

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 RDWorksV8, the control software for the RSD-SUNMAX series, has been installed correctly.
- This document covers only the steps up to preparing the data. If you want to see the actual machining procedure, please refer to the "First Machining" guide.

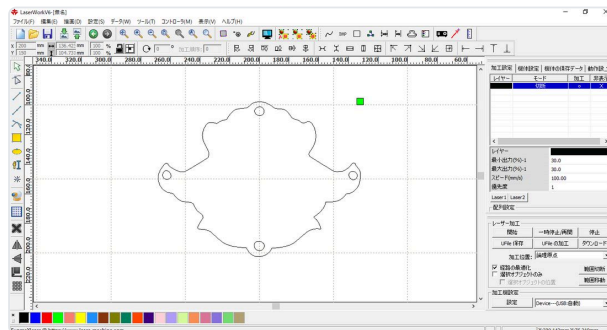
1. Preparing Data When the Cut Edges Will Be Polished

Depending on the material, laser processing may leave scorching on the cut surface, or melting may produce burrs. If scorching or burrs are a problem, the cut edges must be polished after laser processing.

In that case, you could create the machining data with a grinding allowance already built in; however, with RDWorksV8 you can easily add a grinding allowance even when working from actual-size data.

2. Actual-Size Data

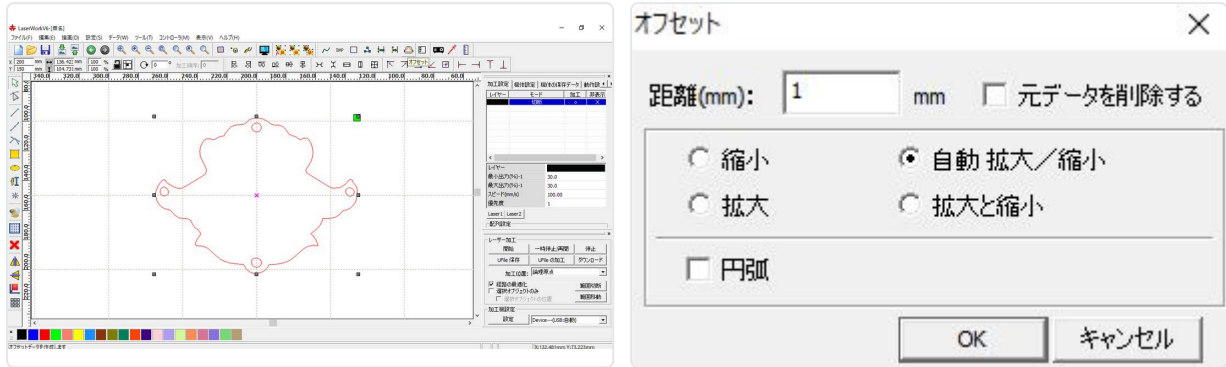
As an example, we will cut the data shown in the figure below. The outer contour will be made 1 mm larger, and the four inner cutout holes will be made 1 mm smaller.



3. Offset

To add a grinding allowance, use the Offset function of RDWorksV8. First, put all objects into the selected state, then click "Offset."

The "Offset settings" dialog appears. Configure it appropriately for your data and the machining you intend to do.



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

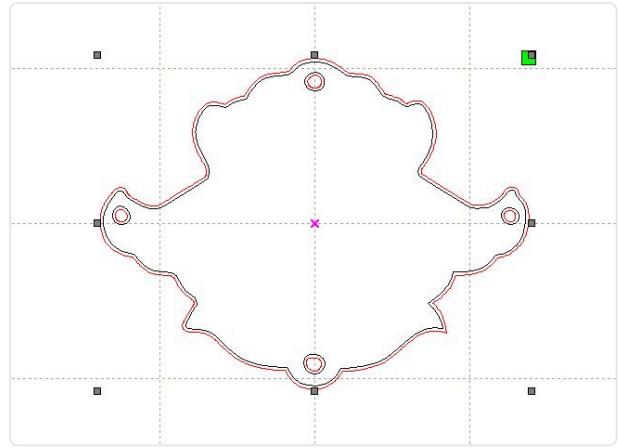
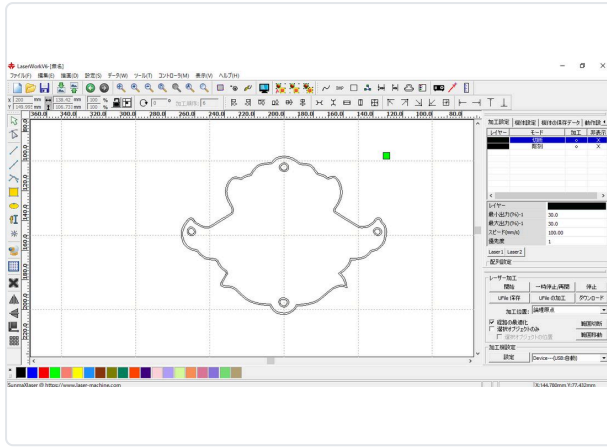
4. Layers

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.

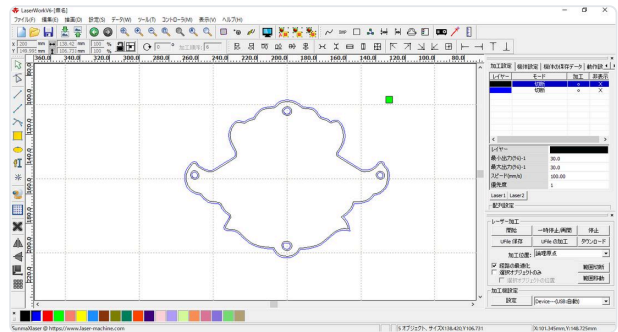
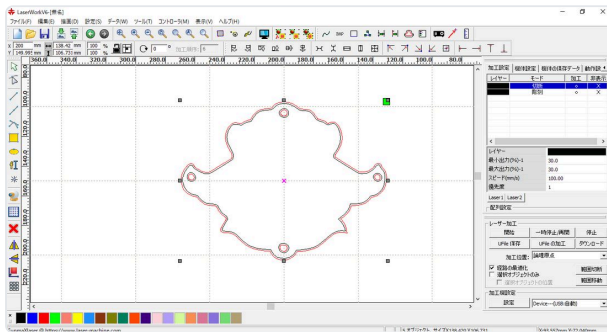
Select the original data with "Select."

While holding down the Shift key, click the original data.



In the layer toolbar at the bottom right of the screen, click a layer color other than that of the offset layer (a color other than black).

Select a color that is different from the offset layer (blue in this example).



The selected data turns blue, and a blue layer is added to the processing settings.

Set the Original Layer Not to Be Processed

In the layer list at the top right of the screen, change the processing setting for the original data (blue) from ○ to ×.

Double-click the ○.

加工設定
機体設定
機体の保存データ
動作設

レイヤー	モード	加工	非表示
	切断	○	×
	切断	○	×

レイヤー

最小出力(%)-1
80.0

最大出力(%)-1
90.0

スピード(mm/s)
8.00

優先度
2

Laser1
Laser2

加工設定
機体設定
機体の保存データ
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レイヤー	モード	加工	非表示
	切断	○	×
	切断	×	×

レイヤー

最小出力(%)-1
80.0

最大出力(%)-1
90.0

スピード(mm/s)
8.00

優先度
2

Laser1
Laser2

This completes the data.