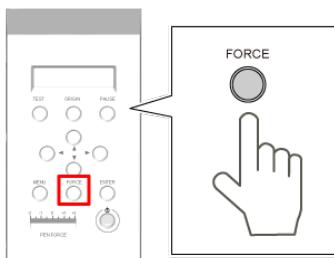
#### NOTE

Make sure that the material is load to the machine.

- 1 Check that the **PEN FORCE** slider is in its center setting (at "0" on the scale).



- 2 Press **FORCE**.



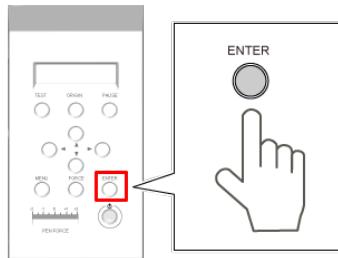
The blade force is displayed.

FORCE 50gf	◀ ▶
*50gf	◀

- 3 Press **◀ ▶** to change the value.

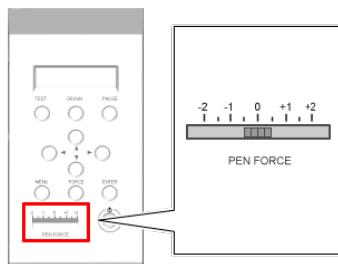
FORCE 50gf	◀ ▶
*60gf	◀

4 Press  to confirm.



### Fine-tuning blade force

After you set the blade force using the FORCE menu, you can further fine-tune the blade force using the PEN FORCE slider. Use this procedure when you want to make the blade force slightly larger or smaller than the setting made using the menu.

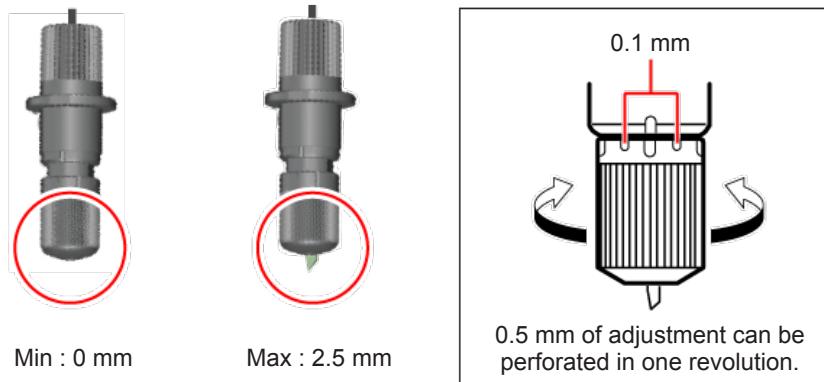


Adjustable Range:  $\pm$  Approximately 30 gf

\* This value is intended only as a rough guide. Accuracy is not assured.

## Adjusting the Cutting-in Amount

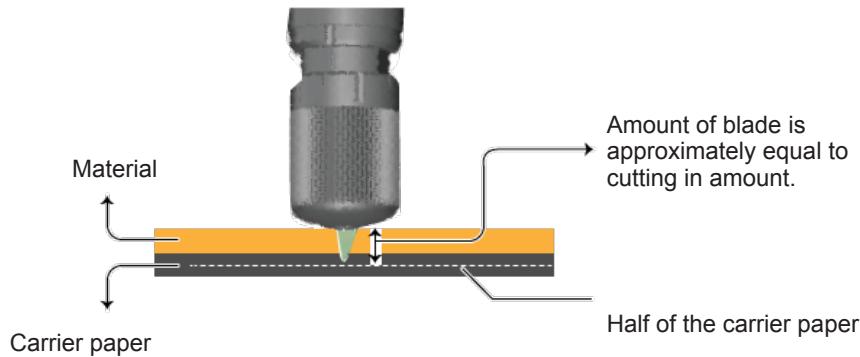
When you want to perform accurate and fine adjustment of the cutting-in amount, such as when cutting material with thin carrier paper, you can obtain good results by adjusting the amount of blade extension. Turn the cap portion of the blade holder to adjust the amount of blade extension.



### General Guide for Amount of Blade Extension

Use the following formula as a rough guide for setting the amount of blade extension.

$$\text{Amount of blade extension} = \text{Thickness of material} + (\text{Thickness of carrier paper} / 2)$$



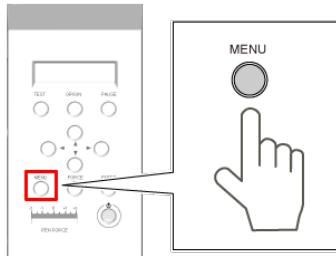
## Setting the Cutting Conditions

The setting method is common. in procedure4,select the cutting conditions that you want to set.

### **NOTE**

Make sure that the material is load to the machine.

- 1 Press  several times to display the screen shown in the figure.



UNSETUP	◀ ▶
	↓

- 2 Press  to display the screen shown in the figure.

CONDITION	◀ ▶
	▶

- 3 Press .

- 4 Press   to choose the item setting that you wish to adjust.

SPEED 20cm/s	◀ ▶
	▶

Following items can be set.

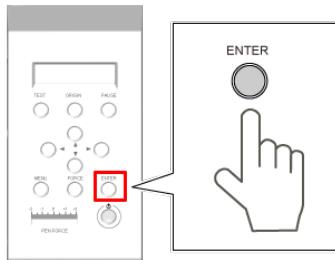
- ☞ P. 146 "Setting Cutting Quality (QUALITY)"
- ☞ P. 146 "Setting the Amount of Offset for the Tip of the Blade (OFFSET)"
- ☞ P. 147 "Setting the Direction of the Coordinate Axis for Cutting (ROTATE)"
- ☞ P. 148 "Extending the Cutting Area (EXTEND)"
- ☞ P. 149 "Setting the Speed of the Blade During Cutting (UPSPEED)"

- 5 Press .

- 6 Press   to set the value.

SPEED 20cm/s	◀ ▶
*22cm/s	↓

⑦ Press .



When you have finished, press the  key to go back to the screen in the figure.

W : XXX mm  
L : XXX mm

### MEMO

You can save the cutting conditions you have set.

☞ P. 149 "Saving the Cutting Conditions"

### Setting Cutting Quality (QUALITY)

This setting lets you set cutting quality.

#### NORMAL

This setting should be used for normal operation.

#### HIGH SPEED

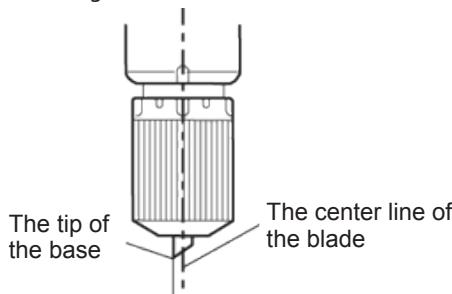
This setting should be used when you want to increase the cutting speed.

#### HEAVY

This setting should be used when using thick or heavy media.

### Setting the Amount of Offset for the Tip of the Blade (OFFSET)

This setting lets you set the amount of offset for the tip of the blade. Set a value that matches the conditions for the blade installed. When using the included blade or equivalent parts, cutting can be performed using the factory-default settings.



#### OFFSET

- Stored in Memory: Yes
- Factory Default: 0.250 mm
- Setting Range: 0.000 to 1.000 mm (0.025 mm steps)

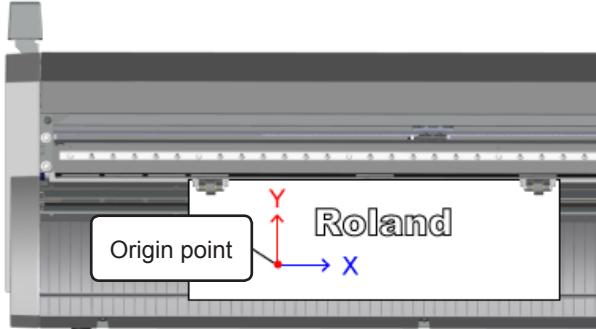
---

### Setting the Direction of the Coordinate Axis for Cutting (ROTATE)

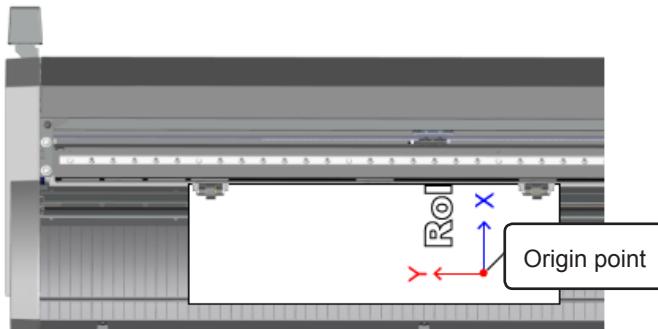
---

This setting lets you set the direction of the coordinate axis for cutting. When set to 0deg (default value), the origin is set at the lower left of the material. When set to 90deg, the origin is set at the lower right of the material, and the data is rotated counterclockwise by 90 degrees. Note that when 90deg is selected, the coordinate axis changes. The arrows in the figure indicate the positive directions of X and Y axes.

#### When Set to 0deg



#### When Set to 90deg



### ROTATE

- Stored in Memory: Yes
- Factory Default: 0deg
- Selection Choices: 0deg or 90deg

### Extending the Cutting Area (EXTEND)

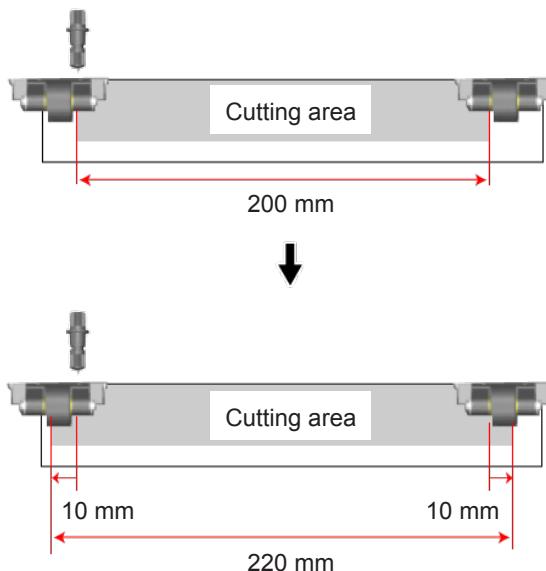
It is possible to extend the cutting area by up to 20 mm.

#### NOTE

Depending on the design to be cut, the pinch rollers may pass over the top of the cutting line.

#### Example: Setting 0 mm → 10 mm

EXTEND  
\*10.0mm



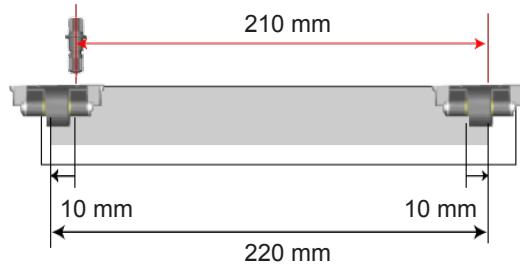
#### When "EXTEND" was set after loading a material.

The value of W displayed in the panel and actual cut width are different. When you set the upper example, the panel is displayed as shown in the figure below.

W : 210 mm  
L : XXX mm

#### NOTE

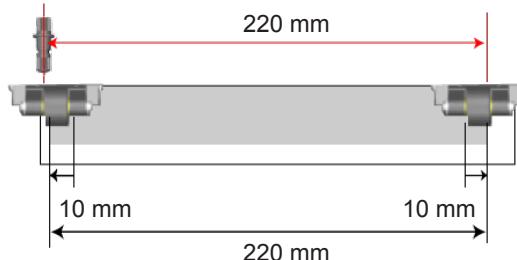
The panel indication is 210mm, but the actual cut width is 220mm



**When "EXTEND" was set before loading a material.**

The value of W displayed in the panel and actual cut width are same. When you set the upper example, the panel is displayed as shown in the below figure.

W : 220 mm
L : XXX mm

**EXTEND**

- Stored in Memory: Yes
- Factory Default: 0.00 mm (OFF)
- Setting Range: 0.1 to 10.0 mm

**Setting the Speed of the Blade During Cutting (UPSPEED)**

This setting lets you set the speed for moving the blade to the next cutting position with the blade lifted off the material during cutting operation. If set to AUTO, the blade moves at the speed specified by SPEED. If UPSPEED is increased, the cutting time is shortened. When cutting material that is thinner or thicker than the standard material, it may be better to decrease the speed such as to prevent the material from being lifted up.

**UPSPEED**

- Stored in Memory: Yes
- Factory Default: AUTO
- Setting Range: 10 to 50 cm/s (10 cm/s steps), AUTO

**Saving the Cutting Conditions**

The current cut conditions can be saved to memory. Eight sets of settings can be saved to USER 1 to USER 8 memories. Overwriting a memory deletes any old conditions it contains.

**Procedure****NOTE**

Make sure that the material is loaded to the machine.

- 1 Press several times to display the screen shown in the figure.

UNSETUP	◀ ▶
	↑ ↓

- ② Press .

MEMORY	◀ ▶
<USER1>	▶

- ③ Press , , .

SAVE *USER1	◀ ▶
50 - 20 0.250	↓

The display shows the values of FORCE, SPEED, and OFFSET menus from the left.

- ④ Press ,  to select the memory number you wish to save cutting conditions to.

SAVE *USER2	◀ ▶
50 - 20 0.250	↓

- ⑤ Press .

The screen below is displayed.

SAVE USER2	◀ ▶
	▶

Press the  key to go back to the screen in the figure.

W : XXX mm
L : XXX mm

### MEMO

Though not shown on the display, the UPSPEED (the speed at which the blade moves when not cutting) and cut quality are also saved.

## Loading Cutting Conditions

Cutting conditions saved to memory can be loaded. You can select the memory from USER 1 to USER 8. Note that loading cutting conditions from memory erases any cutting conditions that have not been saved.

 P. 149 "Saving the Cutting Conditions"

### Procedure

- ① Press  several times to display the screen shown in the figure.

UNSETUP	◀ ▶
	↓

- ② Press .

MEMORY	◀ ▶
<USER1>	▶

- ③ Press  .**

SAVE *USER1	 
50 - 20 0.250	 

- ④ Press   to select the memory number you wish to load.**

SAVE *USER2	 
50 - 20 0.250	 

- ⑤ Press  to execute.**

Press the  key to go back to the screen in the figure.

W : XXX mm
L : XXX mm

## Cutting Detailed Characters and Complex Shapes

### Smoothing Function

The smoothing function can be used to cut smooth curves.

- ON  
When curves in cutting results are not smooth
- OFF  
When cutting small characters or complex shapes

### Procedure

- ① Press  several times to display the screen shown in the figure.**

UNSETUP	 
---------	--

- ② Press  several times.**

OTHERS	 
--------	--

- ③ Press  twice.**

- ④ Press   to select ON or OFF.**

SMOOTHING	 
*OFF	 

⑤ Press .

Press the  key to go back to the screen in the figure.

W : XXX mm

L : XXX mm

## Cutting in the Same Position Repetitively (Overlap)

The Overlap function is used when it is not possible to cut through the material in a single pass, for example, when cutting thick material.

### Procedure

**NOTE**

Make sure that the material is load to the machine.

① Press  several times to display the screen shown in the figure.

UNSETUP



② Press  several times to display the screen shown in the figure.

OTHERS



③ Press .

④ Press  several times to display the screen shown in the figure.

OVERLAP OFF



⑤ Press .

⑥ Press  to set the number of cuts.

Setting Range: 1 to 10.

OVERLAP OFF



2

**MEMO**

OVERLAP  $\Rightarrow$  2 Normal cut + 2  $\Rightarrow$  3 cuts are made

- 7** Press .

**NOTE**

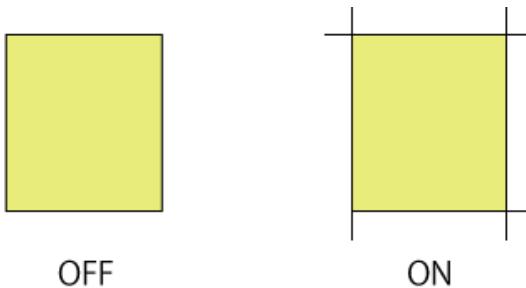
This setting remains enabled until you disable it. If you do not require it, disable it after use.

Press the  key to go back to the screen in the figure.

W : XXX mm
L : XXX mm

## Cutting Corners Cleanly (Over Cut)

This function cuts an extra 1 mm at the start and end of each line. It is effective when you want to produce particularly sharp corners, for example when cutting thicker materials. In most cases the over cut function should be set to "OFF." Set it to ON when you want to ensure that corners are cut cleanly. However, if the over cut function is enabled when cutting small characters or complex shapes, areas of the material that are required may be cut. In such cases it should therefore be set to "OFF."



### Procedure

- 1** Press  several times to display the screen shown in the figure.

UNSETUP	◀ ▶
	◀

- 2** Press  several times to display the screen shown in the figure.

OTHERS	◀ ▶
	▶

- 3** Press .

- ④ Press several times to display the screen shown in the figure.

OVERLAP OFF	

- ⑤ Press .

- ⑥ Press to select ON.

OVERLAP OFF	
ON	

- ⑦ Press .

**NOTE**

This setting remains enabled until you disable it. If you do not require it, disable it after use.

Press the key to go back to the screen in the figure.

W : XXX mm
L : XXX mm

# Cutting Conditions

## General Guide Regarding Cutting Conditions

A general guide for cutting conditions and the service life of the blade for different combinations of materials and blades is given below. Note that optimal cutting is not necessarily obtained simply by conforming to the conditions below. Perform a cutting test in advance to adjust the conditions. (For instructions on performing a cutting test, refer to P. 142 "Performing a Cutting Test".)

Blade	Material	Cutting force [gf]	Cutting speed [cm/s]	Amount of cutter blade offset [mm]	Service life [m]
ZEC-U5032	General signage vinyl	30–100	20	0.25	4000
ZEC-U5025	General signage vinyl	40–100	20	0.25	4000
	Fluorescent vinyl	120–200	10	0.25	2500

\* The values for Service life are intended to serve as a general guide when cutting materials of identical type.

### MEMO

If uncut areas remain even when the blade force is increased by more than 50 to 60 gf, the blade has most likely reached the end of its service life.

Replace with a new blade.

☞ P. 186 "Consumable Items"

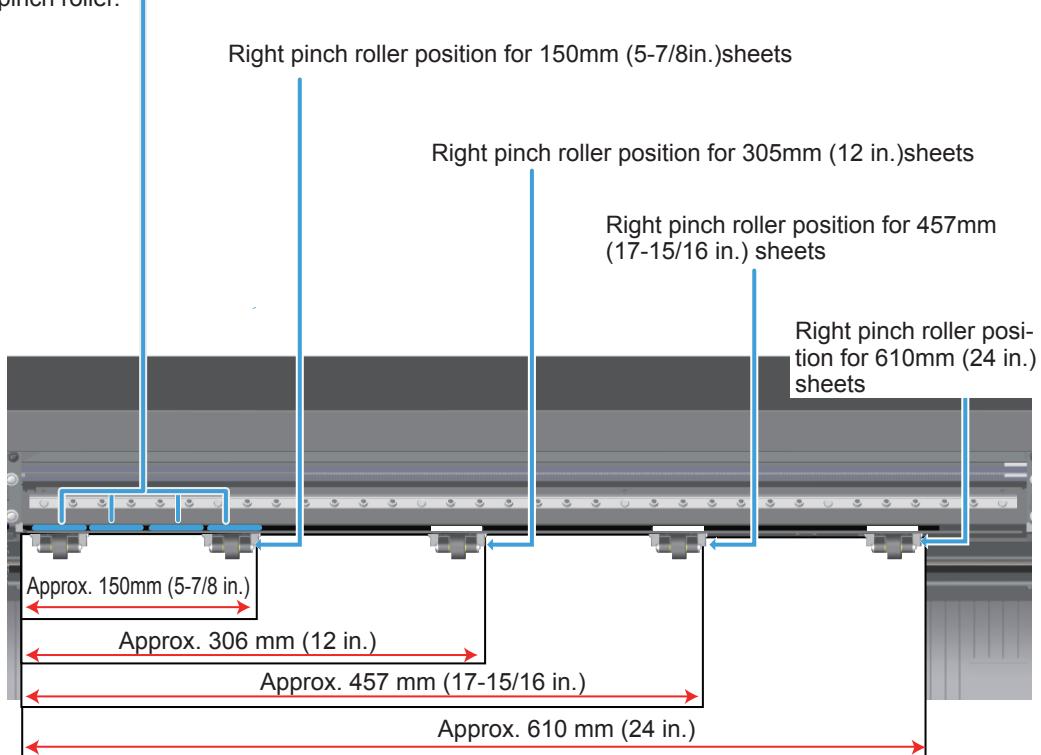
If the desired cutting results are not obtained (for example, if uncut areas remain) even after the blade is replaced, refer to P. 183 "Uncut Areas Remain or Cut Edges are not Clean" in What to Do If.

### Loading Position of Material

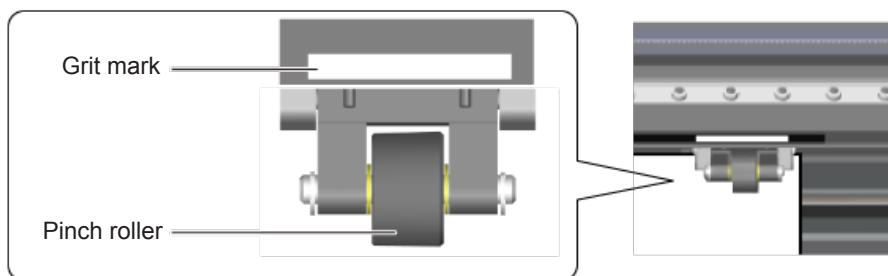
Be sure that both edges of the material and the pinch rollers are aligned with the pinch-roller position-verification marks.

The left pinch roller can be used within the area shown.

When using sheets with widths other than those shown below, adjust the position of the left pinch roller.



### Pinch rollers and grit marks



# Preventing and Correcting Misaligned Cutting

## Using Thinner or Harder Material than Normal

You can use the fan to hold down the material and prevent misalignment. Change these settings to match the thickness and hardness of the material used.

### Procedure

#### NOTE

Make sure that the material is load to the machine.

- 1 Press  several times to display the screen shown in the figure.

UNSETUP	  
---------	---

- 2 Press  several times to display the screen shown in the figure.

OTHERS	 
--------	--

- 3 Press .

- 4 Press  several times to display the screen shown in the figure.

VACUUMFAN AUTO	 
----------------	--

- 5 Press .

- 6 Press   to select the air volume.

- 1: Weak
- 5: Strong
- AUTO: Automatic

Use a weaker air volume when using thin material.

VACUUMFAN AUTO	  
----------------	---

- 7 Press .

Press the  key to go back to the screen in the figure.

W : XXX mm	 
L : XXX mm	

## Preventing Misaligned Cutting

Set this setting to "ON" to feed out the material automatically during cutting. While this setting is enabled, when cutting data is sent from the computer, cutting is performed every 1 meter after the material has automatically been fed forward (depending on the data, the material may be fed out more than 1 m, for example if the next movement point is more than 1 m back). If material has already been fed out using the AREA function, the material will not be fed out automatically until the length of material that was fed out using the AREA function is reached, even if PRE-FEED is set to "ON."

\* This function is only enabled when the material type has been set to "ROLL."

### Procedure

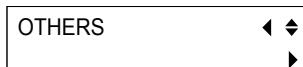
#### NOTE

Make sure that the material is load to the machine.

- ① Press  several times to display the screen shown in the figure.



- ② Press  several times to display the screen shown in the figure.



- ③ Press .

- ④ Press  several times to display the screen shown in the figure.



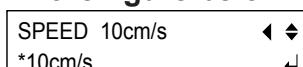
- ⑤ Press .

- ⑥ Press   to select ON or OFF.

Setting feed speed



When the figure above is displayed, press the  key twice to display the figure below.



**Press to set the speed.**

Setting Range: 1 to 10

SPEED 10cm/s	
*10cm/s	

**Press .**

**7 Press .**

Press the key to go back to the screen in the figure.

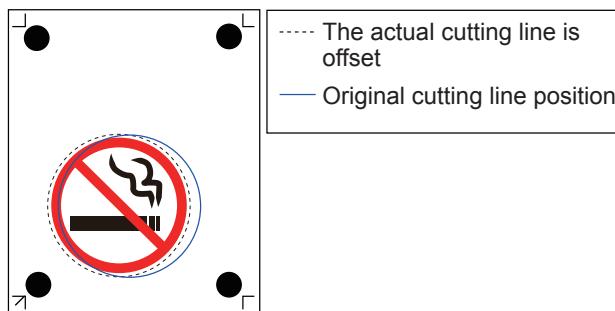
W : XXX mm

L : XXX mm

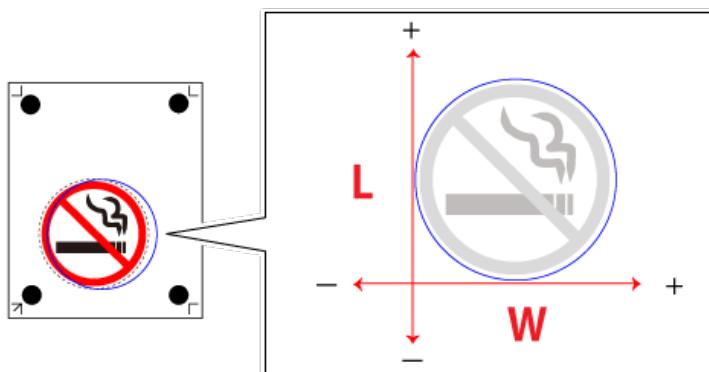
## Adjusting the Cutting Position

If the printing position and the cutting position are offset as shown in the figure below, you can correct the issue by adjusting either the printing position or the cutting position. This example shows the procedure for adjusting the cutting position.

⇒ P. 162 "Adjusting the Printing Position"



### CROP - L/W Values

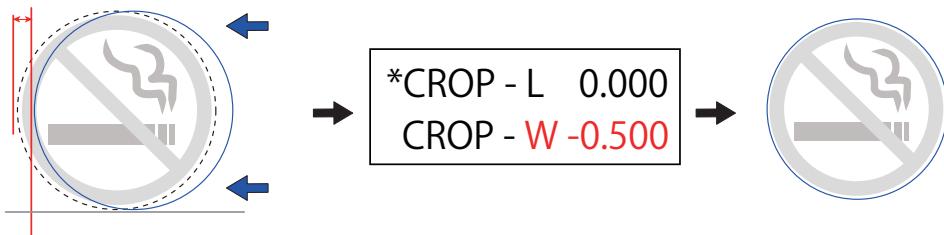


Input range: - 25 mm to 25 mm

To move the cutting line 0.5 mm to the left → Enter the W value

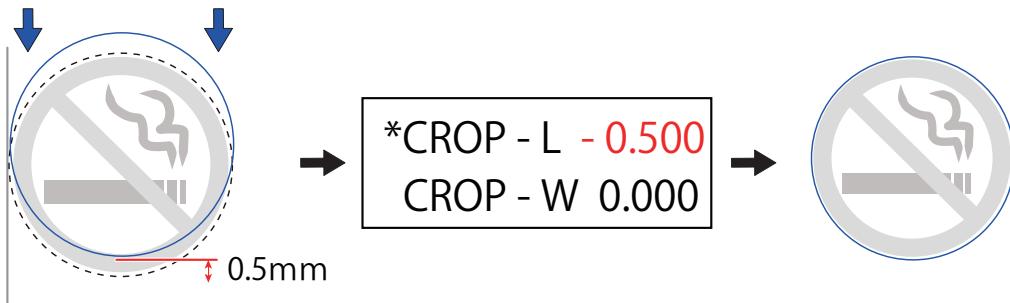
----- The actual cutting line is offset  
— Original cutting line position

0.5mm



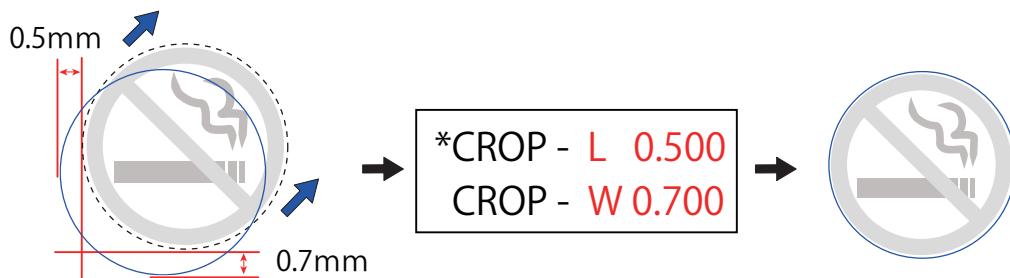
\*CROP - L 0.000  
CROP - W -0.500

To move the cutting line 0.5 mm down → Enter the L value



\*CROP - L -0.500  
CROP - W 0.000

To move the cutting line 0.7mm up and 0.5 mm to the right → Enter both W and L values



\*CROP - L 0.500  
CROP - W 0.700

## 1. Set the CROP - L value

**NOTE**

Make sure that the material is load to the machine.

- 1** Press  several times to display the screen shown in the figure.

UNSETUP	 
---------	--

- 2** Press  several times to display the screen shown in the figure.

OTHERS	 
--------	--

- 3** Press .

- 4** Press  several times to display the screen shown in the figure.

CROP ADJ.	 
-----------	--

- 5** Press  twice.

The screen below is displayed. First enter the CROP - L value.

CROP - L 0.000	 
----------------	--

\*0.250

- 6** Press   to enter the values.

Refer to the section above titled "CROP - L/W Values" to enter the values.

- 7** Press .

The screen below is displayed.

CROP ADJ.	 
-----------	--

CROP - L 0.250

## 2. Set the CROP - W value

- 1** Press .

The screen below is displayed. Enter the CROP - W value.

CROP ADJ.	 
-----------	--

CROP - W 0.000

- 2** Press .

- ③ Press to enter the values.

CROP ADJ.	
CLOP - W 0.250	

- ④ Press .

When you have finished, press the key to go back to the screen in the figure.

W : XXX mm
L : XXX mm

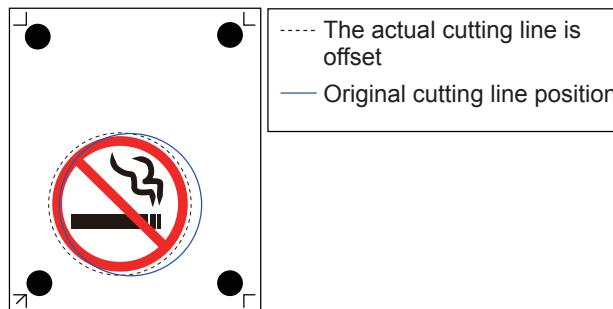
- ⑤ Send cutting data.

Perform cutting again and check the cutting position.

## Adjusting the Printing Position

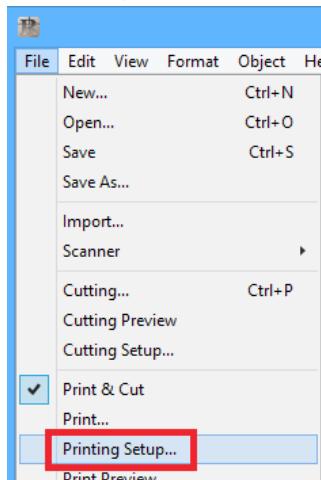
If the printing position and the cutting position are offset as shown in the figure below, you can correct the issue by adjusting either the printing position or the cutting position. This example shows the procedure for adjusting the printing position.

P. 159 "Adjusting the Cutting Position"

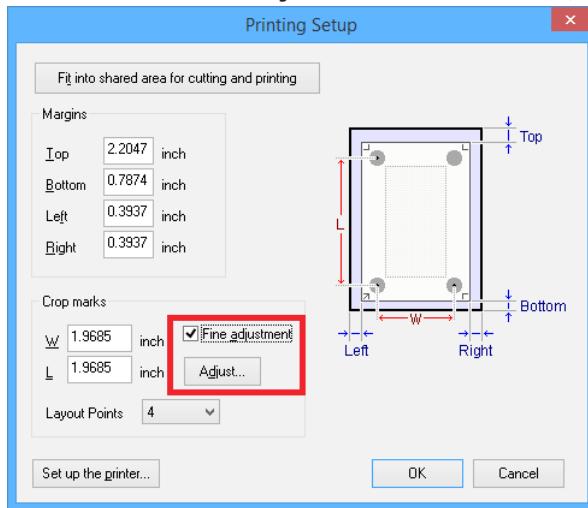


### Procedure

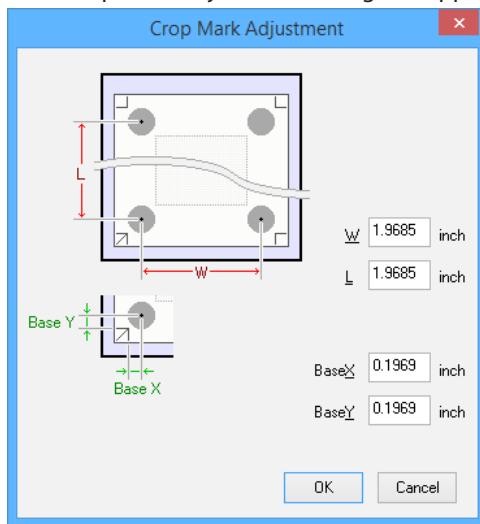
- ① In CutStudio, from the File menu, click Printing Setup.



**② Select the Fine adjustment check box, and then click Adjust.**



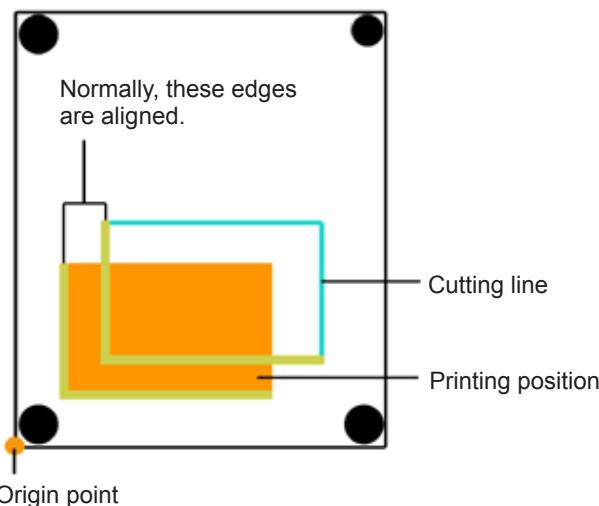
The Crop Mark Adjustment dialog box appears.



### ③ Align the position with respect to a line or point that is close to the origin.

Adjust the Base X and Base Y values to eliminate the offset, and then click OK.

Do not change the W and L values at this point.



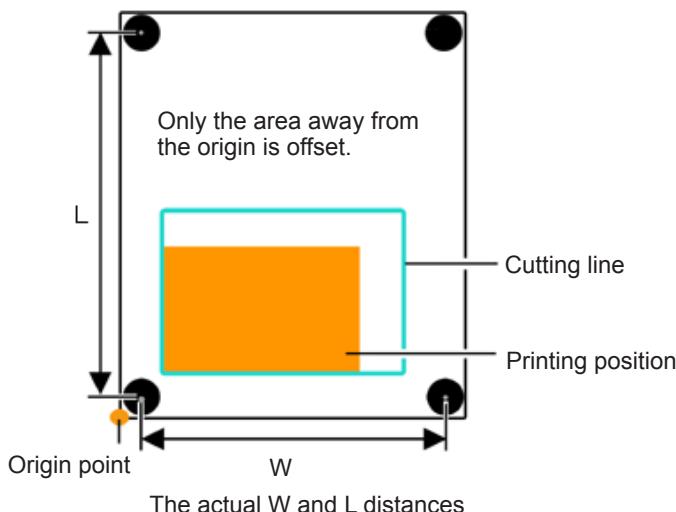
#### The cutting position is offset to the left or right of the printing position

Change the Base X value. If the cutting position is offset to the right, increase the value; if it is offset to the left, decrease the value. In the case shown in the figure above, increase Base X.

#### The cutting position is offset above or below the printing position

Change the Base Y value. If the cutting position is offset above, increase the value; if it is offset below, decrease the value. In the case shown in the figure above, increase Base Y.

If the printing and cutting positions are offset at a location distant from the origin as shown in the figure below even after adjusting the positions with Base X and Base Y values, it is possible that the distance between the crop marks that are printed is offset from the settings (W and L). This may be due to the expansion or contraction of the material or distortion in the printing. Proceed to step 4.



**④ Set W and L in the Crop Mark Adjustment dialog box as described below to correct the error.**

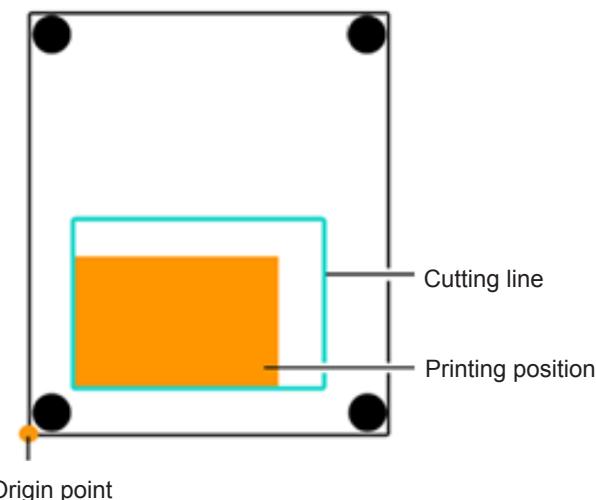
However, the values are merely guide lines. The optimal values must be found by changing the values and actually cutting the material several times.

**Note**

Before changing the settings, check that the Base X and Base Y settings have been adjusted with respect to a line or point close to the origin. If they were not, the adjustment result of step 3 will be offset if the W and L settings are changed.

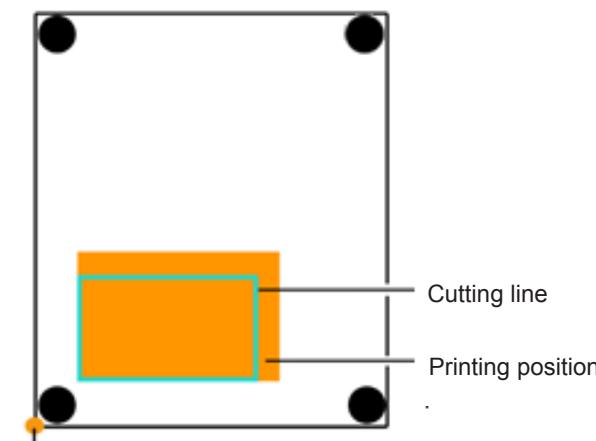
**The cutting lines are offset outward from the printing position**

This may be because the distance between the printed crop marks is longer than the setting. In this case, set the W and L values greater than the settings to make the adjustment.



**The cutting lines are offset inward from the printing position**

This may be because the distance between the printed crop marks is shorter than the setting. In this case, set the W and L values smaller than the settings to make the adjustment.



Origin point

### Note

The values entered in the Crop Mark Adjustment dialog box are effective only when Fine adjustment in the Printing Setup dialog box is enabled. All the entered values are cleared if Fine adjustment is disabled or if the W and L values of Crop marks are changed.

### If the sensor fails to read the crop marks

If the sensor fails to read the crop marks, the screen in the figure appears. If this screen appears, proceed to "Crop Marks Cannot be Read." If this does not resolve the issue, refer to P. 91 "Cutting in Tool Mode (1)", and perform alignment in Tool Mode.

SET TO  
<TOOL MODE>

# ***9. Maintenance/Replacement***

---

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# Cleaning

Cleaning is important in order to ensure clean cutting. Clean the machine periodically.

☞ P. 168 "Cleaning the Blade Holder Cap"

## ⚠ CAUTION

**Be sure to perform operations as specified by the instructions above, and never touch any area not specified in the instructions.**  
Sudden movement of the machine may cause injury.

## ⚠ CAUTION

**Never use gasoline, alcohol, thinner, or any other flammable material.**  
Doing so may cause fire.

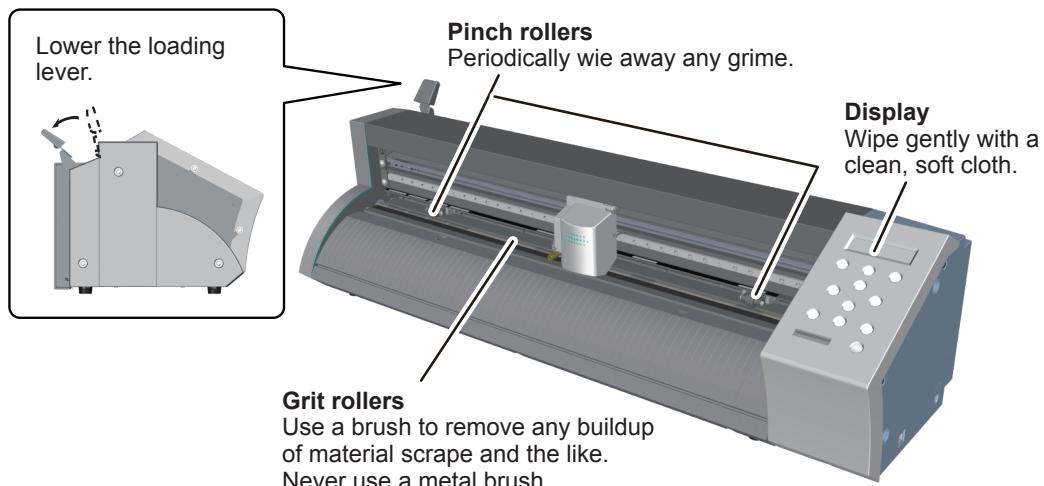
## Cleaning the Machine

### Items required

- Cloth soaked in water and thoroughly wrung out

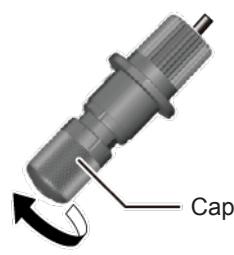
### NOTE

Switch off the power before cleaning



## Cleaning the Blade Holder Cap

If there is a buildup of material adhesive or dust inside the cap, loosen the cap, remove it, and remove any foreign matter. If pieces of material or dust build up inside the blade holder cap, the blade will stop turning smoothly and will no longer cut cleanly.



Loosen

# Replacing the Blade

If the blade becomes dull, replace it with the included replacement blade.

☞ P. 171 "Consumable Items"

## ⚠ CAUTION

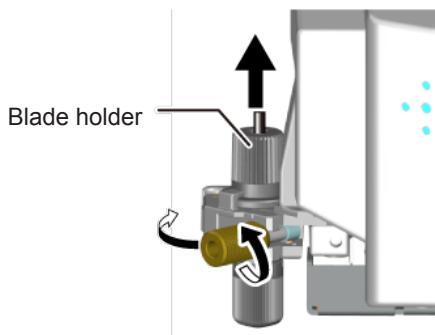
**Be sure to perform operations as specified by the instructions above, and never touch any area not specified in the instructions.**  
Sudden movement of the machine may cause injury.

## Procedure

### NOTE

Remove the media before replacing the blade.

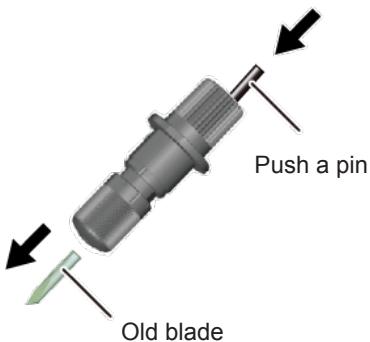
#### 1 Remove the blade holder from the carriage.



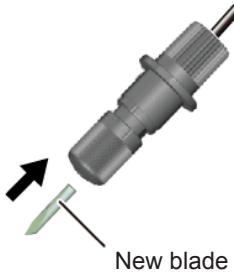
## ⚠ CAUTION

**Never touch the tip of the blade with your fingers.**  
Doing so may result in injury.

#### 2 Remove the old blade.



**③ Install a new blade.**



**④ Install the blade holder.**



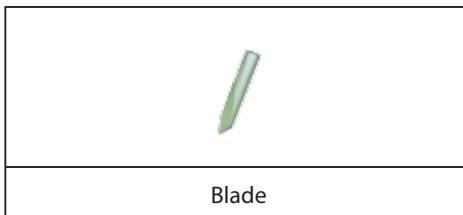
☞ P. 24 "Step 4: Install the Blade Holder"

# Consumable Items

## Purchasing Consumable Items

To purchase consumable items, visit the Roland DG Corp. website (<http://www.rolanddg.com/>) or contact your authorized Roland DG Corp. dealer.

### Blade



Blade

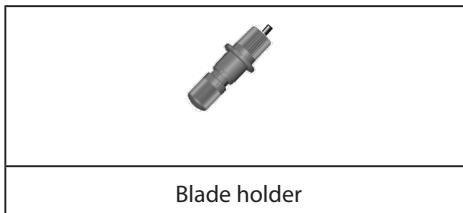
In the cases below, the blade has reached the end of its service life. Replace it with a new item.

- The tip of the blade is broken.
- Uncut areas remain even though the blade force has been increased to 50 to 60 gf.
- Cuts are not as clean as they used to be.
- The material starts to curl up from the carrier paper when cutting detailed areas or corners.

The tip of a blade that has been used for a long time or has been used to cut hard material may wear away as shown in the figure. A blade that has worn in this manner will no longer cut cleanly, so replace it with a new one.

☞ P. 169 "Replacing the Blade"

### Blade holder



Blade holder

After the tip of the blade has been adjusted, the cap of the blade holder rubs against the material when cutting, causing the end of the cap to gradually wear away. As the cap becomes increasingly worn it becomes impossible to adjust the tip of the blade correctly, and clean cutting is no longer possible. When this happens, replace the blade holder with a new one. When a blade holder has been used for a long time, the bearing that supports the blade deteriorates, making it more difficult for the blade to turn. If you continue to use a blade holder that has deteriorated in this fashion, the machine will not cut cleanly because the tip of the blade will not turn smoothly. If corners or curved sections are not cut cleanly or cuts start looking like perforated lines, or if similar problems occur, refer to P. 168 "Cleaning the Blade Holder Cap" and clean the blade holder cap. If this fails to resolve the problem, replace the blade holder with a new one.

### Blade protector

If cutting is performed when the amount of blade extension or the blade force is not adjusted appropriately, the tip of the blade may pierce the material's carrier paper and scratch the blade protector. If cutting is performed when the blade protector is scratched, it will not be possible to cut cleanly. If the surface of the blade protector is deformed due to scratching or similar damage, the blade protector must be replaced. Contact your authorized Roland DG Corp. dealer.



# 10. What to Do If/Error Message

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# The Machine Doesn't Run

---

## Are cables connected?

---

Check that the power cord and the USB cable to the computer are connected correctly.

---

## Is the power switched OFF?

---

Turn on the machine power.

---

## Is the machine ready to receive cutting data?

---

If the display shows the following, cutting is not performed even when data is sent. Select the loaded material, press the  key, and set the machine ready to receive cutting data.



---

## Are the software application settings incorrect?

---

Select the appropriate driver for the machine. For the selection procedure, refer to the manual for the application software.

---

## If the machine does not run even after you have checked the points above

---

Perform a self test. If the self test cannot be executed, the machine may have malfunctioned. Contact your authorized Roland DG Corp. dealer.

 P. 130 "Checking the Machine Status (Self Test)"

# Flat Material Cannot be Set Up using "PIECE" (Length is not Displayed)

---

## Is the material longer than 1.6 m?

---

If flat material longer than 1.6 m is set up using "PIECE," the machine recognizes it as a roll.

☞ P. 134 "Using a Variety of Materials"

# Creating or Importing Data

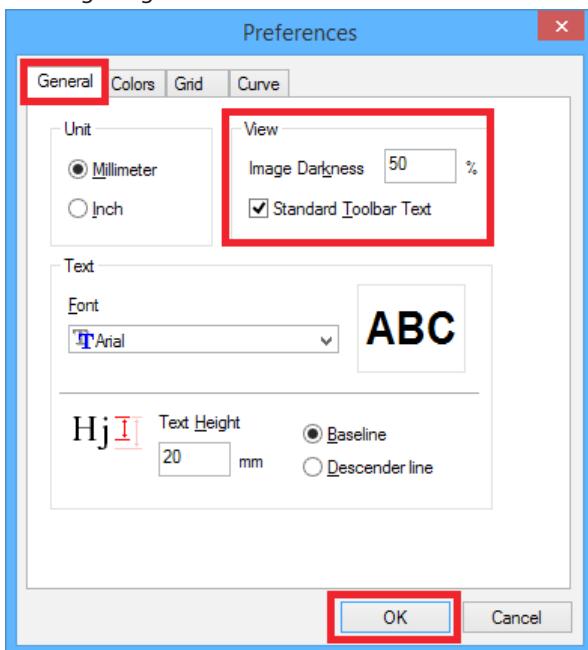
## Changing the Darkness of an Aligned Image

It is possible to change the darkness of an image imported into CutStudio.

### Procedure

- 1 From the File menu, click Preferences.**
- 2 On the General tab, enter a value in the Image Darkness box.**

Setting Range: 1 to 100%



- 3 Click OK.**

## Illustrator Data Cannot be Imported

### Is the data saved in AI 8.0 or EPS 8.0 format?

When importing data created in Illustrator into CutStudio, it is only possible to import AI 8.0 or EPS 8.0 files. If using a higher version, save files as a lower version before importing.

☞ P. 58 "File Formats that can be Imported into CutStudio"

## Sample Data Cannot be Found

### Location of Sample Data Folder

Open the Sample.bmp file found in the CutStudio installation folder (usually located in the CutStudio folder under Program Files on the C drive).

### Is the computer not set to show hidden folders?

Sample data may not be displayed in some cases depending on the computer settings. If sample data is not displayed, follow the procedure below and recheck the location of the sample data folder.

#### Windows 8/8.1

### Procedure

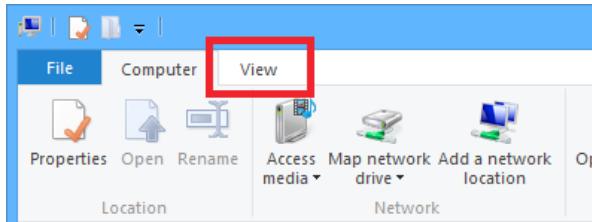
#### **1 Click Explorer.**

Click the folder at the bottom left of the desktop.

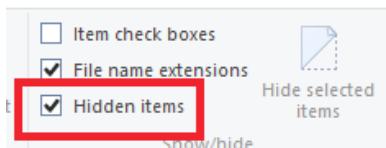


The screen below is displayed.

#### **2 Click the View tab.**



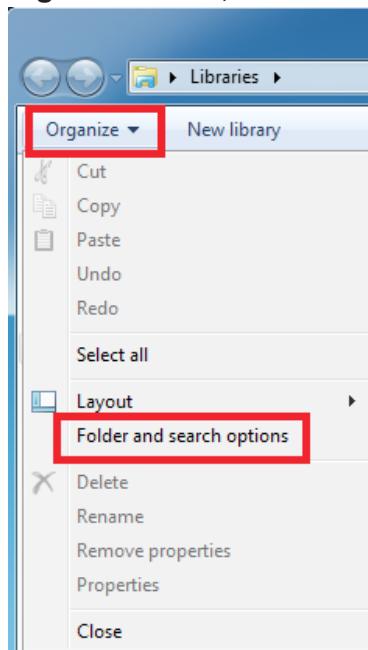
#### **3 Select the Hidden items check box.**



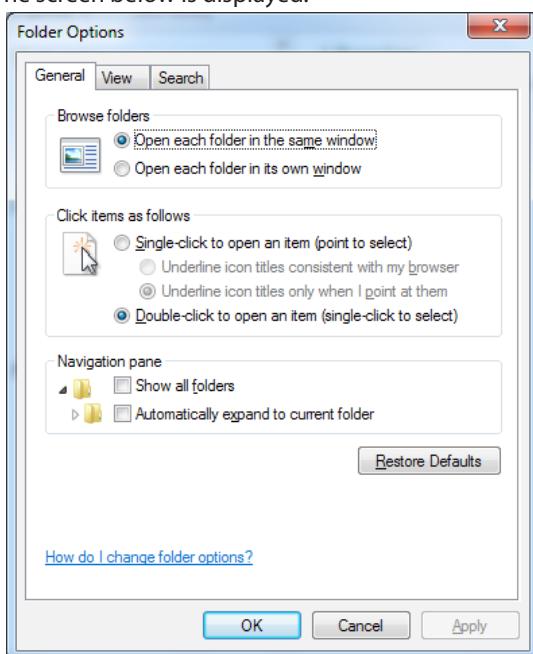
### Windows Vista / 7

#### Procedure

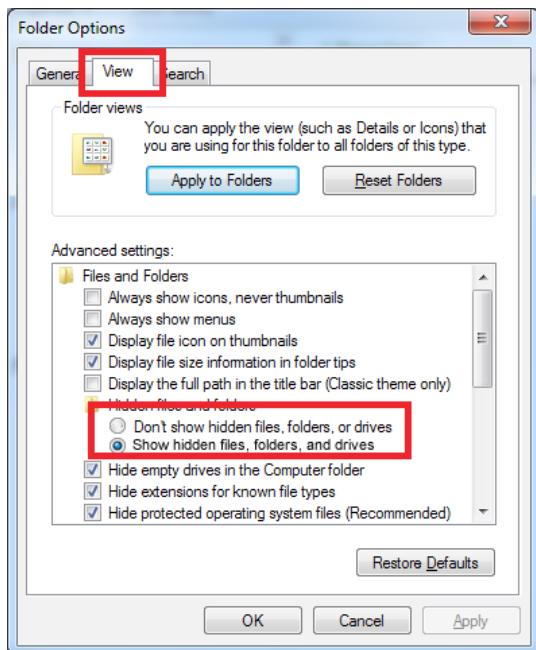
- 1 From the Start menu, click Computer.**
- 2 In the Organize menu, click Folder and search options.**



The screen below is displayed.



- ③ Click the View tab, and select the Show hidden files, folders, and drives check box.



- ④ Click OK.

# The Material Slips Away from the Pinch Rollers While Cutting

---

## Is the loading lever lowered?

---

If it is, the material is not secured in place. Check that the pinch rollers are within the edges of the material, and raise the loading lever.

---

## Is the material loaded in parallel with the guides?

---

If the front edge of the material is cut at an angle, trim off an excess portion so that the front edge is parallel with the guides, and then load the material.

☞ P. 156 "Loading Position of Material"

---

## Is the material making contact somewhere during cutting?

---

Make sure that the left and right edges of the material do not make contact with the inner surfaces of the machine during cutting. Such contact not only damages the material, but also hinders normal material feed and causes the material to slip out of position.

---

## Was the material feed checked before cutting (for roll material)?

---

If you start cutting without checking the material feed, correct cutting results may not be obtained. In the worst case, it may cause an error or malfunction or damage to the material.

☞ P. 138 "Loading Roll Material (3) (Material Feeding)"

---

## Is direct sunlight or high intensity indoor light hitting the machine?

---

Move the machine to a location where direct sunlight or indoor light does not hit the machine.

# Crop Marks Cannot be Read

When the machine cannot read crop marks, it displays an error message and pauses operation. If this happens, press any key on the operation panel. Remove the material, check the following items, and then reload the material.

## "CROPMARK ERR" or "SET TO <TOOL MODE>" is Displayed

### Is the material loaded correctly?

Refer to P. 134 "Using a Variety of Materials" and load the material in the correct position.

### Are you using material that is not white or is glossy?

Crop marks cannot be detected if decorations or colors are on the material. Crop marks also cannot be detected on glossy material even if it is white.

☞ P. 95 "Materials that can be Used for Printing & Cutting"

### Does the material have creases or wrinkles?

Crop marks may not be read if the material has creases or wrinkles. Stretch the creases or wrinkles out and load the material again. If the crop marks still fail to be read, prepare new material without creases or wrinkles and repeat the operation from printing the data.

### Are the crop marks blurred or are they in a color other than black?

Set the color of crop marks to black, specify 100% density, and print the data again.

☞ P. 83 "Crop Marks"

### Are the size and shape of crop marks correct?

Make the crop marks perfect circles 10 mm(0-3/8in.) in diameter. The machine can only detect crop marks in the prescribed shape.

☞ P. 83 "Crop Marks"

### Are the crop marks at the correct positions?

Refer to P. 85 "Setting the Margins and the Distance between Crop Marks" and place the crop marks at the correct positions.

### Is the [ROTATE] menu set to [90deg]?

Set the [ROTATE] menu to [0deg] when using crop marks. Crop marks cannot be read if set to [90deg].

☞ P. 147 "Setting the Direction of the Coordinate Axis for Cutting (ROTATE)"

### Is direct sunlight or high intensity indoor light hitting the machine?

If direct sunlight or indoor light hits the cutting carriage sensor, crop marks may not be detected. Move the machine to a location where direct sunlight or indoor light does not hit the machine.

### If the issue is not resolved even after taking the steps below

In such cases, perform alignment in Tool Mode.

☞ P. 91 "Cutting in Tool Mode (1)"

## **"LENGTH NG," "WIDTH NG," or "ANGLE TOO BIG" is Displayed**

### **Is the material loaded at an angle? Are the printing results crooked?**

Crop marks cannot be detected in the following cases:

- The left and right crop marks are slanted by 5 degrees or more with respect to the moving direction of the carriage.
- The crop marks are offset by 20 mm or more in the material-feed direction.

### **Do the distances between crop marks specified by the program match those specified on the machine? (Manual Mode)**

Set the distance specified by the program correctly in the machine.

### **Are the crop marks at the correct positions?**

If the angle formed by the two lines connecting the center of the three crop marks is not 90 degrees, the crop marks cannot be read. Crop marks cannot be read if the distance between crop marks in the material-feed direction is 500 mm (19-11/16in.) or more.

### **Is the printing expanded or reduced?**

If the size is expanded or reduced when printing, the crop marks cannot be read when cutting. Print the data by specifying 100% for the magnification.

# Cutting Results are not Clean

## The Results of Cutting are Displaced when Using the Printing & Cutting Function

### Is a thick material being used?

When using thick material, set HEAVY of Cutting Quality.

☞ P. 146 "Setting Cutting Quality (QUALITY)"

### When using roll material, was the amount of material to be cut pulled out before performing cutting?

If cutting is performed without pulling out the material, the material may slip or operation may stop due to a motor error.

☞ P. 138 "Loading Roll Material (3) (Material Feeding)"

### Fine-tuning the Printing Position

☞ P. 162 "Adjusting the Printing Position"

### Fine-tuning the Cutting Position

☞ P. 159 "Adjusting the Cutting Position"

## Uncut Areas Remain or Cut Edges are not Clean

### Are the blade and blade holder securely mounted?

Make sure the screws are tightened securely so that they do not come loose during cutting.

☞ P. 24 "Step 4: Install the Blade Holder"

### Is the tip of the blade broken?

If it is, then replace the blade with a new one.

☞ P. 171 "Purchasing Consumable Items"

### Is there any buildup of dust or material adhesive on the tip of the blade?

If dirty, remove and clean the blade.

### Is there any buildup of pieces of material or dust inside the blade holder?

Take off the tip of the blade holder and remove any pieces of material or dust inside.

☞ P. 168 "Cleaning the Blade Holder Cap"

### Is a thick material being used?

When using thick material, set HEAVY of Cutting Quality.

☞ P. 146 "Setting Cutting Quality (QUALITY)"

### Is the blade force appropriate?

Carry out a cutting test and adjust the blade force until cutting can be performed adequately.

☞ P. 25 "Step 5: Perform a Cutting Test"

## Cutting Results are not Clean

---

### Is the amount of blade offset correct?

---

If the setting for the amount of blade offset is not correct for the blade, corners may be rounded or have horns.

☞ P. 146 "Setting the Amount of Offset for the Tip of the Blade (OFFSET)"

---

### Are the blade force and cutting speed appropriate for the material being cut?

---

Carry out a cutting test and adjust the settings until cutting can be performed adequately.

☞ P. 25 "Step 5: Perform a Cutting Test"

---

### When using roll material, was the amount of material to be cut pulled out before performing cutting?

---

If cutting is performed without pulling out the material, the material may slip or operation may stop due to a motor error.

☞ P. 138 "Loading Roll Material (3) (Material Feeding)"

---

### Is the smoothing function turned OFF?

---

☞ P. 151 "Cutting Detailed Characters and Complex Shapes"

---

### Is the blade protector damaged or deformed?

---

If the blade protector is damaged, the material may not be cut correctly even if the machine's settings and the installation of the blade and blade holder are all correct. In this happens, contact your authorized Roland DG Corp. dealer .

☞ P. 171 "Consumable Items"

## Uncut Portions Remain

---

### Is a thick material being used?

---

When using thick material, set HEAVY of Cutting Quality.

☞ P. 146 "Setting Cutting Quality (QUALITY)"

---

### When using roll material, was the amount of material to be cut pulled out before performing cutting?

---

If cutting is performed without pulling out the material, the material may slip or operation may stop due to a motor error.

## The Machine Cuts the Carrier Paper

---

### Are the blade tip adjustment and blade force appropriate for the material being cut?

---

Perform a cutting test and adjust the blade tip and blade force appropriately.

☞ P. 142 "Performing a Cutting Test"

☞ P. 155 "General Guide Regarding Cutting Conditions"

## The Machine Cuts the Same Area Twice

### Is Overlap Cutting set to 0 in CutStudio?

If Overlap Cutting is set to any number other than 0 on the Cut screen, the number is added to the number of cuts.

### Is the machine's OVERLAP setting a number from 1 to 9?

Set the machine's OVERLAP setting to OFF.

☞ P. 152 "Cutting in the Same Position Repetitively (Overlap)"

### Are there overlapping lines?

The same data may have been copied, resulting in overlapping lines. Check the data.

# Frequently Asked Questions

## Moving a Saved Symbol to a Different Computer

### MEMO

For instructions on how to save symbols, check the CutStudio Help.

### Procedure

#### ① Copy the Symbol folder from the path below.

Store the folder in a desired location or move it.

**C:\ProgramData\Roland DG Corporation\CutStudio\Symbol**

Store the folder in a desired location or move it.

#### If the Folder is not Displayed

☞ P. 177 "Is the computer not set to show hidden folders?"

#### ② Copy the Symbol folder to a new computer.

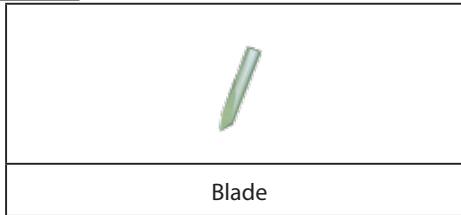
Copy the folder to the same location on the new computer. If the folder is not displayed on the new computer, adjust settings to display hidden folders.

## Consumable Items

### Purchasing Consumable Items

To purchase consumable items, visit the Roland DG Corp. website (<http://www.rolanddg.com/>) or contact your authorized Roland DG Corp. dealer.

#### Blade



In the cases below, the blade has reached the end of its service life. Replace it with a new item.

- The tip of the blade is broken.
- Uncut areas remain even though the blade force has been increased to 50 to 60 gf.
- Cuts are not as clean as they used to be.
- The material starts to curl up from the carrier paper when cutting detailed areas or corners.

The tip of a blade that has been used for a long time or has been used to cut hard material may wear away as shown in the figure. A blade that has worn in this manner will no longer cut cleanly, so replace it with a new one.

☞ P. 169 "Replacing the Blade"

### **Blade holder**



Blade holder

After the tip of the blade has been adjusted, the cap of the blade holder rubs against the material when cutting, causing the end of the cap to gradually wear away. As the cap becomes increasingly worn it becomes impossible to adjust the tip of the blade correctly, and clean cutting is no longer possible. When this happens, replace the blade holder with a new one. When a blade holder has been used for a long time, the bearing that supports the blade deteriorates, making it more difficult for the blade to turn. If you continue to use a blade holder that has deteriorated in this fashion, the machine will not cut cleanly because the tip of the blade will not turn smoothly. If corners or curved sections are not cut cleanly or cuts start looking like perforated lines, or if similar problems occur, refer to P. 168 "Cleaning the Blade Holder Cap" and clean the blade holder cap. If this fails to resolve the problem, replace the blade holder with a new one.

### **Blade protector**

If cutting is performed when the amount of blade extension or the blade force is not adjusted appropriately, the tip of the blade may pierce the material's carrier paper and scratch the blade protector. If cutting is performed when the blade protector is scratched, it will not be possible to cut cleanly. If the surface of the blade protector is deformed due to scratching or similar damage, the blade protector must be replaced. Contact your authorized Roland DG Corp. dealer.

## **Checking Supported Versions of Illustrator/CorelDRAW**

For information regarding the latest supported versions, visit the Roland DG Corp. website (<http://www.rolanddg.com/>).

☞ P. 42 "Installing Plug-in for Illustrator"

☞ P. 48 "Installing Plug-in for CorelDRAW"

# Software Cannot be Installed/Uninstalling Software

## The Driver Cannot be Installed (Windows Vista / 7)

If you have canceled installation or if the installation wizard does not appear when the USB cable is connected, follow the procedure below.

### Procedure

- ① Connect the machine and the computer with the USB cable, and switch on the machine.**
- ② If a message saying "Found new hardware" appears, click Close.**  
Disconnect the USB cable from every printer except the machine.
- ③ From the Start menu, right-click Computer. Click Properties.**
- ④ Click Device Manager. If a User Account Control window appears, click Allow.**  
Device Manager appears.
- ⑤ From the View menu, click Show hidden devices.**
- ⑥ Search the list for Printers or Other devices, and double-click it. The name of your machine or Unknown device appears below. Click the name to select it.**
- ⑦ From the Action menu, click Uninstall.**
- ⑧ On the Confirm Device Uninstall window, select the Delete the driver software for this device check box, and click OK.  
Close Device Manager.**  
The name of your machine or Unknown device appears below. Click the name to select it.
- ⑨ Disconnect the USB cable from the computer, and restart Windows.**
- ⑩ Follow the procedure in "Uninstalling the driver (Windows Vista / 7)" and uninstall the driver.**
- ⑪ Follow the procedure in "Installing the driver for Windows" and reinstall the driver from the beginning.**

☞ <http://startup.rolanddg.com/>

## The Driver Cannot be Installed (Windows 8/8.1)

If you have canceled installation or if the installation wizard does not appear when the USB cable is connected, follow the procedure below.

### Procedure

- 1 Connect the machine and the computer with the USB cable, and switch on the machine.**
- 2 If a message saying "Found new hardware" appears, click Close.**  
Disconnect the USB cable from every printer except the machine.
- 3 Click Desktop.**
- 4 Move the mouse to the bottom-right corner of the screen to display the Charms bar, and click Settings.**
- 5 Click PC info.**
- 6 Click Device Manager. If a User Account Control window appears, click Allow. Device Manager appears.**
- 7 From the View menu, click Show hidden devices.**
- 8 Search the list for Printers or Other devices, and double-click it.**  
The name of your machine or Unknown device appears below. Click the name to select it.
- 9 From the Action menu, click Uninstall.**
- 10 On the Confirm Device Uninstall window, click OK. Close Device Manager.**
- 11 Disconnect the USB cable from the computer, and restart Windows.**
- 12 Follow the procedure in "Uninstalling the driver (Windows 8/8.1)" and uninstall the driver.**
- 13 Follow the procedure in "Installing the driver for Windows" and reinstall the driver from the beginning.**

☞ <http://startup.rolanddg.com/>

## Uninstalling the Driver (Windows Vista / 7)

To uninstall the driver, follow the procedure below.

### Procedure

---

- ① Switch off the machine, and disconnect the USB cable between the computer and the machine.**
- ② Log on to Windows as an administrator.**
- ③ From the Start menu, click Control Panel, and then click Uninstall a program.**
- ④ Select the driver of the machine you want to delete by clicking it, and then click Uninstall.**
- ⑤ A deletion confirmation message appears. Click Yes.**
- ⑥ From the Start menu, click All Programs, and then click Accessories. Click Run, and then click Browse.**
- ⑦ Select the name of the drive or folder where the driver is stored. \*Note**
- ⑧ Double-click SETUP64.EXE (64-bit version) or SETUP.EXE (32-bit version).**
- ⑨ If a User Account Control window appears, click Allow.**  
The driver install program starts.
- ⑩ Click Uninstall. Select the machine you want to delete, and click Start.**
- ⑪ If a window prompting you to restart the computer appears, click Yes.**  
The uninstall procedure is complete when the computer finishes restarting.

### NOTE

Download the driver for the machine you want to delete from the Roland DG Corporation website (<http://www.rolanddg.com/>), and select a folder to extract the files into.

## Uninstalling the Driver (Windows 8/8.1)

To uninstall the driver, follow the procedure below.

### Procedure

- 1** Switch off the machine, and disconnect the connector cable between the computer and the machine.
- 2** Start Windows.
- 3** Click Desktop.
- 4** Move the mouse to the bottom-right corner of the screen to display the Charms bar, and click Settings.
- 5** Click Control Panel, and then click Uninstall a program.
- 6** Select the driver of the machine you want to delete by clicking it, and then click Uninstall.
- 7** A deletion confirmation message appears. Click Yes.
- 8** From the Start menu, click Desktop.
- 9** Start Explorer, and open the drive and folder where the driver is stored.  
\*Note
- 10** Double-click SETUP64.EXE (64-bit version) or SETUP.EXE (32-bit version).
- 11** If a User Account Control window appears, click Allow.  
The driver install program starts.
- 12** Click Uninstall. Select the machine you want to delete, and click Start.
- 13** If you need to restart the computer, click Yes when a window prompting you to restart appears.
- 14** After the computer has restarted, open the Control Panel, and click View devices and printers.
- 15** If you see the icon of the machine you want to delete, right-click it, and click Remove device.

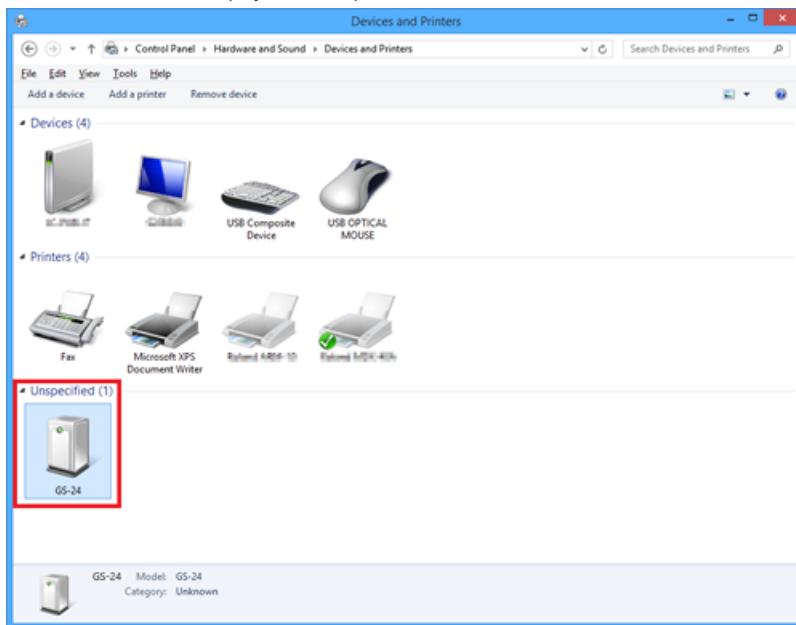
### NOTE

Download the driver for the machine you want to delete from the Roland DG Corporation website (<http://www.rolanddg.com>), and select a folder to extract the files into.

## The Driver is Displayed as "Unspecified" after Installation

If the driver did not install correctly, it may be displayed as "Unspecified" in some cases. Try the installation method described at the link below.

[P. 192 "The Driver is Displayed as "Unspecified" after Installation"](#)



### MEMO

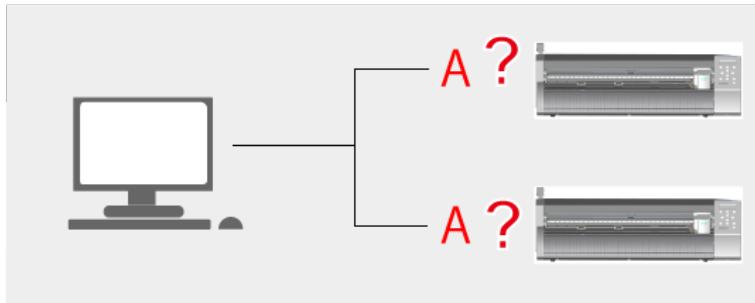
URLs contained in this manual are subject to change without notice. If a link appears to be broken, contact your authorized Roland DG Corp. dealer.

# Connecting Two or More GS-24 Units to a Single Computer

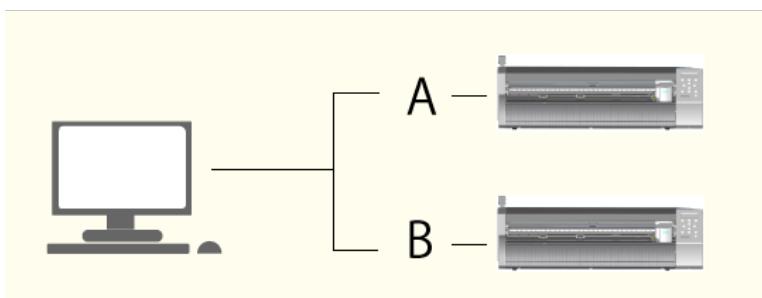
## Connecting Two or More GS-24 Units to a Single Computer (Connecting Multiple Units)

When connecting multiple GS-24 units to a single computer, you must change the USB number of each machine so that the computer can distinguish between output destinations. The machine's default setting is "A." When connecting two or more machines, the second machine and every machine thereafter must be configured with a setting other than "A" so that the machine can distinguish the output destination of the data.

### Not OK



### OK



### 1. Change the Name of the Second GS-24 Unit

Follow the procedures below to connect a second GS-24 unit. The same procedures can be used to connect a third unit and any subsequent units.

#### Procedure

##### **NOTE**

Do not connect the USB cable at this stage.

- 1 Turn off the power of the machine.

- ② Press and at the same time. The screen below is displayed.

USB Str. [ A ]	◀ ▶
*A	◀ ▶

- ③ Press and select a setting other than "A."

It is possible to select "B" or "E." In this example, "B" is selected.

USB Str. [ A ]	◀ ▶
*B	◀ ▶

- ④ Press .

The screen below is displayed.

Please, Power ON Again
---------------------------

- ⑤ Turn the power off and then on again.

The screen below is displayed. Check that the letter you set in step 3 is displayed.

Roland GS-24 [ B ] Main : xxx
----------------------------------

## 2. Connect and Change the Computer's Printer Settings

### Procedure

- ① Connect the machine to the computer using the USB cable.

The driver is installed.

- ② Open Devices and Printers.

Roland GS-24 (Copy 1) is created.

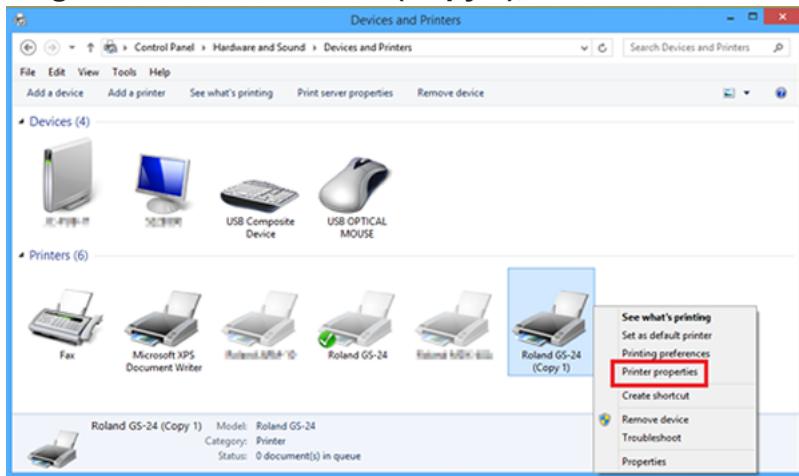
#### Windows 8/8.1

From the Start screen, click Apps, and then click Control Panel. Click Hardware and Sound, and then click Devices and Printers.

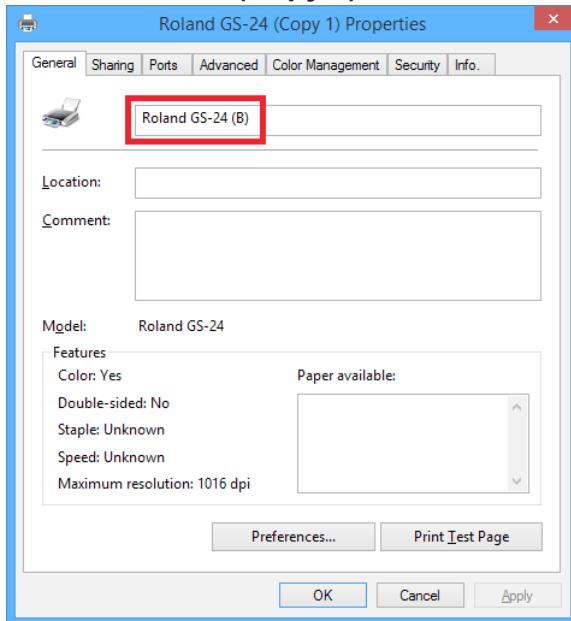
#### Windows Vista / 7

From the Start menu, select Devices and Printers.

**③ Right-click Roland GS-24 (Copy 1), and select Printer properties.**



**④ Change Roland GS-24 (Copy 1) to Roland GS-24 (B).**



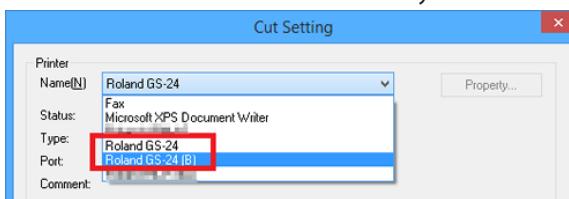
**⑤ Click OK.**

### 3. Check that the Second GS-24 Unit has been Installed

#### Procedure

- 1 Start CutStudio.**
- 2 From the File menu, click Cutting Setup.**
- 3 Click the Printer Name.**

Check that Roland GS-24 (B) is displayed. If the menu looks similar to the one displayed in the figure below, the second machine is connected correctly.



# Error Message List

Index	Solution	Cause
<b>B</b>		
<b>BAD POSITION</b>	<p>Press any key to cancel setup and clear the error message. Move the pinch rollers to the correct positions and reload the material.</p> <p>*Note: If the message appears even if the pinch rollers are moved to the correct positions, the machine may be exposed to direct sunlight or intense indoor lighting. Turn off the power, and move the machine to a location where it is not exposed to direct sunlight or intense light.</p> <p>After moving the rollers, turn on the power.</p>	Pinch rollers are at positions where the material cannot be pinched.
<b>C</b>		
<b>CROPMARK ERR</b>	<p>The machine was not able to read the crop marks. Check the shape and color of the crop marks, and the color and glossiness of the material.</p> <p>If the same error occurs even after you have reviewed the shape and color of the crop marks, and the color and glossiness of the material, contact your authorized Roland DG Corp. dealer.</p>	The shape or color of the crop marks, or the color or glossiness of the material is not suitable for the machine. The issue may also be due to mechanical failure.
<b>CROPMARK ERR ANGLE TOO BIG</b>	Press any key to clear the error message. Reload the material.	Crop mark 2 or 3 is slanted by 5 degrees or more.
<b>CROPMARK ERR LENGTH NG</b>	Press any key to clear the error message. Reload the material.	Crop mark 3 is offset by 20 mm or more in the material movement direction.
<b>CROPMARK ERR WIDTH NG</b>	Press any key to clear the error message. Reload the material or change the position of crop mark 2.	Crop mark 2 is offset by 20 mm or more in the carriage direction.
<b>D</b>		
<b>DATA OVERFLOW</b>	<p>First, delete the data stored in the machine.</p> <p>☞ P. 132 "Step 1: Prepare the Data for Recutting"</p> <p>Next, decrease the size of the data sent from the computer and resend it. Then carry out a REPLOT.</p> <p>☞ P. 132 "Cutting the Same Object Repetitively"</p>	The amount of data stored in the machine is too large and REPLOT cannot be executed.

## Error Message List

Index	Solution	Cause
<b>E</b>		
EEPROM ERROR		Switch off the power and contact your authorized Roland DG Corp. dealer.
ERROR 1 : WRONG COMMAND		Data that the machine is not able to interpret was sent.
ERROR 2 : WRONG NO. S	Press any key to clear the error message. Review the data sent from the computer, and send the correct data.	The number of parameters differs from the permissible number.
ERROR 3 : OUT OF RANGE		The value of the specified parameter was outside the permissible range.
<b>M</b>		
MOTOR ERROR	Turn off the power, lower the loading lever, and load the material again.	<p>A heavy load was placed on the motor, and the operation stopped.</p> <ul style="list-style-type: none"> <li>• Cutting was performed when thick material was loaded.</li> <li>• The material was pulled off suddenly from the roll without feeding out the material before cutting.</li> <li>• An overload was placed on the machine due to a material jam or similar cause.</li> </ul> <p>When cutting roll material, pull out the length of material to be cut from the roll. Perform a test feed before cutting. When doing so, set the AREA value in the display menu so that it is around 20 cm longer than the length of the cutting data.</p> <p style="text-align: right;">☞ P. 138 "Loading Roll Material (3) (Material Feeding)"</p> <ul style="list-style-type: none"> <li>• When cutting thick material, set HEAVY of cutting quality.</li> </ul> <p style="text-align: right;">☞ P. 146 "Setting Cutting Quality (QUALITY)"</p>
<b>O</b>		
ORIGIN ERROR	Turn off the power, and move the machine to a location where it is not exposed to direct sunlight or intense light. Then, turn on the power.	The machine is exposed to direct sunlight or strong indoor lighting and was not able to detect the origin immediately after the power was switched on.
OUT OF CUT RANGE	Press any key to clear the error message. Check that the crop mark positions or the origin are not set outside the material, and redo the settings.	This message indicates that the crop marks or the origin are set outside the material.

Index	Solution	Cause
S SHEET UNLOADED	<p>Press any key to cancel setup and clear the error message. Load the material correctly, and make it ready for cutting (setup condition).</p> <p>☞ P. 156 "Loading Position of Material"</p>	<p>Attempted to ready the machine without loading material. The material was removed when the machine was ready to perform cutting. The material came loose during cutting.</p>
SET TO <SENSOR MODE>	<p>Press any key to clear the error message. Change the machine's settings to Sensor Mode, and then resend the data.</p> <p>☞ P. 67 "Step 6: Set the Alignment Method (Sensor Mode)"</p> <p>☞ P. 80 "Step 6: Set the Alignment Method (Sensor Mode)"</p>	<p>Data for three crop marks was sent when the machine was in Tool Mode.</p> <p>Crop mark data was sent when the machine was in Manual Mode.</p>
SET TO <TOOL MODE>	<p>Press any key to clear the error message. Change the machine's settings to Tool Mode, and then resend the data. When doing so, use four crop marks. When the machine is in Tool Mode, it is not possible to cut using three crop marks.</p> <p>If you want to use three crop marks, leave the machine in Sensor Mode and change the shape and color of the crop marks, or the color and glossiness of the material.</p> <p>☞ P. 83 "Crop Marks/Tool Marks"</p> <p>☞ P. 181 "Crop Marks Cannot be Read"</p> <p>☞ P. 91 "Cutting in Tool Mode (1)"</p>	<p>Crop marks cannot be read when the machine is in Sensor Mode.</p>
SOLENOIDEEPROM	Switch off the power and contact your authorized Roland DG Corp. dealer.	



# **11. Specifications**

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# Specifications

## Specification List

<b>Product name</b>	GS-24	
<b>Drive system</b>	Digital control servo motor	
<b>Cutting mechanism</b>	Media-moving method	
<b>Acceptable material widths</b>	50 to 700 mm(1-15/16 to 27- 9/16 in.)	
<b>Cutting area</b>	Maximum 584 (W) × 25000 (L) mm (22-1/1 (W) × 984-1/4 (L) in.)	
<b>Usable tools</b>	Roland CAMM-1 series blade	
<b>Maximum cutting speed</b>	500 mm/s (all directions)	
<b>Cutting speed</b>	10 to 500 mm/s (all directions)	
<b>Blade force setting range</b>	30 to 350 gf	
<b>Mechanical resolution</b>	0.0125 mm/step (0.000492 in./step)	
<b>Software resolution</b>	0.025 mm/step (0.000984 in./step)	
<b>Distance accuracy (*1)</b>	Error of less than ±0.2% of distance traveled, or ±0.1 mm, whichever is greater	
<b>Repetition accuracy (*1) (*2)</b>	± 0.1 mm or less	
<b>Alignment accuracy for printing and cutting when printed material is loaded (*1) (*3)</b>	±1 mm or less for movement distance of 210 mm or less in material-feed direction and movement distance of 170 mm or less in width direction (Does not take influence of printer and material into account)	
<b>Connectivity</b>	USB 2.0 (FULL SPEED compliant)	
<b>Replot memory</b>	2 MB	
<b>Command system</b>	CAMM-GL III	
<b>Power supply</b>	Dedicated AC adapter Input: AC100 V - AC240 V ± 10%, 50/60 Hz 1.7 A Output: DC24 V 2.8 A	
<b>Power</b>	Approx. 30 W	
<b>Acoustic noise level</b>	During operation	70 dB (A) or below
	During standby	40 dB (A) or below
<b>Dimensions</b>	860 (W) × 319 (D) × 235 (H) mm (33-7/8 (W) × 12-9/16(D)× 9-1/4(H) in.)	
<b>Weight</b>	13.5 kg (30 lb.)	
<b>Packaging dimensions</b>	975 (W) × 450 (D) × 390 (H) mm (38-3/8 (W) × 17-11/16 (D)× 15-3/8 (H) in.)	
<b>Packaging weight</b>	18 kg (40 lb.)	
<b>Environmental</b>	Temperature: 5 to 40°C (64 to 77°F), humidity: 35 to 80% RH (non-condensing)	
<b>Accessories</b>	AC adapter, power cord, blade, blade holder, roller base, tweezers, alignment tool, USB cable, setup guide	

\*1 According to material and cutting conditions as specified by Roland DG Corporation. (Using separately available stand PNS-24)

\*2 •Excluding expansion/contraction of the material.

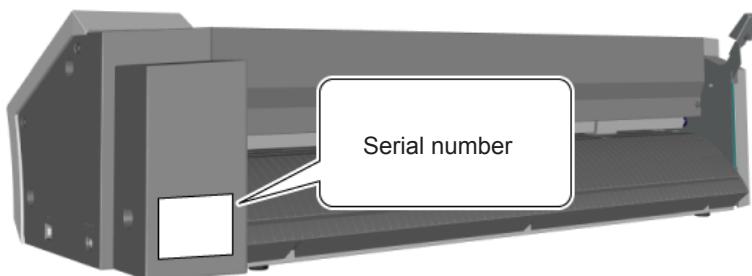
- Length in material feed direction: less than 1600 mm.

\*3 According to measurement standards as specified by Roland DG Corporation.

- Software must be included Roland DG Corporation software.
- Assumes use of a laser or inkjet printer with a resolution of 720 dpi or greater.
- Excludes glossy and/or laminated material.
- Excludes effects of warped printing due to accuracy of printer or effects of expansion/contraction of material.
- May not be read correctly by the sensor depending on the printer ink (black) used.

## Locations of the Power Rating and Serial Number Labels

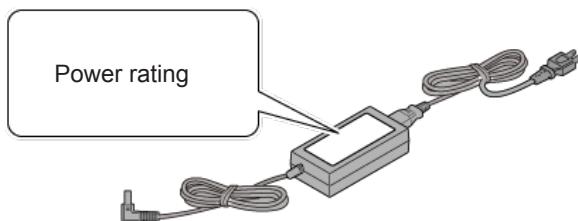
### Serial Number



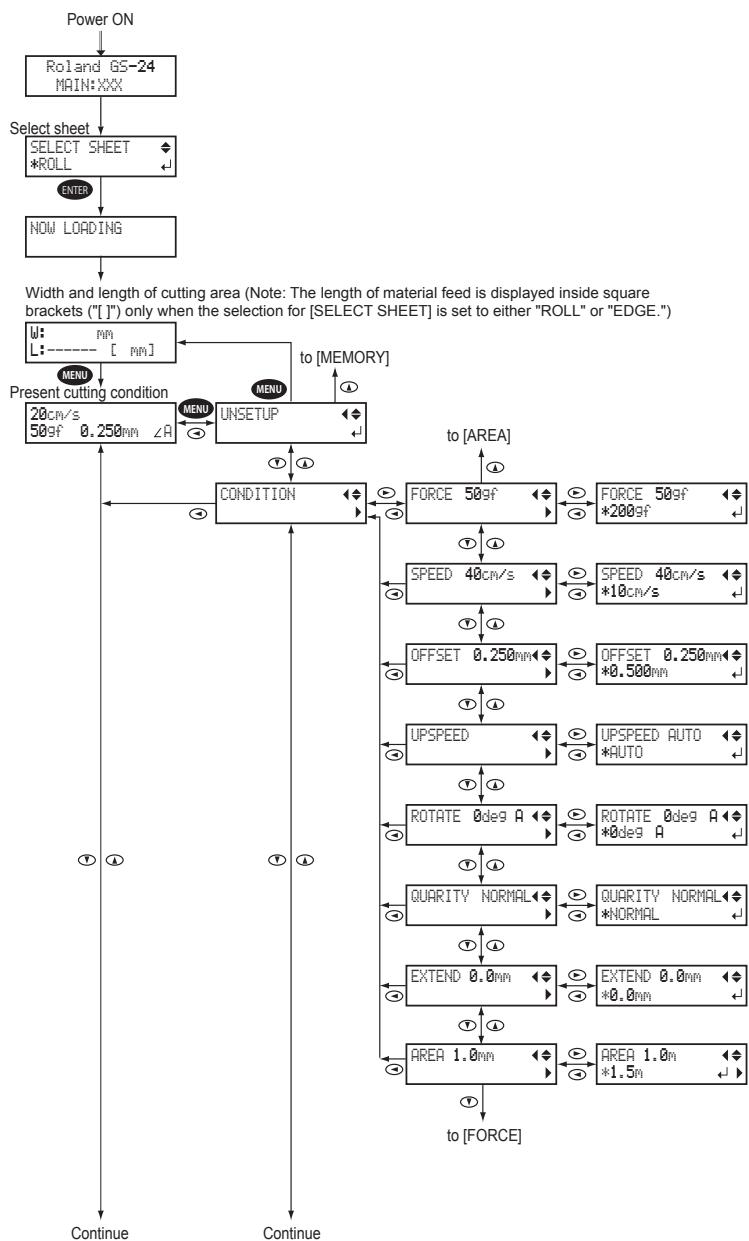
This is required when you seek maintenance, servicing, or support. Never peel off the label.

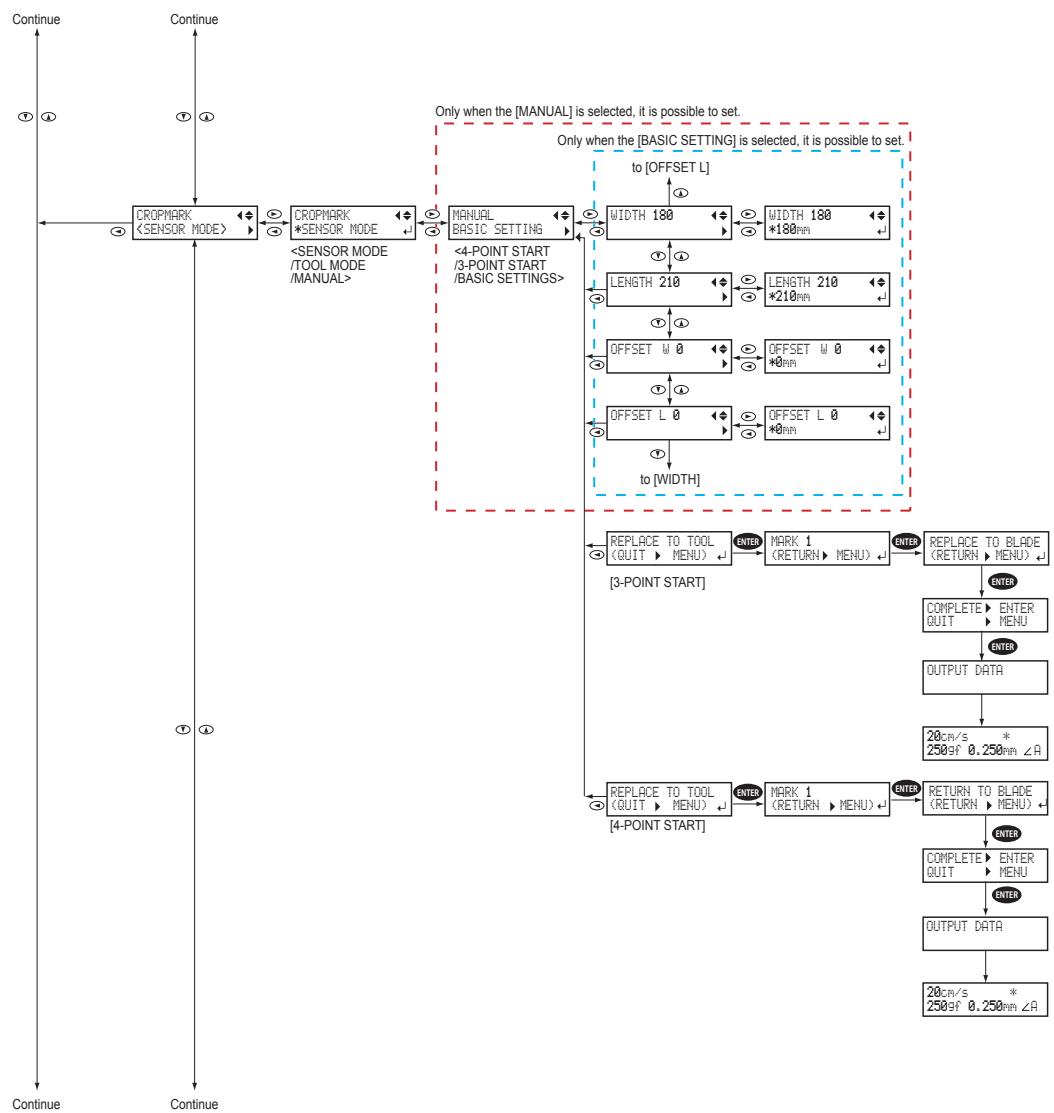
### Power Rating

Use an electrical outlet that meets the requirements for voltage, frequency, and amperage given on the label.



# Menu Flow Chart





## Menu Flow Chart

