

# **RSD-SUNMAX-UVZH — EZCAD2 Operation Guide 2: Text Marking Procedure**

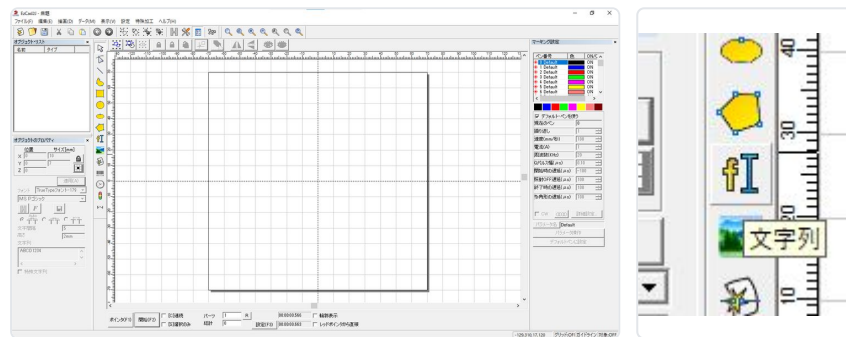
RSD-SUNMAX Series  
SUNMAX LASER

**About this document:** This is an English translation of the Japanese original prepared by SUNMAX LASER for reference purposes. In case of any discrepancy, the Japanese original shall prevail. Specifications are subject to change without notice.

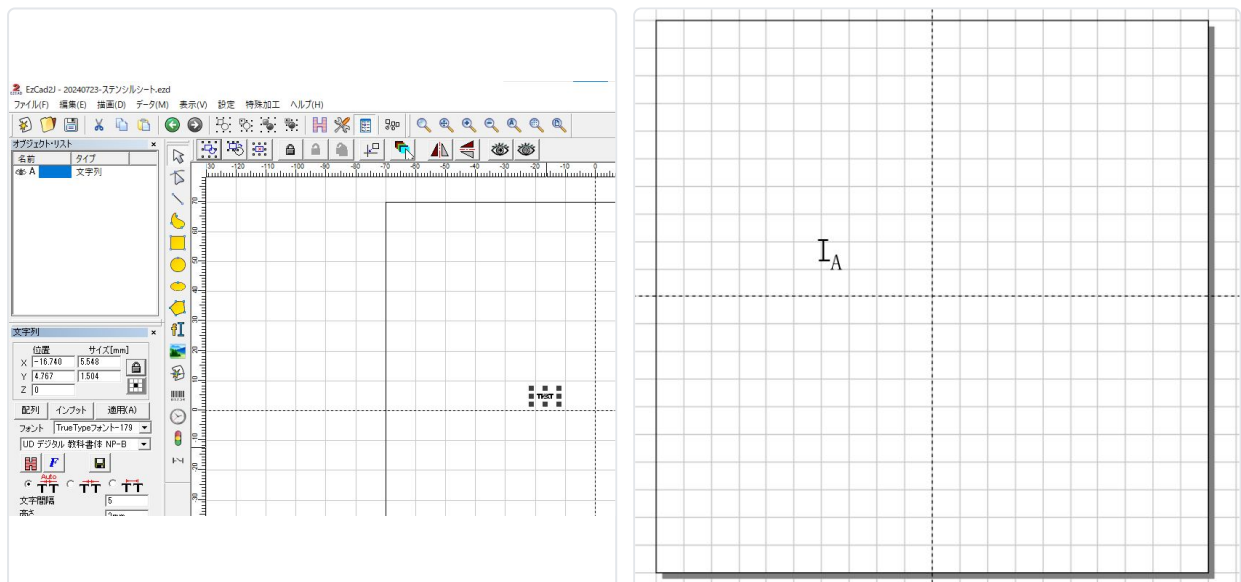
- This document assumes that the RSD-SUNMAX-UVZH (hereinafter "UVZH") has been set up correctly.
- This document assumes that EZCAD2, the control software for the UVZH, has been installed correctly.
- The setting values in this document are reference values. Adjust them to suit the material you are processing.

The following is the procedure for creating text data in EZCAD2. This step is not required when using externally created data.

Click the Text button on the toolbar. The mouse pointer changes shape.



Move the mouse pointer into the drawing area and click at any position; the default text ("TEXT") appears.



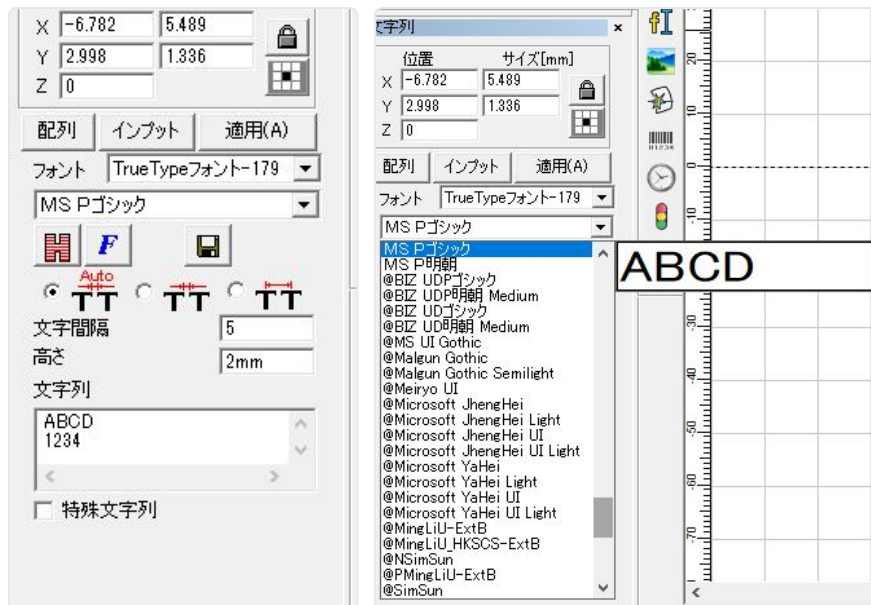
Note: The appearance of the text (font, size, etc.) varies depending on your settings.

To change the default "TEXT" characters to any text you like, edit the contents of the text area in the Text panel.

The character size is set with the "Height" value.

To change the font, click the ▼ button of the combo box and select a font from the list that appears.

Note: The row under the mouse pointer in the font list becomes the selected state, and the current text is previewed in that font at the right end of the row. Depending on the font, the preview may appear blank — for example, when the font does not contain the required characters. In that case, that font cannot be used.



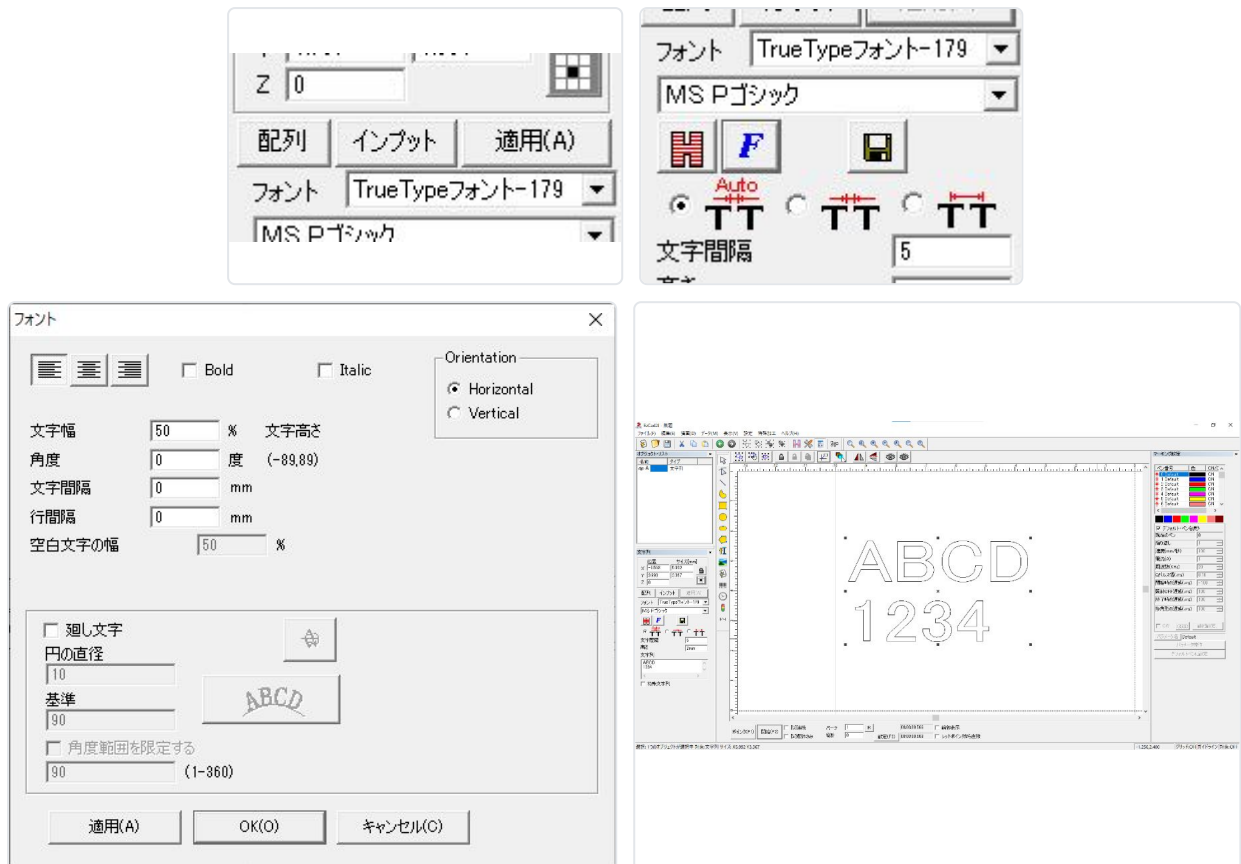
Note: The fonts shown in the list differ depending on your PC environment.

Click the Apply button to apply the settings.

To adjust the text appearance (character width, etc.), click the "F" button and configure the detailed text settings.

Adjust the text as needed — character width, character spacing, and so on — then click the "OK" button to apply the settings.

Note: For details on text settings, refer to the "Text" section of the user manual.



Use the zoom tool to check your edits.

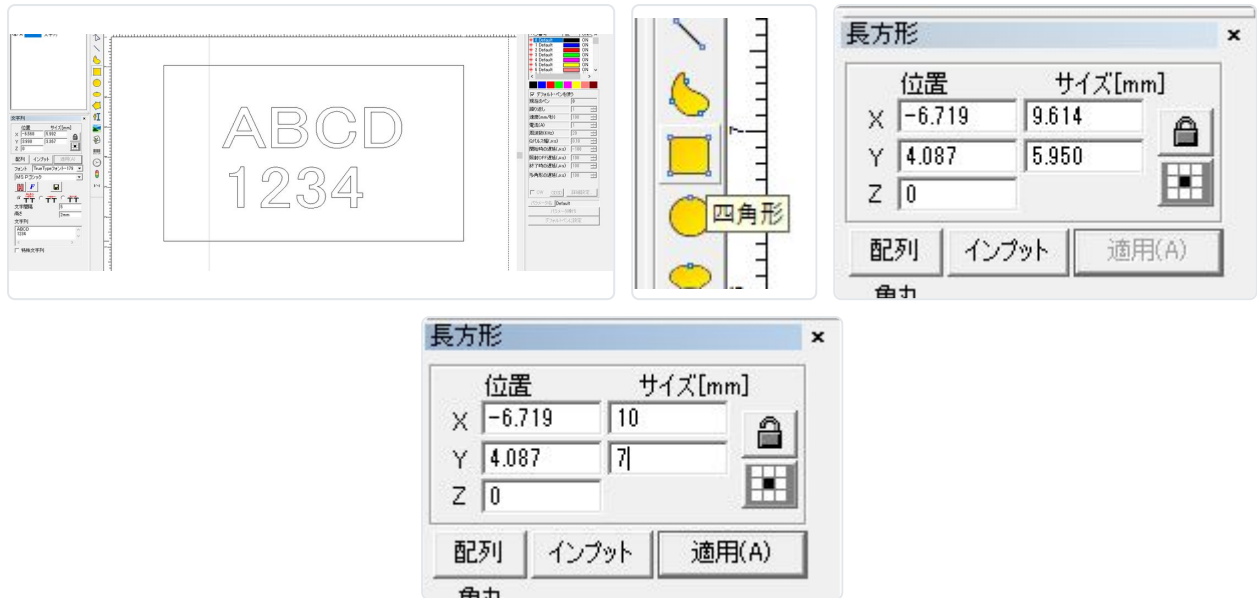
This completes the text adjustment.

For a rubber stamp die, the area to be engraved is the area outside the text, so you need to set up an engraving area.

Click Rectangle in the Draw menu, or click the Rectangle button on the drawing toolbar.

Drag to insert a rectangle so that it encloses the text. The size and position of the rectangle will be set later, so an approximate size is fine at this point.

When the rectangle is inserted, the Rectangle properties panel appears on the left side of the screen.



To change the size of the rectangle, edit the size values in the Rectangle properties panel. To keep the aspect ratio fixed, set the lock icon to locked; to enter arbitrary values, set it to unlocked, then enter the values.

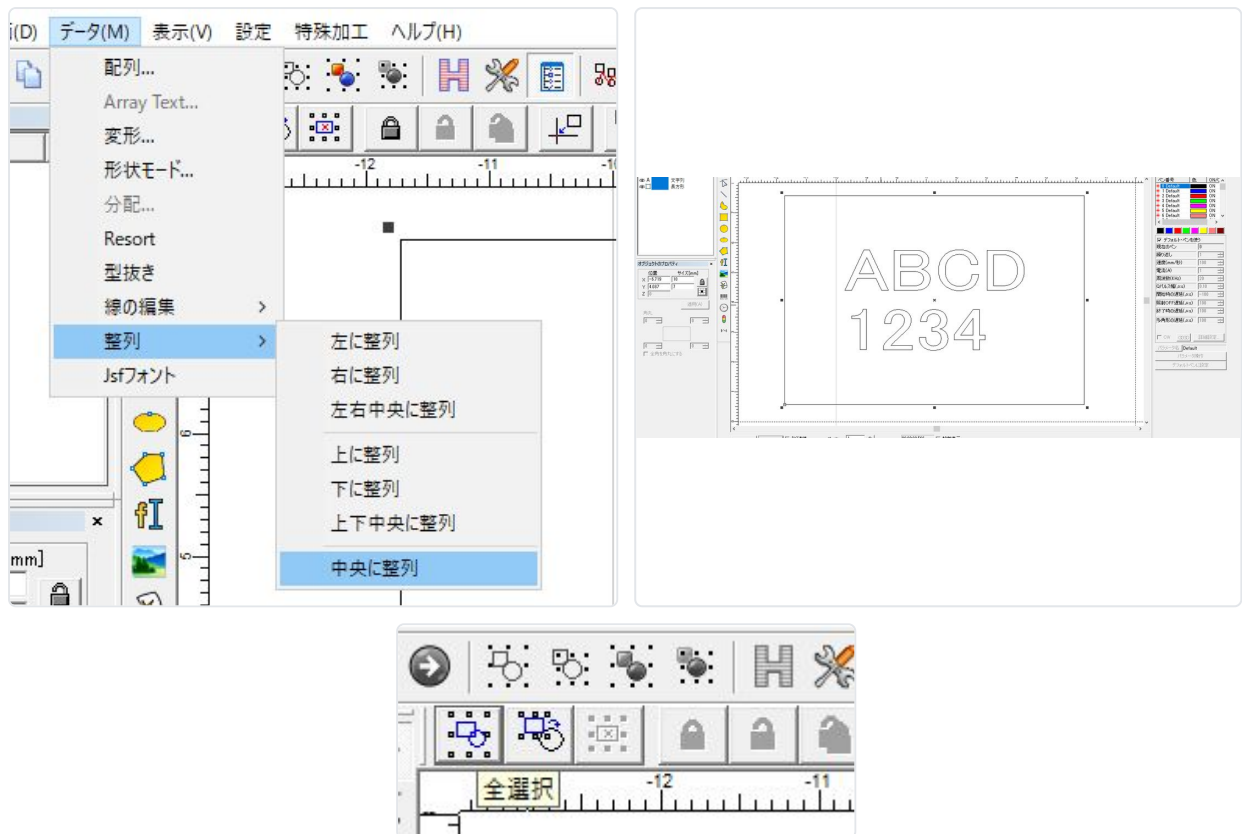
After changing the values, click the "Apply" button to complete the setting.

Note: For details on rectangles, refer to the "Rectangle" section of the user manual.

Next, center-align the rectangle (engraving area) and the text.

Click the Select All button.

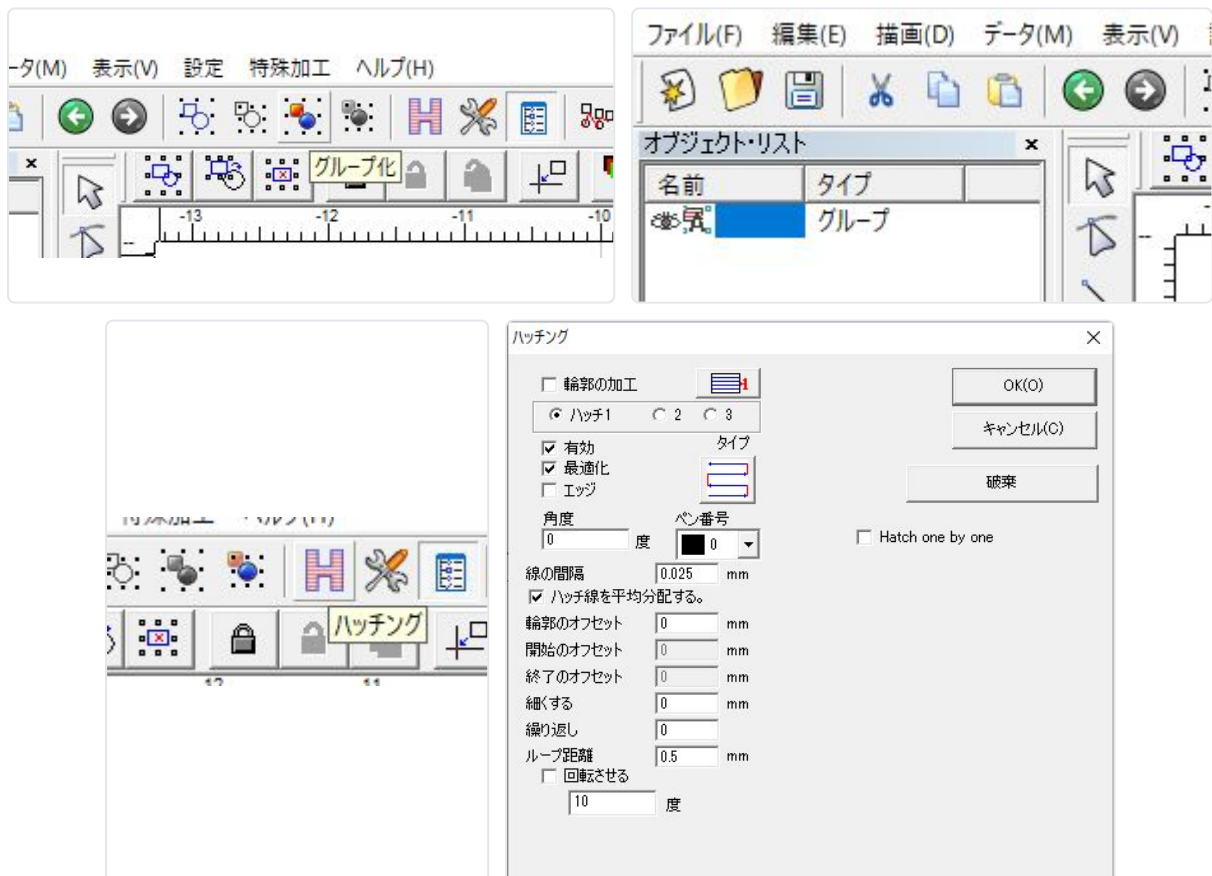
With both the text and the rectangle selected, choose Data menu > Align > Align Center.



The objects are centered both vertically and horizontally.

With the text and rectangle objects selected, choose Group from the Edit menu, or click the Group button.

The object list on the left side of the screen now shows only a single group.



Next, configure the engraving settings. With the text object selected, choose "Edit" > "Hatch" from the menu, or click the "Hatch" button on the toolbar; the Hatch dialog appears.

For rubber stamps, a processing method is required that creates a stepped profile to increase the strength of the stamp face and prevent the face from collapsing when stamping. For this reason, three hatch settings are prepared.

The settings for Hatch 1 are as follows.

| Setting                        | Value              |
|--------------------------------|--------------------|
| Contour marking                | Unchecked          |
| Hatch selection                | Select Hatch 1     |
| Enable / Optimize              | Checked            |
| Angle                          | 0 degrees          |
| Type                           | Bidirectional mode |
| Pen No.                        | 0 (black)          |
| Line spacing                   | 0.025              |
| Average distribute hatch lines | Checked            |
| Contour offset                 | 0 mm               |

Leave the Hatch dialog open and configure the following settings. The settings for Hatch 2 are as follows.

| Setting                        | Value              |
|--------------------------------|--------------------|
| Contour marking                | Unchecked          |
| Hatch selection                | Select Hatch 2     |
| Enable / Optimize              | Checked            |
| Angle                          | 90 degrees         |
| Type                           | Bidirectional mode |
| Pen No.                        | 1 (blue)           |
| Line spacing                   | 0.025              |
| Average distribute hatch lines | Checked            |
| Contour offset                 | 0.15 mm            |

ハッチング

☐ 輪郭の加工

ハッチ1    2    3

☒ 有効    タイプ

☒ 最適化

☐ エッジ

角度 0 度    ペン番号 0

線の間隔 0.025 mm

☒ ハッチ線を平均分配する。

輪郭のオフセット 0 mm

開始のオフセット 0 mm

終了のオフセット 0 mm

細くする 0 mm

繰り返す 0

ループ距離 0.5 mm

☐ 回転させる

10 度

OK(O)

キャンセル(C)

破棄

☐ Hatch one by one

ハッチング

☐ 輪郭の加工

ハッチ1    2    3

☒ 有効    タイプ

☒ 最適化

☐ エッジ

角度 90 度    ペン番号 1

線の間隔 0.025 mm

☒ ハッチ線を平均分配する。

輪郭のオフセット 0.15 mm

開始のオフセット 0 mm

終了のオフセット 0 mm

細くする 0 mm

繰り返す 0

ループ距離 0.5 mm

☐ 回転させる

10 度

OK(O)

キャンセル(C)

破棄

☐ Hatch one by one

Then continue with the settings for Hatch 3.

The settings for Hatch 3 are as follows.

| Setting                        | Value              |
|--------------------------------|--------------------|
| Contour marking                | Unchecked          |
| Hatch selection                | Select Hatch 3     |
| Enable / Optimize              | Checked            |
| Angle                          | 0 degrees          |
| Type                           | Bidirectional mode |
| Pen No.                        | 2 (red)            |
| Line spacing                   | 0.025              |
| Average distribute hatch lines | Checked            |
| Contour offset                 | 0.2–0.4 mm         |

ハッチング

☐ 輪郭の加工

ハッチ1    2    3

☒ 有効    タイプ

☒ 最適化

☐ エッジ

角度 0 度    ペン番号 2

線の間隔 0.025 mm

☒ ハッチ線を平均分配する。

輪郭のオフセット 0.4 mm

開始のオフセット 0 mm

終了のオフセット 0 mm

細くする 0 mm

繰り返す 0

ループ距離 0.5 mm

☐ 回転させる

10 度

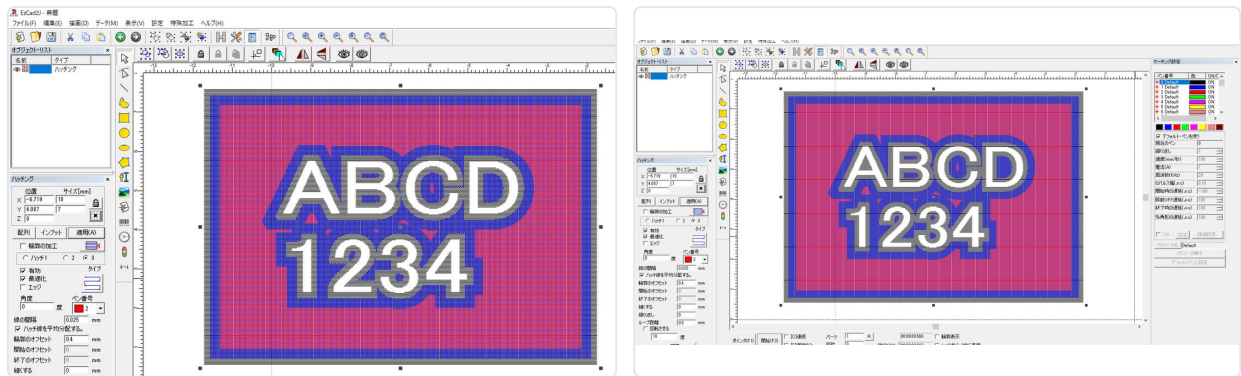
OK(O)

キャンセル(C)

破棄

☐ Hatch one by one

After configuring Hatch 1, Hatch 2, and Hatch 3, click the "OK" button to apply the settings.

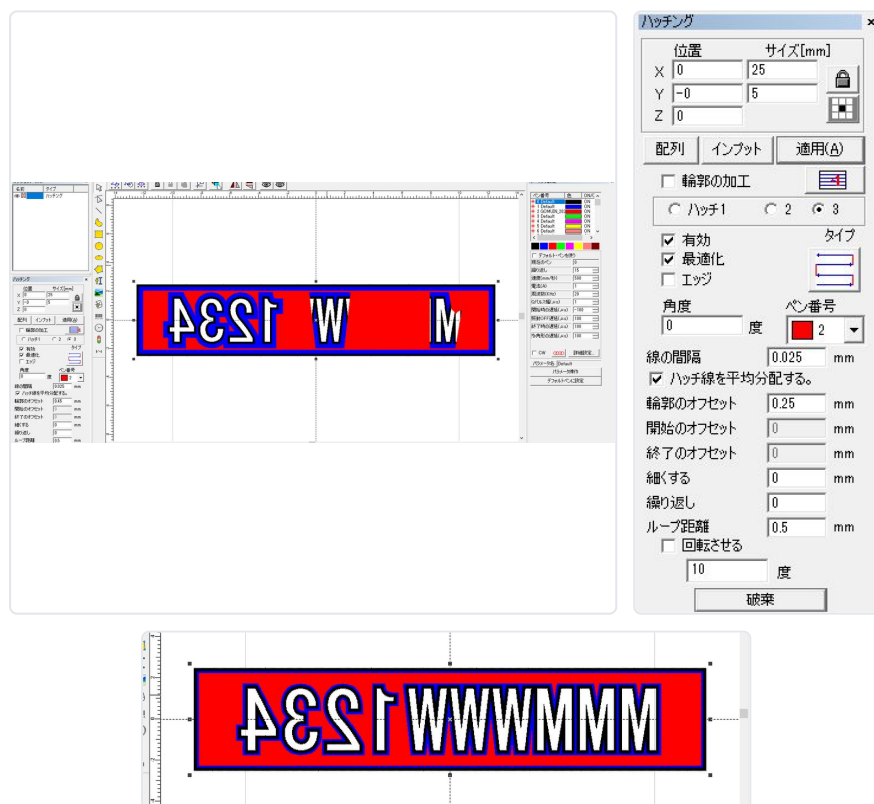


Confirm that the three-color hatch settings have been applied as shown in the figure above.

Note: As in the figure above, some lines may appear to be missing. If the gaps are regular, this is due to your screen resolution and does not indicate a problem with the data. However, if you see irregular color dropout, the data itself may have a problem.

## If Irregular Color Dropout Occurs

Irregular color dropout can occur even with text data created directly in EZCAD2. This happens because the contour offset is affected by the shape of the characters, such as font size and weight.



If you find irregular color dropout, select the hatch object, then in the hatch properties select (1) Hatch 3, (2) change the "contour offset value" to 0.2–0.25, and (3) click "Apply."

After applying, the offset width becomes narrower and the dropout areas are resolved, as shown. The optimal value differs depending on the character data, so adjust it as needed. The minimum value is 0.2 mm. If the dropout still remains, change the character width or character size in the font settings, or switch to a different font.

For details on hatch settings, refer to the "Hatch" section of the user manual.

For the marking settings, use the marking parameter panel on the right side of the screen to configure the three pens selected for hatching: pen number 0 (black), pen number 1 (blue), and pen number 2 (red).

Before configuring the pens, deselect all objects. Click once on an empty area of the work area so that no object is selected.

Click the black pen color and uncheck "Use default pen."



The black pen settings are as follows:

| Item          | Setting           |
|---------------|-------------------|
| Loop count    | 15                |
| Speed         | 500 mm/sec        |
| Current       | 1 (do not change) |
| Frequency     | 20 kHz            |
| Q pulse width | 1 $\mu$ s         |

Do not change any other settings.

**Caution:** The black pen controls the engraving of the stamp face. Engraving too deep or too shallow has a particularly strong effect on stamping quality.

There is no Apply button for the pen settings; the values you enter take effect as entered.

Next, click the blue pen color and uncheck "Use default pen."



The blue pen settings are as follows:

| Item          | Setting           |
|---------------|-------------------|
| Loop count    | 20–30             |
| Speed         | 500 mm/sec        |
| Current       | 1 (do not change) |
| Frequency     | 20 kHz            |
| Q pulse width | 1 $\mu$ s         |

Do not change any other settings. Note: The optimal values vary depending on your environment.

Next, click the red pen color and uncheck "Use default pen."

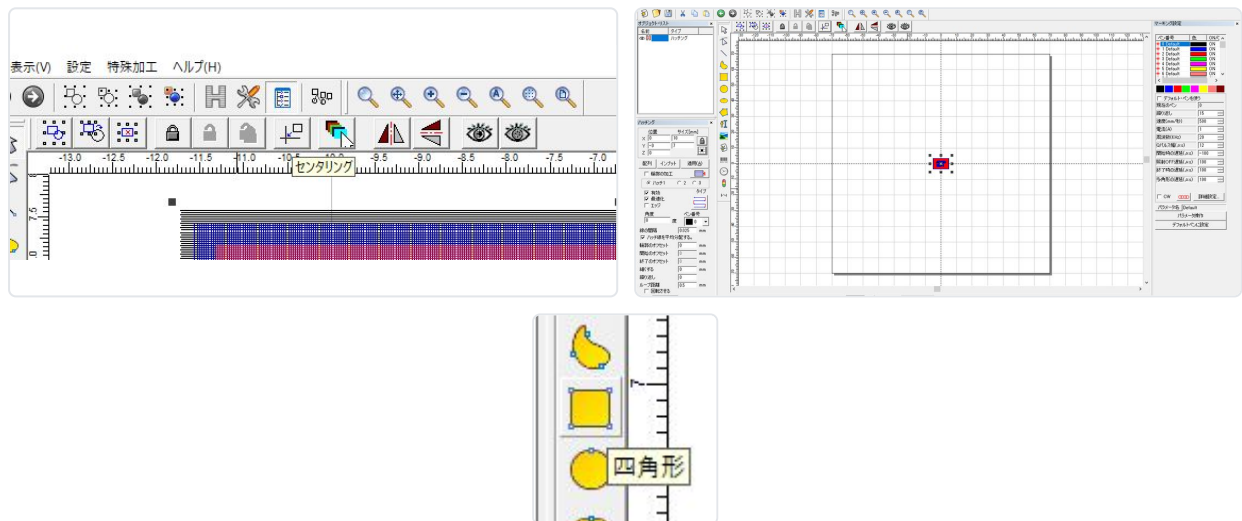
The red pen settings are as follows:

| Item          | Setting           |
|---------------|-------------------|
| Loop count    | 40–50             |
| Speed         | 500 mm/sec        |
| Current       | 1 (do not change) |
| Frequency     | 20 kHz            |
| Q pulse width | 1 $\mu$ s         |

Do not change any other settings. Note: The optimal values vary depending on your environment.

This section describes how to add a cut line for trimming the rubber after engraving. If you do not need a cut line, skip ahead to "Flipping the Data" below.

First, select the hatch object and click the centering button.



The data is placed at the center of the work area.

Next, click the rectangle tool.

Drag across any area of the work area to insert a rectangle. You will adjust its size and position later.

With the rectangle selected, select green (pen number 3).



The green pen settings are as follows:

| Item          | Setting           |
|---------------|-------------------|
| Loop count    | 20 or more        |
| Speed         | 100 mm/sec        |
| Current       | 1 (do not change) |
| Frequency     | 20 kHz            |
| Q pulse width | 1 μs              |

Do not change any other settings.

Enter the size in the rectangle properties, then click the "Apply" button.

Next, with the rectangle still selected, click the centering button.

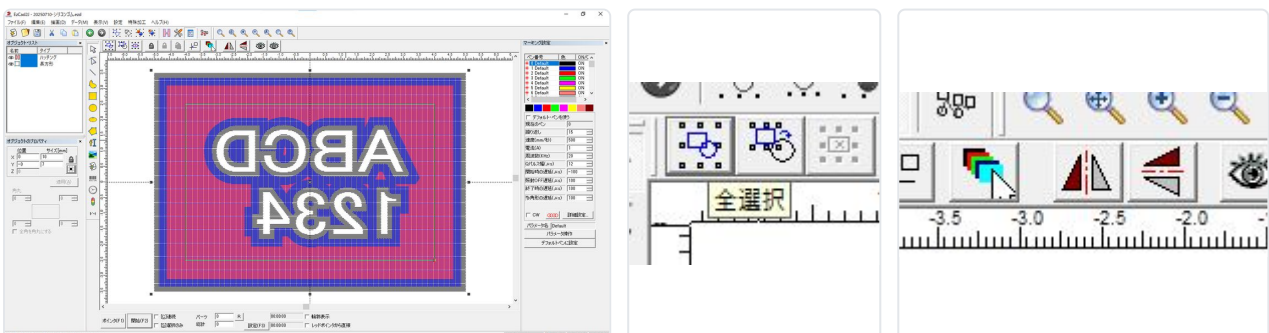


You can confirm that the rectangle and the hatch object are now both placed at the center.

**Caution:** Increasing the number of passes makes the cut line easier to cut through, but the thicker the rubber sheet, the less likely it is to be cut completely. The cut line serves only as a cutting guide; trim the rubber with scissors or a similar tool.

For rubber stamps, the data must be mirrored. Click the select-all button to select all objects.

Click the flip button.



The data is flipped.

Once all settings are complete, click the "Pointer" button at the bottom of the screen to check the processing position. Click the "Start" button to begin processing.

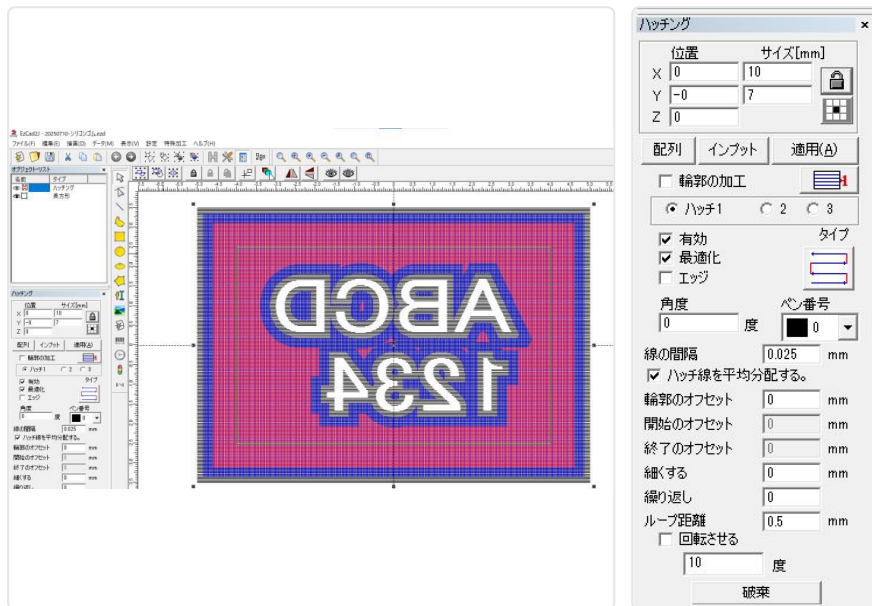


Note: The same parameter settings can be used for both regular rubber and silicone rubber. However, processing conditions differ depending on the rubber material used, so check the optimal values for each material as needed. (For rubber materials, this usually only requires changing the number of passes.)

## Changing Text After Marking Settings Are Applied

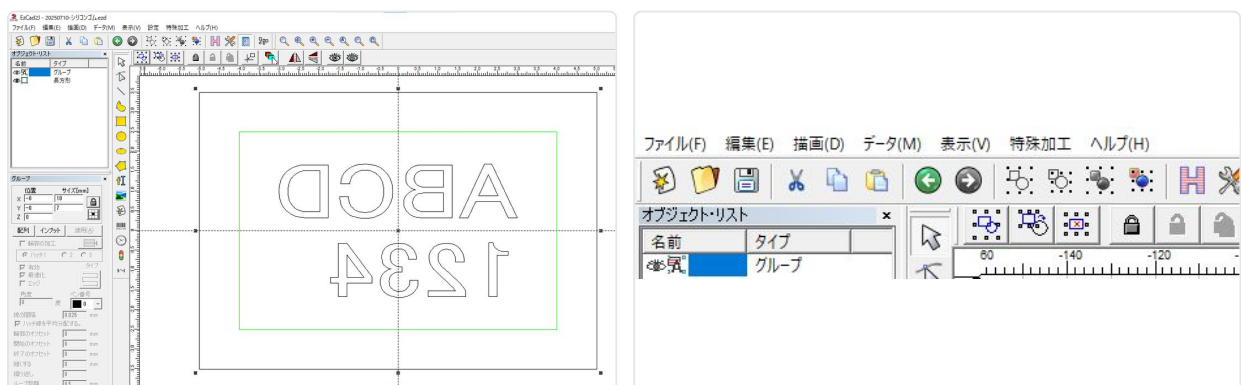
If you want to change the text height or other attributes after the marking settings have been configured, you must discard the hatch settings and ungroup the objects. First, select only the hatch object.

Click the "Discard" button at the bottom of the hatch properties panel.

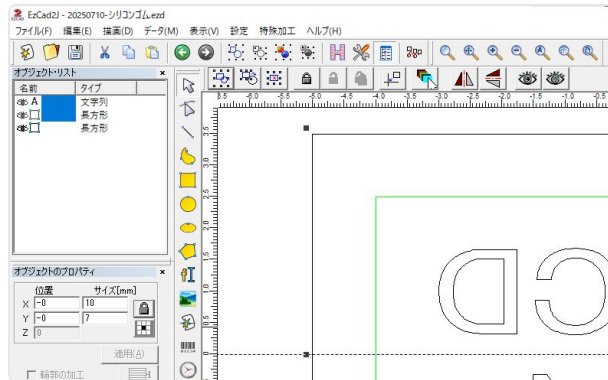


The hatch settings are discarded, and the selection reverts to the group object (or, if the objects were not grouped, to the individual objects such as the rectangle and text).

When editing the text, if the text is grouped with the rectangle, you must ungroup it first. Select the group object and click the Ungroup button on the menu bar.



The text and the rectangle become separate objects, and you can now select the text on its own.



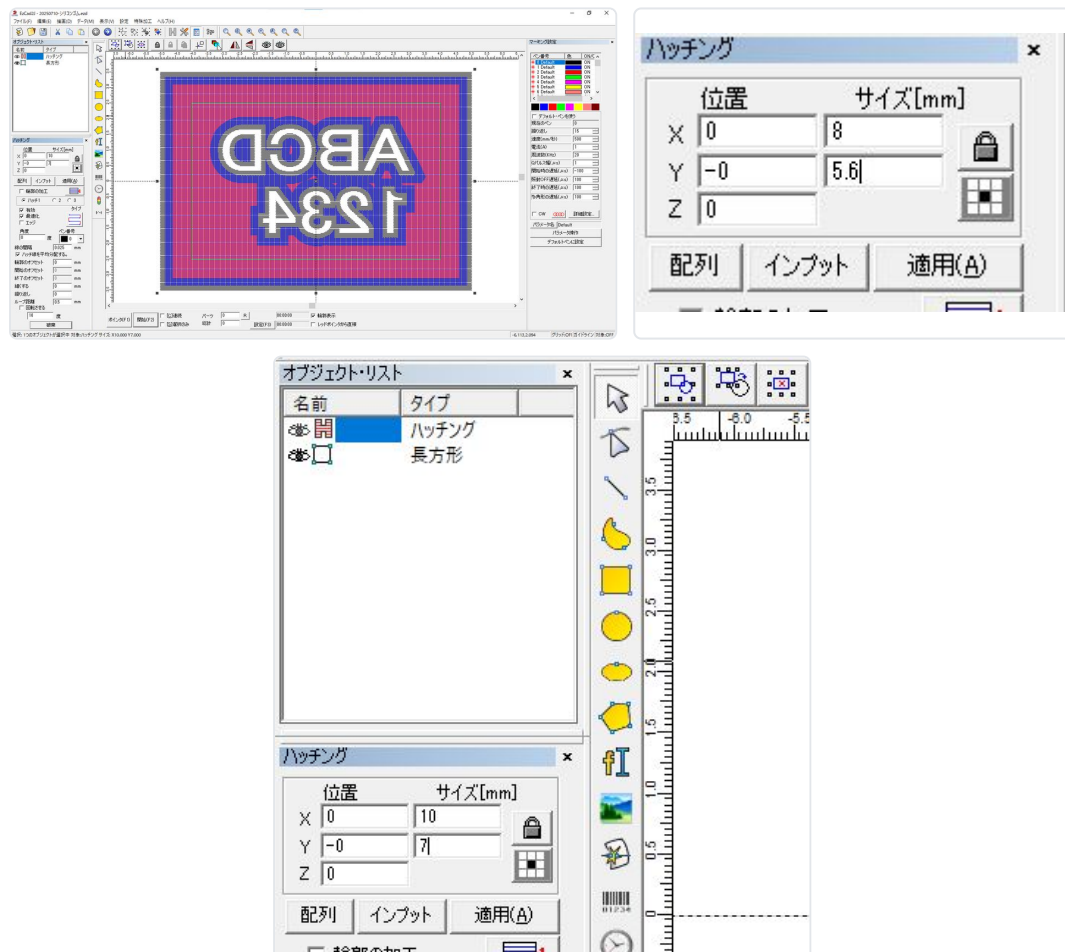
## If You Only Need to Scale Up or Down

If all you need is a text-size change with the aspect ratio kept fixed, you can do this by resizing the hatch object itself.

For example, the text in this guide was created with a height of 2 mm. To change this text to a height of 1.6 mm, you can shrink the hatch object by the same ratio (5:4). In this guide, the rectangle used for hatching is 7 mm.

To keep the aspect ratio fixed, set the padlock icon to the locked position.

With the aspect ratio locked, enter 5.6 mm — the Y size of 7 mm reduced by the same ratio — and click Apply.



Only the size changes; the hatch and pen settings remain unchanged.

This method can be used only when shrinking the text while keeping its layout as is. If the font, character spacing, character aspect ratio, or other settings differ from the original, you must discard the hatch settings, ungroup the objects, and set up the text again.

