

# **Work Example — Data Preparation for Polished Cut Edges**

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.

# Work Example — Data Preparation for Polished Cut Edges

- This document assumes that the laser machine has been set up correctly.
- This document assumes that LaserWork, the control software for the RSD-SUNMAX series, has been installed correctly.
- This document covers only the steps up to data preparation. If you want to see the actual machining process, refer to "First Machining."

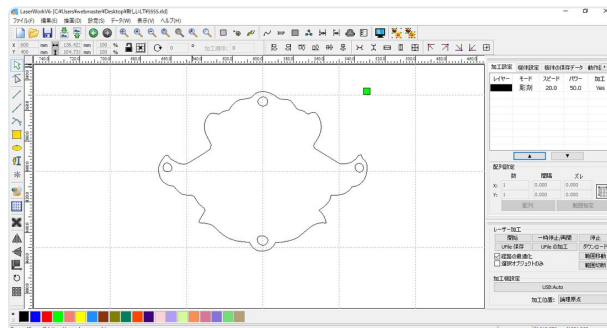
## 1. Preparing Data When the Cut Edges Will Be Polished

Depending on the material, laser processing can leave scorching on the cut face or burrs caused by melting. When scorching or burrs are a problem, the cut edges must be polished after laser processing.

In such cases you could build the grinding allowance into the machining data from the start, but with LaserWork you can easily add an allowance even when working from actual-size data.

## 2. Actual-Size Data

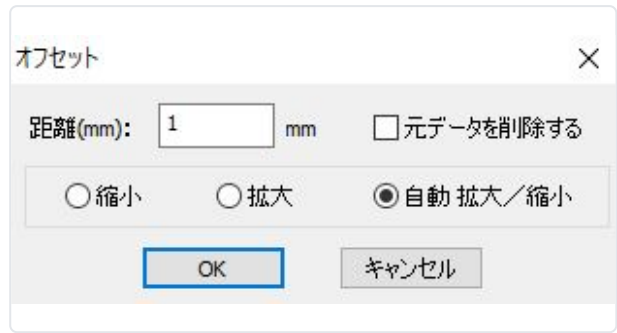
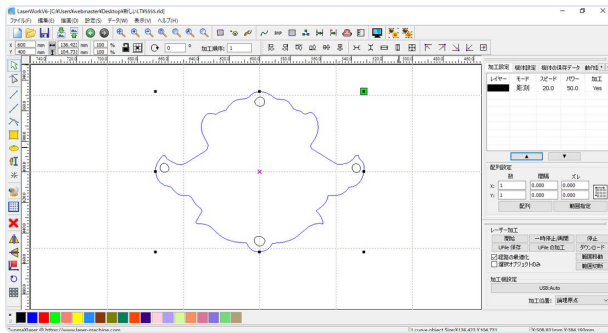
As an example, we will cut data like that shown below. The outer contour will be made 1 mm larger, and the four inner cutout holes will be made 1 mm smaller.



## 3. Offset

To add a grinding allowance, use LaserWork's offset function. First, select all objects, then click "Offset."

The "Offset settings" dialog appears. Configure it appropriately for your data and the work to be performed.



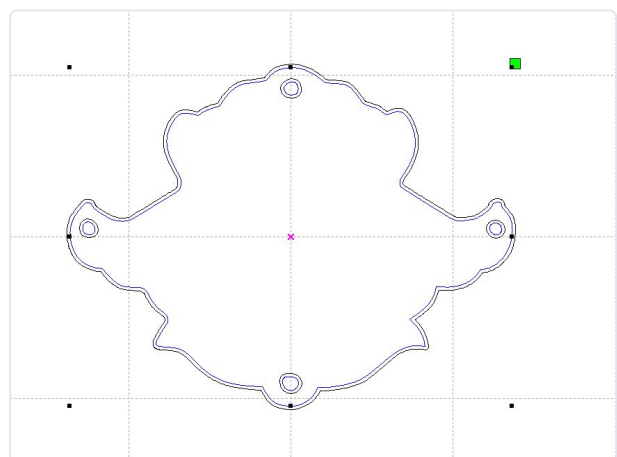
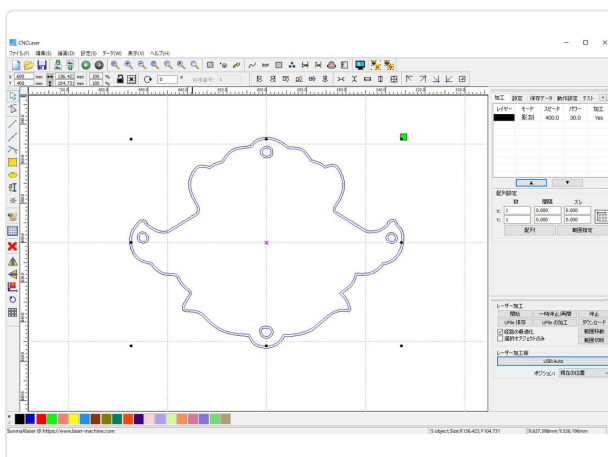
- **Distance:** Sets the offset amount [mm]. In this work example the grinding allowance is 1 [mm], so set it to 1.
- **Shrink / Expand / Auto:** Selects the offset direction. To apply an allowance of the same size everywhere, you would normally select all objects and choose "Auto." With "Auto" selected, CNCLaser automatically decides whether to expand or shrink each object based on its position and generates the offset data. If you want to vary the size of the allowance, or apply it only in certain places, set "Expand" or "Shrink" individually for each selected object.

## 4. Layers

At this stage, the original data and the offset data are combined on a single layer. Select the original data with the selection tool and create a new layer.

**Step 1.** Select the original data with "Select."

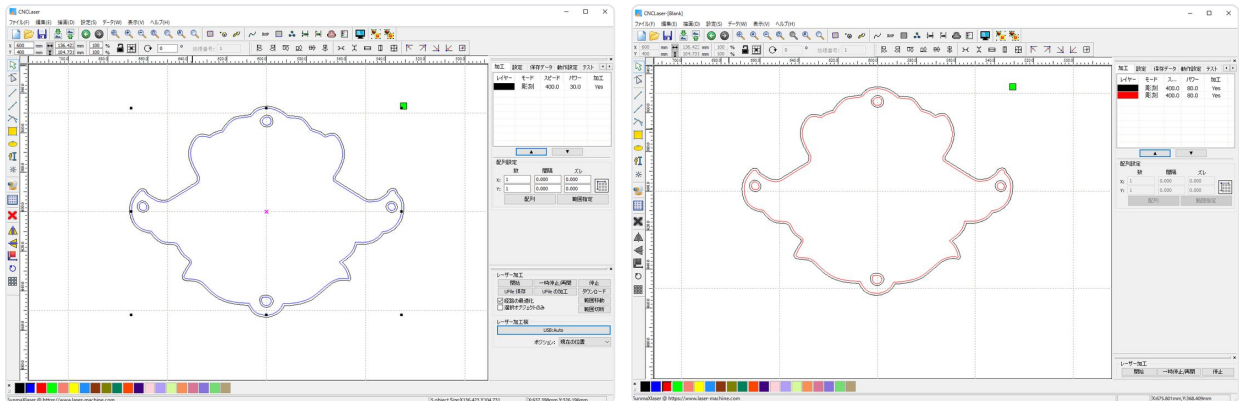
Hold down the Shift key and click the original data.



**Step 2.** On the layer toolbar at the lower right of the screen, click the color of the offset layer (any color other than black).

**Step 3.** Select a color different from the offset layer (red in this example). Click it.

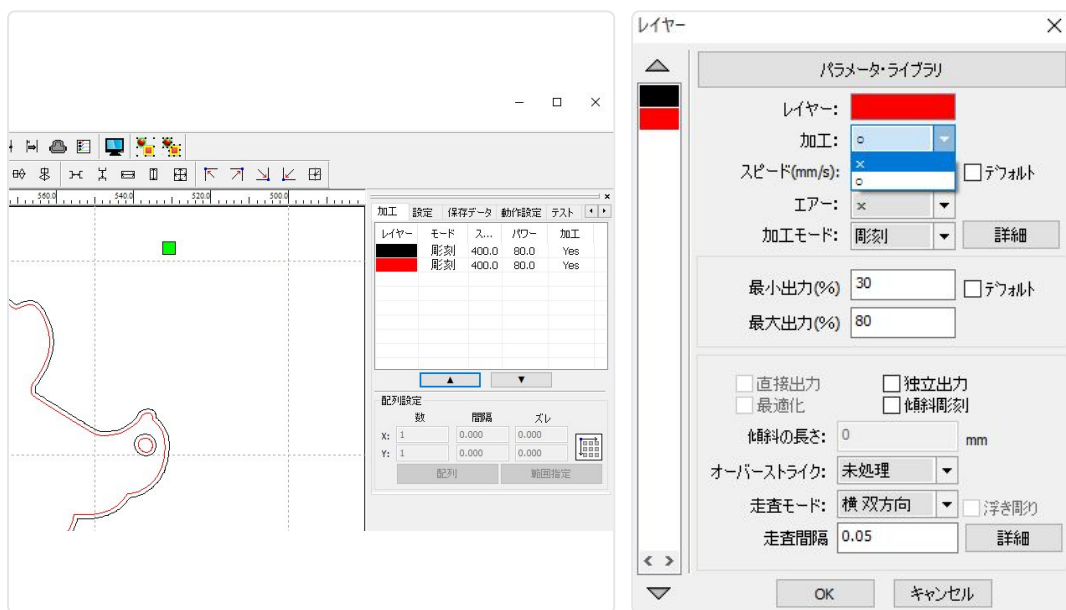
The red layer has been added.



**Step 4.** Set the original layer so that it will not be processed.

In the layer list at the upper right of the screen, double-click the original data (red).

**Step 5.** The Layer dialog appears. Change the processing setting from "○" (process) to "×" (do not process).



The data is now complete.