RZNC-laser Series

Control Handle

Users Guide

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RZNC-Laser Host Program

I. Host program introduction:

This software is designed by Beijing Richnc Technology Co,. Ltd. and it is for laser process. It combines with the software CorleDraw and makes easy and to design the target graphic. And this host program works with our RZNC laser control system to control laser cutting, laser sweeping, laser engraving motions.

This host program supports Coreldraw12, Coreldraw13 versions.

II. Setup：

1：Setup CorelDraw to C:\Program Files\Corel；

2: Open the host program CD and click on SETUP.EXE file, click "Next Step" for following windows and set the host program to C:\Program Files\Corel；

3: Copy ZHB.GMS file in setup ， and paste it to "Corel\Corel Graphics 12\Draw\GMS";

4：Open CorelDraw, select Tools menu and click Select, and then select Coustom (Figue2); then select Macro command and select the 3rd macro command "GlobaMacros.Module1.zhb"；in the help window add "laser Process"(as figure1), it will create a new button, and copy "GlobaMacros.Module1.zhb" to the left side of the Tools in CorelDraw (Figure2)；Then you set a laser process icon [icon] in CorelDraw.

5：After setting the laser process icon, click in [icon] in CorelDraw and | Laser Process | will appears.

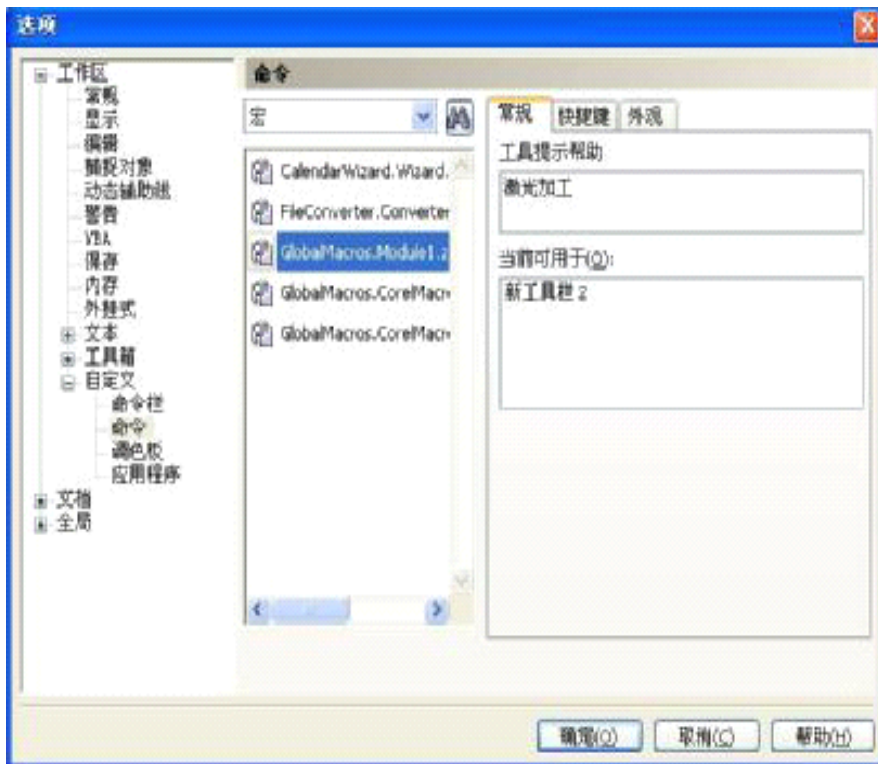Figure1   Figure2

III：Software Process：

In CorelDraw, the sweeping method of vendor graph or character sweeping are basic divided into edge sweeping and area sweeping. In this software, we identify the edge sweeping as cutting, while area sweeping as sweeping(Scanning); Processed BMP image belongs to sweeping.

(I). Image Sweeping

1：Sweeping

Select the target graph or characters, click right button of the mouse, select the

Property Processor as Figure 3, click [ ] to choose sweeping color; then click [ ] and set width as 0 in Edge；it will just sweep the inner part of the graph or the words. Process effect shows as Figure4.

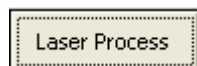Figure3   Figure4

2：Cutting：

Select the target graph or characters, click right button of the mouse, select the

Property Processor, click [ ] and select [✗] (no sweeping)；Click [ ] and set width as filament in Edge, it will just to sweep the graph and words' outside edge. Process effect shows as Figure5.

Figure5

3：Image Sweeping：

For gray image file processed by CorelDraw or PhotoShop，it can be imported by CorelDraw and use this host program to output and sweep. You just need to click

[Laser Process] button to set its process parameter.

When you process the image file in CorelDraw or PhotoShop , you need to adjust the graph's brightness and contrast, then change it into a gray graph, then change it into a bitmap file, finally change this bitmap file into gray graph, it is the file which can be processed.

4：Line Sweeping：

Because the line is not closed, our suggestion is you can choose rectangle with small width to replace.

5：Male Sweeping

Select the drawn graph and its outside square, unit them as one graph by

choosing

Combination in Arrange, click right button of the mouse, in Property Processor window; click [icon] and select color, click [icon] and set set width as 0 in Edge. Process effect shows as Figure6.
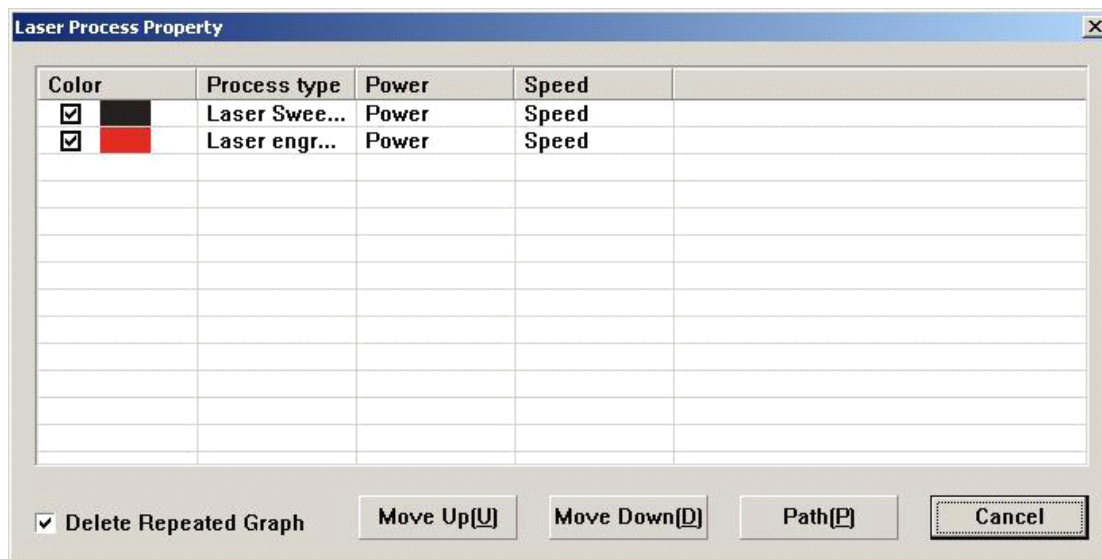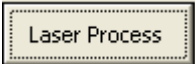

Figure6

(II)Trace output Setup

After having processed graph files in CorelDraw , click [icon] and [Laser Process] button shows，click this button and enter Process Property （figure 6），select your process mode，then click left button of the mouse to set process parameter, click Trace and enter the file download window(figure7), click [icon] to save the trace as a file, click

[icon] to send the trace to the controller. The unselected trace will not be outputted, and it is also possible to output multi traces to one file.

IV．Laser Process Parameter:
(I)：Laser Sweeping Parameter

Laser Power: the percent is to adjust the laser output power, users need to adjust it for different working materials and speed.

Acceleration: the default value is13500 mm/s²，the max value is 30000 mm/s². Unit is mm/s²

Acceleration space: machine motion increase and decrease distance, unit mm, default value is 15mm.

Interspace: Sweeping interspaces between two column, unit is mm

Speed: machine sweeping speed, unit is mm/min

Mode: there are several sweeping modes: single sweeping and bilateral sweeping. Single sweeping can not be affected by offset, while bilateral sweeping, you

must to set the right offset value to get a good process effect.

Offset：in order to get a good process effect for counteracting error which caused machine moving, it needs to set the offset sometimes, especially for bilateral sweeping. Laser cutting or single sweeping get nothing to do with this value. Unit is mm.

(II)：Laser cutting parameter

Laser power: laser generator output power when it cuts.

Linear Acceleration: speed increase and decrease ability of signal motor, Unit is mm/s^2

Curve Acceleration: speed increase and decrease ability of multi motors motion, Unit is mm/s^2

Speed: laser machine motion speed, unit is mm/min.

Note：

If sweeping speed is V(unit: mm/s), its acceleration is a, its space is S, then $V^2 = 2 \times a \times S$ 。

V．CorelDraw Menu commands

Commands	Menu	Shortcut button
Property Processor	Right button of mouse to select target graph	ALT + ENTER
Combination	Arrange→Combination	CTRL + L
Location	Arrange→Change→Location	ALT + F7
Size	Arrange→Change→Size	ALT + F10