One．Main interface

Turn on<PowerMR-control system>，Wait system startup completion，LCD will appear

machine operating the main interface：

F1 Star：Double-click the F1,The ThorX6 started。

F2 Documet manager：Double-click the F2，Management is stored in internal memory in

one machine engraving file。

F3 softwaresetup：Double-click the F3，You can install the SD card package upgrade or

update the hardware and software system here。

F5 Hardware test： Double-click the F5，For each part of the test of whether the normal work of the engraving machine hardware。

F6 Hardware parameters：Double-click the F6,Open the internal parameter settings window，For each parameter setting and marking machine related work。
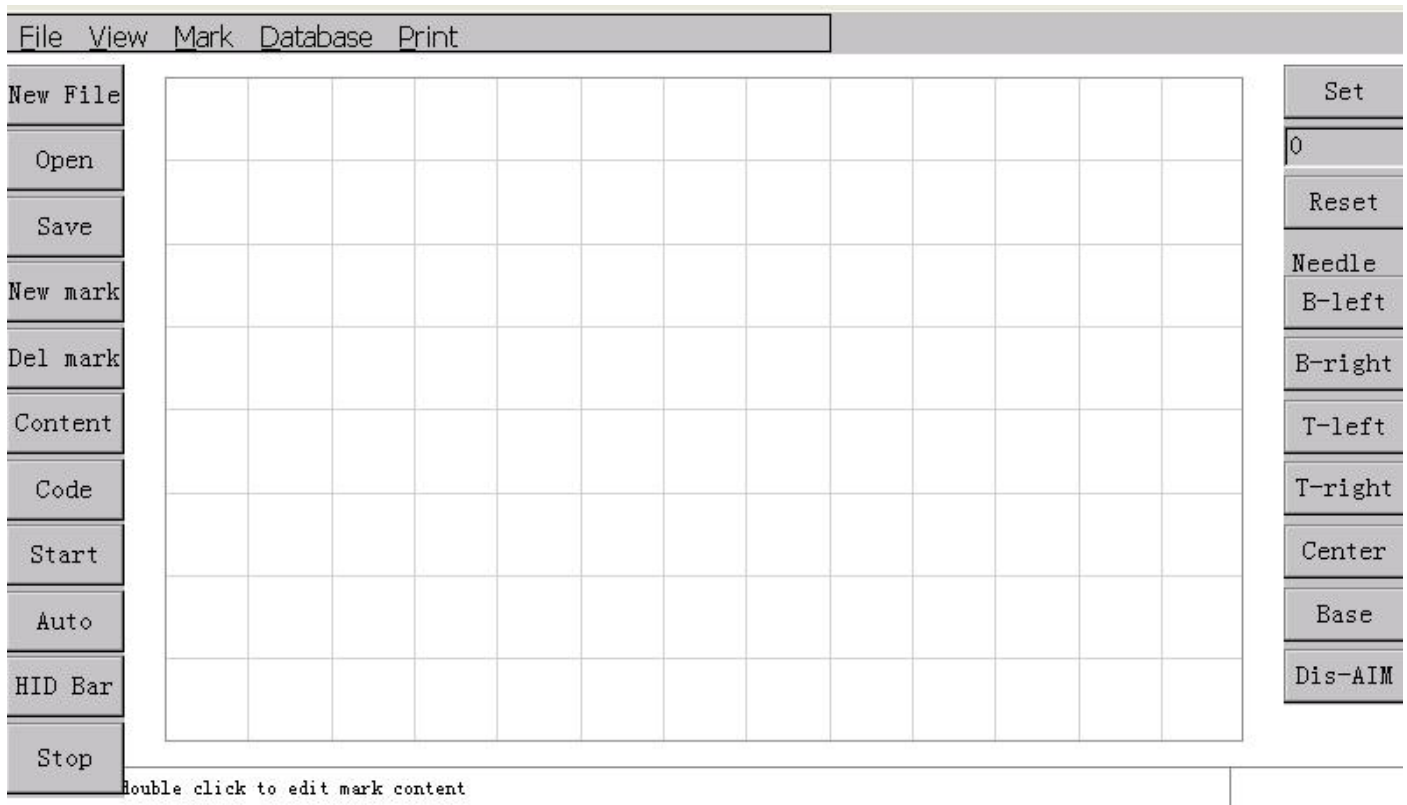
F7 System setup：Double-click the F7,Open the system settings window，To set various parameters of the current system。

In the following sections, we will introduce the one one part of the operation。

Two． <u>start of operations</u>

2.1Overview

Double-click the F1，"ThorX6 industrial engraving marking Control System" (hereinafter referred to ThorX6) started, wait a few seconds to complete the system starts, there ThorX6 main interface, the following diagram:

```
File  View  Mark  Database  Print

New File                                                    Set
                                                            0
  Open                                                    Reset
                                                          Needle
  Save                                                    B-left
New mark                                                 B-right
Del mark                                                 T-left
Content                                                  T-right
  Code                                                   Center
  Start                                                   Base
  Auto                                                   Dis-AIM
HID Bar
  Stop
Double click to edit mark content
```

The top menu bar, contains all the function menu marking machine control, intermediate for what you see is engraving operation area income, the default is 140mm * 80mm, all of the numerical software in addition to special instructions, are in millimeters (mm)，

Engraving operation region to the lower right corner square cubes as input suspension window with a built-in keyboard, click to show or hide the built-in keyboard. As shown below：

2.2Quick start

In this section, we will briefly introduce how to quickly create a text label and a serial number tag, and of the two markers of the needle, determine the final location on the workpiece engraving。

Click New mark, open the "create mark" window, as following figur：
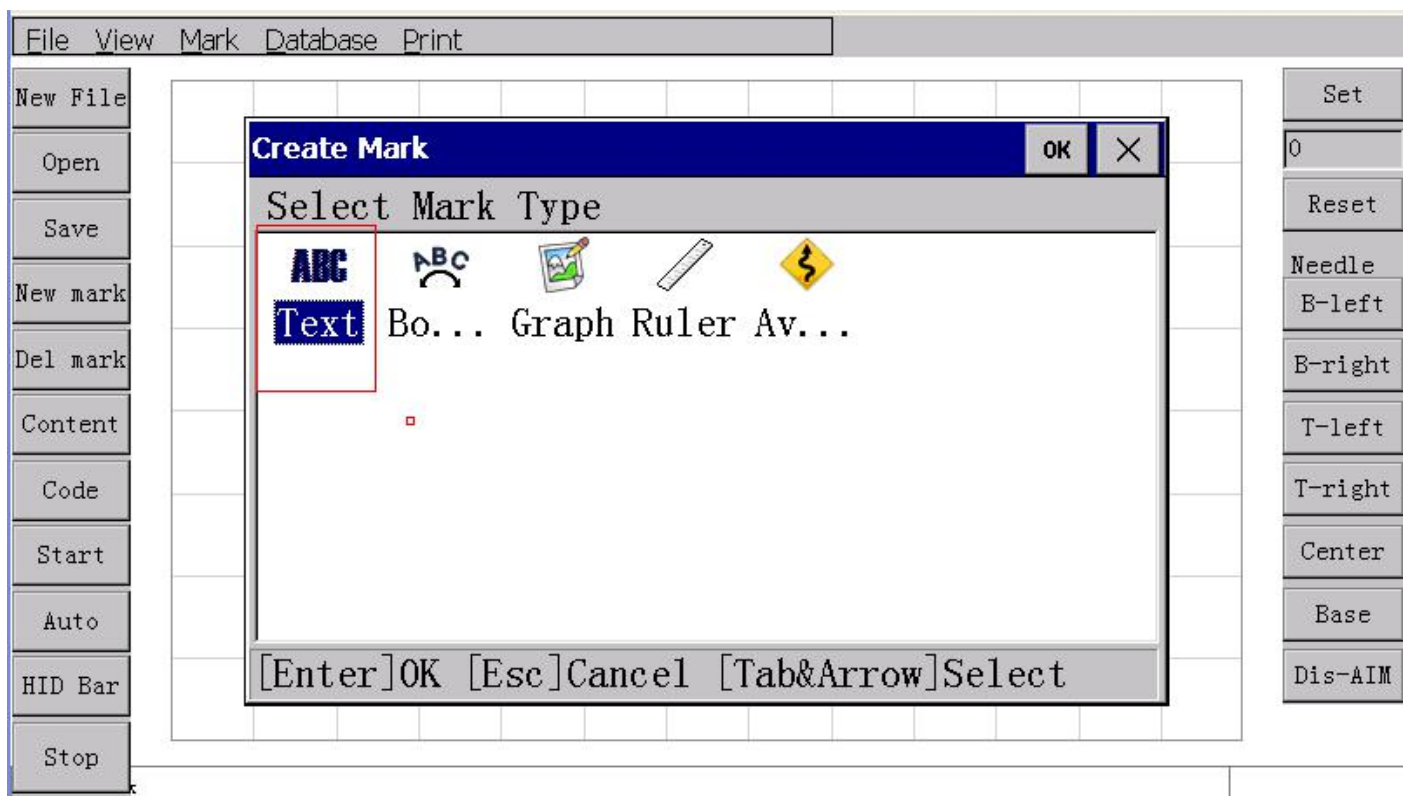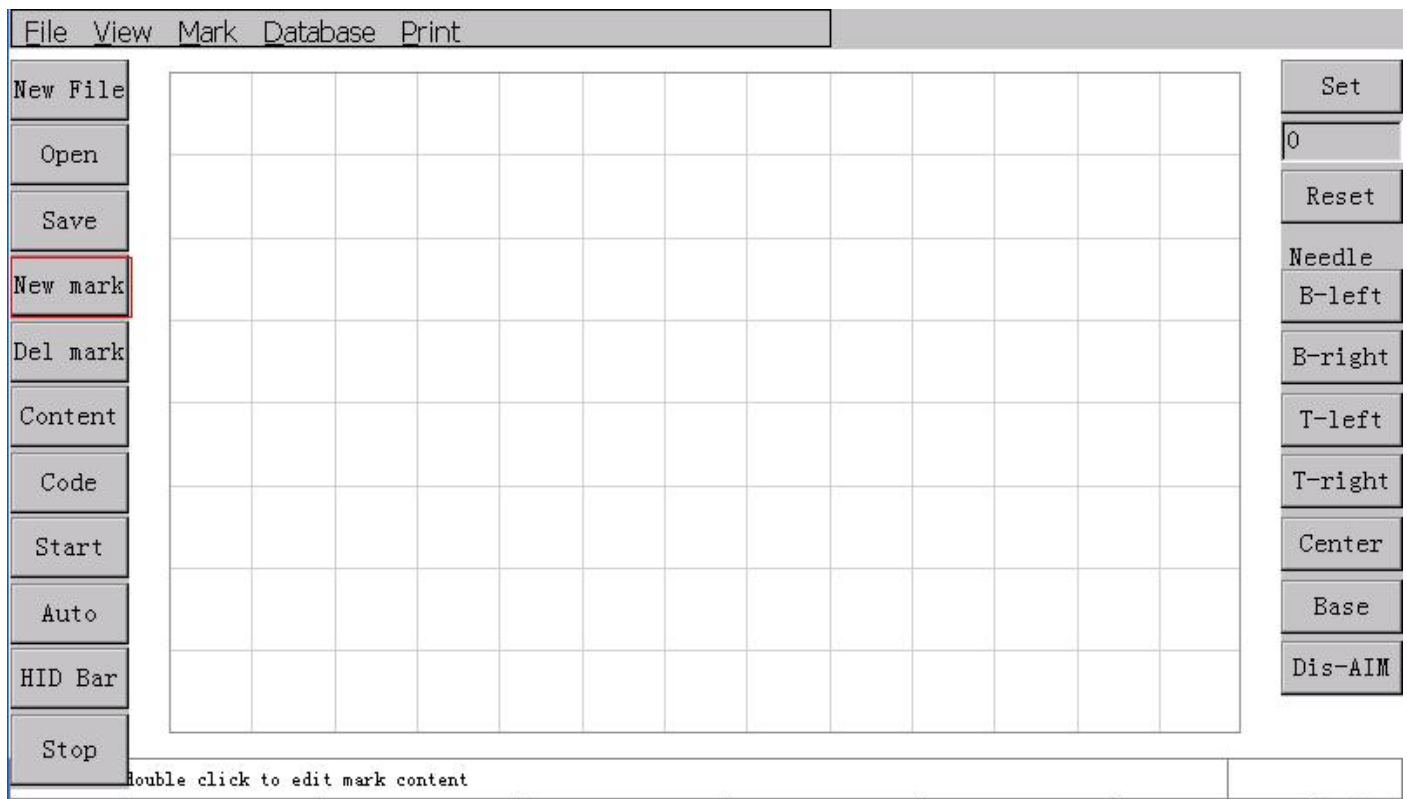
Here we select "mark text" type, and then click the top right corner of the window (OK)

button, or directly press the Enter key, finish marking type selection. Then "edit the markup content" window opens automatically, as shown in the following
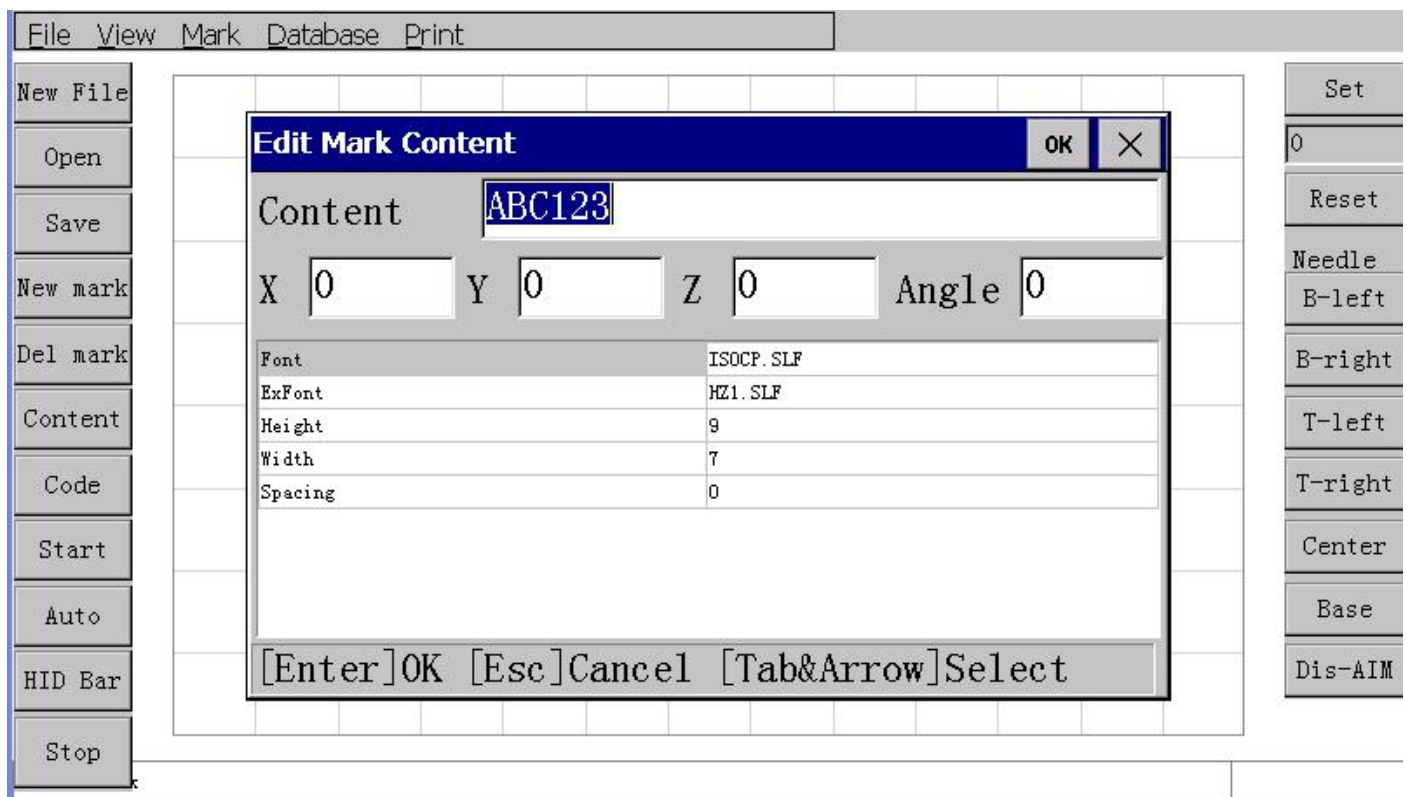
We can edit the markup content, here position, font and so on, these will be detailed in a later chapter。Click on the keyboard of the suspension frame, pop-up keyboard, or using an external keyboard input can change the contents of. Now we are in the default "ABC123" as the marked content, click on the upper right corner of the window (OK) button, or directly press the Enter key, finish marking content editor. Then "edit the markup code" window opens automatically，The following diagram：
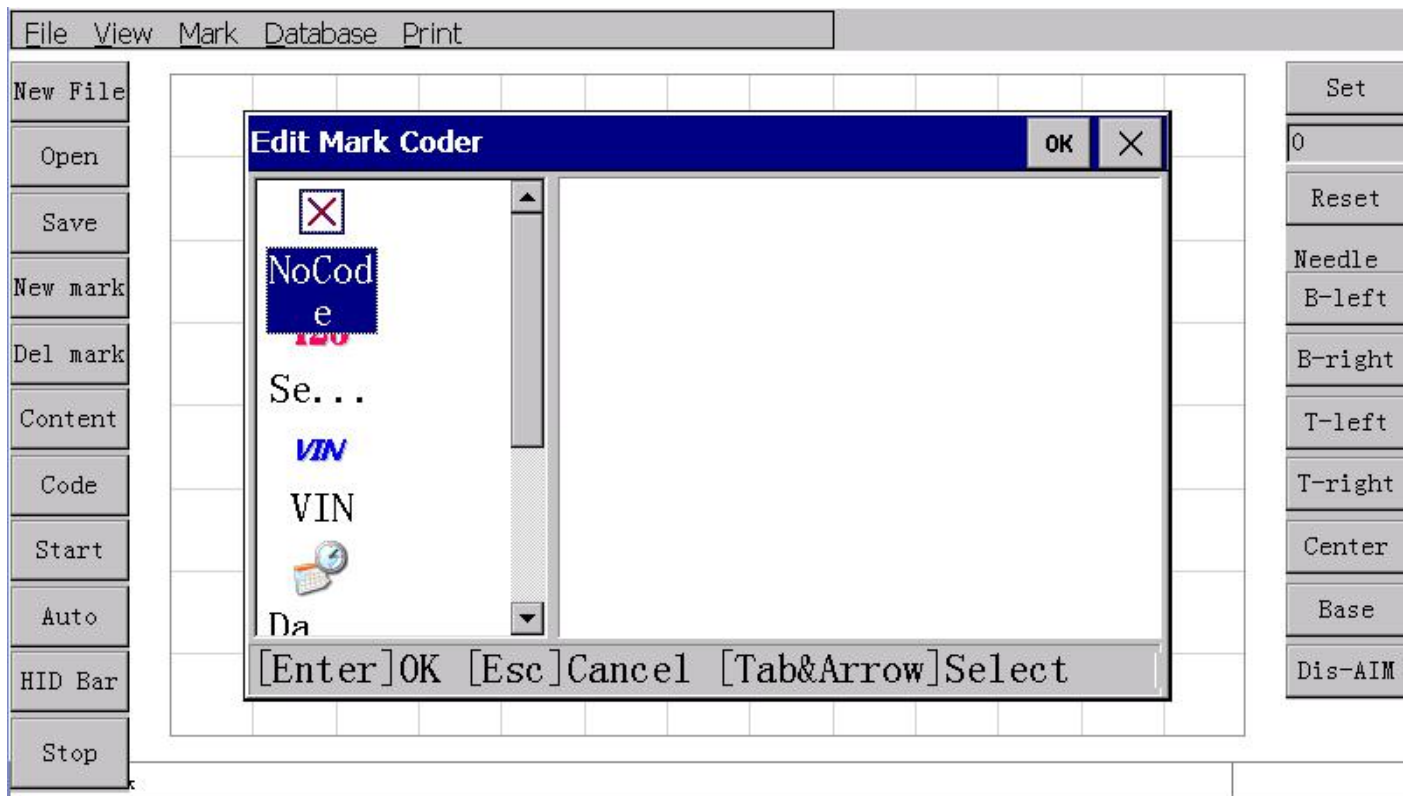
Because we want to make the tag content for fixed content, which means they do not need to change in the imprint is finished, so here we will use the default "no code". Click again on the top right corner of the window (OK) button, appeared engraving engraving control software operating area in the tag we established, as shown below：
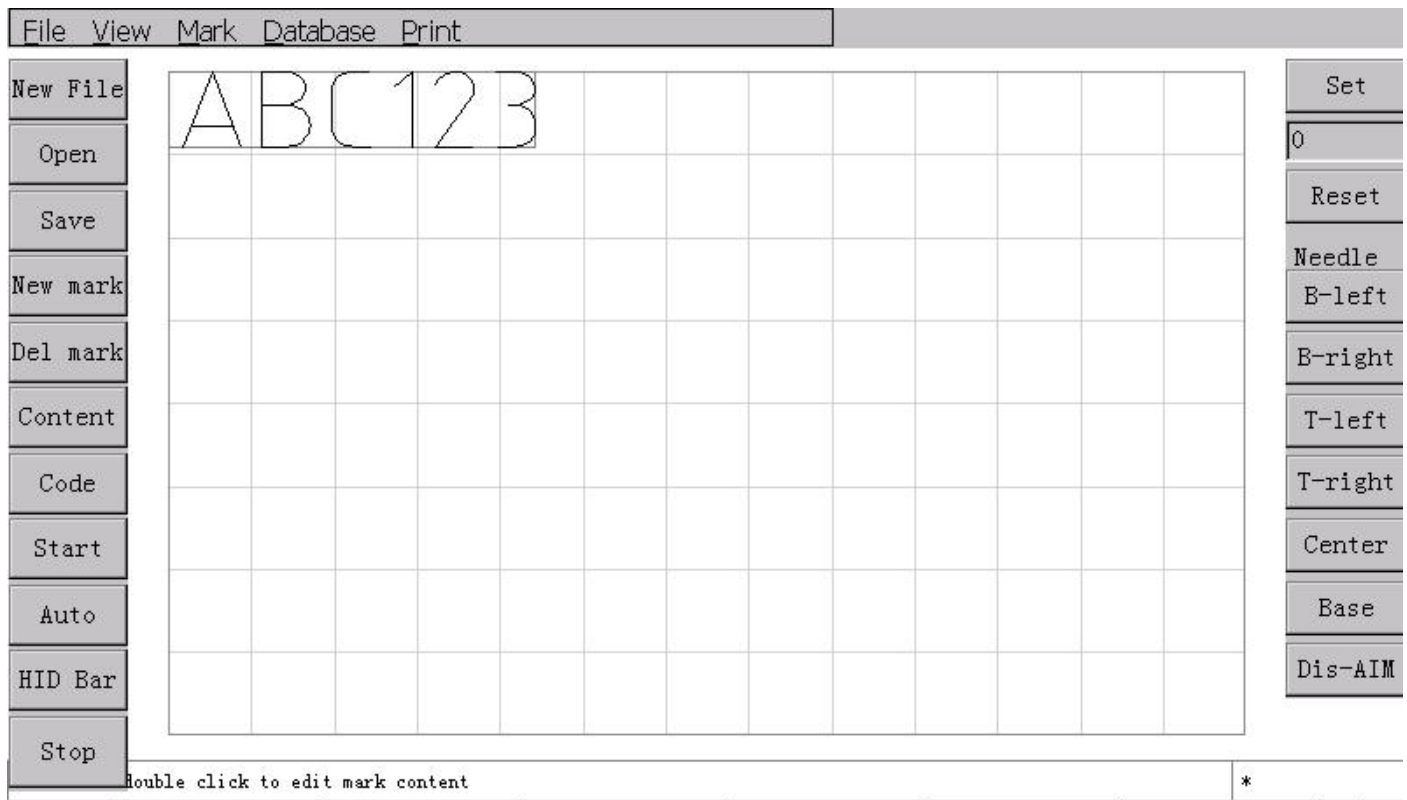
The new tag will according to the coordinates in the "edit the markup content" in the window, shown in the engraving operation area。

Now we use the same method, to establish a "serial number" mark。"Or choose "text also

create marking" window"， "Content   ABC123   "

window we will be the default "ABC123" changed to "12345", and then in the next "edit the

markup code in this window, select" Serial, as shown in the following figure：
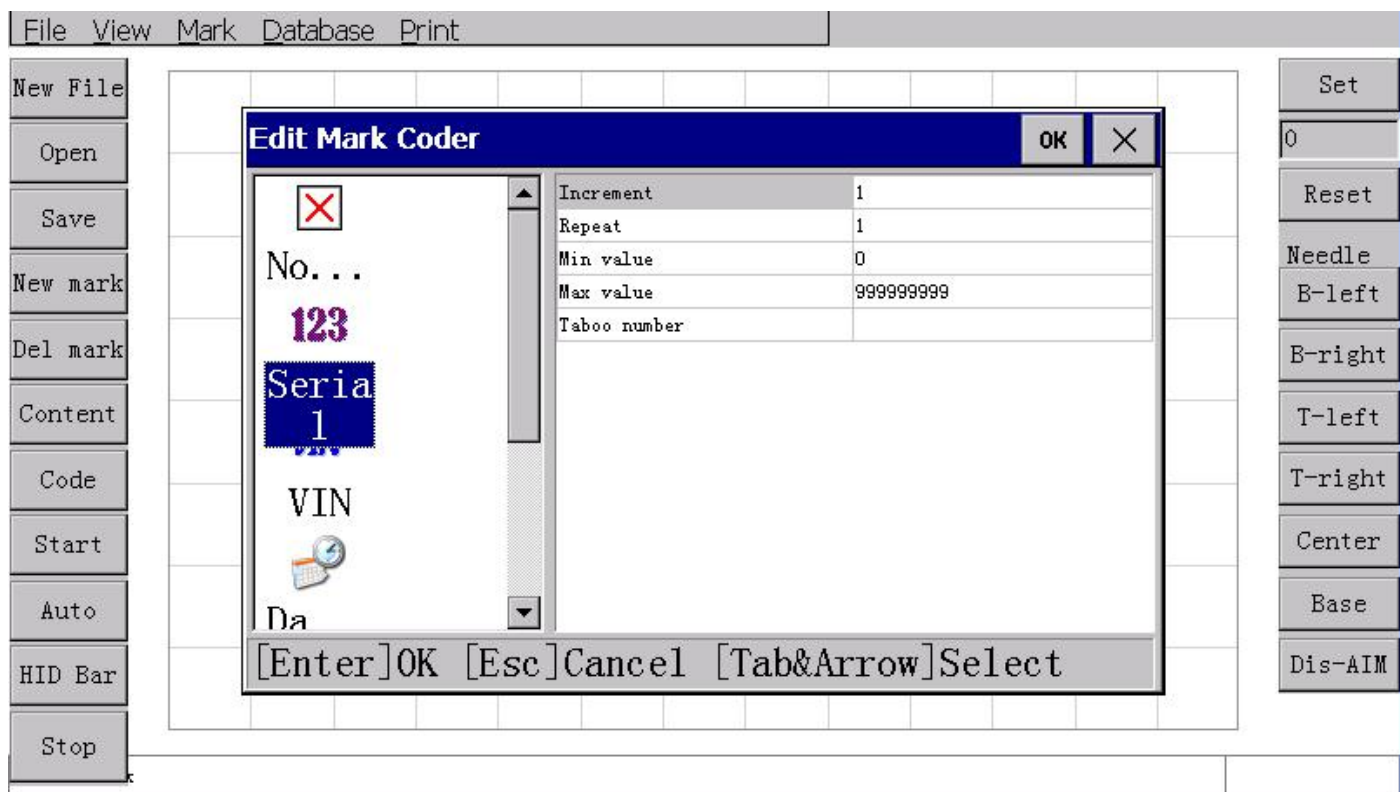
　　"Serial" With some of the parameters, then we leave it, use the default values of the

parameters can be. After the completion of the establishment, marking operation area will be

displayed in two marked content, as shown below：
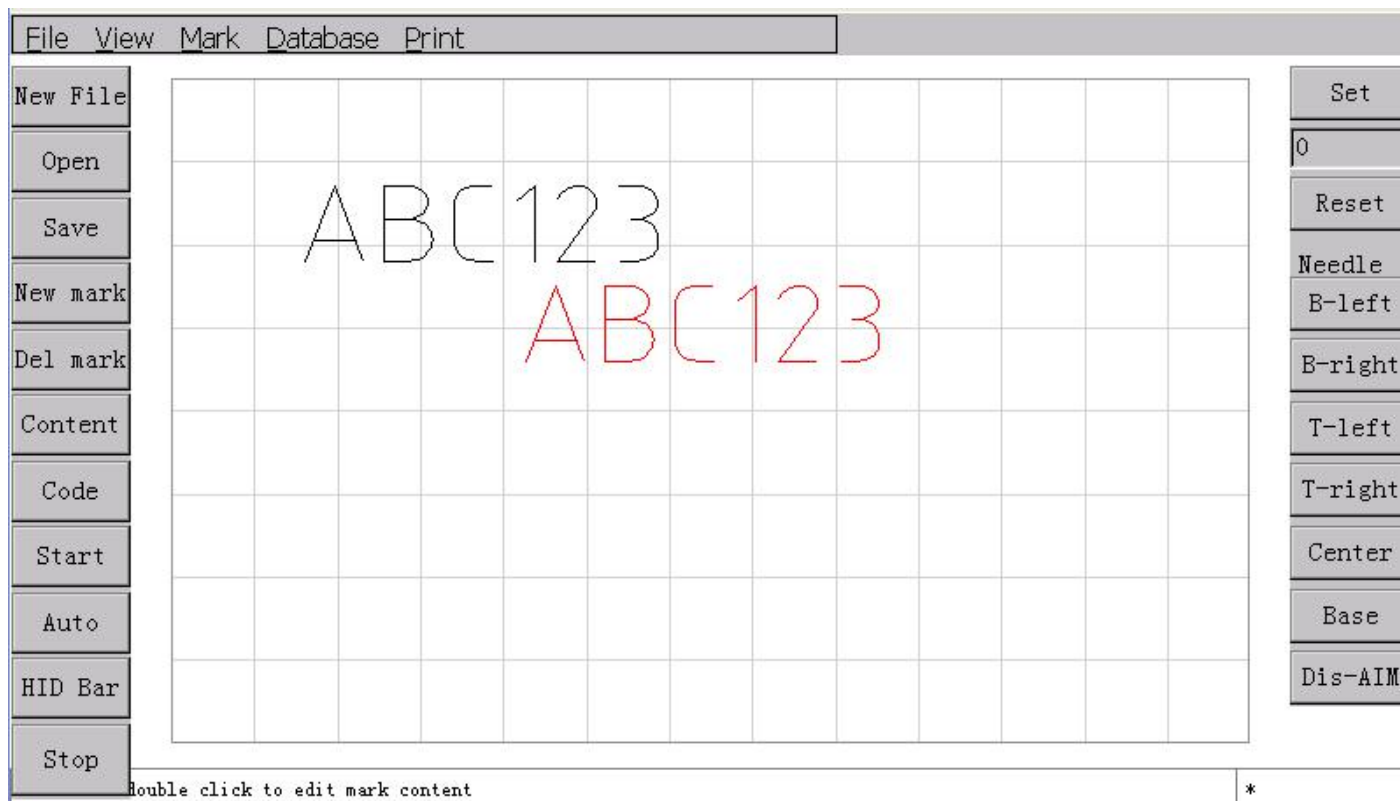
Notic:"Serial" Marker color to red, each with a different markup code can show different colors to distinguish in the view are. Now the two markers are stacked together, the following position adjustment。

First click on the touch screen or the left mouse button selection marker, marker is selected and is surrounded by a frame, the frame alignment is surrounded by mark, press the touch screen or the left mouse button down, can be directly labeled dragged to a new position. When you drag the marker position, marking the needle automatically aligns to a new location. This is a function of the software, each time you change the marked position, engraving needle are automatically aligned to the new position of the mark。

Also in the menu bar or use the keyboard to fine tune, click on the Mark -Move mark, as shown below
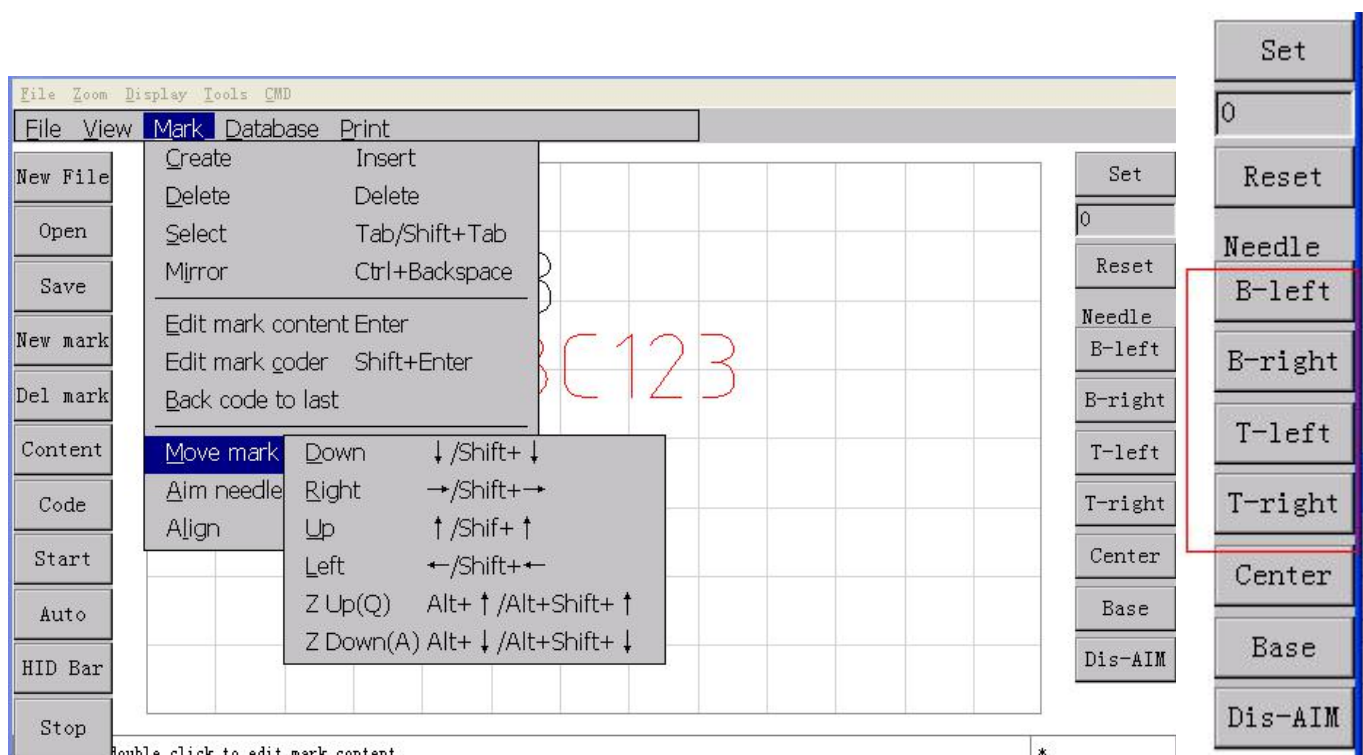

You can also press the keyboard arrow keys to adjust。

"Serial"12345" the arrow corresponds to the direction of mobile 1mm, repeat the process,

making the serial number marked "12345" move to another suitable position. The process of moving, you can pay attention to engraving stamping head, engraved with "12345" the needle will change the position and movement，

automatic needle characteristics, can be very convenient to the marker position to the actual workpiece real imprint positions.

Mark position adjustment, may look like this, as the following diagram:
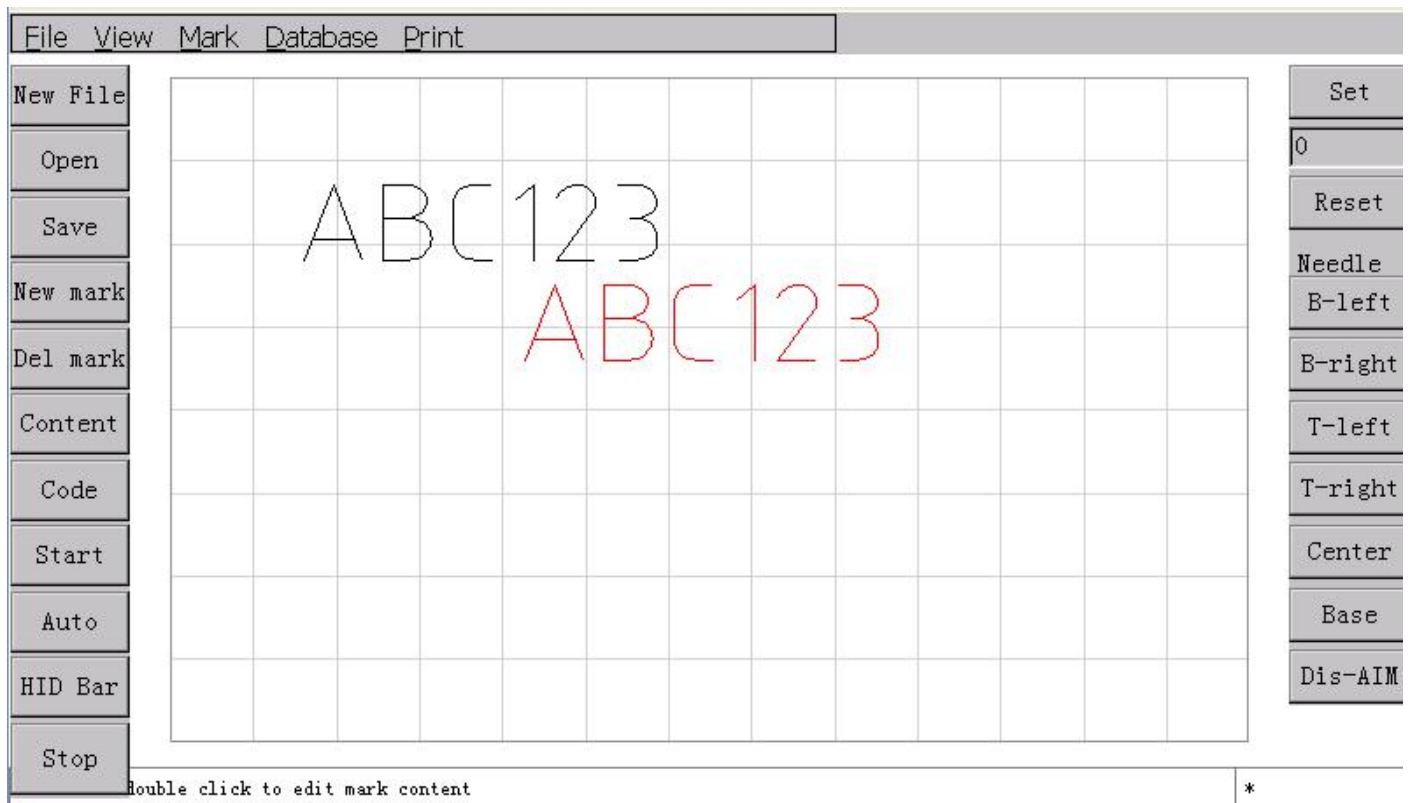
Now we can try to imprint the two mark on the workpiece, the imprint of the operation is very simple, Start can be started, or directly press imprint operation shortcut button (F9), as shown

below
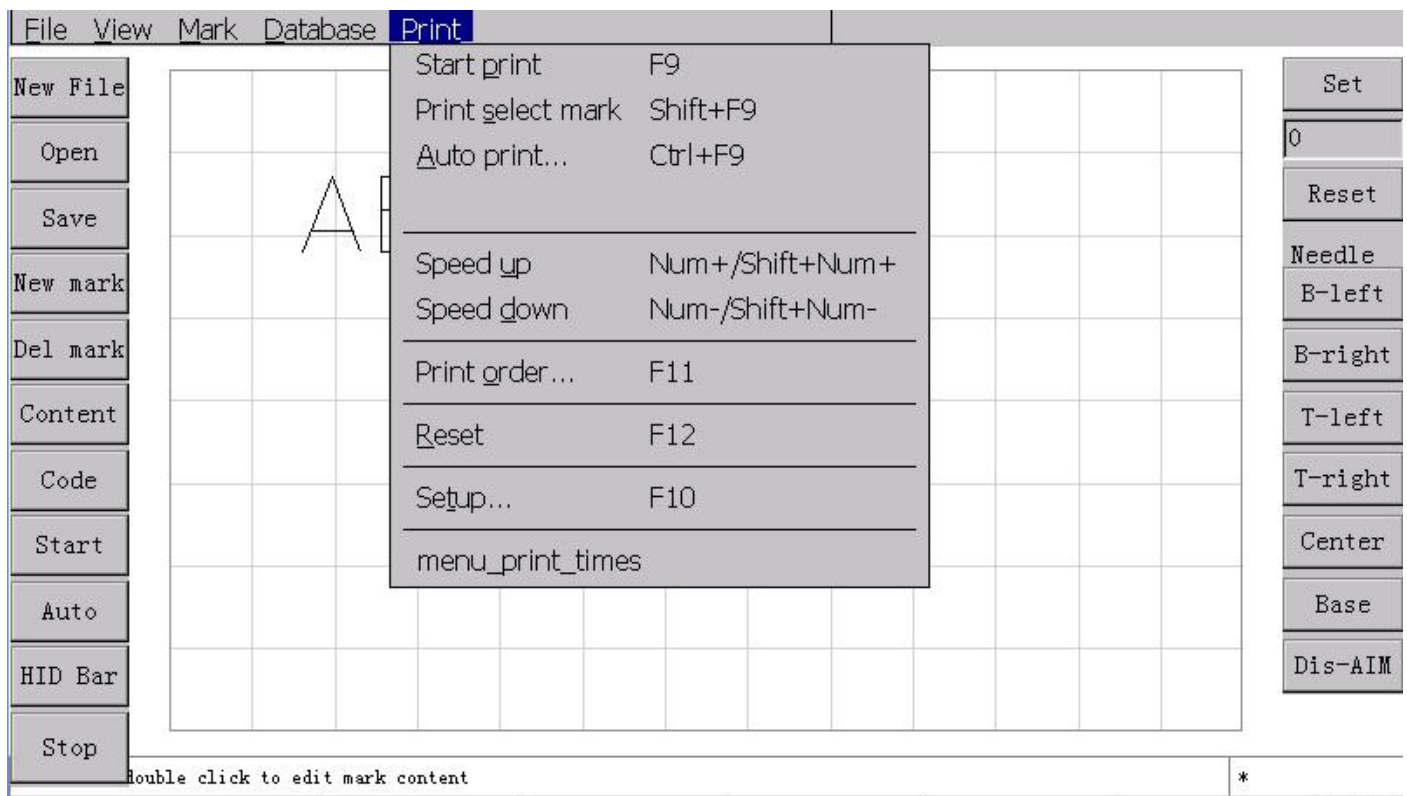
Now marking machine starts to work, marking machine will be engraved print this two marker in your content on the workpiece, wait marking machine work is completed, will find the serial number tag content has changed,

"Serial Content from the "ABC123" changed to "ABC124", this is the role of the serial number coding, each use of the mark the serial number coding, will bear in automatically after accumulating a number is "1 in general, accumulation"。
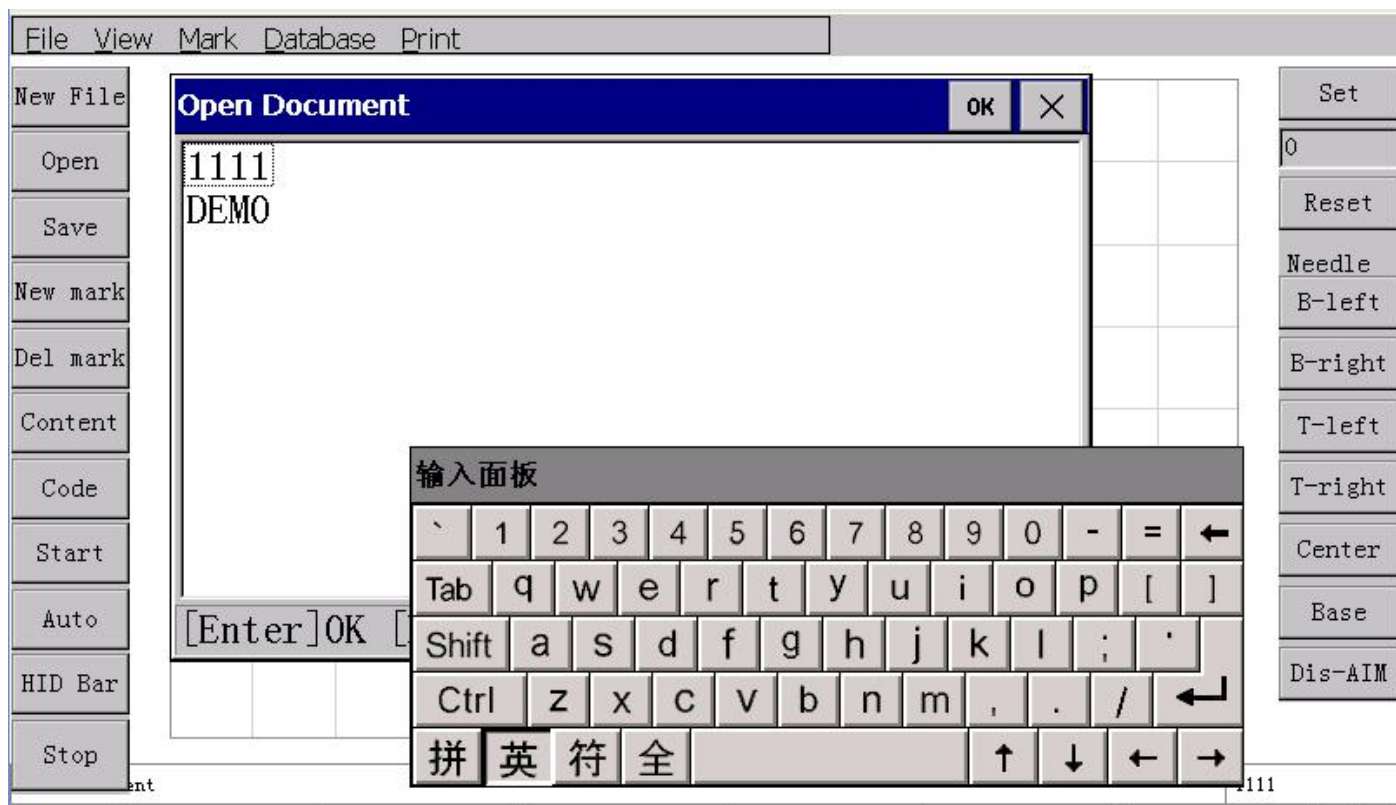
2.3File operations

You can use the main interface of F3 to manage these files。

Click on the menu (file), as shown below
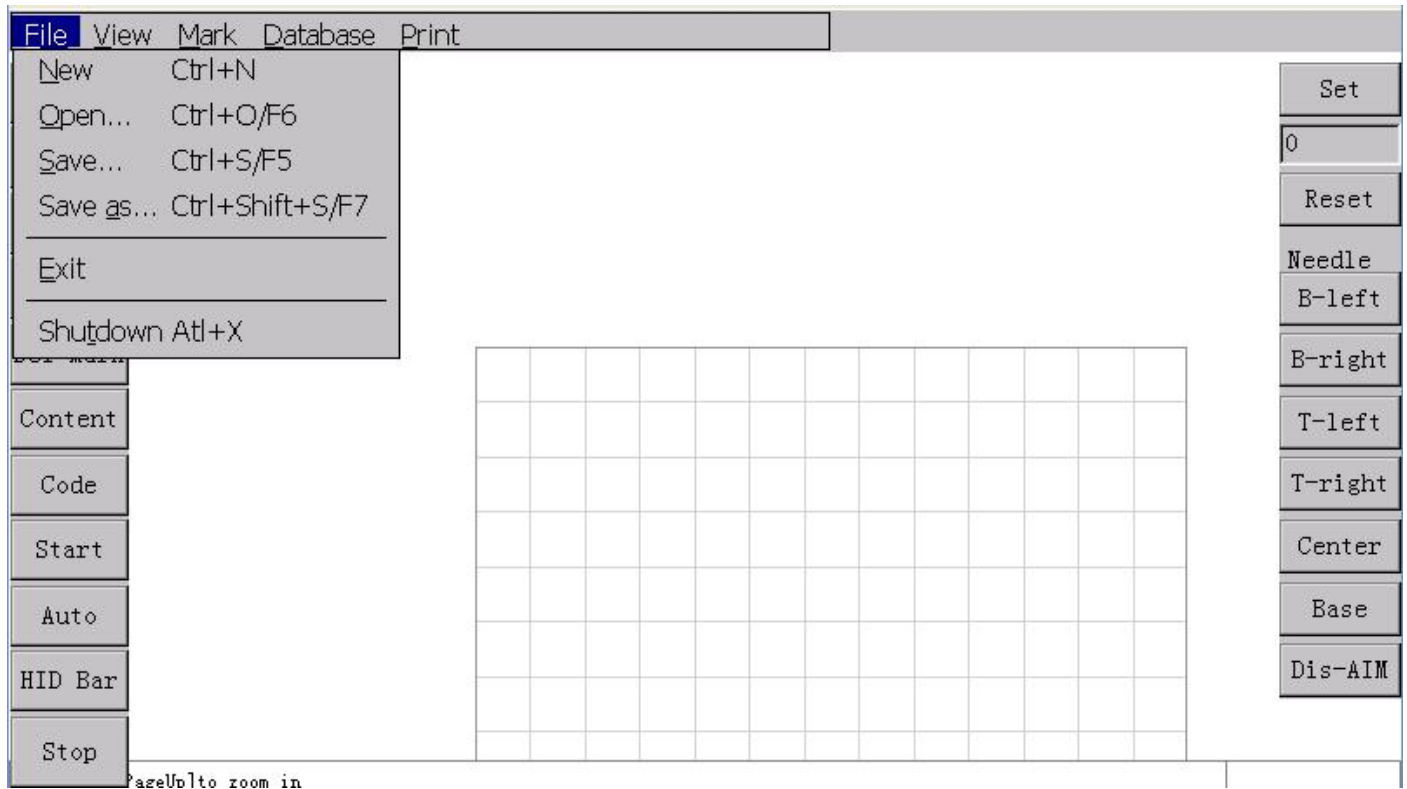
The functions are as follows:

a. New: Create a new file, if the file being edited not saved, will prompt the user to save。

b. open: Opens a file, as shown in the following figure:

"Open " window that lists all the files in the development of engraving machine, choose one, click on the upper right corner of the window (OK) button or press (Enter) key, the file is opened。

After opening the file, the file name will be displayed in the status bar to the right of the.c.

save: The current file to memory integrated machine inside, as shown below：
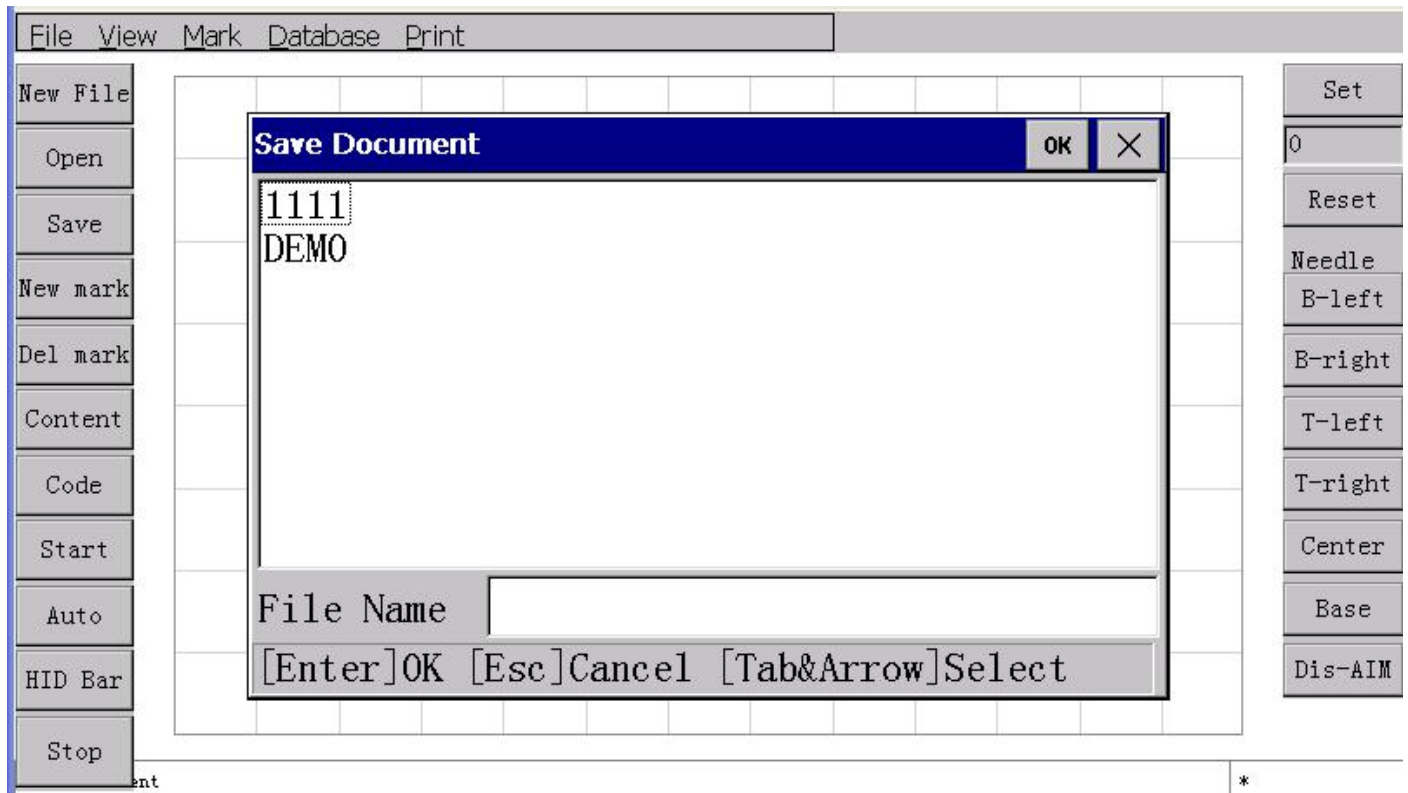
"Save" Window lists all the files in the development of engraving machine, enter a file name in the "file name" column, and then click the top right corner of the window (OK) button or press (Enter) key, the file is saved。

Notic，Save function only when changes occur after the contents of the documents to be executed, it means to save a new file or just open the file is of no significance。

When the contents of the file changes, the status bar on the right side of the file name will be added to the last "*", when the contents of the file is saved, "*" disappear. This sign can prompt the user file content changes whether have disk。
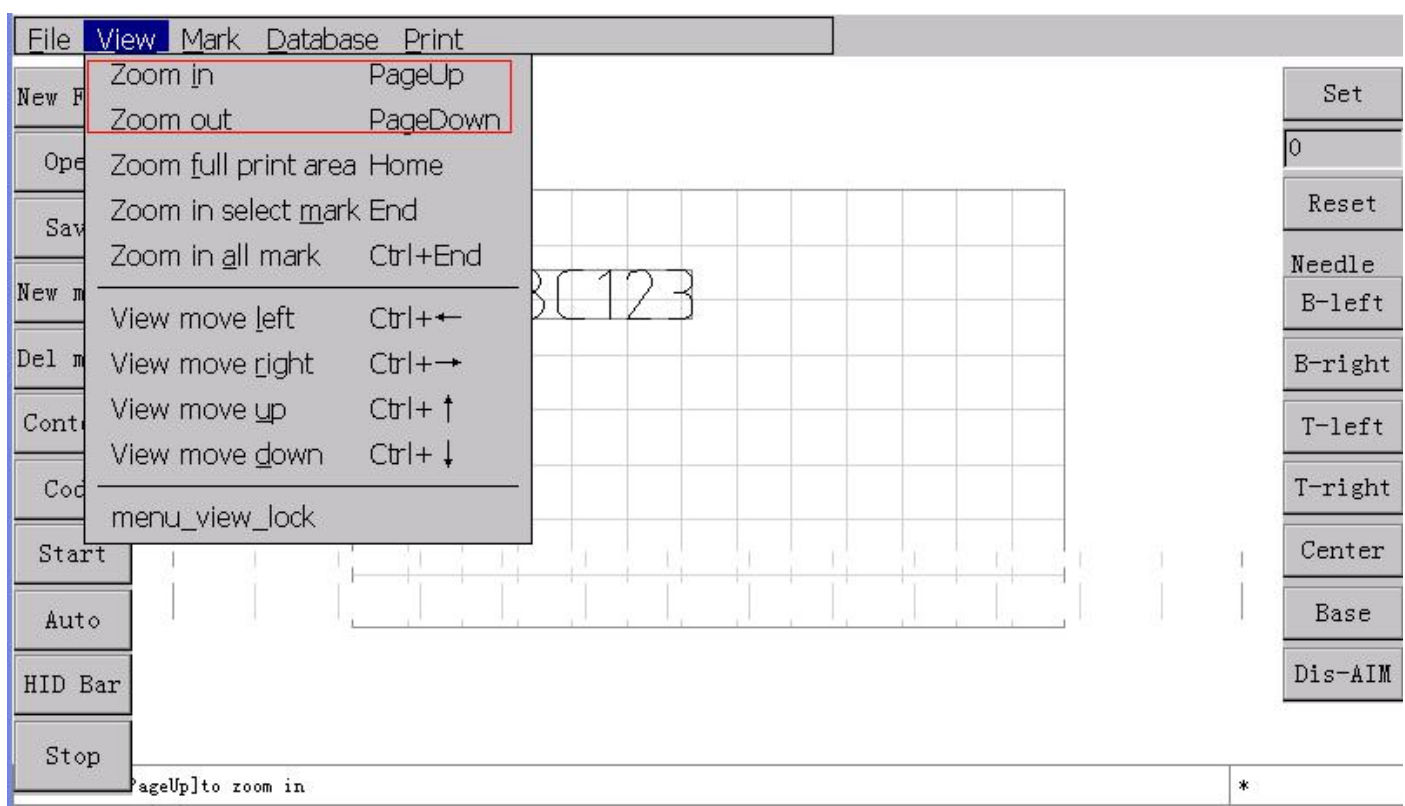
d. Save as：The current file to another name。

2.4 View

All the blank part imprint area and edge, collectively referred to as the marking control software view, view operation is the most basic operation marking control software。

2.4.1The zoom and move the view

Use the View menu (zoom in /zoom out)

, reduce the amplification can be view zoom in to any size, enlarged view can see Mark graphic details, narrow view can view mark content, more sometimes, established markers may be located on the imprint area outside, then you need to narrow the view can be found. Zoom, zoom marker for one of the one or more selected, (view) menu selection marker (amplification) directly to the direct amplification of one or more marker selection marker, as shown below:
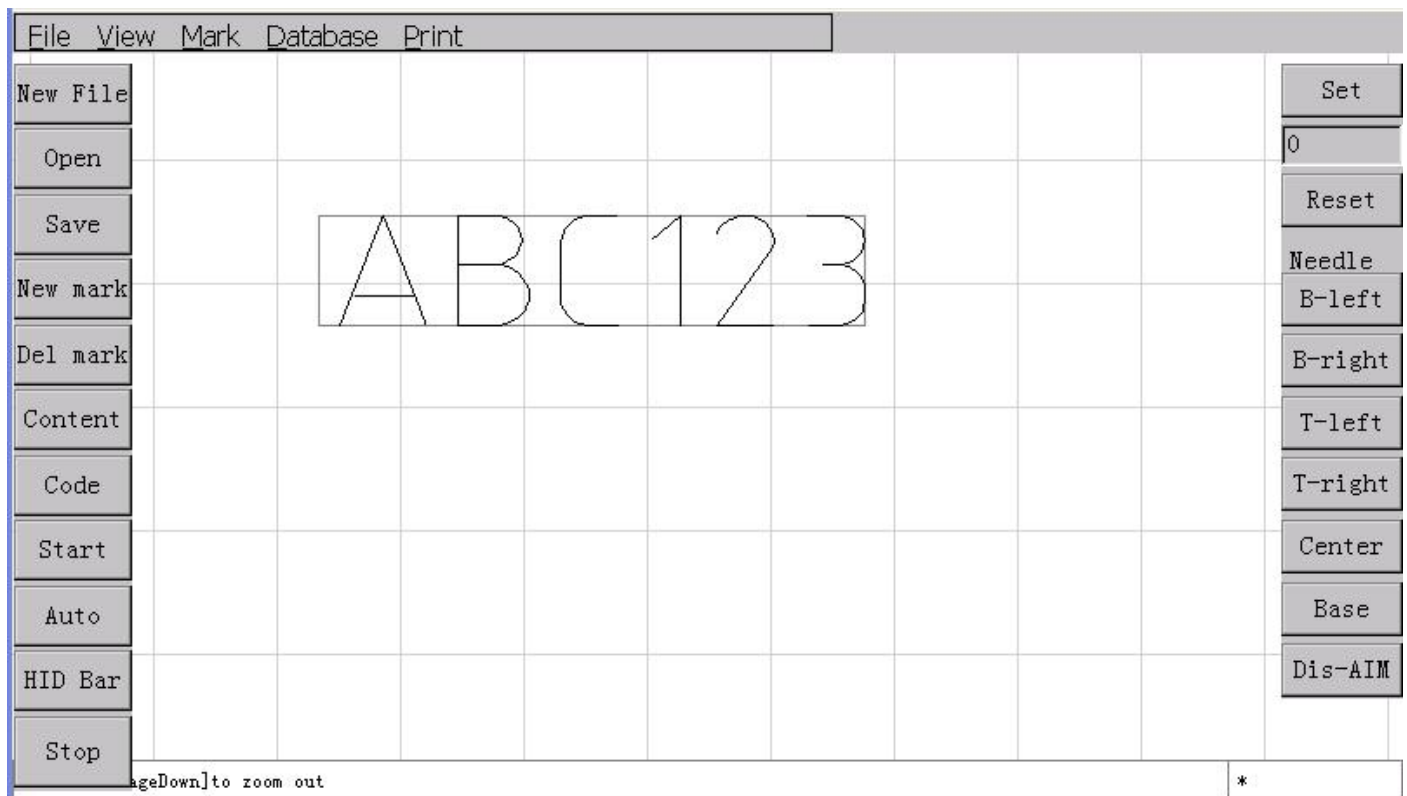
2.4.2 Selection and mobile Tags。

Choice：

The radio：Click on the touch screen or the mouse to select a tag, in addition can also use the keyboard shortcut (Tab) to make a choice in different markers, markers in is chosen, will have a wireframe bounding in external marker。

Multiple choice：The touch screen or the left mouse button down press the blank area of the view, drag a black box, tag allows black wrap to be selected, and then release the left mouse button, then each one is the black box label wrapped around, will be selected, as shown in the following figure:
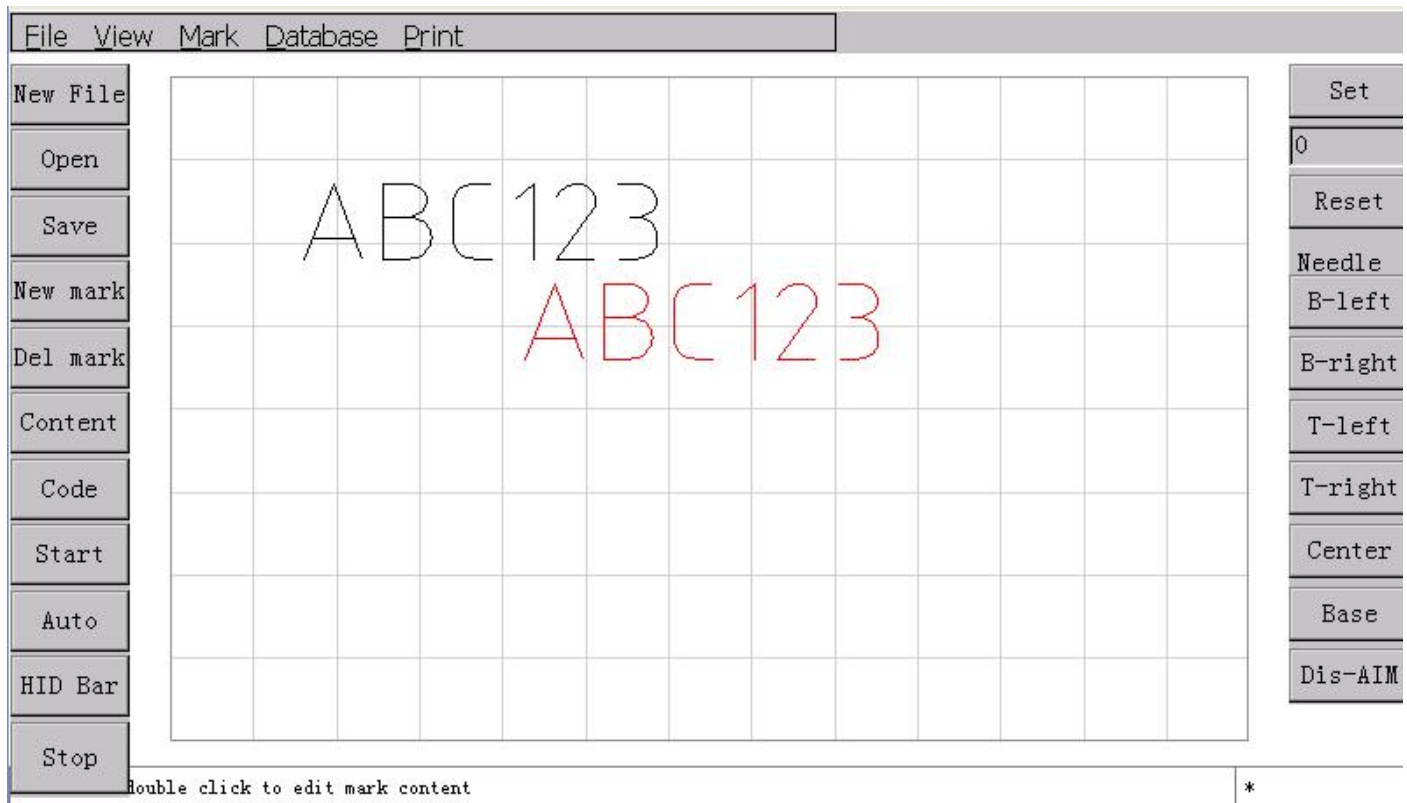
Move：

When marking in the selected state, press the touch screen or the mouse aligned with a selection marker, and then press the touch screen or the left mouse button down, move, can directly mark dragged to a new position. In addition, you can also press the arrow keys on the keyboard, the mark will according to your specified direction, mobile 1mm, press and hold (Shift) key on the keyboard is not put, then press the arrow keys on the keyboard, the mark will according to your specified direction, mobile 10mm, this will enable you to get more accurate positioning mark engraved printing in the area of location. Whenever you change the position of the marker, marking needle is automatically aligned to the new position of the mark, these were presented in the quick start. Need to pay attention to the needle, this function only for a single marker selected effectively, that is to say, when you move at the same time more than one marking, engraving needle will not attempt to align。

2.5Create and edit markers

2.5.1The establishment of word class mark

Word class tag content can be in English characters, numbers, symbols, Chinese characters, and has the font parameters. Marking control software contains two kinds of word class marker, a standard the [text], a kind of [fan text], the only difference between these two marks is arranged in different ways, most of its basic parameters are the same , the standard
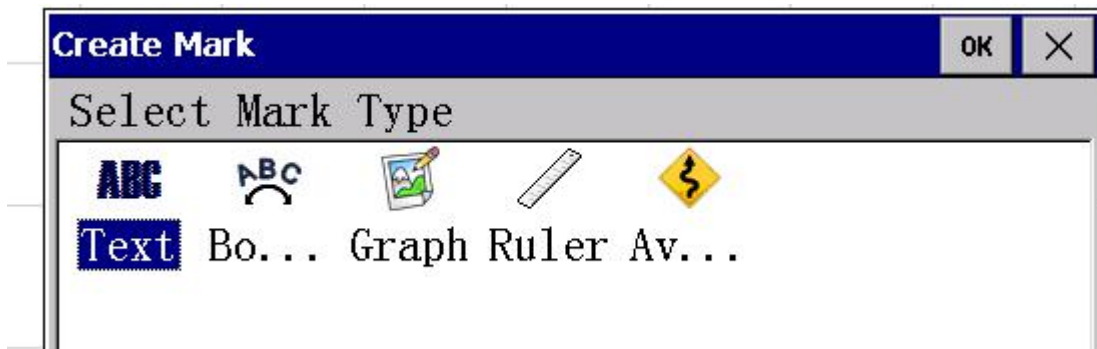
[text] the text tags are commonly arranged in a straight line manner, while the [fan-shaped text] is the specified radius and starting angle of the fan-arranged. These two types of tags can be in [add tags] button on the pop-up list of tag types to choose, as Figure：

Note that the type of tag, once selected, will no longer be changed.

Since [the text] and [fan the text] is to establish and edit the same way, we will work together to describe their use. In the tag type list, select a good type of marker text, its related parameters will be displayed in the [tag] panel, which is 2.1 Quick Start section has been introduced here we will describe each of these parameter.

a. Content: As the name suggests, here you can change the tag text.

b. X, Y, Z: these three parameters used to specify the tag in the engraving area location.According to the text tag this position vary by the type. Standard [text] is a target in mind this position marks the lower left corner, while the [fan the text] is a target in mind when the fan-shaped arrangement of the center of a circle. Note the Z, Z position is enabled only in the Z-axis movements feature an effective, when you have the movements of the Marker function, Z will be able to set the tag engraving plane height.

c. Angle: tag around the X, Y locations specified rotation angle. Of [fan-shaped text], this perspective is the starting point of fan-shaped arrangement.

d. English Font: tag content in English, numbers, symbols, font name to use

e. Chinese font: tag content in the Chinese characters used in the font, note that when you enter the characters in the content later, the Chinese character fonts must select a valid character fonts, or create a markup may not display Chinese characters, or a direct result of tag is invalid.

f. High character, word width: tag content characters in size. Note that here the words of high word-wide, and can not be absolutely limit the size of characters, it's just a reference to size, the actual words of high word-wide would be due to different fonts and change. For example when the word-wide are set to 5mm, the numeric characters "1" are generally not up to the width of 5mm, and with the change in the width of the font is also differ, such as the font "ISOCP.TEF" of the numeric characters "1" to than the font "STENCIL.TEF" the number of characters "a" slightly wide number. The following figure:

g. Word spacing: tag the content distance between characters   and

STENCIL. TEF   ISOCP. TEF

character.

h. Radius (fan version): fan outside the radius of inscribed circle.

i. Character direction (fan version): the decision when the fan-shaped arrangement of the characters towards the top center of a circle or a departure from the center of a circle, the effect of different directions as shown：
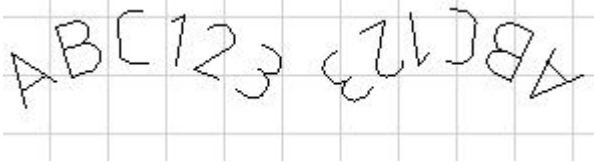
2.5.2 Text encoding Class tag

Only word class tags can be properly defined [tag code], a non-word class tag definition encoding will be meaningless. [Tag code] will determine the word class tag engraving is completed in each character changes. For example one has a "serial number" code word class tags will be automatically after the completion of each engraving add value "1."

Tag coding can be used [tag] panel [code] button to choose.

Word class tag has four kinds of codes to choose from, 11 are listed below:
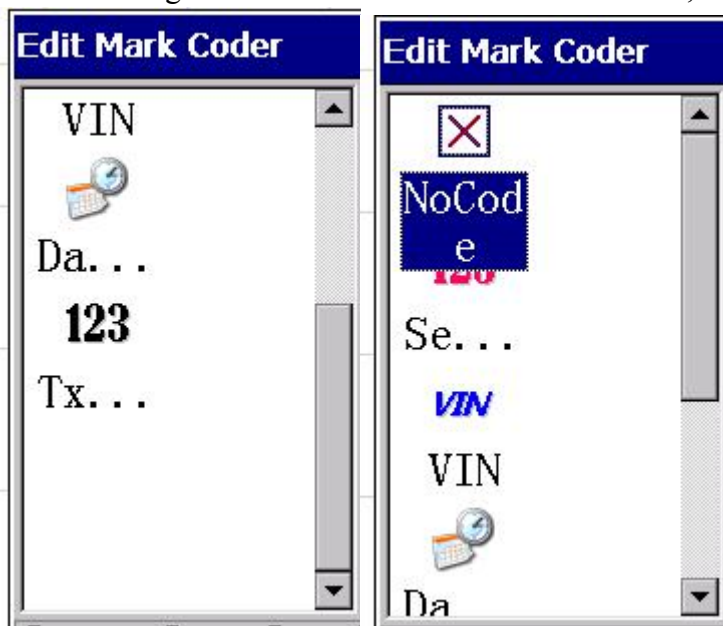
a. The NoCod: As the name suggests, the non-coding means that the content of this tag does not require an engraving after the completion of each change, so this code there is no argument.

b. Serial r: also known as serial number, in general, "serial number" are formed by a number of characters, or at least mark the end of the content of the digital characters, if the tag is not a number at the end of the content of character, this tag will not be graphic, because its content does not meet the "serial number" of the encoding format. Have "serial number" code word class tag in each engraving will be conducted after the completion of numerical computation, the results of operations by the "serial number" parameter to decide.

1. Increments: tag content values at each value of the increase in the amount of computing time, in general, is 1.

2. Repeat Count: mark the contents of the value of the engraving operation once the number of times before.

3. Min: mark the contents of the minimum value allowed, if the value is less than this value after the operation, will automatically change to the minimum value.

4. Max: mark the contents of the value of the maximum allowed, if the value is greater than this value after the operation, will automatically change to the minimum value.

5. Taboo a few: to require tag content where not allowed figure. For example some geographic taboo number "4", then you can fill in here, "4", in operation, the tag content will be automatically skipped the

number "4." Such as "123" directly after the completion of the engraving changed to "125."

Note that, regardless of how the tag value of the contents of operations, will not change the character length of the tag content, which means that, when the serial number "AB9999" add "a" would become "AB0000", rather than the "AB10000".

c. VIN: VIN (Vehicle Identification Number), the Chinese called the vehicle identification code, is a manufacturer to a car in order to identify and designate a set of code. VIN according to certain rules is composed of 17 letters and numbers, of which the first 9 in order to test bits. VIN encoding parameters and the "serial number" essentially the same, only difference is that, VIN serial number can be set at the end of the length of the code, for example, when the serial number length is set to 4:00, VIN Code "ABCDEFGH7JK889999" when completed, will change in the engraving "ABCDEFGH2JK880000" rather than "ABCDEFGH8JK890000".

d. Date Time: Date encoding type will be in accordance with its only "format" parameter directly change the content of markings, no matter what the content tag, will be to change the ground "format" the date specified time code. "Format" is a special code formed by a group of characters, which determines the character formatting tag content. Formatting characters, see Appendix 1 definitions.

2.5.3 build graphical marker
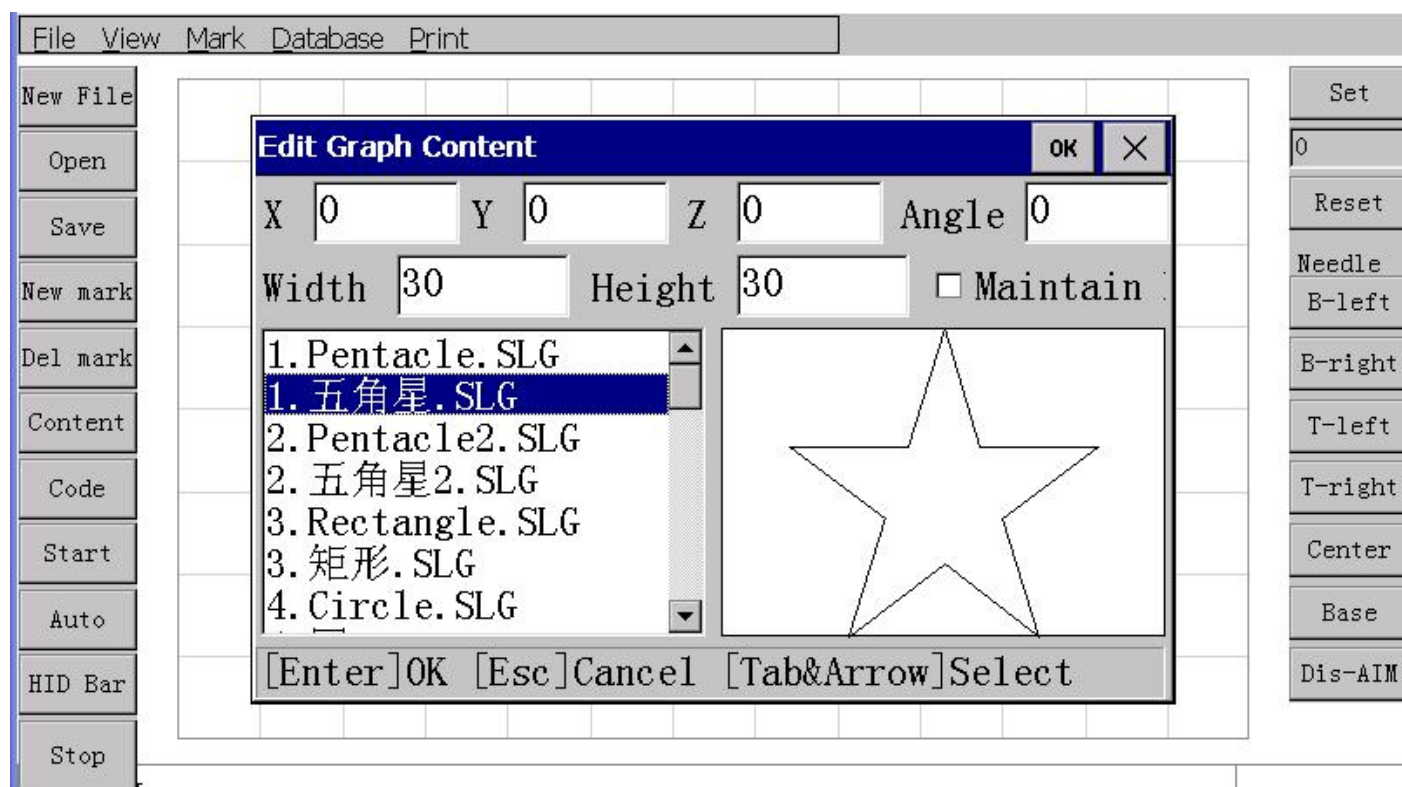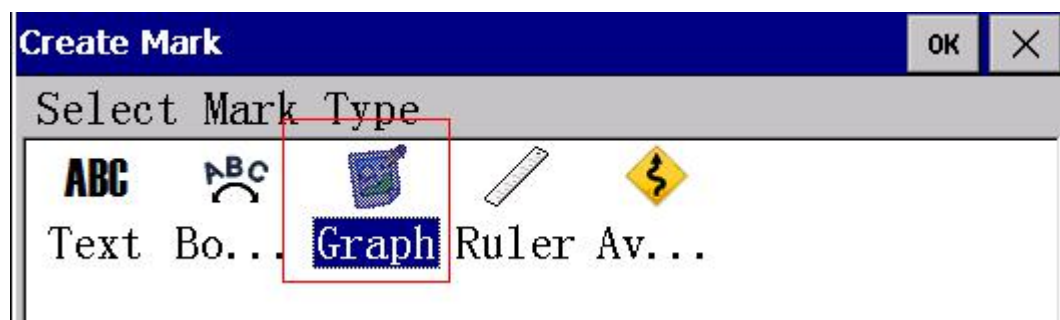
Graphic method of marking the establishment of language classes with the same tag, but the graphic tag parameters are completely different, in the tag type list select the graphic, and then in Tag Editor area left mouse button, this time an empty tag graphics will be created . In [tag] panel, click [Browse] button to open a file dialog, and then in the file dialog to select a suitable graphics file, graphic mark Jibei created successfully.

Parameters X, Y, Z, rotation angle of the meaning of the same word class tags are the same, "width", "height" is used to determine the actual appearance of the graph size, "Keep ratio" option will always keep the original graphics within the proportion of This means that when you change the width of the graph, the graph of the height will automatically calculate the proportion of graphic itself out, the same, when you change the height graphic, graphics, the width of the graphic itself will also automatically calculate the proportion of .

2.5.4 marks the establishment of benchmark
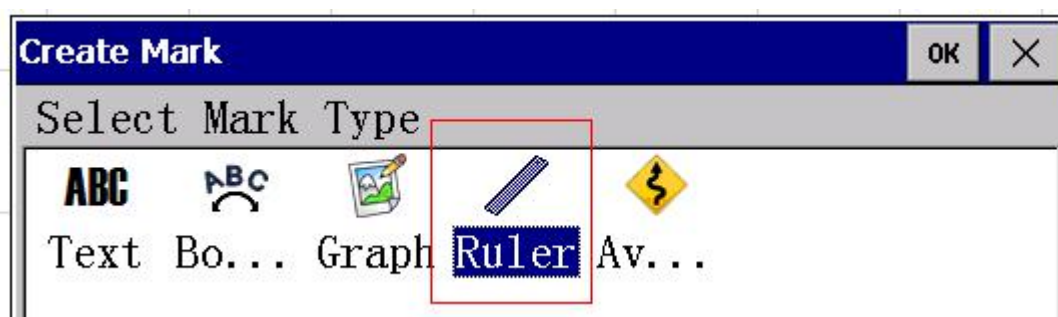
Scale parameter more, the following diagram to illustrate the use of some basic parameters of the meaning expressed by:

And the role of the various parameters are as follows:

a. Total cell number: total cell number indicated that ruler.

b. Each grid length: that between the ruler where the width of each small cell, mm units.

c. Each grid values: Note that "per grid value" and "per grid length," which is different from the concept of "lattice width," said the ruler where the actual width of each small cell, and the "cell value" is that each small grid ruler li represented by the value, usually this value is set to "1", but there are special circumstances, for example: to create an inch as the unit of the ruler, it should be in the "cell width", type 2.5.4, while in the "cell value" Enter 1, as 25.4 mm equals 1 inch.

d. Ruler Height: ruler, said the total height (some characters not included), mm units.

e. A small grid ratio: a small grid, said a high percentage of height ruler.

f. In the proportion of grid: the grid, said a high percentage of the height ruler.

g. Start value: that the ruler start bit values. Under normal circumstances from the "0" start.
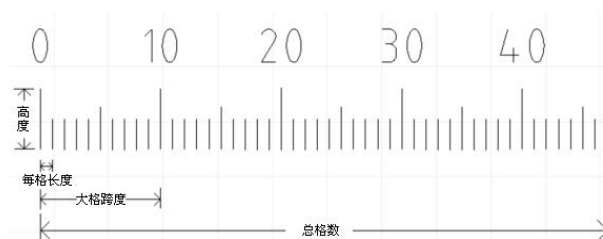
h. Large grid span: that a large number of cells within the small grid.

i. Number of decimal places: if the value contains a decimal ruler, then the values of the number of decimal places.

j. Fan-shaped radius: If the fan-shaped radius set to a valid value (not "0"), you can create a fan-shaped ruler, the following diagram:

k. Digital Font: Set the ruler on the numeric characters in the font.

l. Font Location: numerical characters from the marked distance.

m. Characters wide, high character, word spacing: These parameters are the same as with the word class tags, see the word class tag instructions.

n. Character point of view: Numerical character rotation angle.

o. Show figures showing the number of cells: the decision whether to display a ruler on the character values.
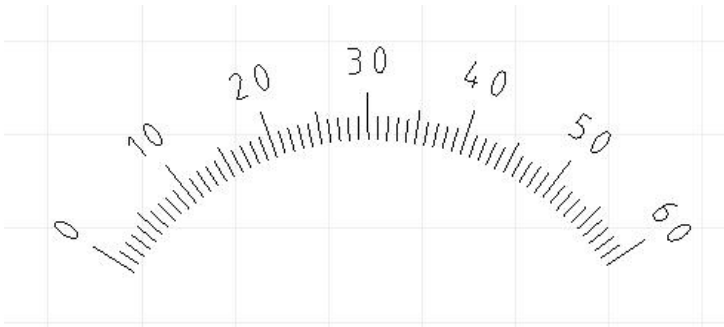
2.5.5 the establishment of bypass points
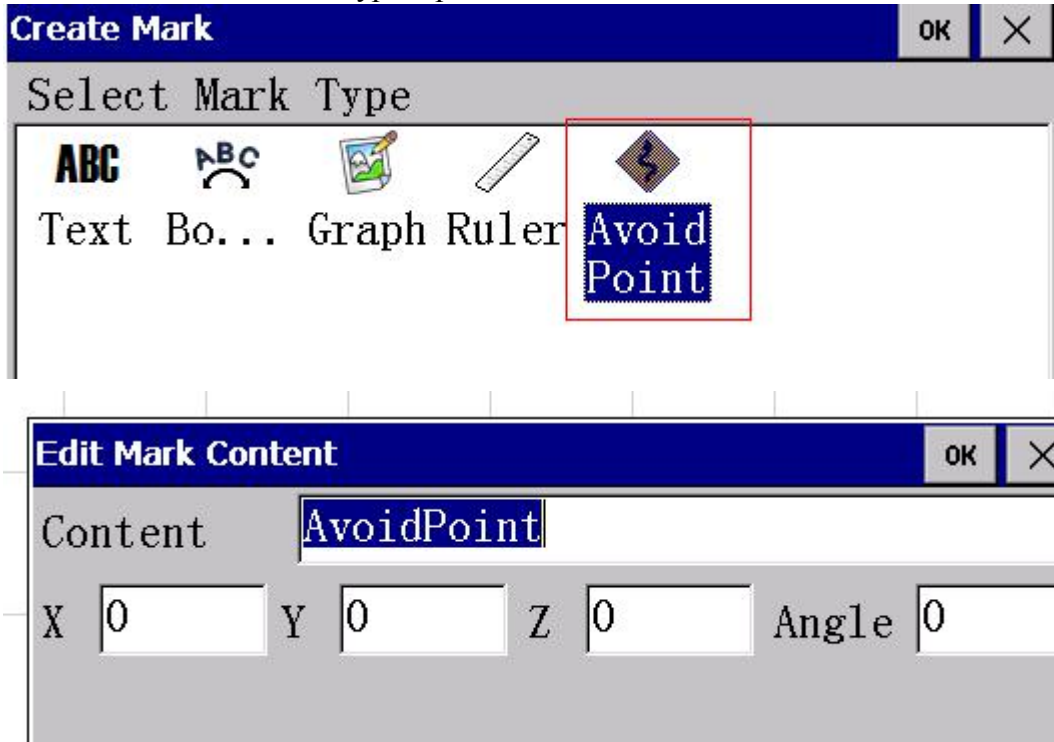
Plane in the vicinity of certain parts of the engraving may be, there are some obstacles, these obstacles in the engraving process may hinder the operation of engraving needle track, then we need to find ways to make engraving needle during operation to bypass these obstacles.

Marking control software can be set in the engraving controlled areas "detour point", so as to achieve the purpose of bypassing the obstacle. "Detour point" mean that the engraving needles must be from this point of bypass, and then walked the next one engraving mark.

As shown below, if the engraving needle
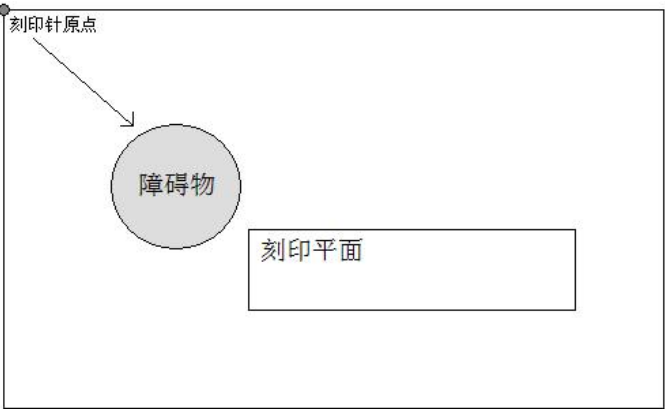
starting from the origin location, in the arrival engraving flat, it will run into obstacles, requiring a "detour points" to guide engraving needle around this obstacle。

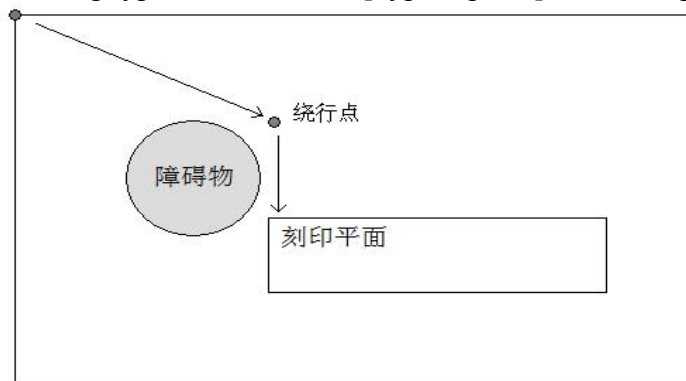Create a bypass point is simple, in the tag type list, select the [bypass point], then this points to the need to bypass the location of moving can be, as shown below:

Now when engraving began, needles will be shown by the arrow first went to "detour point", and the engraving flat, thus bypassing obstruction.

绕行点

障碍物

刻印平面

engraving direction, then walk to the

2.5.6 editors marking and pairs needle

Regard Geotagged determined except in view operation a as described using direction key and mouse methods, another ThorX6 there [Alignment] feature available, This certain circumstances, [Alignment] features than manually mobile marker location more effective and accurate. Click menu [tags], [alignment] can Open [alignment] functionality submenu, [alignment] feature have multiple Alignment follows：

a. Center of a circle / starting point: To mark the starting point of the center of a circle, or aligned, this alignment generally used to align the center of two fan-shaped Markup point.

b. Left: The left-most mark the left edge of subject, the other marking the left edge aligned together.

c. Right-aligned: the most marked of the right edge of the right shall prevail, will mark the right edge of the other aligned together.

d. Top Alignment: The top edge of the marked subject will be marked on the other edge of aligned together.

e. At the end of alignment: the most marked under the bottom edge of subject, the other marking the lower edge aligned together.

f. Horizontally: The number of tags to the same level of alignment of center line.

g. Vertical center: The alignment of multiple tags to the same vertical center line.

h. Combination line: combination of multiple tags to the line.

When the spacing is established, a number of marks will be the distance of this interval to form a line. Note that the composition of the line, but that will mark the location of grouped together, rather than marking the contents of the portfolio together, the various tags, or independent of each other, but from the location point of view, arranged in a row.

We have repeatedly mentioned earlier, each time you change the marker position, engraving needles are automatically aligned to the new location of the marker. This is the engraving control software of the automatic needle feature to note is that for pin this feature is selected only for a single marker effective, that is, when you move more than one marker at the same time, the engraving needle will not try to right quasi. Click on the menu [tag], [right needle] can open the [right needle] feature sub-menu, [right needle] feature has a variety of ways as follows:

a. The lower left corner: The engraving to mark the lower left corner for the potential.

b. The lower right corner: The engraving to mark the lower right corner for the potential.

c. The upper left corner: the engraving for the quasi-upper-left corner to the tag.

d. The upper right corner: the engraving for the quasi-upper right corner of the tag.

e. Center of a circle / starting point: the engraving for the quasi-center of a circle or a starting point to the mark, this way of needles used to make the engraving for the quasi-normal to the center of a circle fan point of the text.

f. Cessation of needle: selection, when the mobile tags, engraving needles will then not be aligned, unless the re-operation of needles.

When you select a menu approach to the pin, the next time you move the marker, engraving needle will be the way you choose to go by alignment, for example, when you select the lower right corner of the needle, then every time you move the marker , engraving needles are to the lower right corner alignment marks, rather than the lower left corner is the default.2.6 Marking the operation and set

2.5.7 Marking the order of

[Marker] panel engraving operation contains all the functionality required, but before the start of engraving, we should first understand the concept of the order engraving. When the view is only one mark, the engraving the order does not make sense, but when the view contains multiple tags, most of the time we all need to set the engraving in order to speed up the engraving process. By default, the engraving is based on marking the establishment of the order to carry out, that is, the first mark was first established in engraving, after the establishment of the labeled graphic, in some cases, this is not the problem, but if we believe that this order is notreasonable, it needs to be adjusted. Click on the menu [engraving], [engraving order] to open the engraving in order to adjust the window, as shown:

Marker order to adjust the window, the list in order according to the present engraving list view the contents of all the tags and location, choose one of them and then click "Move Up" or "Move Down" could change the tag engraving order. A simpler approach, click on "Automatic Sort" button, engraving control software will automatically top to bottom, left to right in order to sort all the tags, which is the most commonly used sorting method.

2.5.8 Marking Set

"Marking speed" refers to the engraving needle in engraving state road speed, "air walking speed" refers to the engraving engraving needle in the non-state road speed (ie the empty walk), properly set and match these two speeds can be does not affect the accuracy of the case to achieve efficient engraving. Under normal circumstances, air speed of walking speed can be higher than engraving, but preferably not more than 20 or more.

Setting the speed is very simple, you can directly drag the speed control bar, you can also text box on the right directly to input speed parameter.

Also in engraving machine parameter settings without opening the case of the window can directly use the numeric keypad on the right number "+","-" engraving speed quickly set up, every time I press the "+","-" number, will Marking rate of increase or decrease in one, if on the keyboard hold down the [Shift] key and hold, every time I press "+","-" number, will increase or decrease the speed engraving 10.

Because the engraving needle engraving process is initiated by high-pressure gas control, proper operation with the high-pressure gas, to avoid "missing pen" and "tail" of the bad engraving outcome, the following figure:

Marker at the beginning of each successive strokes of each character, the
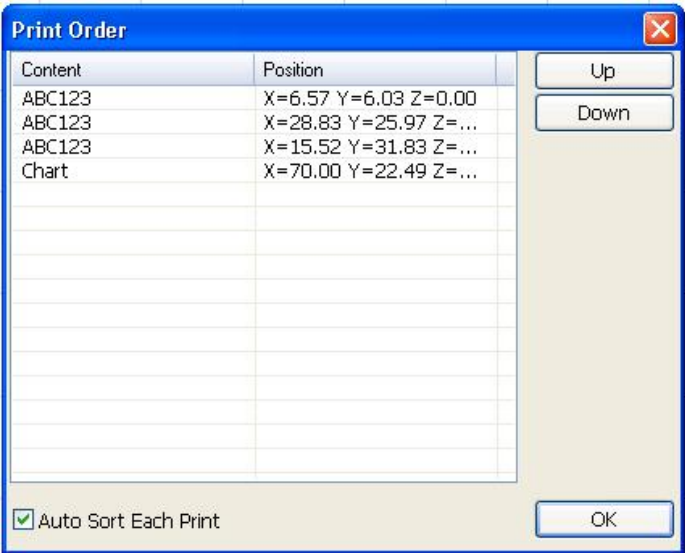
high-pressure gas source will be opened, so as to drive high-frequency impact and engraving engraving needle, but because of high-pressure gas in gas-filled need a short time, and if at this time, engraving engraving needle has already begun, while the high-pressure gas has not yet reached, there will be the phenomenon of missing pen. In order to avoid this situation arising, in the high-pressure gas source is opened, so that engraving needle in-situ high-pressure gas stop short period of time to wait for the arrival so that it can effectively avoid the phenomenon of missing pen. This is a short pause of the time we referred to as "delay put pen to paper", under normal circumstances will only take about 2-8 milliseconds.

In each successive strokes of each character at the end engraving, high-pressure gas source will be shut down, but because of the inflated high-pressure gas pipeline may also retained some of the gas is not released finished, if at this time, engraving needle began to move, then the This part of the retention of the high-pressure gas may also lead engraving needle high-frequency shocks, there will be tailing phenomenon. In order to avoid such situations arise, after the closure of the high-pressure gas source, so that engraving needle in-situ high-pressure gas stop short period of time to wait for full release, so that you can effectively avoid smearing. This is a short pause of the time we referred to as "carrying pen delay", with "delayed start to write," just like "carrying pen delay" Under normal circumstances only need about 2-8 milliseconds.

"Delay put pen to paper" and "pen lift delay" set method is very simple, to the right in the text box directly delay parameter.

If your engraving machine installed pneumatic clamps, you can set a delay amount for this fixture to press the "Start engraving" button to have enough time to clamp the workpiece and push the workpiece to reach engraving bit. The delay quantity we call the "Gripper delay."

Because the engraving machine engraving bodies are mechanical devices, so after repeated engraving prone to minor errors, if such errors do not revised, it will increase the number of times as the engraving has been accumulated continue, eventually leading to the location of engraving deviation Therefore, an automatic reset function is designed to correct such errors. The number and engraving by engraving the complexity of determining the number of auto-reset, typically, each engraving 200 times or so automatically reset once. This parameter we call "reset number of times."

Rotating workpiece diameter can be set in rotation when the rotating workpiece diameter of India.

Under normal circumstances, each engraving is completed, engraving needles should be allowed to return to the specified coordinates (generally speaking coordinate origin), the next time engraving again when starting from this coordinates, the coordinates of what we call "stand-by from the standard," "standby from standard" can be freely set by the user engraving anywhere within the region.
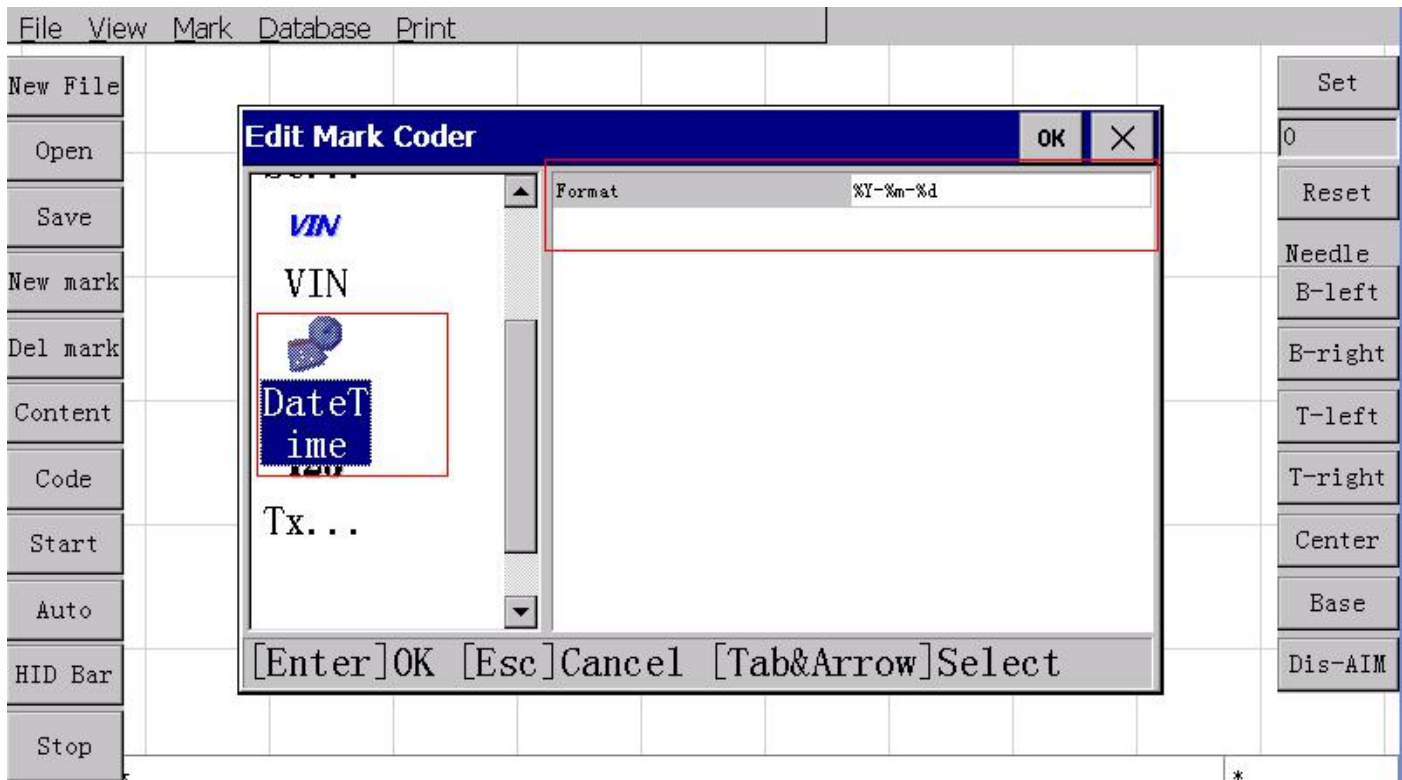
2.5.9 Marking Operation
Start engraving: engraving process begin immediately.
Marking only the selected marker: only embedded in the view, select the tag.
Automatic continuous Marking: according to the specified time, automatic marking
Reset: Reset the engraving needle to machine origin.

2.5.10 Marking in comparison with the number

New File						Set
Open						0
Save	**Edit Mark Coder**		OK	×		Reset
New mark		▲	Format	%Y-%m-%d		Needle B-left
Del mark	VIN					B-right
Content	DateT ime					T-left
Code						T-right
Start	Tx...					Center
Auto		▼				Base
HID Bar	[Enter]OK [Esc]Cancel [Tab&Arrow]Select					Dis-AIM
Stop						*

Engraving machine control software with the serial number of the engraving as well as the VIN code data to compare with the number of features, engraving engraving software to normal after the completion of each, will record all engraving of the serial number as well as the VIN code tag content, every time a user will be engraving the same The content, pop-up window will warn users to be confirmed.

Note that this feature is only saved the file has been named effective, and never saved the contents of the temporary engraving, engraving machine control software does not compare them with the numbers.

Appendix 1. The date format for character encoding

% a: day of the week abbreviation (in English form)

% A: The full name of the week (English form)

% b: abbreviation for the month (English form)

% B: The full name of the month (English form)

% c: date and time (format: day / month / year hours: minutes: seconds)

% d: Day (01-31)

% H: time (24 hour clock 00-23)

% I: time (12 hour clock 01-12)

% j: the first days of the year (001-366)

% m: month (01-12)

% M: points (00-59)

% p: 12 hour clock in the morning or afternoon (AM / PM)

% S: second (00-59)

% U: The first weeks of the year (Sunday as the beginning of the week 00-53)

% w: day of the week (Sunday to "0" 0-6)

% W: The first weeks of the year (Monday as the beginning of the week 00-53)
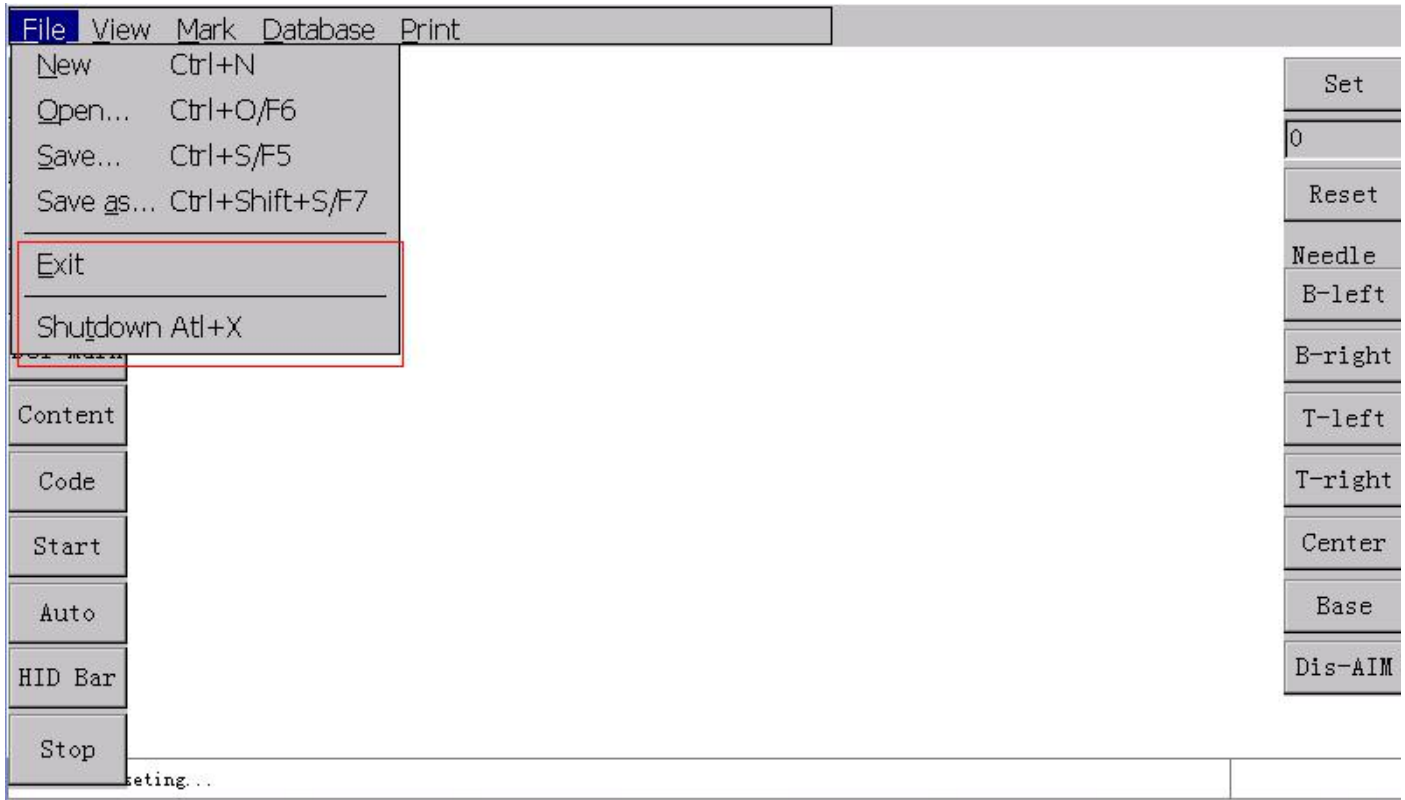
% x: Date (format: day / month / year)

% X: Time (format: hours: minutes: seconds)

% y: year (short-form 00-99)

% Y: year (four full format)

%%: A percent sign

2.6shut down

exit：Exit the engraving control software, returning integrated machine main interface。

shutdown：Safely closed integrated machine system. The integrated machine has a lot of information is stored in the integrated machine memory in the imprint process will, like the same number comparison of recording information, if the system direct power off during use, will likely make the information lost, all whenever need to shut down the power supply system, please use the safe shutdown, and wait for the shown in the picture, and then shut down the power supply system。

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In addition, when one machine to stay in the main interface, can shut down the power supply system。

Three．Document Manager

Management is stored in internal memory in one machine engraving file，When the need to maintain these files, you can use one machine in the main interface (document management) function, press F2 or click directly (document management) icon, you can open the window (document management), as shown in the following figure：
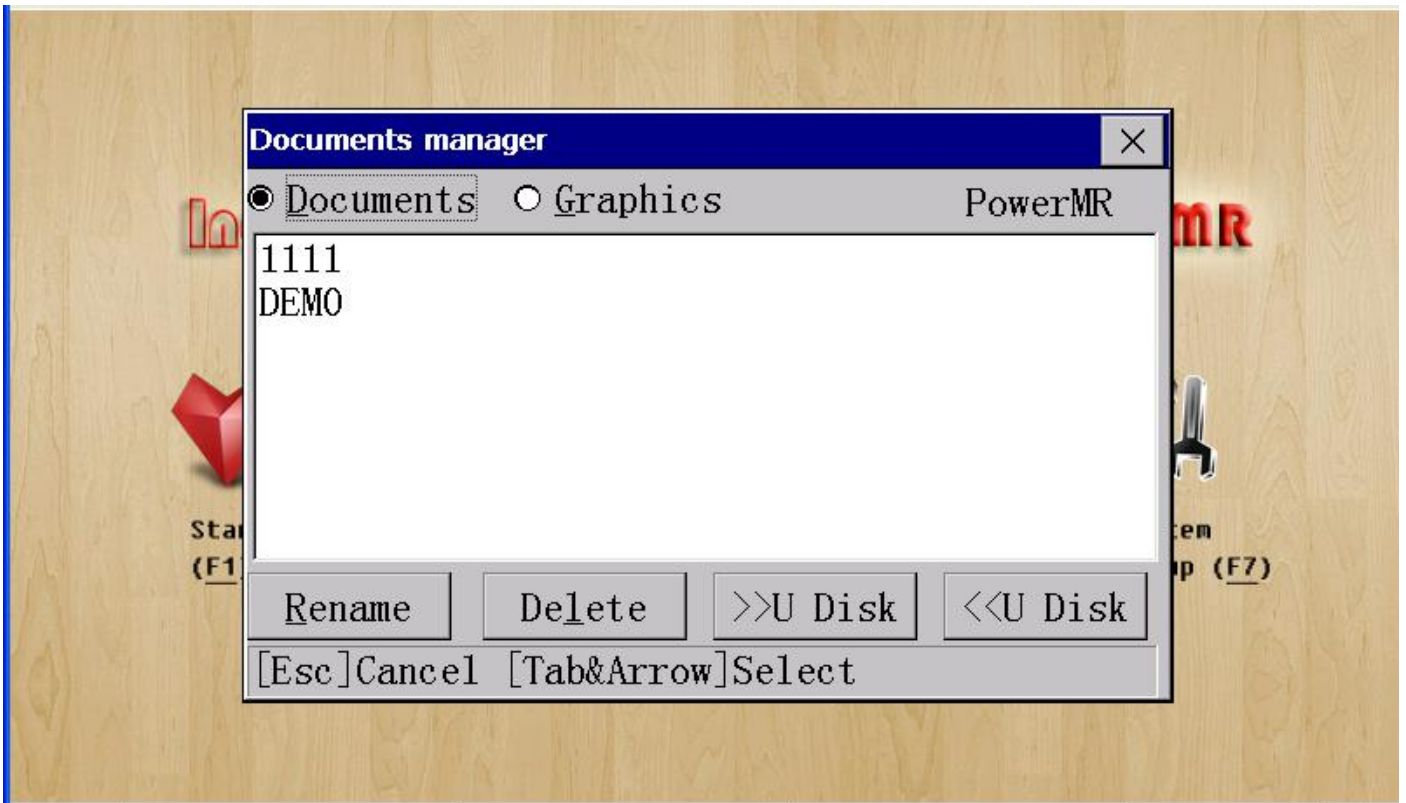
Document Manager respectively according to the documents and the use of engraving engraving graphics, can be at the top of the window you can select the type of document processing.

Name: select a file, and then click "Rename", will be able to change the file name.

Remove: select a file, and then click the "delete", can be directly deleted this file. (deleted files cannot be recovered, used with caution)

Export: U disk or the SD card into the machine, click this button, the root folder of all integrated machine internal files will copy U or SD card by the same name in the. This function can be used on one machine internal file backup.

Introduction: the U disk or the SD card into the machine, click this button, all the U disk or SD Kagan folder in the file will be copied to the integrated machine. This function can be used to recover once the backup file。

Four． Sotfware Setup

The hardware software and the function module of integrated machine internal can be installed to upgrade or adjusted by software, when you need to make the software installation, the installation of software package will contain the SD card into the machine, and then press the shortcut key F3 or directly click on the (keybord) Icon software installation, can be opened (software installation) window, as shown in the following figure：
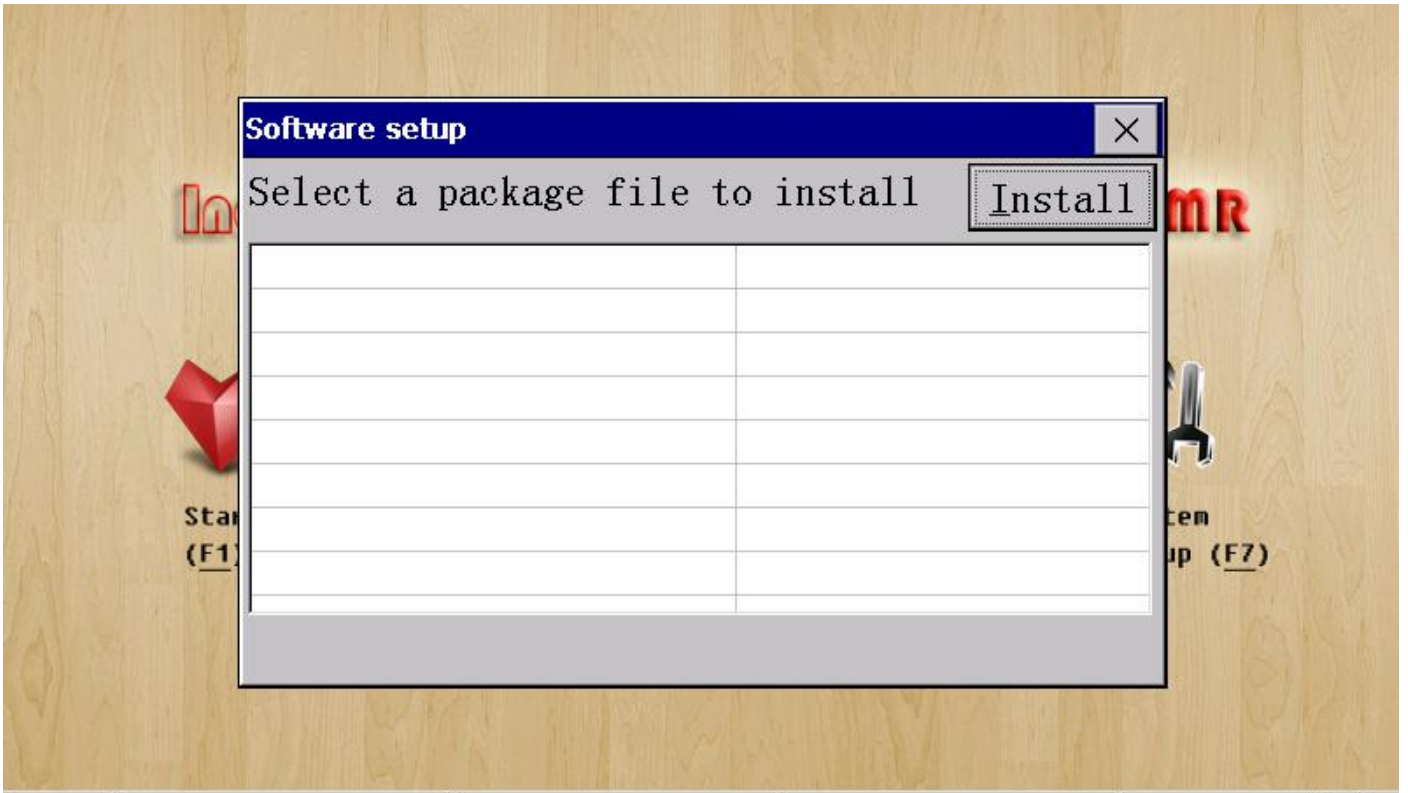
Select an installation package, for example when you need to use the replacement of one machine in the Chinese characters font, you can choose a Chinese characters here, and then click "Install" button, the Chinese characters font is installed to one machine interior.

In most cases we use (software Manager) function to upgrade the integrated machine hardware and software upgrade, refer to the corresponding description. Need to pay attention to is, hardware and software updates are not installed Chinese characters module of the small module is installed, so every time after the upgrade, should shut down the power supply system, then wait 5 seconds, and then re open the system, hardware and software upgrade will take effect。

Five. Hardware Test
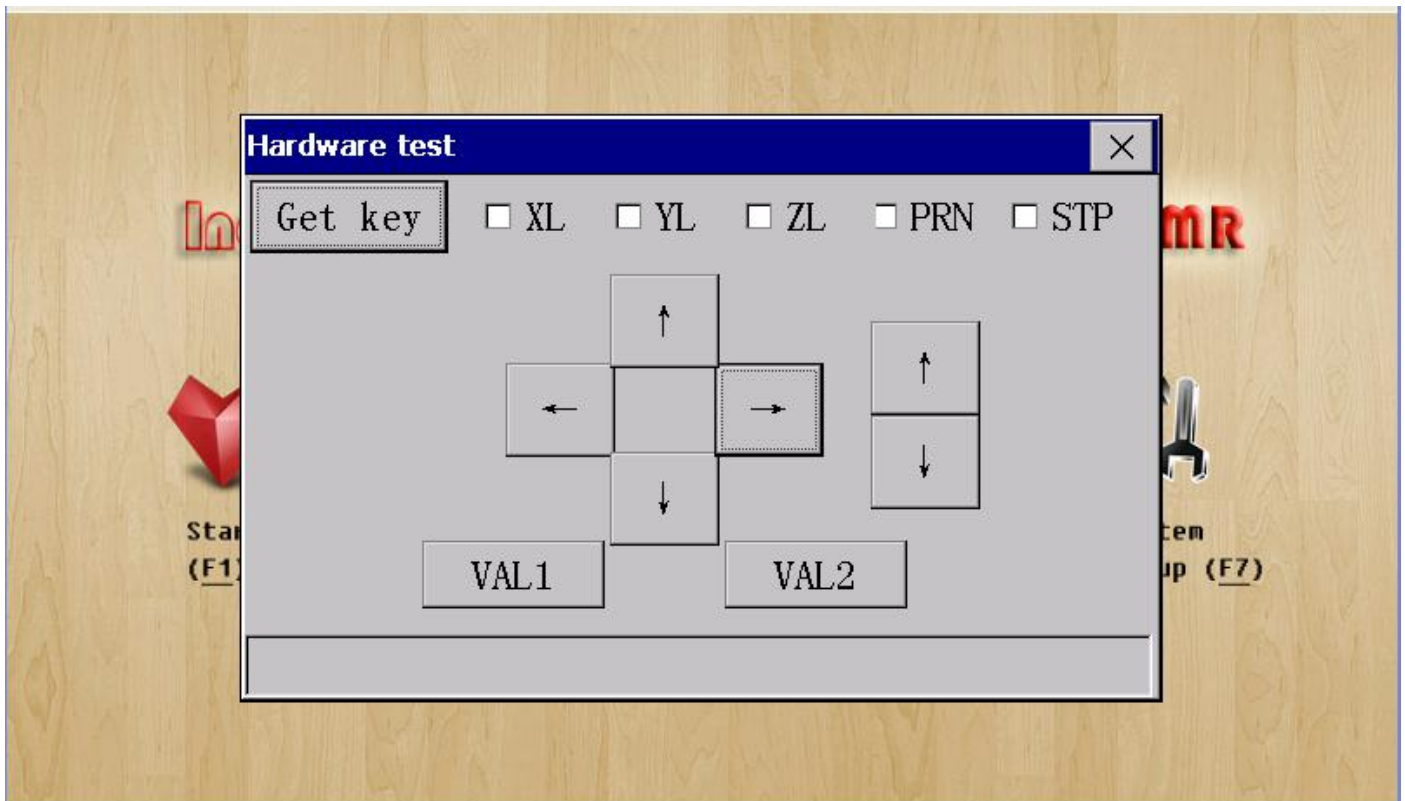
Six．System Setup

Note: the "System Setup" can only be modified to carry out by the professional installation personnel, and is not recommended for casual users to change these parameters. Error parameters may make the marking machine can not work normally, severe cases may damage the marking machine hardware。

The X range: walking range imprint machine head X axis.

The Y range: walking range imprint machine head Y axis.

The Z range: walking range imprint machine head Z axis. Note that when the Z axis for rotary marking, this range should be set to the perimeter of the actual maximum workpiece.

X step: step step step calculation method of X axis, refer to appendix 2.

Y step: step step step calculation method of Y axis, refer to appendix 2.

Z step: step step step calculation method of Z axis, refer to appendix 2. Note that when the Z axis for rotary marking, this step is invalid.

Speed, speed ratio base: drive speed and adjust relevant parameters, by different drive models to decide, no adjustment in most cases. If it is found that the integrated machine overall engraving speed too slow or too fast, please contact one of machine design engineering personnel to adjust some parameters.

The reset sequence: the way of reduction of each shaft adjusting reset when the default is X axis and Y axis at the same time reduction, fill in "XY", if you need to reset the Y axis, and then reset the X axis, should fill out the "Y, X", "x, y" empathy representing the first reset X axis Y axis. If the Z axis is also need to reset, you can fill out the "XYZ", in most cases, we should reset the Z axis, should fill out the "Z, XY", meaning the first reset, reset

the Z axis, XY axis and then reset.

Loosen the limit switch: reset after the release of mechanical origin limit switches, recommend the use of proximity switch embossing die for homing using this function, the tick.

Z as the lifting shaft: third axis Z is used as the lifting shaft. The Z axis at the engraving control all markers in the software will be available.

The Z as a standard of the axis of rotation: the Z axis as a shaft rotation using 2. For Y axis plane is invalid, the Z axis will be as the axis of rotation instead of Y axis and X axis together for 2 axis rotation engraving.

Z as an extension of the axis of rotation: the Z axis as a shaft rotation using 3. As Z axis will assist Y axis plane, 3 axis rotation imprint together with the X axis. In this mode, a single word mark will be handled by the XY axis plane to imprint, every moment of printing a word, the Z axis will rotate to the next word position, and then by the XY axis plane to imprint.

The rotary coefficient:Coefficient of rotating shaft, calculation method

The hardware parameters of the formula

Step length = motor gear diameter × π ÷ 360 × ÷ drive motor-step breakdown of the number of terms

In most cases, we use most of the motor gear diameter of 14.23, the electrical step angle of 1.8, the drive segment number 32, when the calculation steps are as follows:

Step length = 14.23 × 3.14159265359 ÷ 360 × 1.8 ÷ 32

= 0.006985134915716515625

≈ 0.0069851349 (decimal 10 can be retained)

Step angle of motor rotation factor = ÷ ÷ reduction ratio drive segment

In most cases, we use the motor step angle 1.8, rotating body reduction ratio of five times the number of the drive segments 32, when rotated coefficients are as follows:

Rotation coefficient = 1.8 ÷ 5 ÷ 32

= 0.01125