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CALCA®

CALCA® BRAND Auto Fed Flatbed Digital Cutter

USER'S MANUAL DTFC-6090F

Please read this manual carefully before operation

CONTENT

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Auto Fed Flatbed Digital Cutting Plotters

Work Smarter, Not Harder!

Thank you very much for choosing our CALCA brand series cutter, Please read the manual carefully, including the installation, operation and maintenance to ensure the best output and the life time of the machine.

Smarter and people-oriented innovation in the design concept and details will give you simple and relax Cutting experience.

Flatbed Cutter gives your materials a finished, professional look of quality that can really drive business. By giving your materials a higher quality cutting, roll and sheet/piece series of cutting methods, Reduce media waste / processing time, Flatbed Cutter will improve your business image and help bring in more sales leads

Applications:

DTFC-6090F Series is suitable for post-processing of the printed media created. It is a faster, more accurate, more economical digital cutter designed for Heat Transfer Apparel, DTF, industries as Road& Traffic Safety Signs, Automotive Aftermarket, Print Cut, Die Cutting, and other signage graphics.

DTFC-6090F Series is typically applied to cut both printed and unprinted medias with thickness <1.5mm, such as Reflective Sheeting, Paint Protection Film/PPF, Window Tint, PPE, PET, PVC, PU, Paper and other vinyl stickers with incomparable high efficiency.

Added offline (USB) operation enables users of all skill levels to easily process materials. More suitable for print-on-demand in small production runs for producing various products such as labels, heat transfer sheets for custom apparel and the POP as table advertising.

Auto fed flatbed digital cutter is capable of cutting materials in roll and sheet/piece with outstanding high quality, series of cutting methods including perforation cutting, half cutting, creasing and marking benefit clients greatly with more output and less cost of labor.
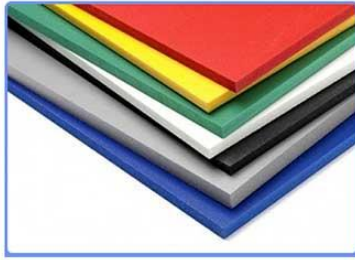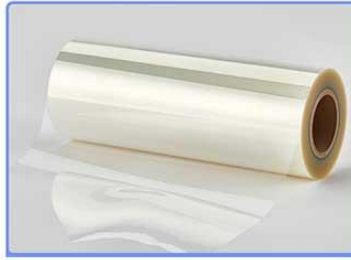
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Cardboard

Vinyl Sticker

Label

PVC

PET Film

PP Film

**Reflective Film**

Adhesive Sticker

Magnetic Sticker

Features:

Grating Ruler

Inevitably material surface is not level from point to point, the grating ruler is applied to measure the distance between blade tip and material surface, and the cutting depth is adjusted in every 0.01mm by the controller accordingly. Then the blade travels up and down as material surface goes to keep the same cutting depth at any position of the tool paths across the entire table. In short, Grating Ruler is of key importance for consistent cutting depth.

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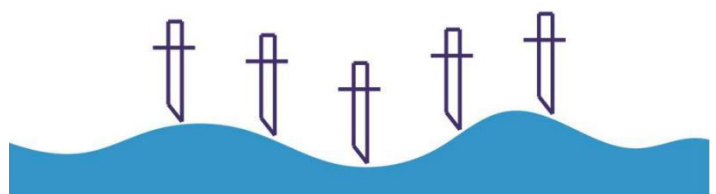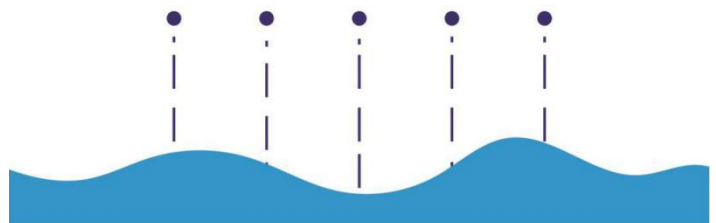
Advanced Tool Carriage

The tool carriage adopts the structure of sports car, using of silent voice coil motor makes it outstrip its rivals. The tool carriage is featured as fast, agile and no overheats for long-time non-stop operation.
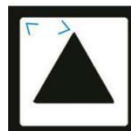

Voice Coil Motor

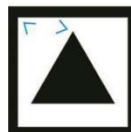Agile

Fast

Big Cutting Force

No Over-heat

Making Blade-tip Compensation with Chip

Makes blade-tip compensation with Chip instead of software, the digital cutter works with constant high precision no matter what kind of CAD / CAM software is applied.
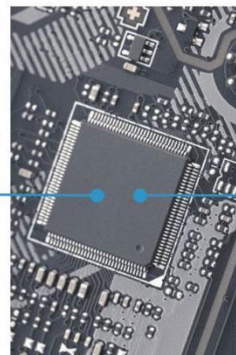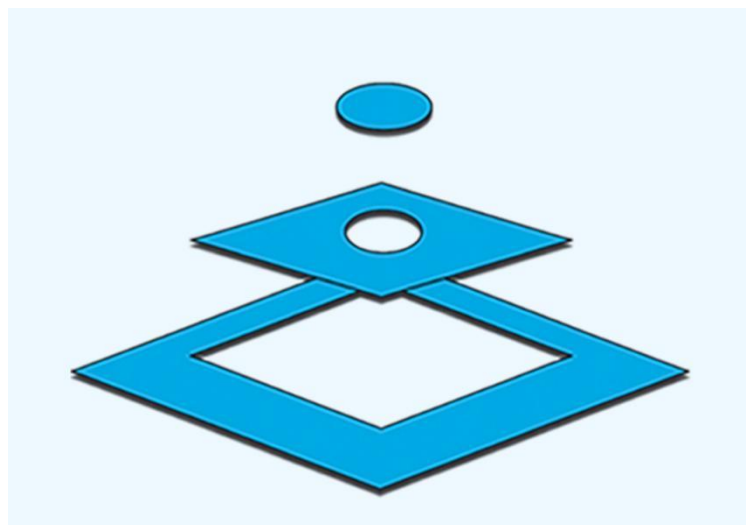
Smaller Offset

Exact Offset

Larger Offset

Advanced Algorithm

Half Cut / Perforation Cut

Half cut / Perforation cut are available, every time you may carry out either one or both.

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Compatible with AutoCAD, AI, Coreldraw and Flexisign

Leading the same industry we make software by ourself, we are able to adapt our system to the latest version of popular CAD / CAM software, such as AutoCAD, Adobe Illustrator, Coreldraw and Flexisign.
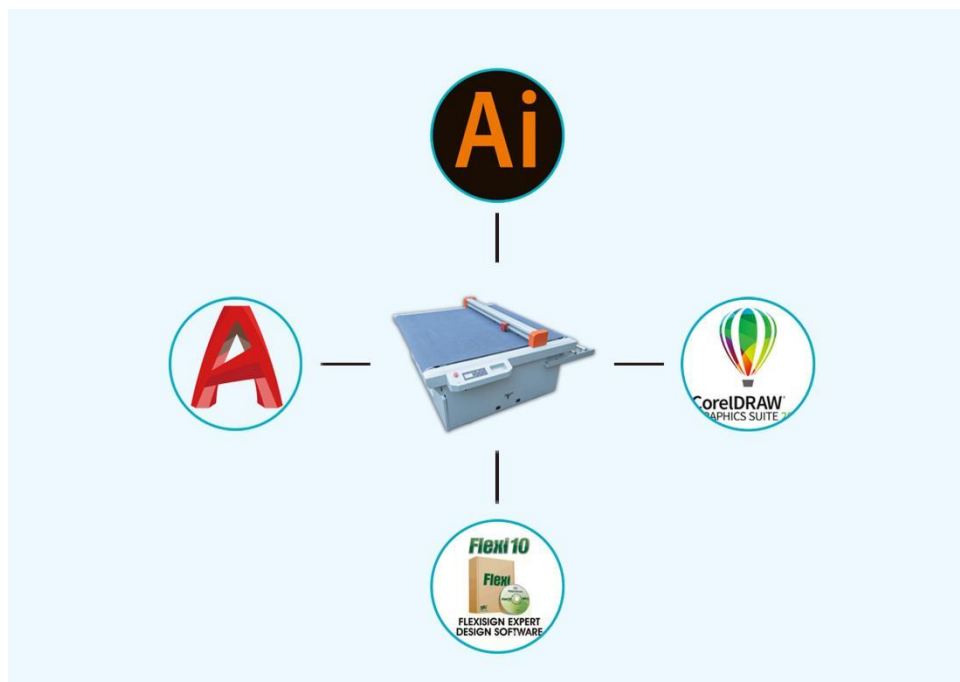
I. Technical Parameter

Specification	
Item Code	LPC-DTFC-6090F
Power Input	AC 110/220V, 50/60Hz
Power Consumption	2.2KW
Max Cutting Size	600 x 900mm
Material Thick	0.05-1.5mm
Max Cutting Speed	800mm/s
Cutting pressure	600g
Mechanical resolution	0.0125mm
Cutting pressure setting	Adjustable per 1 gram
Minimum character size	English Arabic characters are about 1-2MM

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Interfaces	USB2.0 U Disk
Method to Fix Media	Vacuum Table
Cutting Force Setup	Adjustable in Every 1G
Cutter Blade Diameters	Φ2.0mm
Cutter Blade Angles	30˚, 45˚, 60˚
Dotted Lines Cutting	Yes
Drive	AC Servo
IOS	Win10 / 8 / 7 / XP
Memory Buffer	2MB
CAD/CAM Software	Windows Driver, SignWorkPro, CADtoPlotpro
File Format	DXF, PLT, PDF, HPGL
Port in Standard	USB, RS-232
Registration Marks Recognition	CCD Camera
Cutter Holder	1
Roll Media Bracket	Yes

II. Installation

2.1 installation precautions

1. Before unpacking, carefully check if there is damage for the packing and machine during transportation.

2. After unpacking, check if the service parts are correct as the packing list.

3. The installing place should be provided enough space for operating and free of dust, no vapor, no corrosive gas, no combustible or explosive substance around.

4. After installation, adjust each caster to reach level ground. The casters only be used on even ground for short distance movement.

Notice: Please move carefully since it is heavy equipment.
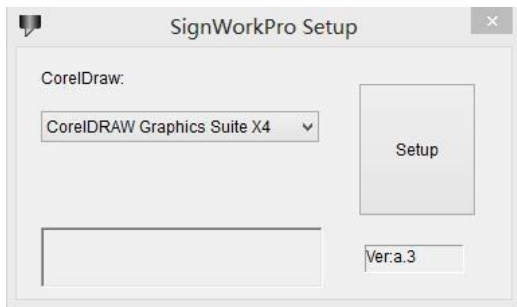
2.2 How to Install Software

1.1 Install SignWorkPro

If you use the software CORELDRAW, you can directly output the cutting job to the cutter with steps below:
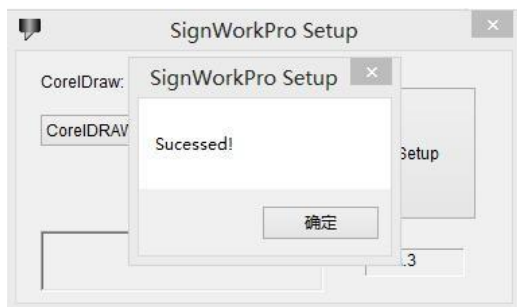
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1. Get the installation package from your sales representative or us.

2. Double click to run, and then choose the corresponding CORELDRAW version, then click to install.

3. The installation is completed successfully.

4. Right click the short-cut icon of CORELDRAW to choose Properties Compatibility and click Run This Program as an Administrator in the following picture.

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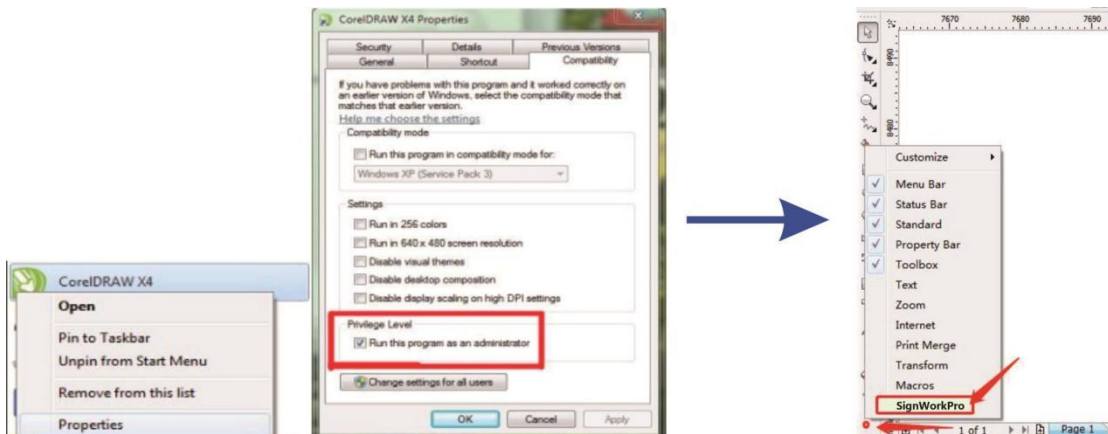
5. Run CORELDRAW, then right click the item in red, then choose SignWorkPro. When the toolbar in the following picture pops up, the installation is fully completed.

1.2 Introduction to icons of software

＊Generate the cutting job with the selected icon and send to cutter.

＊Add Registration Mark to the selected contour.

＊add auxiliary bar code to the selected Mark.

＊Automatically generate the contour for the selected picture.

＊software settings.

2.3 Quick Start to Machine Operation

Open Coreldraw and click on the icon in red circle as below

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Then choose the correct model of the vinyl cutter, please note that this is important for well-off cutting / plotting operation. If the model is uncertain, please refer to the machine picture displayed.

The model we are talking about here is auto feeding cnc flatbed cutter series
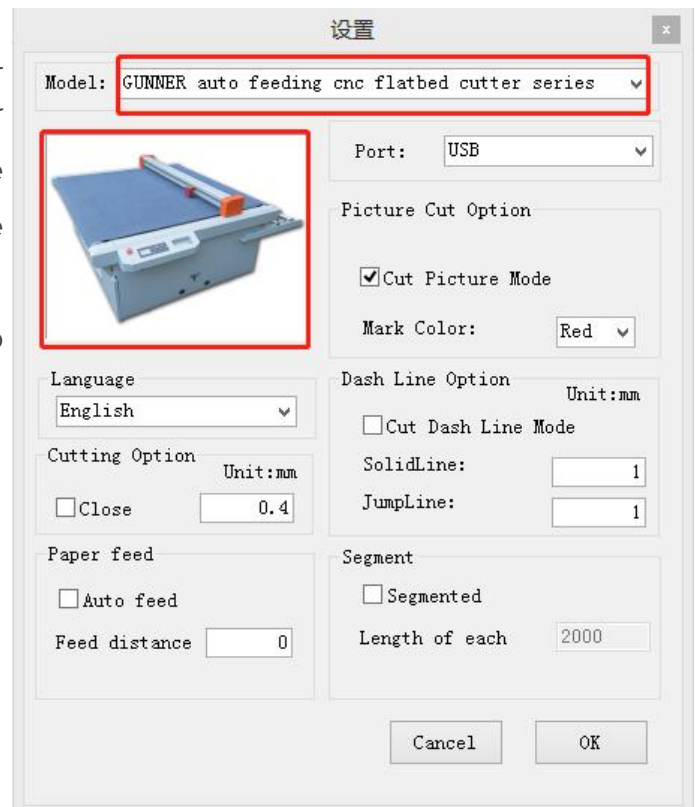
There are Non-contour Cutting and Cut Picture Mode (Contour Cutting). The Segmented Area Cutting Operation and Duplicate Operation are applied to accomplish long length cutting or repetitive work.

There are two ways to send cutting jobs to vinyl cutter, 1st is to connect cutter and PC via a USB Cord and send files by PC; 2nd way is by USB Memory, in this way, you may download file by USB memory, then plugin it to cutter and then carry out cutting operation offline. Please follow the picture below to get the cutting job.

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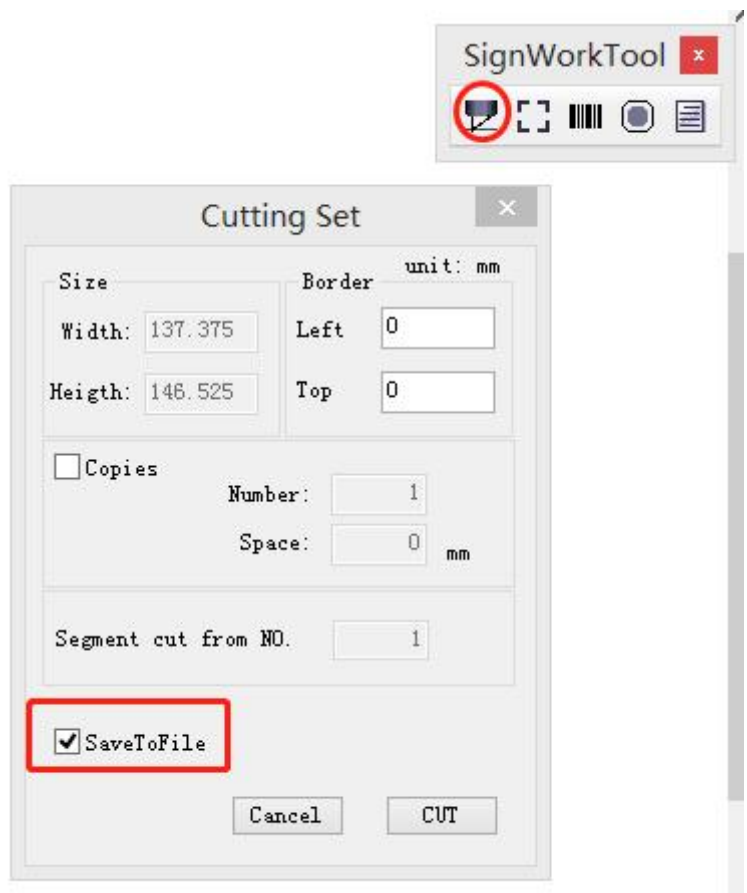
Preparations

To setup cutting force and speed, please refer to Chapter IV of CNC FLATBED CUTTER MANUAL. Before practicing, please set speed smaller than 200mm/s; please make sure the protruding length of tool tip is appropriate; make sure the cutting force is smaller than 200g. You may increase the speed and cutting force gradually as you are more and more skillful in operation.

1.1 Non-contour Cutting

1. Choose the objects to be cut, and then click .
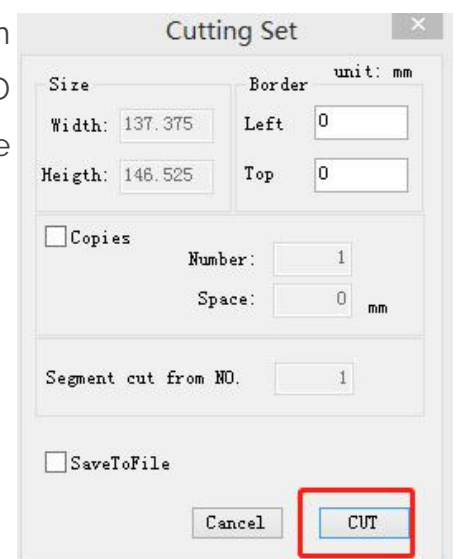

2. as per window below, click Y to carry out cutting of the objects selected, all of the objects in the page will be cut if you click N.
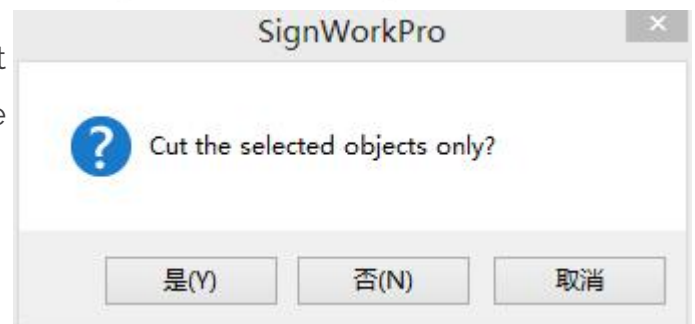
3. As the screen below, click CUT and the cutting operation will be executed. Before clicking CUT, please check the LCD display of machine and make sure it reads ONLINE, please press ▶/■ to switch the mode to ONLINE if not.

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1.2 Contour Cutting

In the beginning, please switch the working mode to Cut Picture Mode (Contour Cutting), the machine won't read the registration marks if Cut Picture Mode is not picked, and it will carry out object(s) selected, which is Non-contour cutting.
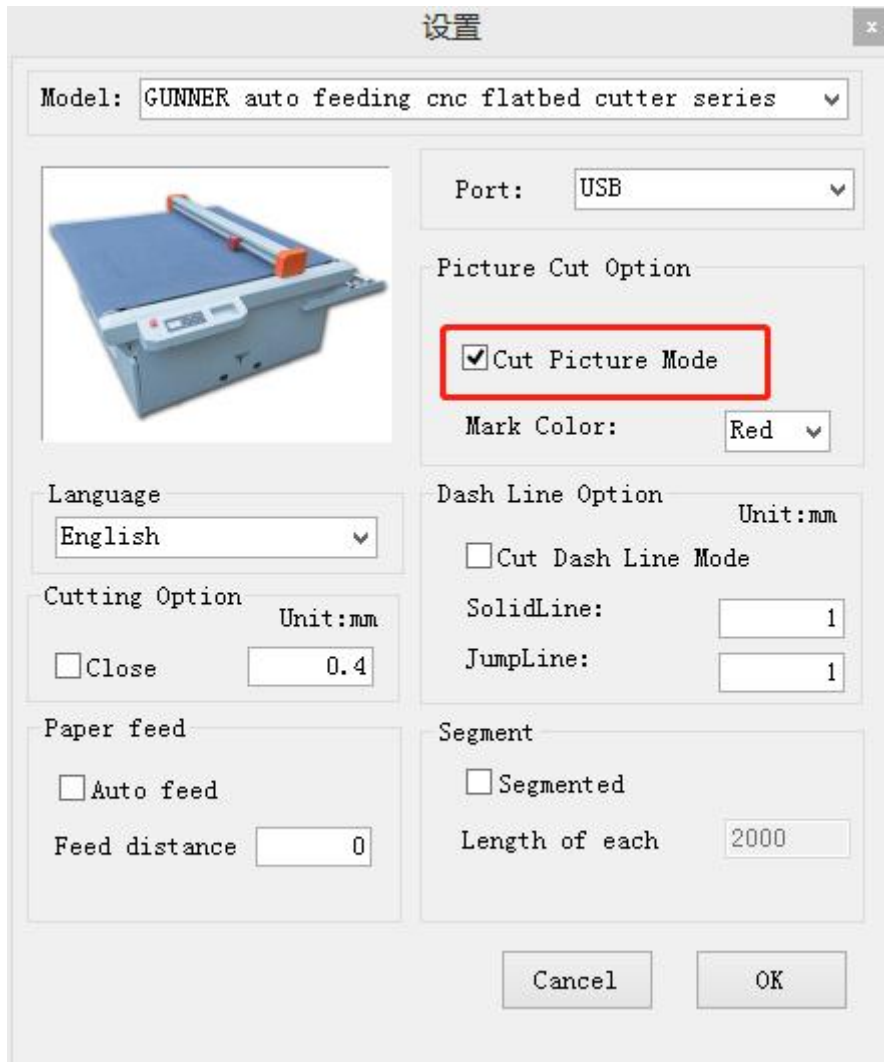
1. Same to Non-contour Cutting operation please get the objects to be carried out ready.

2. Add Registration Marks. Click on Contour(s) and Picture(s),

and then click on

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As picture below, pick Cycle Mark

Then you will see follow screen, at this time, you are allowed to take fine tuning on the object(s) to be cut, please make sure all of the object(s) to be carried out are inside of the registration marks, and there should not be any picture within 10mm to the registration mark(s), or it shall result in failure to recognize the registration mark(s).
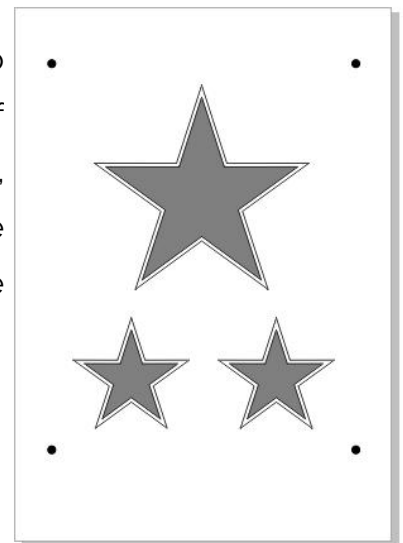
3. hide the picture(s), which are not needed, just reserve Contour(s) and Registration Mark(s). Make sure to select all of the Contour(s) and Registration Mark(s) that going to be carried out, no any one should be miss-selected.

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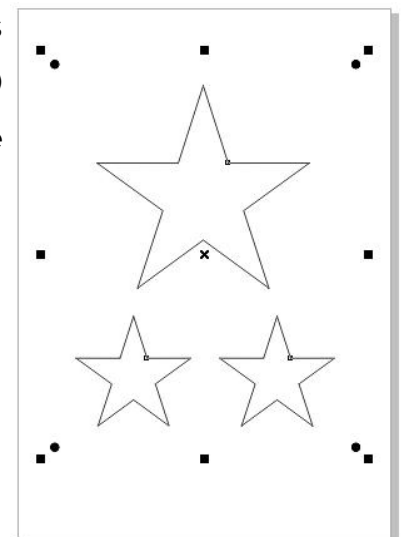
4. click to pop up following screen:

5. See picture below, put the pre-printed paper on machine, let the cutter blade above the center area of the registration mark on top left corner of the paper as shown on Coreldraw page, click CUT, and you will see the CCD Camera will read the dots one by one, then cutting operation will be carried out.

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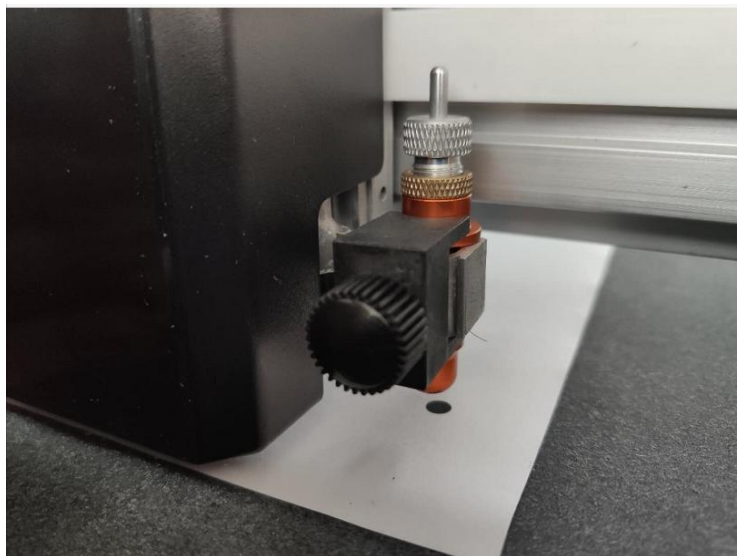
1.3 Segmented Area Cutting Operation

When cutting long length pre-printed media, you shall choose SEGMENTED as shown in following picture.
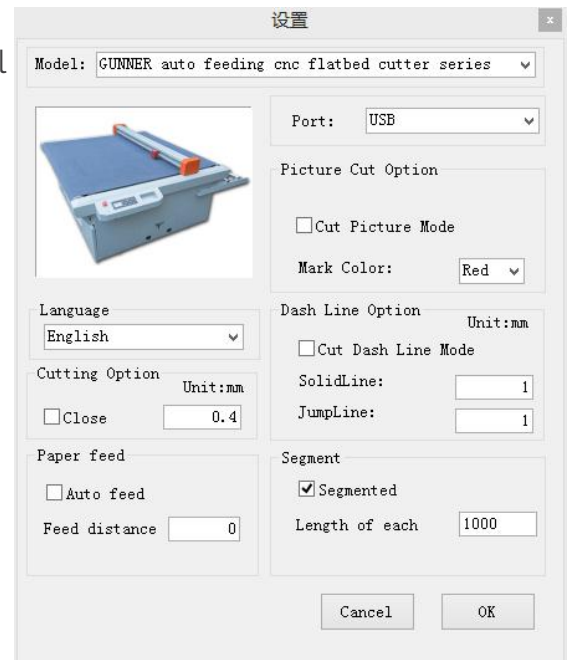
Please take a note:

With Non-contour Cutting, you are allowed to choose the length of each segmented area, while it should not bigger than the Stroke of each axis of machine.

As per picture below, with Contour Cutting, it is unable to setup the length of segmented area, while the length is assigned by distance of registration marks, please make sure the distance should be smaller than the Stroke of each axis of machine.

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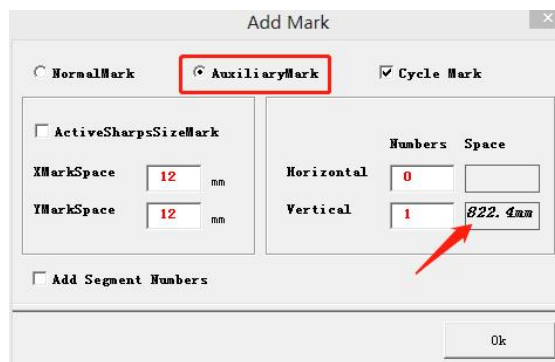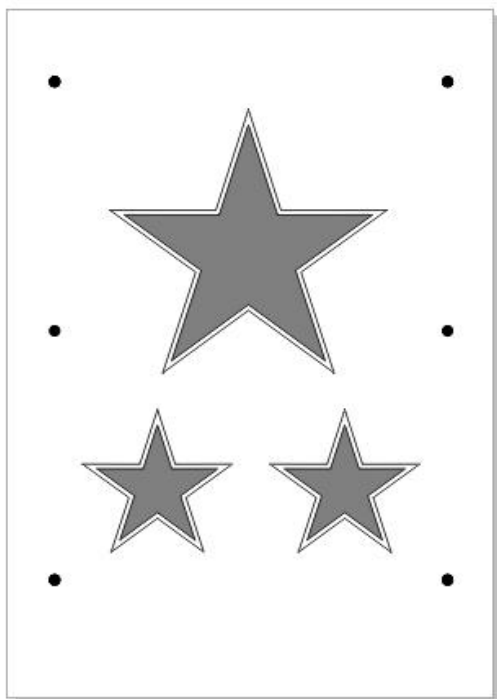
After setup the length of segmented area correctly, please send the cutting job(s) to cutter either in the way of Non-contour cutting or Contour cutting, then the cutter will cut in the length of segmented area, and it will pull the next section of media onto table top after finishing the previous section, it will not stop until finishing the complete job.

1.4 Duplicate Cutting Job and repetitive work

When a repeat cutting is necessary, you need to take Copies feature, while this feature is applicable with U flash memory only.

Pick Copies and SaveToFile，input values in Number and Space, then click CUT, and then download the cutting job with U flash memory.

Connect the U flash memory to the cutter, then press ▶/■ (Run/Stop), and then press ⋀ and ⋁ buttons to select the cutting job to be carried out.

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Press ENTER and machine will start to work, it will accomplish the number of copies as input previously, when a copy is finished, the machine will travel across the distance appointed and move to the next section/area, then it will start to cut in that area or read the registration marks there, the cutter will repeat the process till finish all of the job.

Thanks for your time and please get contact with vendor or authorized agent if there is any further information needed.

III. Safety Instructions

Read the safety instructions and familiarize yourself with the main structure, performance and operation measures before starting the machine. Training and examination is recommended when condition requires. In the operation and maintenance, please be aware of the warning symbols on the machine and proceed with caution to prevent hazards and ensure safety.

3.1. Warning Symbols

Please is aware of the warning symbols below to prevent possible hazards!

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1. Be careful when handling the cutter blade.

2. Do not touch the moving parts such as the carriage and belt while 3. cutting or plotting is in progress.

3. Keep your hands, hair, wearings, etc, away from the moving parts such as the carriage and belt even if the cutter is stopped, as it may suddenly start moving when data is received.

4. Do not put sundries on table top or gantry top.

5. Be sure to ground the earth terminal.

6. Do not disassemble, repair, or remodel the cutter.

7. Do not coannect the cutter to a non-rated power supply.

8. Do not use the cutter in a location where it will be exposed to water, rain or snow.

9. If the cutter generates smoke, overheats, emits a strange odor, or otherwise functions abnormally, do not continue using it. Turn off the power and unplug the power cord from the electrical socket.

10. Do not allow dust or metal scraps to adhere to the power plug.

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11. Do not use the power cord if it is damaged.

12. Do not use or store the cutter in a location exposed to direct sunlight or the direct draft of an air conditioner or heater.

13. When using indoor lighting such as fluorescent or other electrical lamps, provide a distance of at least one meter between the cutter and the light source.

14. Do not use the cutter in an excessively dusty or humid location.

15. Do not use the cutter in a location subject to excessive mechanical vibration or electrical noise.

16. When disconnecting the power cord or interface cable, do not pull on the cord/cable.

17. Do not attempt to lubricate the cutter mechanisms.

18. Do not clean the cutter using volatile solvents such as thinner or benzene.

19. Provide sufficient space around the cutter so that it does not strike any objects in its vicinity during cutting.

20. When using the cutter, take care not to extend the blade more than necessary.

21. Move the tool carriage slowly when moving it manually in order to load the medium or for other reasons.

22. Do not place the cutter on an incline, areas subject to many vibrations, or other unstable locations.

23. Do not place magnetic cards, diskettes or similar items in the vicinity of the tool carriage.

24. Run a test cut when cutting media with unknown condition settings.

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DIGITAL PRINT FINISHING
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Samples are available.

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WARRANTY CARD

MODEL		LOT #	
BUYER		DATE	
SELLER		TEL	

Notes

i. The warranty card should be filled by seller and kept by buyer. Alterations are prohibited.

ii. The guarantee period is two years. The repair is free of charge within 6 months and will be charged with material and labor cost after 6 months.

iii. No free repair is available for any damages caused by the improper use.

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