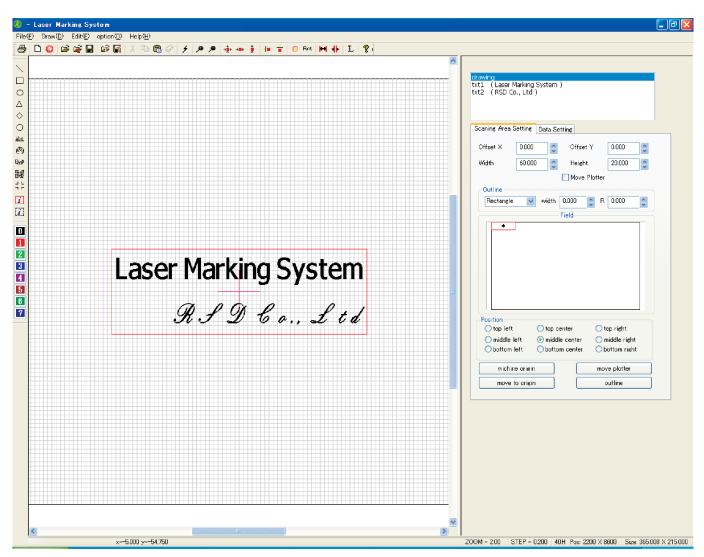
LaserMarkingSystem

Operating manual Ver1.7E

WINDOWS版



Automatic translation by Excite

http://www.excite.co.jp

1 Setup

1-1 System Requirements



PC with Windows2000 or Windows XP VGA Display CD-R Drive 1GB of available hard disk space Parallel Port

1-2 System Setup

Hardware setup
It connects it from a parallel interface of the computer with SUNMAX.
The power supply of the computer is turned on, and Windows is started.
Please refer to the SUNMAX laser sculpture machine manual for details.

1-3 Installation of software

Setup program (Laser Marking System V4.msi) is started from CD-ROM of LaserMarkingSystem, and the installation is advanced following the wizard. After the installation ends, "Laser Marking System 4" is added to the program list of the start menu.

1-4 Start of LaserMarkingSystem

LaserMarkingSystem starts when "Laser Marking System" in "Laser Marking System 4" of the program list of the start menu is clicked.

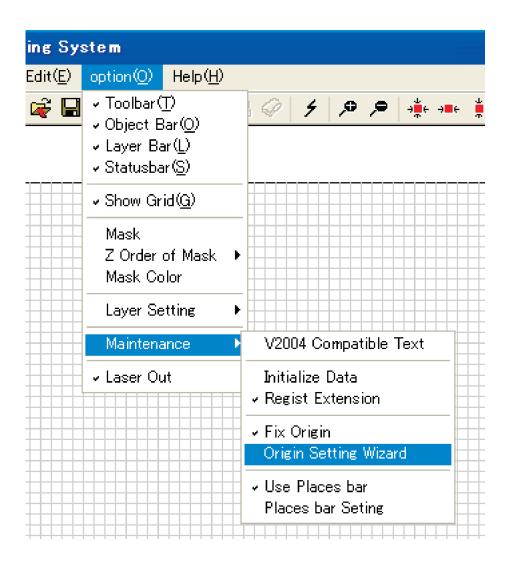
When it is necessary, and it is the following because the correspondence of coordinates of LaserMarkingSystem and SUNMAX is kept, the fixation of the field should fix the field.

- When you start LaserMarkingSystem for the first time.
- When the laser irradiation position shifts by the maintenance of the lens exchange etc.
- Additionally, when the laser irradiation position shifts by some reasons

It is not necessary when using it usually.

Setting method

Selection of menu click menu "Maintenance" - "Option" - "Origin setting wizard".

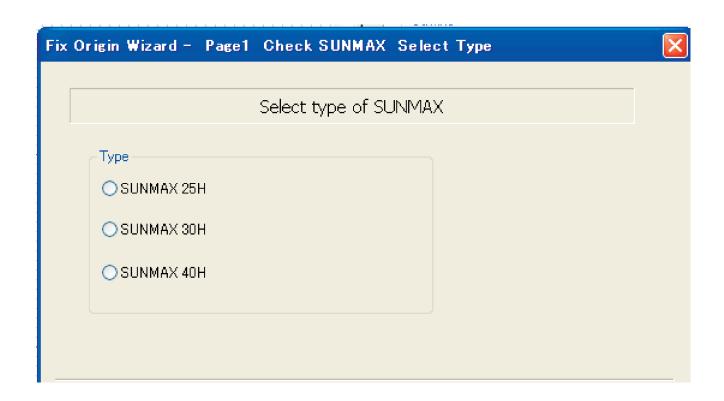


Note) The check mark has adhered to "Fixation of the field coordinates" when already set. When "Fixation of the field coordinates" is clicked when the check mark has adhered, coordinate data where the current state is fixed is deleted. When "Fixation of the field coordinates" is clicked, "Starting point setting wizard" is displayed when there is no check in "Fixation of the field coordinates".

Type setting
The Fix Origin wizard is displayed.
At "Select type of SUNMAX" Please select type of SUNMAX you use.

Note)

When the setup file for each type is used, this dialog is not displayed.

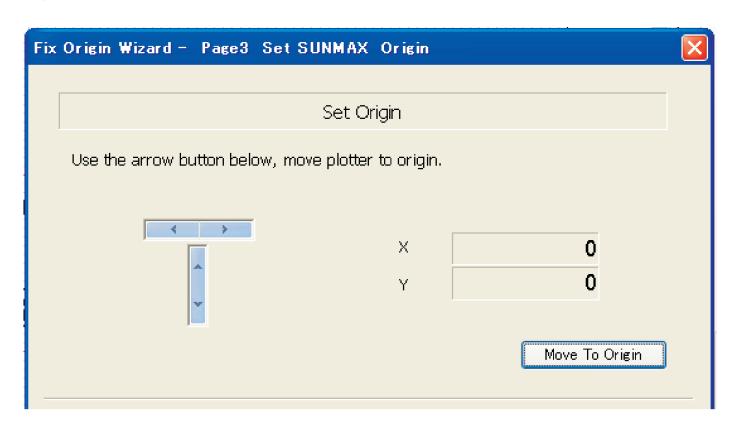


Check of SUNMAX status

 ${\tt SUNMAX}$ status is displayed. After confirm the settings of ${\tt SUNMAX},$ click "Next".



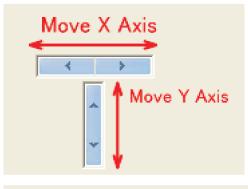
Set Origin
"Set SUNMAX Origin" is displayed. The origin position is set by operating X axis movement button and Y axis movement button with the mouse.



The plotter position of SUNMAX is moved to "Left interior" by operating the movement button.

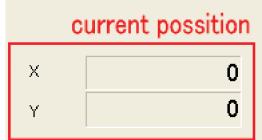
SUNMAX-30H and SUNMAX-40H are set in the intersection part of L type rule.

SUNMAX-25H is properly positioned in "Left interior" according to the shape of the stock vice.



The plotter moves by clicking X axis movable button and Y axis movement button with the mouse. It moves by $0.025\,[\text{mm}]$ a click.

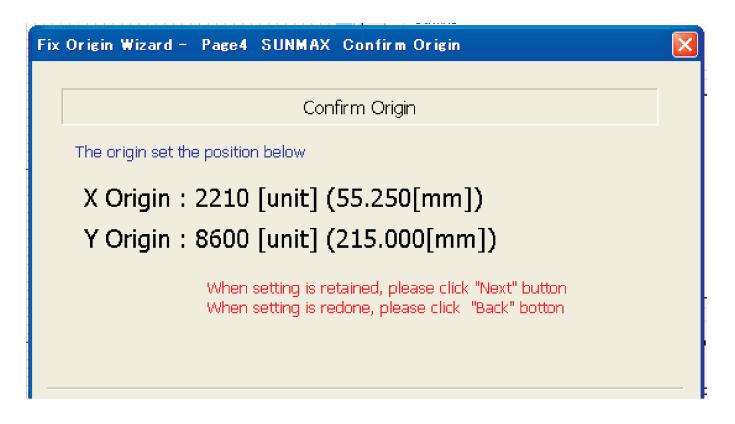
It moves continuously to maintain the clicked state. When the pressed state is continued, it moves quickly because the amount of the movement accelerates gradually.



Present location is displayed.

It returns to the initial state when "Move To Origin" button is clicked. When the starting point position can be set, "Next" is clicked

Confirm Origin "SUNMAX Confirm Origin" is displayed. The value set by "Page3 Set SUNMAX Origin" is displayed. When the setting is made effective, click "Next" button. To do over again, click "Back" button.



Setting is finished

"Fix Origin Wizard" is ended.

The dialog that presses reactivation is displayed when "Exit" is clicked, and end Laser MarkingSystem once, please. After it restart, the set content is reflected.



2 Operation of Laser Marking System

2-1 Externals of LaserMarkingSystem window

LWhen aserMarkingSystem is started, the window shown in Fig.1 is displayed in the computer display. It divides into eight parts, Menubar, Toolbar, Drawing toolbar, Layer toolbar, Campus, Object display window, Property display window, and Status bar.

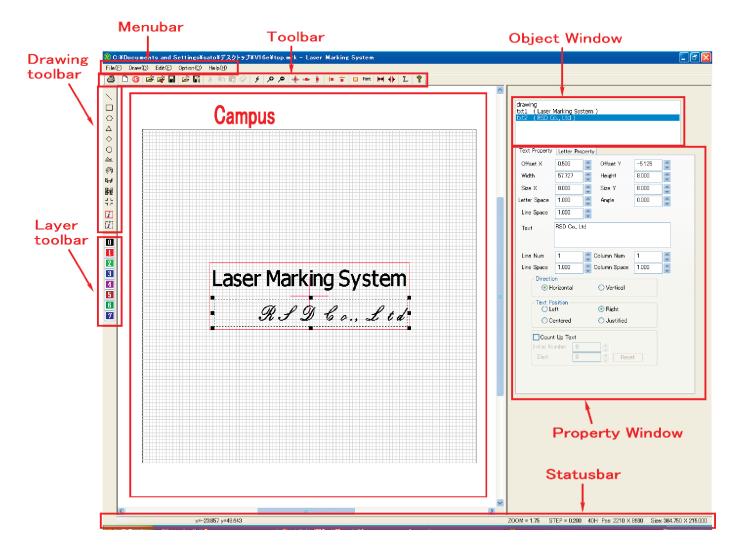


Fig. 1

Menubar

It is arranged in the upper part of the window. There are five -- file, drawing, edit, option, and help. It introduces a detailed function and the operation method by the next paragraph.

Campus

The figure and the character working now are displayed. Figure and the character drawn here are sculptured with the SUNMAX.

Toolbar

It is arranged under the menubar.

There are 26 shortcut menus, and when the mouse pointer is taken on the icon, the function information message is displayed.

Drawing toolbat

It is a short cut menu at the left of the window, and there are 13 icons. This menu can be used from "Draw" of the menubar.

Layer toolbar

It is a short cut menu at the left of the window, and there are eight icons. This menu can be used from "Option - Layer Setting" of the menubar.

Object Window

The object name of each object on the campus is displayed in the window in upper right.

The object selected here can be edited on the campus.

When a new file is opened, the drawing object is made. This object can set specification of coordinates at the position etc. of the specification of the size of the campus and the range of the sculpture and laser light beams in property.

The object name increases whenever the object in the character and the figure, etc. is made.

Property Window

The property of the object selected in the object display window can be displayed and be edited.

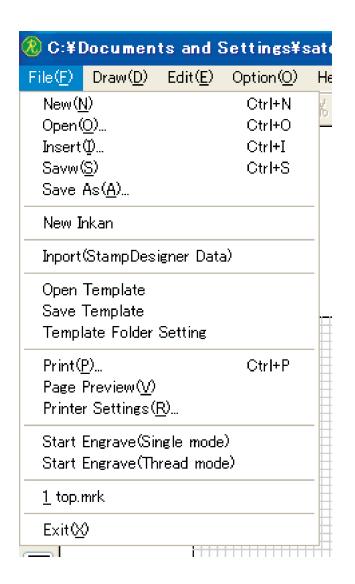
Statusbar

The hint and the setting, etc. concerning the function of Laser Marking System are displayed.

2-2 File Menu [menubar] → [File])

The pull-down menu is displayed when "File" is selected, and the mouse can select a necessary function.

Exit



New Ctrl+N 0pen Ctrl+0 Insert Ctrl+I Save Ctrl+S Ctrl+A Save As New Inkan Inport (StampDesigner Data) Open Template Save Template Template Folder Setting Print Ctrl+P Page Preview Ctrl+V Printer Settings Ctrl+R Start Engrave (Single mode) Start Engrave (Thread mode) List of recent used files

Ctrl+X

New - Open new blank page.

The blank page opens newly.

Open -- Open file. When this menu is selected, the file select dialog is displayed. When a file of preserved Laser Marking System (*.mrk) is selected, the preserved design is read.

Insert -- Insert File When this menu is selected, the file select dialog is displayed. The preserved design is read when file of preserved Laser Marking System (*.mrk) is selected, and it is inserted in the current design. This function is very convenient, can be used by repeating, and can be applied to various figures that have already been designed.

Save -- Save File

The design is preserved in the file. When the file of the design under the edit has already existed, data is updated. When the design file doesn't exist, the file preservation dialog is displayed in the display, and the file is made newly. Afterwards, the design can be called again by using 'Open' or 'Insertion' menu when it is necessary.

Save As -- Save File As New Name

The design is preserved in the file. The file preservation dialog is displayed in the display, and the file is made newly. Afterwards, the design can be called again by using 'Open' or 'Insertion' menu when it is necessary.

****Motice** When the key is input, the file name is preserved in the figure preserved before in the superscription when the file name preserved before is the same.

New Inkan -- Make New Inkan Design

When this menu is selected, the dialog that selects "Corporate registered seal/sign" is displayed in the display. A new design begins with a layout template of the stamp when either is selected.

Inport(StampDesignerData) -- Import data of the selected Stamp Designer Data

When this menu is selected, the folder selection dialog is displayed in the display. Data opens when the folder where the design data made with Web rubber stamp design system "StampDesigner" is stored is specified.

Open Template -- Read tmplate file

The template preview dialog opens, the design is selected, and the template is called.

Save Template -- Save tanplate file

The design making it now is preserved as a template.

Template Folder Settings -- Set template folder

Setting the folder that stores the template.

Print

The design made on campus is printed with the printer.

PagePreview

The preview when the design made on campus is printed with the printer is displayed.

Page Settings

Setting printer.

Start Engrave (Single mode)

The design made on campus is output to Sunmax, and it sculptures. When is output by Single Mode, LaserMarkingSystem cannot be used while outputting data. Here is used to prevent such an accident because there are a possibility of modifying the design by an unexpected operation to LaserMarkingSystem etc. , too, when the same design is repeatedly sculptured.

Start Engrave (Thread mode)

The design made on campus is output to Sunmax, and it sculptures. A new design can be made by using LaserMarkingSystem while outputting data when outputting it in the thread mode.

The List of recent used files

The design is made and when it saves data or the design is read, 15 file names or less are displayed. When the file name is clicked, the selected design is read.

Exit

Exit Laser Marking System

Various figure and characters can be designed inside the campus by using

'Draw' that exists in the menubar. The pull-down menu shown in Fig. 3 is displayed after it selects it, and the type of a necessary figure and the character can be selected by using

For instance, when the rectangle of 20×30 [mm] is designed, 'Quadrangle' is chosen. A rectangular outside frame is displayed inside the campus.

The object name of 'Rectangle' is newly displayed in the object display

The property of 'Rectangle' is displayed in the property display window when this is selected, and it is possible to set it to the design of the favor by setting each numerical value.

Moreover, it is also possible to change the size of the object by dragging a square pointer on the dotted line pulled to the turn of the object drawn inside the campus.

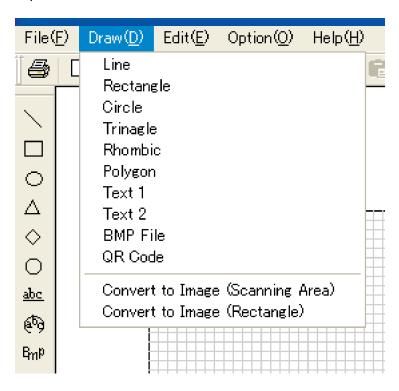


Fig. 3

Line Rectangle Circle Triangle Rhombic Polygon Text1 Text2 Bmp File QR Code Convert to Image (Scanning area) Convert to Image (Rectangle)

Drawing a straight line. Draw a rectangle. Draw a circle or an ellipse. Draw a triangle. Draw a rhombic. Draw a polygon. Draw a line text Draw a circle text. Draw a bmp file data. Draw a QR code Scanning area is made an bmp image. Selected area is made an bmp image.

2-4 Edit [menubar] \rightarrow [Edit]

When 'Edit' that exists in the menubar is selected, the pull-down menu shown in Fig. 4 is displayed on the display. The functions are as follows.

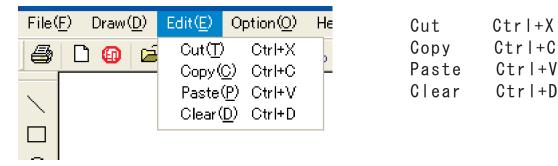


Fig. 4

Cut Ctrl+X

The object under the selection in the palette is copied onto the clipboard, and it deletes it from the figure palette.

Copy Ctrl+C

The object under the selection in the palette is copied onto the clipboard.

Paste Ctrl+V

It draws to the call palette in the data of the clipboard.

Clear Ctrl+D

The object under the selection in the palette is deleted.

When 'Option' that exists in the menubar is selected, the pull-down menu shown in Fig. 5 is displayed. The functions are as follows.

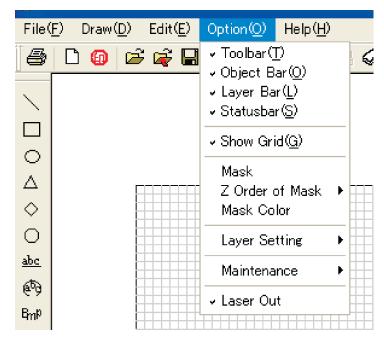


Fig. 5

Toolbar Object Bar Layer Bar Statusbar Toolbar alternates between show and hide.
Object toolbar alternates between show and hide.
Layer toolbar alternates between show and hide.
Statusbar alternates show between and hide.

Grid

Grid of edit area alternats between show and hide.

Mask Z Order of Mask Mask Color It paints out outside scanning area.

it set z-order of mask.

it set mask color.

Layer Setting

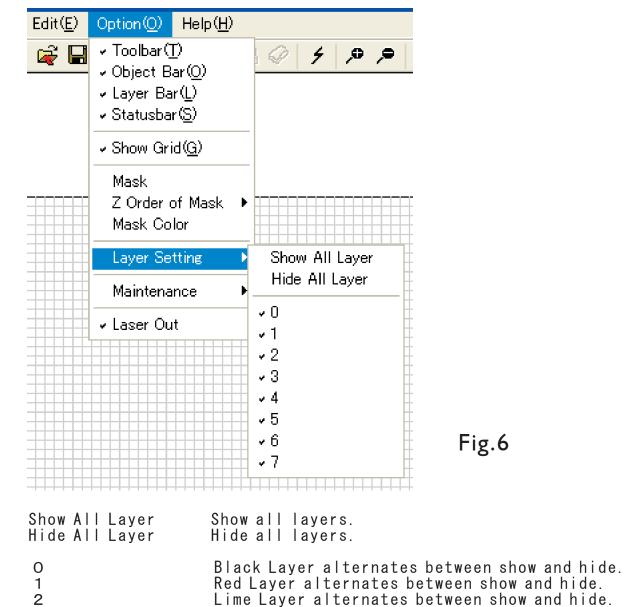
see 2-5-1 Layer

Maintenance

see 2-5-2 Maintenance

Note) As for the mask outside the toolbar, the status bar, the grid, and Scaningeria under the display, ν mark is displayed.

When 'Layer Setting' that exists in 'Option' menu of the menubar is selected, the pull-down menu shown in Fig. 6 is displayed. The functions are as follows.



Note) As for the layer under the display, "u" mark is displayed

Blue Layer alternates between show and hide.

Purple Layer alternates between show and hide.

Maroon Layer alternates between show and hide.

Green Layer alternates between show and hide.

Navy Layer alternates between show and hide.

3

4

5

6

7

When 'Maintenance' that exists in 'Option' menu of the menubar is selected, the pull-down menu shown in Fig. 7 is displayed. The functions are as follows.

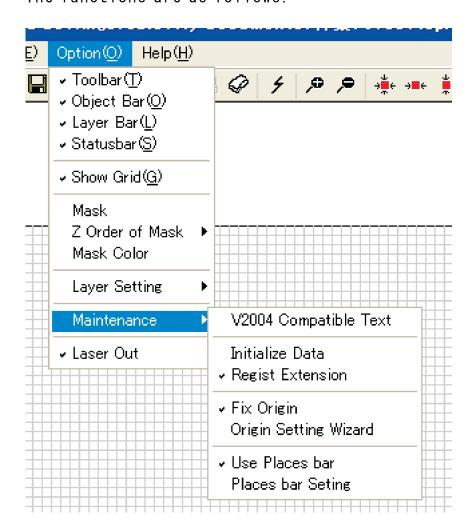


Fig 7

V2004 Compatible Text When Text1 string and Text2 string are painted out, an interchangeable drawing to Laser Marking System V2004 is done. Some characters become thin. Please make it to turning off usually.

Initialize Data

The data file where the setting of the system of LaserMarkingSystem value is described is initialized. Laser Marking System returns to the installed state when this operation is done. Restrat is needed.

Regist Extension

The data file of Laser Marking System is related to Windows. Laser Marking System comes to start automatically when an existing data file is double-clicked by this operation. When"レ" is removed, the relation is released.

Fix Origin Origin Setting Wizard

see 1-5 Fixation of Feald see 1-5 Fixation of Feald

Use Places bar Places bar Setting When 'Help' that exists in the menubar is selected, the pull-down menu shown in Fig. 8 is displayed. The functions are as follows.

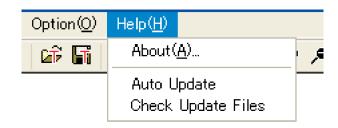


Fig. 8

About The version information dialog of Laser Marking

System is displayed.

Auto Update Auto update alternates between off and on,

Check Update Files Checking update server the latest update files

*) About update

As for Laser Marking System, the change in the version is done by the function enhancing and the trouble correction, etc. Our server is checked every time when LaserMarkinSystem is started when "Auto Update" is made effective, and the upgrade is done automatically when being start next time if updated though the upgrade can be done by installing it after the setup file is downloaded from our homepage. It is always an effective function to the latest version to keep as for software. The Internet connection environment's there, and being able to access our server the FTP become the operation conditions.

*) About cheking the latest version
The update check is done to our server by clicking "Check Update" in
arbitrary timing with an automatic update-function invalidated. When the
update is necessary, automatically it downloads, and it is installed. The
Internet connection environment's there, and being able to access our
server the FTP become the operation conditions.

When "Auto Update" is made effective, it comes to take time to start depending on the Internet connection environment to access our server every time Laser Marking System is started and to acquire updated information. Moreover, there is a possibility that the difference somewhat of the operation causes confusion by the function enhancing when causing it because of being automatically updated, too. I will recommend the level "Check Update Files" to usually invalidate "Auto Update" to evade such a symptom, and to be done once a month.

2-7 Toolbar

The shortcut menu that enables various functions to be executed quickly by the mouse operation is arranged in the toolbar as an icon.





「New」 Open new blank page.

□ 「New Inkan」 Make New Inkan Design

ΓOpen」 Open file。

「Insert」 Insert another mrk file data.

[Save] Save current campus data to file.

[Open Template] Read a template file,

「Save Template」 Save cumpus data as new template.

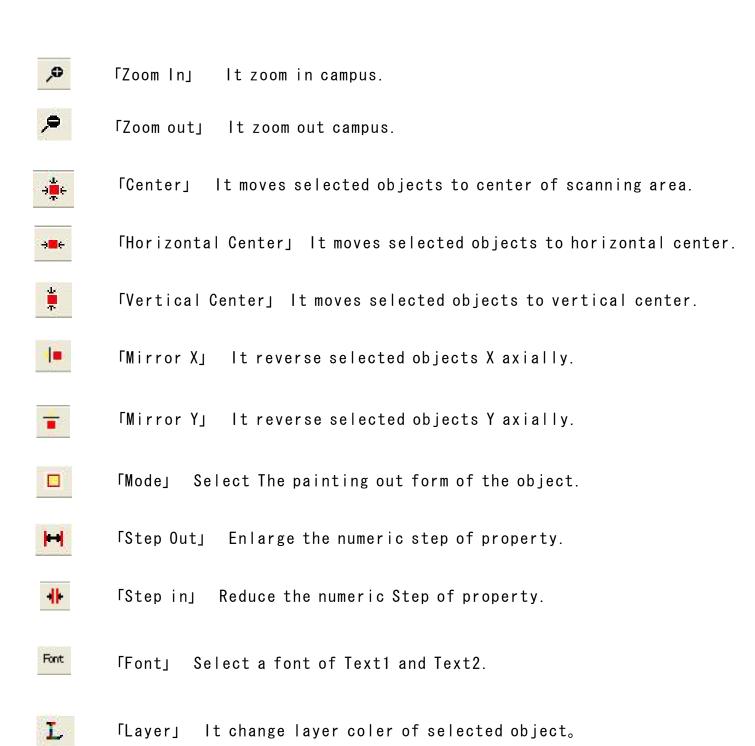
ΓCut」 Cut the selected objects.

「Copy」 Copy the selected objects.

[Paste] Paste the objects on Clipboard.

Γclear」 Delete the selected objects.

f Start Thread Engrave」 Start thread engrave.

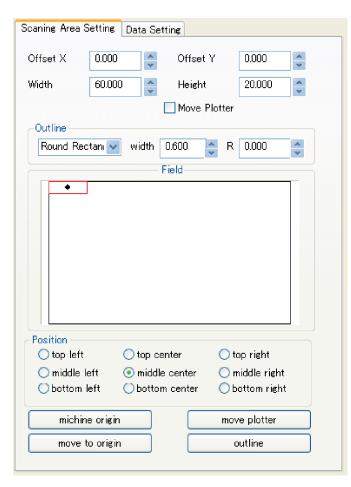


[Help] Show version information.

2-8 「drawing」Object

The "drawing" object displayed in the object window is a special object to do a basic, important setting at the position etc. of the specification of the size of the campus and the range of the sculpture and laser light beams. The movement of the laser sculpture machine is controlled by each setting it.

When this object is selected in the object window, property that attaches to the property window two tabs of following "Scanning Area Setting" and "Data Setting" is displayed.



Offset X:X coordinates to field. Offset Y:Y coordinates to field. Width: Width of scanning area. Height: Height of scanning area.

Move Plotter: It offsets when the check is put, and the plotter moves at the same time as changing the numerical value of the width and the width of length.

Outline(Shape): Shape of scanning area.

Outline (width): Line width of the scanning area frame.

Outline(R): The round value of four corners, in case of round rectangle.

Field: View of Filed. Red rectangle means scanning area.

Position: Position of plotter to Scanning area.

machine origin: Move Plotter to the machine origin.

move to origin: Move plotter to origin set by origin fix wizard.

move plotter: Move plotter to the setting

position

Outline: Test engrave of outline.

Offset X Offset Y

A relative position of the left top seat signpost of Scaningeria that makes coordinates (on the left of the SUNMAX sculpture area) that the starting point setting wizard sets a starting point is specified.

The part displayed with a red frame of the sculpture area displayed in "Field" becomes a sculpture place in SUNMAX real machine. 。

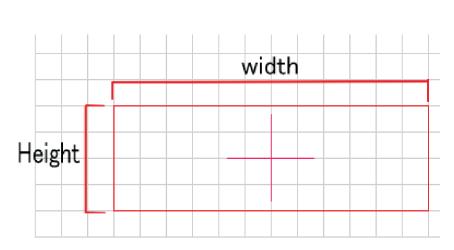
The offset value is properly changed by the size and the position, etc. where the sculptured material is set up.

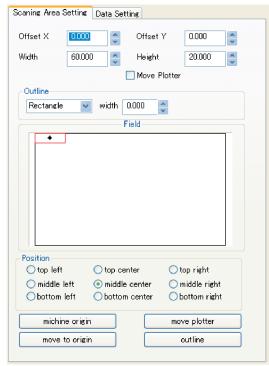
• Width Height

It specify the size of Scanning area.

The unit of the value is mm.

In case of width: 60.000 and height: 20.000, the size of scanning area is 60mm width, and 20mm height.

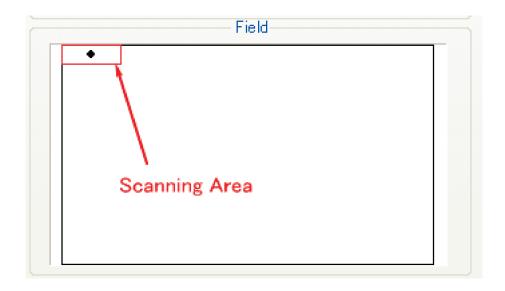




• Field

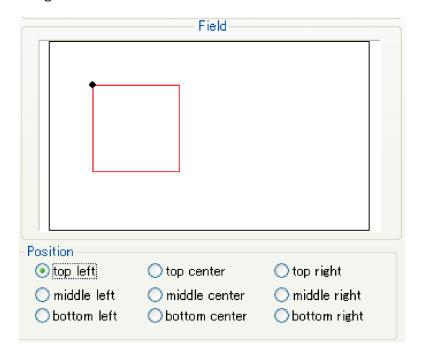
The plotter movement space of Sammax is pseudoexpressed by the field of Laser Marking System.

As for the area displayed in the field, it differs, and the position and the shape etc. of Scanning area are expressed relatively by the model of Sammax. $_{\circ}$



Position

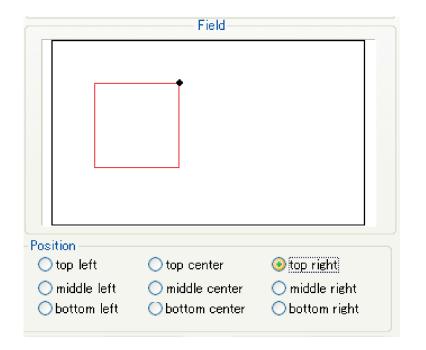
It specifies the position of the plotter to scanning area. It can point "top left", "top center", "top right", "middle left", "middle center", "middle right", "bottom left", "bottom center", and "bottom right".



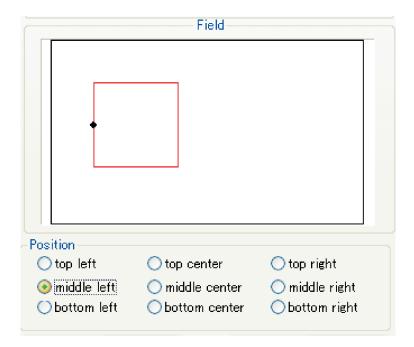
Top left

Field—					
Position top left middle left bottom left	top centermiddle centerbottom center	○ top right ○ middle right ○ bottom right			

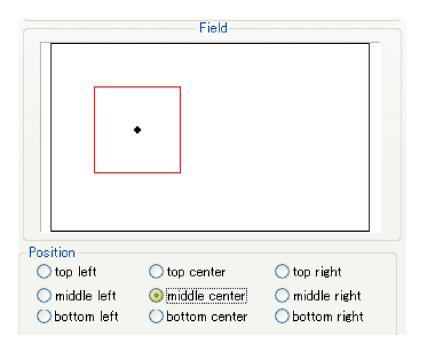
Top center



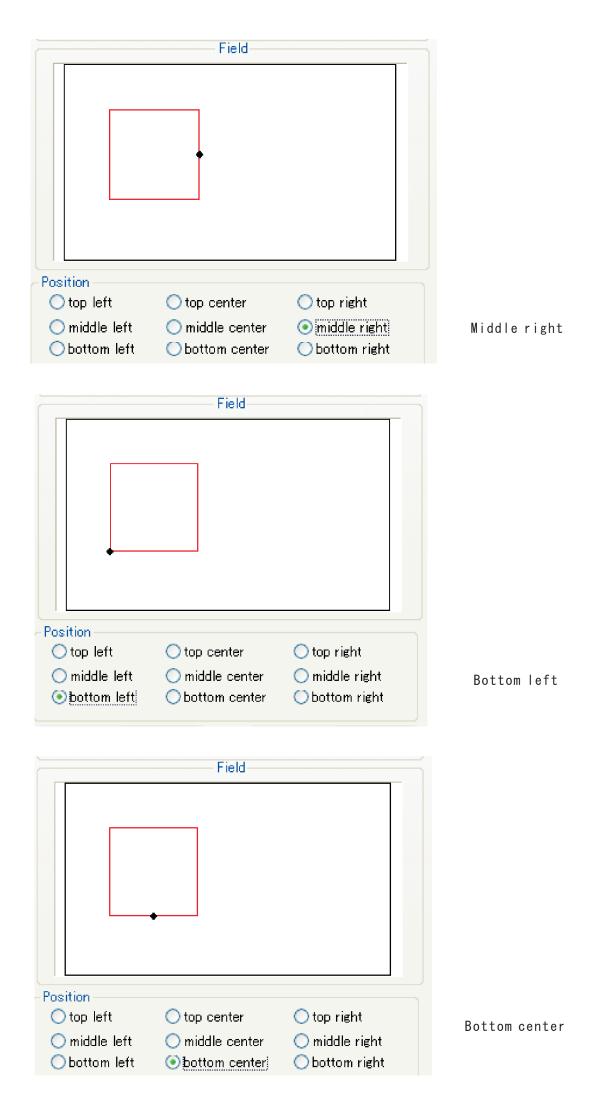
Top right

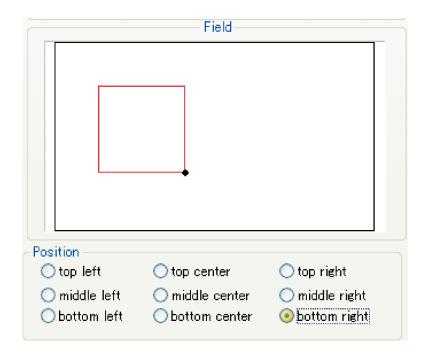


Middle center



Middle center





Bottom right

machine origin

The plotter moves to the machine origin of SUNMAX.

SUNMAX-25H is top right SUNMAX-30H is top left SUNMAX-40H is bottom left

move to origin

The plotter moves to the point set by the fix origin wizard.

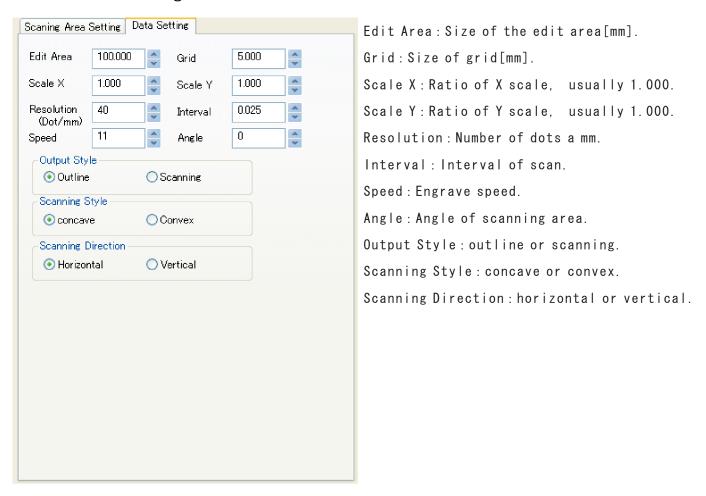
move plotter

The plotter moves to the point set by position .

outline

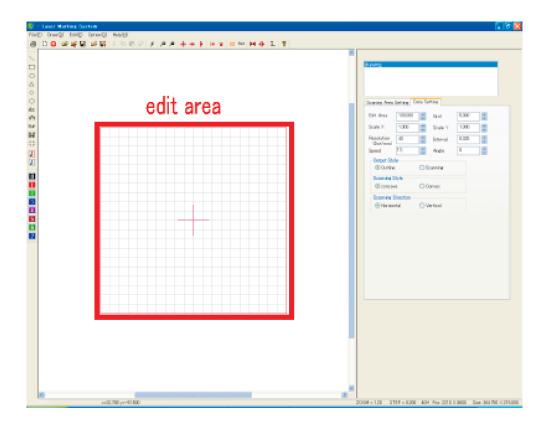
Output outline data of scanning area.

■ Data Setting



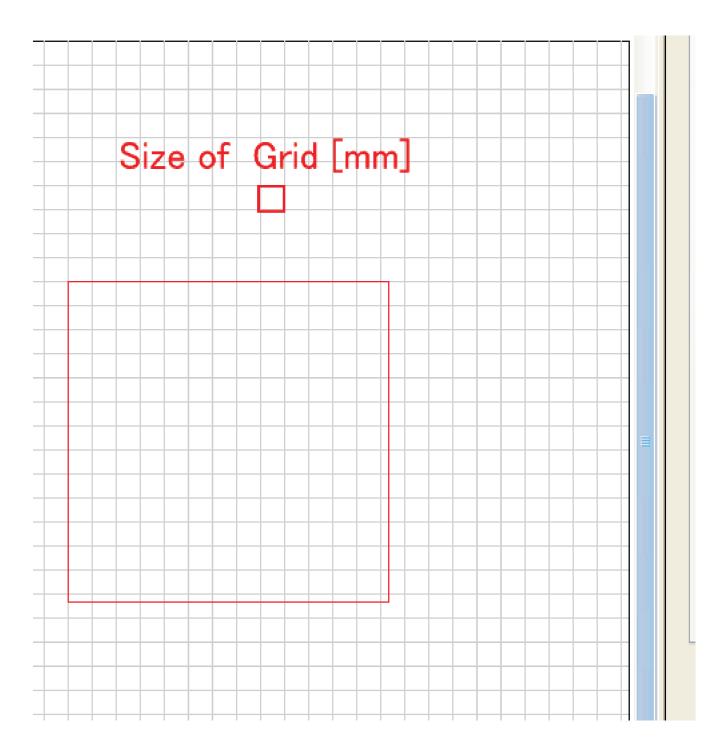
Edit Area

It is a size in the obituary part displayed inside the campus. If the check is put by "Grid" of "Option" of menubar, it becomes a size in the part where the grid is displayed.



Grid

Grid is gray line displayed in the edit area.



-Scale X Scale Y

The unit of the value doubles.

When data is output to SUNMAX, it expands and it reduces by the magnification of the value in which Scaningeria (red frame part) is specified here.
1.000 both scale X and scale Y is specified usually.

It is output with Scaningeria expanded right by the twice centering on at the left of when 2.000 is specified for scale X.

When 2.000 is specified for scale Y, two scanning area is multiplied in the vertical direction.

There are no changes in scanning area and each object displayed inside the campus.

Resolusion (Dot/mm)

It specifies the resolution of scanning area.

The unit is dots per mm.

The resolution rises when the value is enlarged, and the resolution lowers when reducing it.

The maximum value is 40 Dot/mm.

Interval

It specifies inteval of scanning. The unit is mm. The minimumvalue is 0.025.

• Output Style

It specifies convex or concave.

The part colored with scanning area is sculptured when a concave sculpture is specified, and when a convex sculpture is specified, the part that has not been colored with scanning area is sculptured.

Scanning Direction

It specifies direction of scanning move.

The laser light moves to horizontal direction for Scaningeria when horizontal direction is selected, and it sculptures.

The laser light moves to the vertical direction for Scaningeria when the vertical direction is selected, and it sculptures. Horizontal direction is selected usually.

Output Style

It specifies outline or scanning.

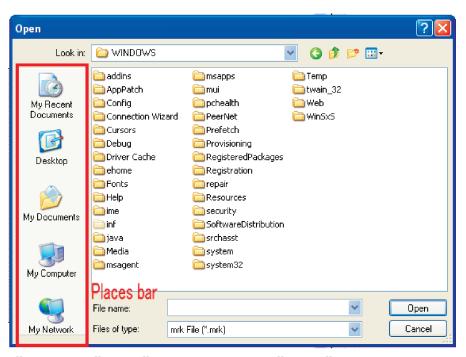
When the outline is selected, each one in the part colored with scanning area is sequentially sculptured.

The laser light sculptures while scanning it in the direction specified for scanning area in the direction of scanning when scanning is selected.

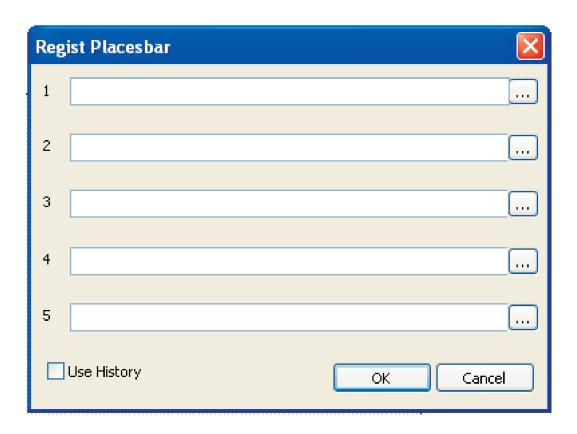
2-9 Places bar

It opens, and the nonuse and use/folder registration of the folder short cut displayed in the left of the file dialog displayed at the time of preservation etc. can file it.

If the check is put in "Option" - "Maintenance" - "Use Places bar" of the menubar, using the Places bar becomes possible.



When "Option" - "Maintenance" - "Places bar Setting" of the menubar is clicked, the dialog is displayed.



The folder can be registered up to five kinds. Moreover, the folder that can be registered can display the history of the file that preserves opening/by checking "The history is used" though it becomes four kinds.

The folder for the data storage is decided and easier file management becomes possible if it registers.

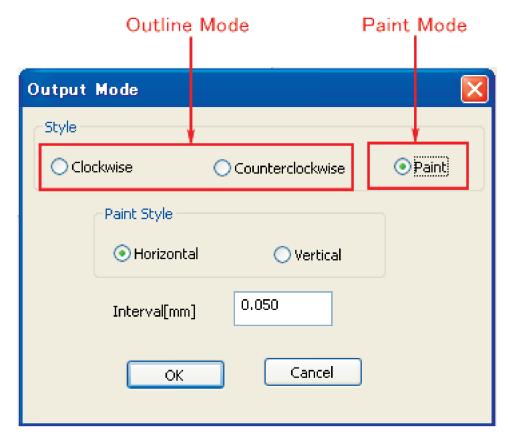
3 Object

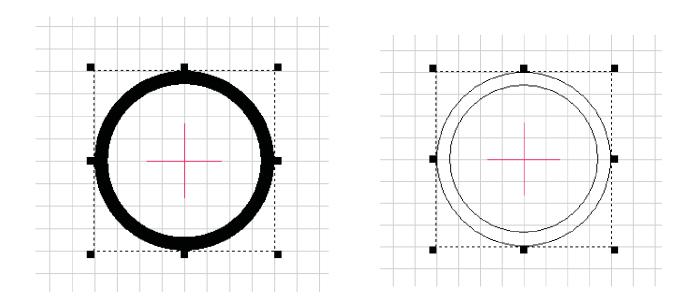
All objects except the BMP object have the drawing mode of "Outline" and "Paint".

An initial value is "Paint" mode.

When the drawing mode is changed, the object that wants to change is selected, and the mode button of toolbar is clicked. Because the dialog is displayed, it sets it.

It is possible to change at any time in the setting.





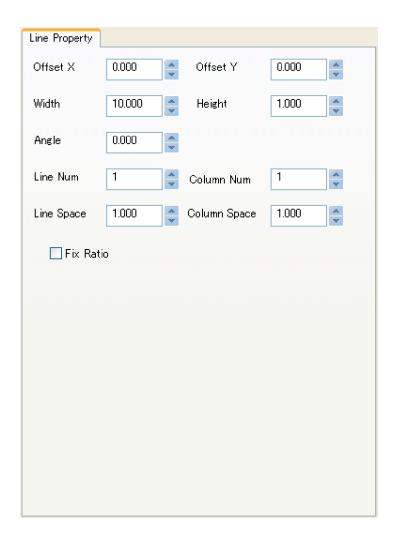
Paint Outline

3-1 Line -- line object

"Line" is added to the object window by selecting the straight line of the selection or drawing toolbar , and line" of "Draw" of menubar is

Displayed to the straight line inside the campus.

When the property window is seen with the line object selected, "Line Property" is displayed.
Details of line property are as follows.



Offset X: Relative position X axis from starting point of edit area

Offset Y: Relative position Y axis from starting point of edit area

Width: Width of the line object.
Height: Width of the line height.
Angle: Angle of the line object.
Line Num: The number of row.
Column Num: The number of column.
Line Space: The interval of row.
Column Space: The interval of column.
The ratio in width and height is fixed.

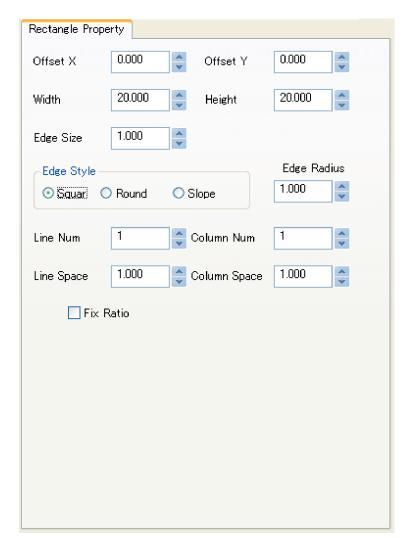
"Rectangle" is added to the object window by selecting the rectangle of the selection or the drawing toolbar

, and the rectangle of "Draw" of

"menubar" is displayed to the rectangle inside the campus.

When the property window is seen with the rectangle object selected, "Rectangle Property" is displayed.

Details of rectangle property are as follows.



Offset X: Relative position X axis from starting point of edit area

Offset Y: Relative position Y axis from starting point of edit area

Width: Width of the line object.
Height: Width of the line height.
Edge Size: Thickness of line
Edge Style: Style of corner
Edge Radius: Radius of corner
Line Num: The number of row.
Column Num: The number of column.
Line Space: The interval of row.
Column Space: The interval of column.
The ratio in width and height is fixed.

"circle" is added to the object window by selecting the circle of the selection or the drawing toolbar ${}_{\bigcirc}|$, and the circle of "Draw" of

"menubar" is displayed to the circle inside the campus.

When the property window is seen with the circle object selected, "Cirle Property" is displayed.
Details of circle property are as follows.

Circle Propert	У		
Offset X	0.000	Offset Y	0.000
Size X	40.000	Size Y	40.000
Edge Size	3.000	* *	
Line Num	1	Column Num	1
Line Space	1.000	Column Space	1.000
F	ix Ratio		

Offset X: Relative position X axis from starting point of edit area

Offset Y: Relative position Y axis from starting point of edit area Size X: Size of X axially Size Y: Size of Y axially Edge Size: Thickness of line Line Num: The number of row. Column Num: The number of column. Line Space: The interval of row. Column Space: The interval of column. The ratio in width and height is fixed.

3-4 Triangle -- triangle object

"menubar" is displayed to the triangle inside the campus.

When the property window is seen with the triangle object selected, "Triangle Property" is displayed.

Details of triangle property are as follows.

Triangle Property					
Offset X	0.000		0.000		
Width	20.000		20.000		
Edge Size	1.000				
-Style					
⊙ Nort	mal	Opposite			
Line Num	1	Column Num	1 *		
Line Space	1.000	Column Space	1.000		
Fix Ratio					

Offset X: Relative position X axis from starting point of edit area

Offset Y: Relative position Y axis from starting point of edit area

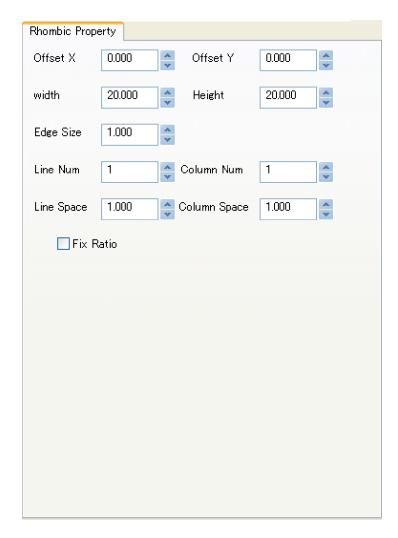
Width: Width of the line object.
Height: Width of the line height.
Edge Size: Thickness of line
Style: Normal or Opposite
Line Num: The number of row.
Column Num: The number of column.
Line Space: The interval of row.
Column Space: The interval of column.
The ratio in width and height is fixed.

"rhombic" is added to the object window by selecting the rhombic of the selection or the drawing toolbar $_{\bigcirc}$, and the rhombic of "Draw" of

"menubar" is displayed to the rhombic inside the campus.

When the property window is seen with the rhombic object selected, "Rhombic Property" is displayed.

Details of Rhombic property are as follows.



Offset X: Relative position X axis from starting point of edit area

Offset Y: Relative position Y axis from starting point of edit area

Size X: Size of X Size Y: Size of Y

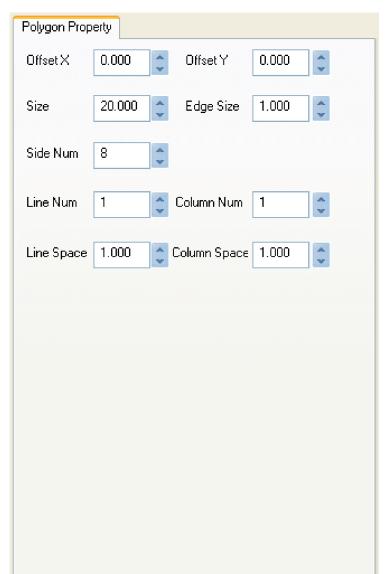
Edge Size: Thickness of line
Line Num: The number of row.
Column Num: The number of column.
Line Space: The interval of row.
Column Space: The interval of column.
The ratio in width and height is fixed.

3-6 Polygon -- polygon object

"polygon" is added to the object window by selecting the polygon of the selection or the drawing toolbar o , and the polygon of "Draw" of

"menubar" is displayed to the polygon inside the campus.

When the property window is seen with the polygon object selected, "Polygon Property" is displayed. Details of polygon property are as follows.



Offset X: Relative position X axis from starting point of edit area

Offset Y: Relative position Y axis from starting point of edit area

Size : Size of object Side Num: The number of side Line Num: The number of row. Column Num: The number of column. Line Space: The interval of row. Column Space: The interval of column.

3-7 Text -- Txt 1 object

"txt1" is added to the object window by selecting the text1 of the selection or the drawing toolbar $\frac{abc}{c}$, and the text1 of "Draw" of

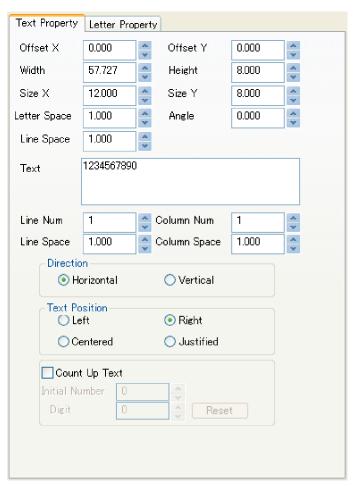
"menubar" is displayed to the text1 inside the campus.

When the property window is seen with the txt1 object selected, "Text Property" is displayed

Please set more detail at letter property.

Details of text property and letter property are as follows.

■Text Property



Offset X: Relative position X axis from starting point of edit area

Offset Y: Relative position Y axis from starting point of edit area

Width: Width of text string. Height: Height of text string. Size X: Width of each letter. Size Y: Height of each letter. Letter Space: Span of each letter.

Angle: Angle of text string.
Line Space: Span of lines.
Text: text string of the object.

Line Num: The number of row.

Column Num: The number of column. Line Space: The interval of row. Column Space: The interval of column.

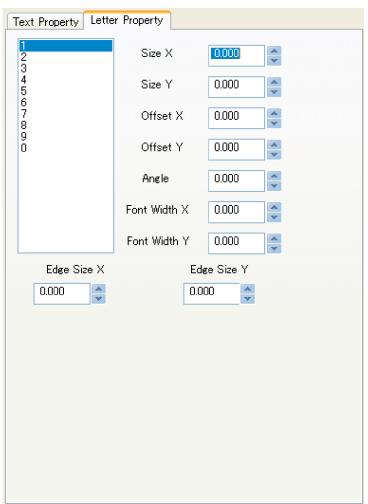
Direction: Horizontal or Vertical Text Position: To arrange text position. Count Up Text: Use yhe text as count number. Initial Number: Initial value of the count. Digit: Digit of count

Reset: initialize count

The count up text is a character string that automatically does one count improvement without changing the value by "Character input" whenever sculpturing. It starts from the value set by "Initial Number". It is convenient for the sculpture of the serial number etc. Moreover, if the object is arranged outside Scaningeria, it becomes a confirmation of the production number.

Note) The count improvement character string is reset to exit Laser Markin System. So, please save data when Laser Marking System exit.

■Letter property



Size X: Adgust size X of selected letter.
Size Y: Adgust size Y of selected letter.
Offset X: Relative position X axis from
the defauly position.
Offset Y: Relative position Y axis from
the defauly position.
Angle: Angle of Selected letter.
Font Width X: thickness of X of selected
letter.
Font Width Y: thickness of Y of selected
letter.
Edge Size X: thickness of X of whole text.

Edge Size Y: thickness of Y of whole text.

■ Font

The font of the txt object can be changed by clicking the font that exists in the toolbar row with the Text object selected.
The font installed in Windows can be used.

Note: There is a character that cannot be used according to the kind of the font.



3-8 Ciecle Tect -- txt 2 object

"txt1" is added to the object window by selecting the text of the , and the text2 of "Draw" of selection or the drawing toolbar

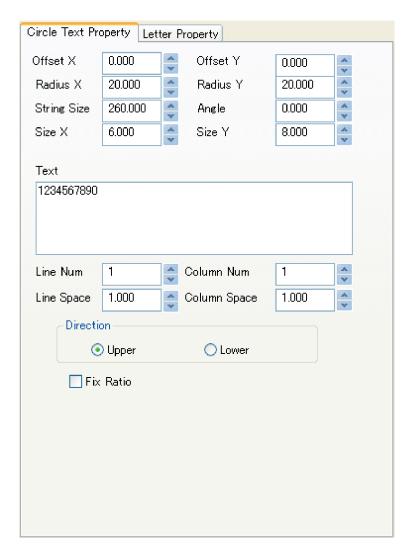
"menubar" is displayed to the text2 inside the campus.

When the property window is seen with the txt2 object selected, "Circle Text Property" is displayed

Please set more detail at letter property.

Details of text property and letter property are as follows.

■ Circle Text Property



Offset X: Relative position X axis from starting point of edit area

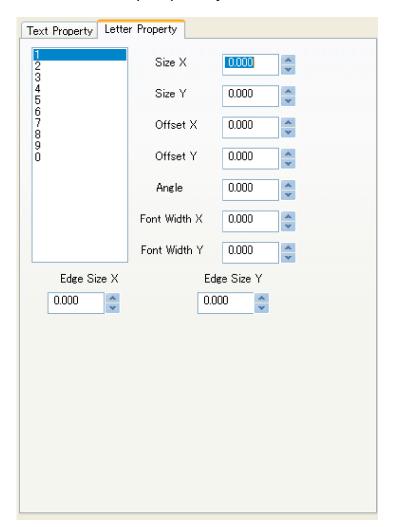
Offset Y: Relative position Y axis from

starting point of edit area
Radius X: Width of letters
Radius Y: Height of Letters String Size: Length of String Angle: Angle of circle text. Size X: Width of letters Size Y: Height of Letters

Text: text string of the object. Line Num: The number of row. Column Num: The number of column.

Line Space: The interval of row. Column Space: The interval of column. Direction: Horizontal or Vertical The ratio in width and height is fixed

■Letter property

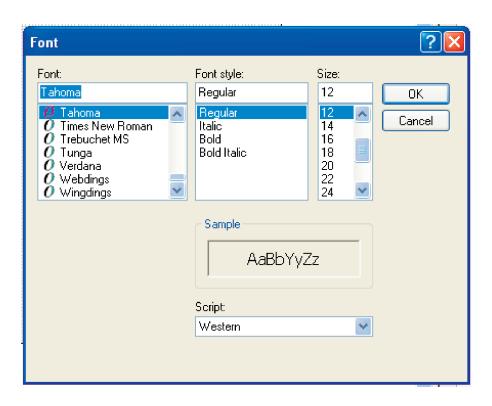


Size X: Adgust size X of selected letter. Size Y: Adgust size Y of selected letter. Offset X: Relative position X axis from the defauly position.
Offset Y: Relative position Y axis from the defauly position. Angle: Angle of Selected letter. Font Width X: thickness of X of selected letter. Font Width Y: thickness of Y of selected letter. Edge Size X: thickness of X of whole text.

Edge Size Y: thickness of Y of whole text.

The font of the txt object can be changed by clicking the font that exists in the toolbar row with the Text object selected. The font installed in Windows can be used.

*Note: There is a character that cannot be used according to the kind of the font.



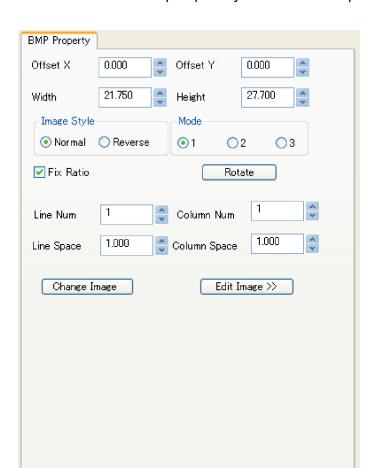
"bmp" is added to the object window by selecting the bmp of the selection or the drawing toolbar $\mathbf{E}_{\mathbf{mP}}$, and the BMP of "Draw" of

"menubar" is displayed to the bmp inside the campus.

note) The file that can read is only monochrome bmp.

When the property window is seen with the bmp object selected, "BMP Property" is displayed.

Details of BMP property and letter property are as follows.



Offset X: Relative position X axis from starting point of edit area

Offset Y: Relative position Y axis from starting point of edit area
Width: Width of image
Height: Height of image
Image Style: Normal or Reverse.
Mode: Method of image display
The ratio in width and height is fixed
Rotate: To rotate image.
Line Num: The number of row.
Column Num: The number of column.
Line Space: The interval of row.
Column Space: The interval of column.
Change Image: The bmp file besides the bmp
file that has already been read is

replaced. Edit Image: see "4 Paint

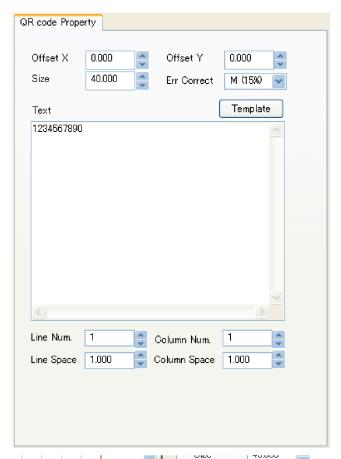
It might become difficult to see the image when expansion/reducing according to the image of the bmp file to treat two black and white step image. It might become easy to see the display by changing "Mode" in that case, and change the setting, please. It doesn't change about the sculpture when finishing and concerning.

"menubar" is displayed to the QR code inside the campus.

When the property window is seen with the barcode object selected, "QR Code Property" is displayed.

Details of QR code property and letter property are as follows.

The QR code is a registered trademark of the DENSO CORPORATION.



Offset X: Relative position X axis from starting point of edit area

Offset Y: Relative position Y axis from starting point of edit area

Size: Size of QR code

Err Collect: Error collect setting of QR
Code (L, M, Q, H)

Template: The template of each cellular phone career company.

Line Num: The number of row.
Column Num: The number of column.
Line Space: The interval of row.
Column Space: The interval of column.



When "Template" is clicked, the left dialog is displayed. When the template used from the list of the combo box is selected, each input item is

The kind of the template is as follows.

- 1. DoCoMo address book
- 2. DoCoMo mail

displayed.

- 3. DoCoMo bookmark
- 4. au address book
- 5. Vodafone dial
- 6. Vodafone mail

The object in Scanning area is converted into the BMP image by selecting the image of the scanning area of "Convert to Image (Scanning area)" of "menubar" or the drawing toolbar. "bmp" is added to the object window, and the BMP image of the scanning area is displayed inside the campus.

It is possible to edit it by making the range of the selection an image by the simple paint function (Refer to "4 Paint").

It becomes bmp object, and refer to "3-8 BMP", please after it makes it to the image.

The object in Scaningeria is converted into the BMP image by selecting the image of Scaningeria of "Make of Scaningeria image" of "Menubar" or the drawing toolbar. "bmp" is added to the object window, and the BMP image of

3-11 Convert to Image (Rectangle)

The range of the selection is converted into the BMP image by selecting the image of the range of the S selection of "Convert to Image (Rectangle)" of "menubar" or the drawing toolbar.

The specification of the range of the selection drags with the mouse after "Convert to Image (Rectangle)" is clicked and is specified.

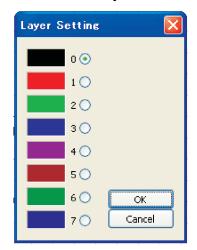
The BMP image of the object (object enclosed with the dotted line) that is added "bmp" to the object window, and is selected inside the campus is displayed.

It is possible to edit it by making the range of the selection an image by the simple paint function (Refer to "4 Paint").

It becomes bmp object, and refer to "3-8 BMP", please after it makes it to the image.

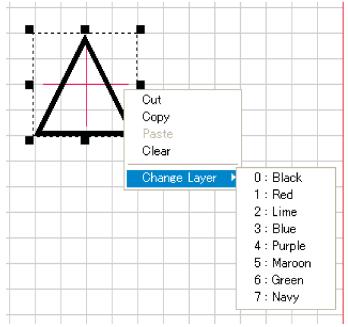
3-11 Layer of Object

The layer is a mechanism sculpturing limitedly specifying the object or the object group that specified it when sculpturing. There are eight kinds, and the layer can be identified according to the color. "Black" layer is used usually.



The operation selects the object that changes the layer, and clicks the layer of the toolbar.

The dialog box like the left is displayed. Please select the layer color that wants to change, and click OK.



Or, then, because the pop-up menu is displayed when right-clicking in the mouse with the object selected, it is possible to change.

Show/hide of each color layer is done by the layer toolbar. The button of the displayed layer is colored with the layer color. The hidelayer is displayed in the gray.



0

All layers are show

Show:black, lime, purple, green Hide:red, blue, maroon, navy

3-12 Copy

A object is selected, and it does with the copy of "Edit" of "menubar" or the copy of the toolbar. $\hfill \blacksquare$

3-13 Cut

A object is selected, and it does with the cut of "Edit" of "menubar" or the cut of the toolbar. \upmathbb{X}

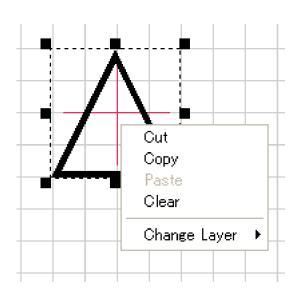
3-14 Paste

To paste the object that is copied or cutted it out, it does with the paste of "Edit" of "menubar" or the of the toolbar.

3-15 Cleat

A object is selected, and it does with the clear of "Edit" of "menubar" or the clear of the toolbar.

Above-mentioned and "Copy", "Cut", "Paste", and "Clear" can be edited from the pop-up menu. Because the menu is displayed when the object that wants to be edited is selected (Only the specification of the position : putting), and it right-clicks in the mouse, it selects it.



4 Paint

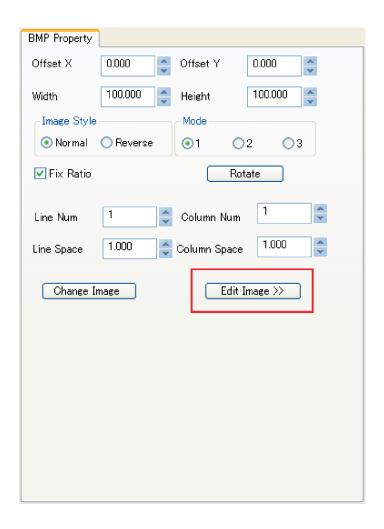
4-1 overview

It is a drawing edit function of each dot by the mouse operation to the bmp object.

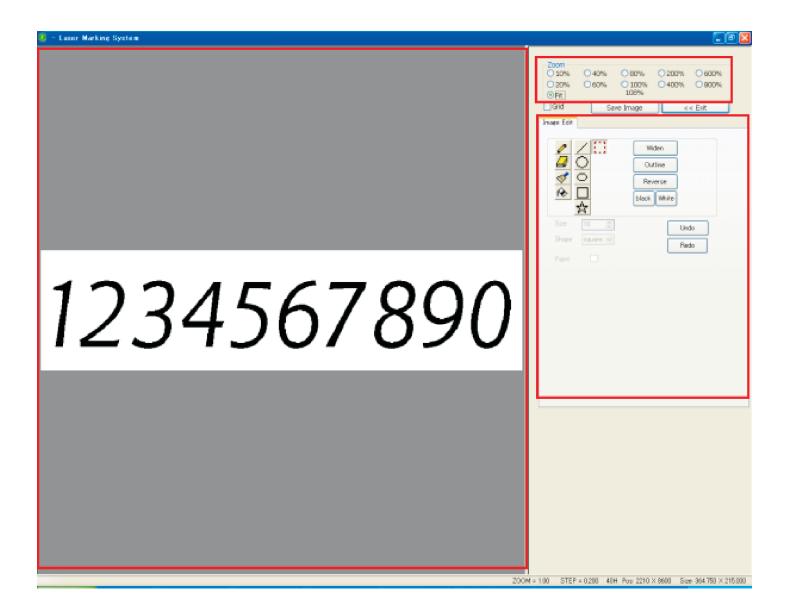
If Edit Image" that exists in the property of the BMP object is clicked,

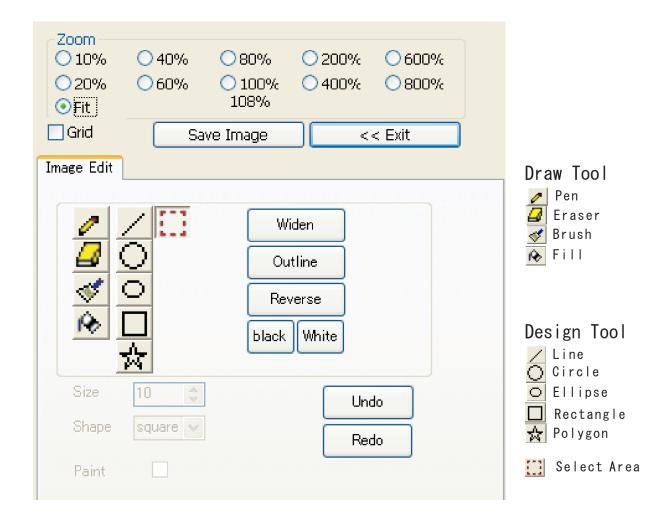
it becomes a simple paint mode.

It comes to be able to do the simple paint edit by making the data made with Laser Marking System an image by "Convert to Image (Scanning Area)" and "Convert to Image (Rectangle)".



Being possible to do by the simple paint function paints out, reverses the range of the selection in a drawing, deletion, drawn, and in line of the unit of the dot (one dot =0.025mm corner) a polygonal, round drawing and range, and is a stroke width within the range of the selection expansion.





Zoom: Zoom ratio of displayed image.

Fit: The image is displayed to install on an image edit full screen.

Grid: Show grid lines in case of more than 400% of zoom.

Save Image: To save the image

Exit: exit paint mode.

Widen: The stroke width within the range of the selection is made fat in each dot. (Total range when there is no range of selection)

Outline: The outline of the image within the range of the selection is extracted. (Total

range when there is no range of selection) reverse: The image within the range of the selection monochrome reverses. (Total range when there is no range of selection)

black: The image within the range of the selection is painted out blacking it. (Total range when there is no range of selection)

white: The image within the range of the selection is painted out in white. (Total range when there is no range of selection)

Ūndo∶undo edit.

Redo: Is done over again the Undo.

Size: Size of pen, eraser, brush, line, circle, ellipse, rectangle, polygon. The unit is dot Shape: Shape of eraser, brush. Circle or square.

Paint: Painting out setting of inside for circle, ellipse, rectangle, and polygon

4-2 Pen

A black line is drawn according to mouse's tracks when dragging it with mouse's left button pressed in the image edit area. The white line is drawn according to mouse's tracks when dragging it with a right button pressed. The thickness of the line is a thickness (dot) specified by "Size".

4-3 Eraser

The black is deleted according to mouse's tracks when dragging it with mouse's left button pressed in the image edit area. The thickness of the line painted out is a thickness (dot) in the black according to mouse's tracks specified by "Size" when dragging it with a right button pressed. Shape is shape (square, circle) specified by "Shape".

4-4 Brush

It is painted out by the black according to mouse's tracks when dragging it with mouse's left button pressed in the image edit area. The thickness of the line painted out is a thickness (dot) in white according to mouse's tracks specified by "Size" when dragging it with a right button pressed. Shape is shape (square, circle) specified by "Shape".

4-5 Fill

The same color as the point range specified with the mouse cursor is painted out. When it positions with the mouse cursor, and a left button is clicked, the range of this color is painted out with the black. When a right button is clicked, it is painted out with white.

4-6 Line

Mouse's left button is pressed on the edit screen, the mouse is moved straight, and it draws to the position in which a left button was released in a black straight line when dragging it. Mouse's right button is pressed, the mouse is moved straight, and it draws to the position in which a right button was released in a white straight line when dragging it. The thickness of the line is a thickness (dot) specified by "Size".

4-7 Circle

The mouse is moved straight pressing mouse's left button in the image edit area and when it drags, and a left button is released, it is drawn to black true yen that centers on the pressed position. The mouse is moved straight pressing mouse's right button and when it drags, and a right button is released, it is drawn to white true yen that centers on the pressed position. The thickness of the line is a thickness (dot) specified by "Size". When the check is put in "Paint", it is painted out in circle.

4-8 Ellipse

The mouse is moved straight pressing mouse's left button in the image edit area and when it drags, and a left button is released, it is drawn to the black ellipse installed within the range. The mouse is moved straight pressing mouse's right button and when it drags, and a right button is released, it is drawn to the white ellipse installed within the range. The thickness of the line is a thickness (dot) specified by "Size". When the check is put in "Paint", it is painted out in ellipse.

4-9 Rectangle

The mouse is moved straight pressing mouse's left button in the image edit area and when it drags, and a left button is released, it is drawn to the black rectangle installed within the range. The mouse is moved straight pressing mouse's right button and when it drags, and a right button is released, it is drawn to the white rectangle installed within the range. The thickness of the line is a thickness (dot) specified by "Size". When the check is put in "Paint", it is painted out in the rectangle.

4-10 Polygon

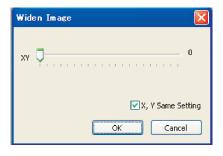
In the image edit area, it is drawn to a black polygon that makes the clicked point the top two or more times in mouse's left button when clicking. As for the last point, the top specification of the polygon ends by clicking a right button. It is drawn to a white polygon that makes the clicked point the top two or more times in mouse's right button when clicking. As for the last point, the top specification of the polygon ends by clicking a left button. The thickness of the line is a thickness (dot) specified by "Size". When the check is put in "Paint", it is painted out in the polygon.

4-11 Select Area

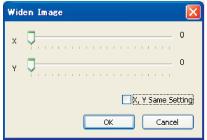
Mouse's left button is pressed on the edit screen, the mouse is moved straight, and the range is selected to the position in which a left button was released when dragging it. When "Windden", "Outline", "Reverse", "Black", and "White" are done, it uses it.

4-12 Widden

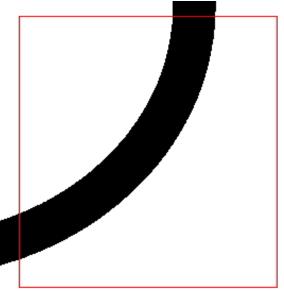
When "Widden" button is clicked with "Select Area" has been selected, the dialog like the under is displayed. The stroke width is extensible to individual XY both or XY by the dialog.



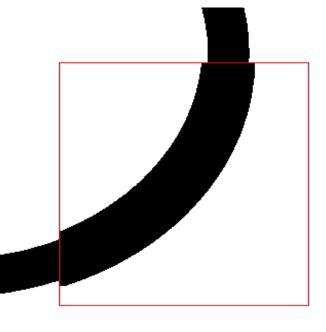
Initial state(X, Y same setting)



Make "X Y same setting" to Off



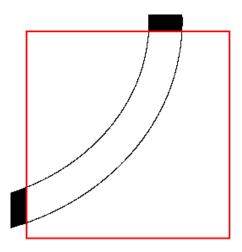
Before



After widden(X, Y)

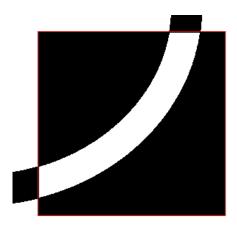
4-13 Outline

If "Outline" button is clicked with "select area" has been selected, painting out within the range of the selection becomes outline data.



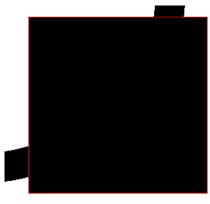
4-14 Reverse

The black within the range of the selection changes places into white when "Reverse" button is clicked with "select area" has been selected.

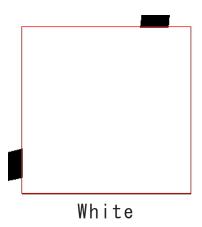


4-15 black / white

When "Black" button is clicked with "select area" has been selected, it is painted out with the black within the area of selection. When "White" button is clicked, it is painted out with white within the area of selection.



Black



5 Inkan (Seal)

5-1 Overview

When the inkan template is used, the design of a registered seal and a corporate sign is simplified.

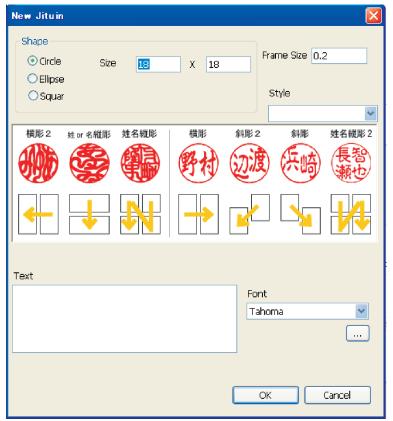
"File" - "New Inkan" of the menubar is clicked to make data newly with a stamp making template or toolbar is clicked .

Because the following dialogs are displayed when the above-mentioned is operated, a jituin or a houjinin is selected, and OK is clicked.



5-2 Jituin

When "Jituin" is selected by "Select Inkan" dialog, the following dialogs are displayed.



Shape : Circle, Ellipse or Squar Size: Width and height (mm)

R:radius of round(shape is Squar

only)

Frame Size thickness of frame.

Style:Layout Test:String

Font: Select font name.

When shape is only "Squar", the specification of R is needed.



5-2-1 Jituin Mode Toolbar

When OK is clicked by "New Jituin", "Jituin Mode" toolbar is displayed on the campus.



外枠(表示中/非表示):Alternate display of frame 内文字(表示中/非表示):Alternate display of text マスク(表示中/非表示):Alternate display of mask

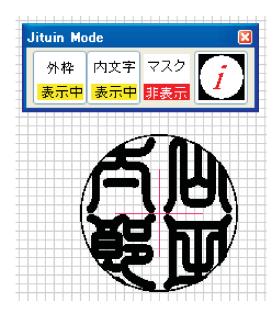
画像化:Change text to BMP object



In "New Jituin" after OK
Initial state



Mask is show

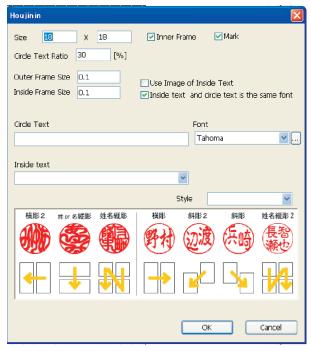


Convert the text to image.

Clear outside of frame and convert to imgae.

5-3 Houjinin

When "Houjinin" is selected by "New Inkan" dialog, the following dialog is displayed.



Circle Text:String of circle text
Font:Font of circle text.
Inside Text:String of inside text(space
character means changing line)
Font:Font of inside text.
Style:layout of imside text.

Inner Frame: To set presence of inner frame. There is not inner frame incase of no check like Jituin.

Mark: Mark means Tenmaru. It can not set in case of no mark.

Use Image of Inside Text:The BMP file is used as a character on the inside instead of inputting the character of the frame on the inside. The item of "Inside Text", "Font", and "Style" is changed to the selection of "Image file of inside frame" when checking it.

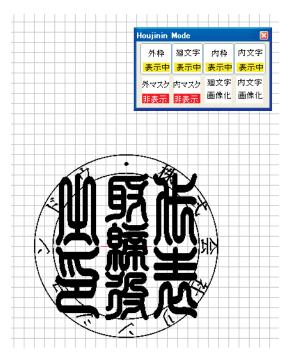
Inside text and circle text is the same font: Use same font.

5-3-1 Houjinin Mode Toolbar

When OK is clicked by "New Houjinin", "Houjinin Mode" toolbar is displayed on the campus.



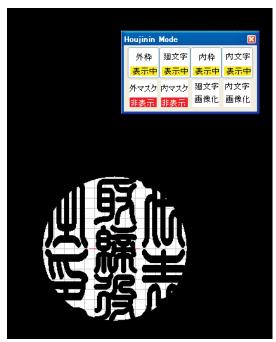
外枠(表示中/非表示):Alternate display of outer frame. 廻文字(表示中/非表示):Alternate display of circle text. 内枠(表示中/非表示):Alternate display of inside frame. 内文字(表示中/非表示):Alternate display of inside text. 外マスク(表示中/非表示):Alternate display of outside mask. 内マスク(表示中/非表示):Alternate display of inside mask. 四文字画像化:Change circle text to BMP object 内文字画像化:Change inside text to BMP object



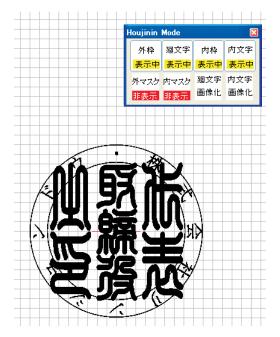
In "New Hojinin" after OK
Initial state



Outside mask



Inside Mask



Convert the circle text to image.

Clear outside of frames and convert to imgae.



Convert the innner text to image.

Clear outside of frame and convert to imgae.

6 Template

6-1 Overview

It comes to be able to make the design of the fixed form shape easily by using the template function, and the design process can be simplified.

"File" - "Open Template" of the menubar is clicked to make data newly with a template or toolbar is clicked.

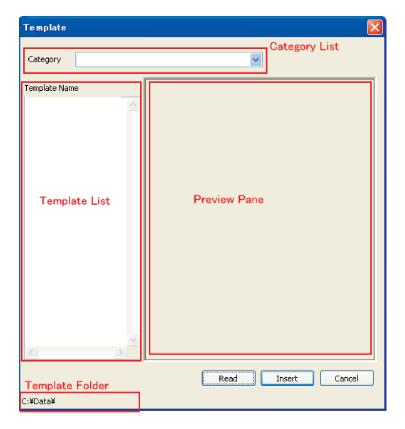
"File" - "Save Template" of the menubar is clicked to register the data under making as a template or toolbar is clicked.

6-2 Template Folder Setting

After Laser Marking System is installed in PC, it is necessary to set the template folder. Because the folder selection dialog is displayed when "File" - "template folder Setting" of the menubar is clicked, the folder that stores the template is set.



The template selection dialog is displayed when the template is called, and "Read" or "Insertion" can be done.



Category List:
The list of the template category.

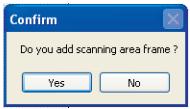
Template List:
The list of template

Preview Pane:
The image of the template selected by the template list is displayed.

Template Folder:
The name of the template folder.

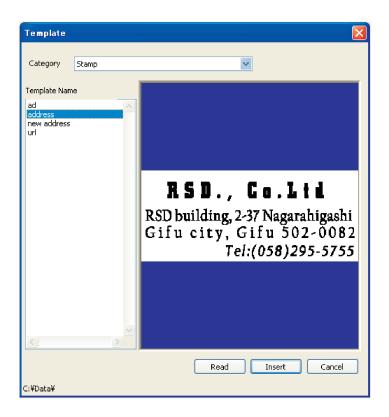
When "Read" is clicked after the template is selected, the design of the template is overwrited by Laser Marking System.

When "Insert" is clicked after the template is selected, the dialog is displayed.

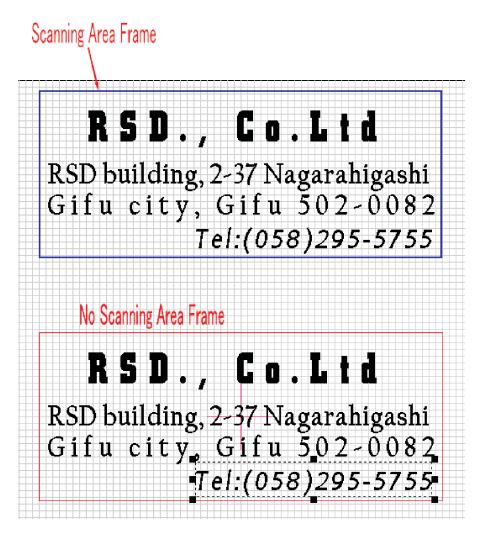


When "yes" is clicked in "Do you add scanning area frame?" dialog, the template is added inside the campus of Laser Marking System with a blue layer quadrangle object of the size of Scanning area. When "No" is clicked, only the object of the template is added inside the campus of Laser Marking System.

The template is selected.

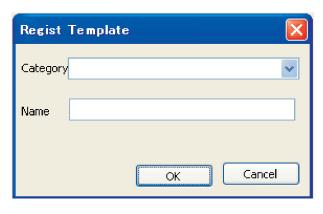


It becomes the following after insert.



6-4 Save Template

The template registration dialog is displayed when the template is registered, and the design on a present campus is registered as a template.



Category: The category of the template is specified. The category that has already been registered is possible to select it by clicking .

The distinguished name is input at a new category.

Name: The template name is input. When the same template name has already existed in a category concerned, it is overwrited.

7 Engrave

7-1 Overview

It is done that "File" - "Start Engrave (Single mode)" of the menubar or "File" - "Start Engrave (Thread mode)" is clicked to sculpture the made data with SUNMAX or clicks toolbar.

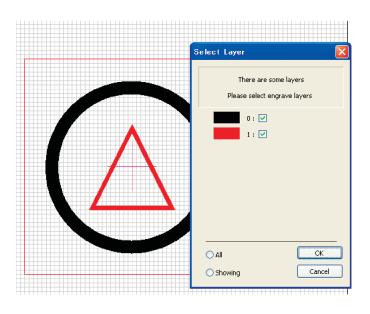
Engrave starts from the toolbar usually. Generally, doing by the thread mode is more efficient.

When "OK" is clicked, SUNMAX begins sculpturing because the confirmation dialog is displayed when starting engrave. When "OK" is clicked, SUNMAX begins engrave.



7-2 Select Layer

The layer that outputs data is set before it begins to sculpture when two or more layers (color) are included in the data that tries to be sculptured. The data of the layer that puts the check is output to SUNMAX. Work improves if the data like the memo etc. not sculptured are specified for another layer when the Scanning engrave exists together to the outline engrave.



When "Black" and "Red" exist in data

The check enters all the layer colors when "All layers" is clicked. The check enters the layer color displayed to click "Layer under the display" on the canvas.