Plotter V1.2

USER MANUAL



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1.INTRODUCTION

1.1.Computer Requirement

1.1.1.Hardware Environment

100%IBM Compatible PC or Industrial Computer, With Memory of 256M or above, 10/100M Network Card, CD-ROM, VGA Color Display and above 100M Hard Disk free space.

1.1.2. Software Environment

Plotter software should run under the Windows setting, So customers are required of installing the Operating System of Windows 7 or Windows XP.

1.1.3. Compatible Device

Plotter V1.2 software supports BOYE processing devices that contain BY control system.

1.2.Software Installation and Operation

1.2.1.Software Installation

- Start Windows operating system and correct the system current time (Note: If the time is wrong, Plotter will not operate correctly);
- From the Plotter installation disk and put into CD-ROM, install Plotter software in your computer;
- Start operation according to the related prompt;
- After installation complete, installation will create Plotter shortcuts in your Start menu and your desktop.

1.2.2.Add Device

■ Double click the icon of Plotter (), Startup Plotter to enter interface (Fig.1-2-1);

Click the add button, Input device name (Fig.1-2-2);



■ Input the twenty-one-digit serial number (Fig.1-2-3);

Click "OK" button to enter Plotter software.

- To upgrade Plotter, please uninstall the old version of the 1、 software, then to install;
- 2、 NOTICE

Uninstall the software operation will remove some user information under the software installation path, please backup in time; Particular, you can backup the ini folder under the installation path, after installation, replace the ini folder you just installed by the backup files, so you may not

Device Info tett(71230004) Basic Motion Communication User paramete	Basic Motion Communication User parameters Device Info Device Plotter-LP Device Plotter-LP Modify Senial No. DFTSP2FV9RJ1TN4CNSKOB Modify
	• X C Y C Z C U Cyde Length 79.98 mm >> Key Start Speed 1200 mm/min Cyde Pulse 5400 Pulse Shift Accel 5000 mm/sqr.s Max. Range 3000 mm EStop Accel 2000 mm/sqr.s Origin Setting 5 mm Max. Start Speed 2500 mm/min Limit polarity Negar Max. Accel 2000 mm/min Dir Polarity Negar Max. Accel 2000 mm/sgr.s I'' Key Reverse I'' S Pulse I'' Enable Reset I'' Enable Limit Triger
<u>د ا</u>	Readn Output
Add Delete	Output All Read All Apply OK Can



Plotter	×	Input 9
Enter ID:	OK Cancel	 Tip: 1 numb

(Fig.1-2-2)

	-
imber must be c in 'O' is English	apitalized. 2) serial

(Fig.1-2-3)





After adding the device. please close and restart the software again. so the related equipment information can be saved to the related catalog.

1.3.PlotterGraphic User Interface

To start the software: double click the icon of Plotter, you can enter PlotterSystem. You will see a window as below:



(Fig.1-3-1)

More detail information please refer to the related chapter of "Basic knowledge".

1.4.The Characteristics of Plotter

- Undo/Redo functionalities to make editing much easier and more fun;
- Adopt 32 bit programming technology, has system-level linear and circular interpolation function;



- Able to input and save multiple device information, and choose one as the current device. When you change the current device, the device parameters (in System Setting, Motion Setting under Settings menu) will change with it. So that you can go on several of operation and control for multiple devices by this software;
- Able to import existing files into current documents to enable you to utilize multiple graphic or image files. Support PLT, BMP (1bit), DXF (R12), DST (SPIN Serial) and HPG file format;
- Able to select one or more graphic elements and apply editing operations such as mirroring, transforming, duplicating, rotating distorting, alignment, changing color to them. Able to do minor adjustment to the positions of the selected graphics elements using arrow keys. Able to edit graphic expediently with the function of nesting groups, which a group can be one element within another group.
- Able to insert text in chosen font. Able to produce the envelope curve or the outline for the closed path;
- Grid support for more precise positioning;
- The software offer data recording function. It can select the numbers entered before;



2.Basic Knowledge

2.1.Enter and Exit the System

2.1.1.Enter the System

Double click the icon of Plottert enter Plotter software.

2.1.2.Exit the System

There are three methods to exit the system;

- Click the exit button on the right up corner of the main windows of the system;
- Select the exit in the File menu;
- Press the quick key $ALT+F4_{\circ}$

2.2.Shortcut Key

Shortcut Key	Functions	Function Declaration			
F1	Using Help	Open the help file of system			
F2	Speed Setting	Set the parameters of graphics			
F3	Graphics	Display all the graphics in the screen			
F4	Work Area	All the screen display the selected graphics			
F5	Run Setting	Selective output the run dates			
F6	Run All	Output the run dates			
F7	Selected Preview	Imitate the system running path and time			
F8	System Setting	Setting every parameter for system			
CTRL+N	New	Create a new blank page			
CTRL+O	Open	Open the saved*.ble file			



CTRL+I	Import	Import graphics in different formats
CTRL+S	Save	Save the *.ble file in the current page
CTRL+Z	Undo	Undo the previous operation
CTRL+Y	Redo	Redo to the previous graphics
CTRL+A	Select All	Select all the graphics in current page
CTRL+C	Сору	Copy the selected graphics
CTRL+V	Paste	Paste the selected graphics to the current page
CTRL+G	Group	Combine the selected graphic elements into a group
CTRL+U	Ungroup	Release the group to make the elements within the group appear as themselves.



Hold down the mouse button and move the mouse, drag the entire canvas

2.3.Tool Bar



(Fig.2-3-1)

The icon in the tool bar is the common functions of the system; it shows the common tools in the menu. Move the cursor on each button, the system will display a brief explanation about this tool in the left side of the status bar. From left to right:

New	Ľ	Open	ų,	Import	2	Save	
Output to off-line file		Undo	5	Redo	2	Сору	B
Paste		Graphics		Work Area		Zoom	Q



Group	Ъ	Ungroup	×	Order	R	Batch Reproduce	200 200
Change to graph	0+0	Run All	Æ	Preview All	PA -)		

2.3.1.Group(G)

Combine the selected graphic elements into a group. All elements within a group will appear as one element. You can also use shortcut key Ctrl-G. A Group can be one element within another group, and a group must contain more than one element.

2.3.2.UnGroup(N)

Release the group to make the elements within the group appear as themselves. You can also use shortcut key Ctrl-U.

2.3.3.Sort(O)

Order the selected graphic elements in the work area. Used to change the order that graphic elements are outputted. There are six methods of ordering, including three automatic methods: By Row, By Column, Closest First and three manual methods: Input Order, Click Ordering and Mouse Guided Ordering. Advice to use automatic method first and do fine tuning later manually.

How to operate:

Click "Order" in Edit menu or click icon 🔊 in the toolbar to enter ordering mode. Press the right mouse button to bring up the following menu. (Fig.2-3-3)





- **1.Enter Ordinal :** Select a graphic element and choose Input Order will bring up a dialog as in Fig.3-4-3. You can type in an order number directly to change the order of the selected graphic element.
- **2.Enter Group:** Enter a group to edit the order of graphic sub-elements within the group.
- 3.Leave Group: Leave the current group and go back to the root level.
- **4.Click Sorting:** Click on each graphic element in the order you want, and they will be ordered according to the order you clicked.
- 5.Auto Sort: After clicks on the Auto Ordering, the following ordering menu

appears:



By Row: Order the graphic elements row by row according to given height;

By Column: Order the graphic elements column by column according to given width of the column;

Closet First: Start from the top-left corner of the working area, and order by choosing the closest element as the next one after finishing ordering the elements within the scan radius;

radius: When select the Closet First, the last graphic within the scan radius takes priority;

Optimize Path Start: Change the origin of the graphic when in the process of ordering so that to make theworking optimizes;

Automatic sorting imported graphics: According to the

customer's demand, increase the function of import graphics, the



graphics use the shortest sort method automatically the premise is the graphics which to be imported can not exceed the size of the area which the software setting in it, if exceed the area, it must do sort operation by yourself;

All: If not checked, will treat the group just as an element; while if checked, will also order the elements with a group.

- **6.Mouse Guided Sorting:** Clicks on the Start Mouse Guided Ordering to enter the Mouse Guided Ordering state. Then press the left mouse button and drag, and the graphic elements will be ordered according to the path your mouse moved. If all graph elements in the working area are ordered, the system will automatically end the Mouse Guided Ordering. You may also click on "End Mouse Guided Ordering" to end, and the remaining graphic elements will stay in the original order.
- **7.Optimize Path Start:** Optimize the path start to reduce the total operation time.
- 8.Color order :"Placed to top" operation will make the currently selected color working order to route to the front, "Placed to end" operation will make the currently selected color working order routed to the end, "Up""and "Down" will make the currently Selected color working order move up and down a bit.



The graphics can not be a combination when do perform color sorting)



Mouse Guide Ordering follows a principle: When an element encloses other elements (called sub-elements), the sub-elements have to be ordered first for the laser working purpose. Ordering By Row or By Column goes in the shape of letter S to reduce machine



2.3.4.Batch Replicate(B)

Reproduce the graphic according to the quantity and interval in the Batch Reproduce dialog.

How to operate:

Select graphic elements to be reproduced, click icon in the toolbar or select "Batch Reproduce" in Edit menu, and Batch Reproduce dialog will appear as in Fig.2-3-6.

Batch Replicate	
Horizontal Quantity 1 Interval 0.01 mm Area Width 0 mm	Vertical Quantity 1 Interval 0.01 mm Height 0 mm
	OK Cancel

(Fig.2-3-6)

Specific instruction:

Quantity: Number of copies to generate horizontally or vertically;

Interval: Distance from border to border between copies horizontally or vertically;

Full In Work Area: Select this item, click "OK" key to make the system auto generate one batch of the same graphic that arranged full surface;

Fill Area: Select this item, click "OK" key to make the system auto generate one batch of the same graphic that fill the specified area.

2.4 Transform Bar



(Fig.2-4-1)



Used to localize and zoom the selected graphics.

Horizontal distance	\leftrightarrow	Vertical distance	\$ Lock	9	Rotate	C
Polygon Setting	\bigcirc	H-Mirror	V-Mirror	Ø	Paintbrush color	1
Colors of selected graphics		Location of selected graphics	Туре		Туре	

2.5.Color Bar



The Color Bar is used to change the color of the selected graphics by clicking the button in the toolbar.



The last button can be used to self-define the color by the color palette.

2.6.Alignment Bar

```
(Fig.2-6-1)
```

The icon in the alignment bar is the common ways for alignment. Move the cursor on each button, the system will display a brief explanation about this tool in the left side of the status bar. From left to right:

Align Left		Align Vertical Center	**	Align Right	≯∎ →0	Align Top	
Align Horizontal Center	**	Align Bottom	<u>*</u>	Align Center	<u>ark</u>		



2.7.Insert Tool Bar

The icon in the Insert Tool Bar is the common tools for drawing and inserting. Move the cursor on each button, the system will display a brief explanation about this tool in the left side of the status bar.From left to right:

Draw ellipse	0	Draw rectangle		Draw Circle	0
Draw lines	b	Draw Arc	r	Draw Spline	\leq
Draw polygon	\diamond	Insert text	ABC	Insert Location Frame	••
Insert file no.	NO.				

2.8.Curve Editing Bar

 $\checkmark \square \not \land \not \land \checkmark + - \neg \cap \ \square \not \land \not \Rightarrow \Rightarrow \blacksquare \land (Fig.2-8-1)$

The Curve Editing Bar contains icons for curve editing tools. It can add/delete some nodes from the curve, break the curves, and close the curves. Move the cursor on each button, the system will display a brief explanation about this tool in the left side of the status bar.From left to right:

Node Editing	ſ	Make Closed		Add Node	/s.,	Delete Node	K.
Change Start Point	* *	Break Apart	∔	Link Up	+	Change To Curve	~
Change To Line	D	Delete Segment	*	Locate Node	\$	Merge lines	¢
Split graph	÷	Fill Graphics		Delete SuperPosition	×		



2.9.Control Flat Bar



Can read the relevant file information of device through Control Flat Bar.

Device: Contains the current selected device name and IP address;

File Information: Display the file name in the opposite order of memory files, and do delete, run, pause, continue, terminated operation to file or see the current file information, make the equipment empty will delete all the files on the device and do formatting operations for the file system;

Direction Key: To control the head moving;

Keyboard Control: Use the direction key on keyboard;



1.Do any operation on the file, you must select the response file;

2. To delete the file, you can select multiple files by shift + left mouse button to delete together.



3.Basic Operations

3.1.Basic Operating Process

■ Set the parameters in motor setting, motion setting and through the setting menu, set the machine state through the Device Information Bar, make sure

the parameters in d	Basic Motion Communication User parameters
Setting(S) Help(H) System Setting F8	Pen Control Delay Drop Delay 0 ms Lift Delay 0 ms
User Parameters	Starting Position
Run Setting	C Top-left C Top-right . ● Bottom-left C Bottom-right
Smoothing Setting(T) Grid Setting(G)	⊂ Return Position
Options(O)	Absolute coordinate Return position Absolute origin
	Readin Output

Make the graphics or read the graphics file in other file;





× Speed Setting Display Working Color Speed Apply To All Ŀ Ū 5000 1 Basic Setting Apply Speed 5000 mm/min Reserve 0 mm ОΚ Cancel

According to the file, set appropriate parameters.(Double-clicked the

Execute the drawing work.

	6
🗅 🖻 🚡 🖬 💁 🗠	[12] [13] [13] [14] [14] [15] [14] [15] [14] [15] [14] [14] [15] [14] [14] [15] [14] [14] [14] [14] [14] [14] [14] [14



Run			
Device			
Name: tett		-	Attribute
State:			
Types: Plot	ter-LP		
IP: 192	.168.1.100		
Port:		🔲 Save A	s Offline File
Output Range	Send Off	line File	
• Al	🗌 🗖 Outp	out Offline File	
C Selected			
Startup Mode			
C Auto	C Series	Running 1	Times
Manual		Interval 0	s
	Cancel	Start	



3.2.Editing with Mouse

3.2.1.Select

- To select a graphic element, just click on it. When selected, there will be eight small squares shown around the element and one "x" shown in the center;
- To select multi-graphic elements, press the left mouse button, hold it, and drag a rectangle to cover the graphic elements and one "x" shown in the center;
- To select a compound, you can just click on it ,you will see two empty squares in the center instead of "x".

3.2.2.Move

Select the graphic element, and move the cursor to the center, you will see that the cursor becomes "+". Then press the left mouse button and drag, the graphic element will move with your mouse move.

Select the graphics, press the button SHIFT, Using the mouse to drag the graphics, figure move only in X or Y direction. The graphics will move on the direction which the mouse move nearly.

3.2.3.Zoom

Select the graphic element, and move the cursor to one of eight small squares, the cursor becomes double arrowhead icon. Then press the left mouse button and drag, the graphic element will zoom with your mouse move.

3.2.4.Rotate

Click the selected graphic element again to get into rotate/distort mode, the selection display will become four short lines on four sides, four short curves around the corners, and the icon in the center. The icon represents the reference point for rotation, and you can move it by mouse. Move the cursor to the one short curve



of the four short curves, press the left mouse button and drag, the graphic element will rotate with your mouse move around the reference point.

3.2.5.Distort

Click the selected graphic element to get into rotate/distort mode. Then move the cursor to one of the short lines on the sides, press the left mouse button and drag, the graphic element will distort with your mouse move around the center.

3.2.6.Grab

Press the Mouse middle button, the mouse will become the icon $\langle \gamma \rangle$, then press the right mouse to drag the window at will.

3.3.File Menu

Click File in the Menu Bar, the following menu appears:

New (N)	Ctrl+N
Open (Q)	Ctrl+O
Import (I)	Ctrl+I
Close(C)	
Save (<u>S</u>)	Ctrl+S
Save As (<u>A</u>)	
Save as Offline Fil	le
Recent Files	
Exit(X)	



3.3.1.New(N)

Create a new document. You can also click the icon D in the toolbar or use shortcut key Ctrl-N.

3.3.2.Open(O)

Open an existing file. You can also click the icon in the toolbar or use shortcut key Ctrl-O. Can open 5 file formats: PLT.BMP.DXF.DST.HPG and BLE. Among



them BLE is the main file format and the only one Plottercan save to.

Through the "menu"-"file"-"open" or "open" button in the commonly used toolbar, pop dialog box "open", as show in Fig3-3-2. The file type increases the bitmap format selection.

Open						? 🛛
Look jn:	🗀 test		~	O d	D	
My Recent Documents Desktop	Language BoyeTool.dll LaserCA.exe SpeedCal.dll Veredist_x86_ VecBase.dll	2008EN.exe				
My Documents						
My Computer						
	File <u>n</u> ame:				~	<u>O</u> pen
	Files of type:	All files(*,*)			~	Cancel
My Network		Open as read-only				

(Fig3-3-2)

3.3.3.Import(I)

Import an existing file and merge it into the current document. You can also click the icon in the toolbar or use shortcut key Ctrl-I. Can import 5 file formats: PLT.BMP.DXF.DST.HPG and ai, the software supports preview function when choosing a file.

3.3.4.Close (C)

Close the current document.

3.3.5.Save(S)

Save the current document to the corresponding BLE file. The settings are saved along with graphic information. You can also click the icon \square in the toolbar



or use shortcut key Ctrl-S.

3.3.6.Save As(A)

Save the current document to another BLE file. Will prompt for the new file name.

3.3.7. Output the offline files

Save the current file as the off-line files format (ULE format), Can directly click the icon in the toolbar. The saved offline files can be copied to the device through U disk or through the "Send Offline Files" way to sent to the device (via the F5 shortcut key to open).

3.3.8.Recent File

Shows recent files that you have used. You can click a file name and open it directly.

3.3.9.Exit(X)

Exit from Plottersoftware. Will prompt you to save if you have edited the open documents but have not saved them.

3.4.Edit Menu

Click Edit in the Menu Bar, the following menu appears:

Edit(E)	View(V)	Setting(S)	Help(
Undo	5(U)	Ctrl+Z	
Reda	o(R)	Ctrl+Y	
Сору	/	Ctrl+C	
Paste	9	Ctrl+V	
Selec	t All(A)	Ctrl+A	
Sort((O)	F11	
Crea	te Profile	Ctrl+Q\Ctrl	+W

(Fig3-4-1)



3.4.1.Undo(U)

Undo the last operation of changing the graphic shape and position. You can also use shortcut key Ctrl+Z.

3.4.2.Redo(R)

Redo the last operation that was undone. Can use shortcut key Ctrl+Y.

3.4.3.Copy

Copy the selected graphic. Can use shortcut key Ctrl+C.

3.4.4.Paste

Paste the copied graphic. Can use shortcut key Ctrl+V.



3.4.5.Select All(A)

Select all graphic elements in the document. You can also use shortcut key Ctrl-A.

3.4.6.Sort(O)

Order the selected graphic elements in the work area. Used to change the order that graphic elements are outputted. There are six methods of ordering, including three automatic methods: By Row, By Column, Closest First and three manual methods: Input Order, Click Ordering and Mouse Guided Ordering. Advice to use automatic method first and do fine tuning later manually.

3.4.7.Create Profile(F)

Create outlines for closed path. We can set the distance between the outline and the original graphics, set the way of producing outline, the color and whether to keep the original graphic when producing outline.



Creat Profile		×
Distance	5	mm
Connection	Line 👻	
Color		More Color
📝 Kee	ep Original 📃	Enveloping Line
	ОК	Cancel

(Fig.3-4-2)

Distance: The interval between the outline and the original path;

Connection: The method for connecting outline;

Color: The color of outline;

Enveloping Line: Generating the outline of the selected graphic in order to define the engraving area. It largely improves the work efficiency;

Keep Original: Select to keep original graphic when producing the outline, otherwise the original graphic will be deleted (this function invalid for the Enveloping Line).



3.5.View Menu

Click "View" in the menu bar, the following menu will appear:

View(<u>V</u>)	Setting(S)	
🗸 Toolb	ar(T)	
✓ Pan/Z	oom	
✓ Color		
🖌 Status	;(S)	
Conso	ole	
 Alignr 	ment(A)	
Edit(E)	
✓ Insert	(D)	(Fig.3-5-1)
		(11g.5-5-17

3.5.1.Toolbar(T)

Show or hide the toolbar.

3.5.2.Orientation/Zoom

Used to set the location and transform for the graphics.

3.5.3.Color

Set the color for the graphics.

3.5.4.Status (S)

Show or hide the status bar. Status bar shows information about the selected menu item or toolbar icon on the left, and shows the coordinates of the cursor.

3.5.5.Control Flat(F)

Show or hide the control platform.

3.5.6.Alignment (A)

Show or hide the alignment bar.

3.5.7.Edit (E)

Show or hide the edit bar.

3.5.9.Insert (D)

Show or hide the insert bar.



3.6.Setting Menu

Click "Setting" in the menu bar, the following menu will appear.

Setting(<u>S</u>)	Help(<u>H</u>)			
System	Setting	F8		
User Pa Run Set	rameters ting			
Smooth Grid Set	ing Setting(T) tting(G)			
Options	(O)		(Fig.	3-6-1

3.6.1.System Setting

Select "System Setting" or press the button F8 will open the system setting window (As Fig.3-6-2).

Device Info Device (71230004) Basic Motion Communication User paramete	Basic Motion Device Info Device Device Serial No.	71230004 Plotter-LP		Bord No.	1	Modify
		φx	Сү	⊂z	сu	
	Cycle Length	79.98	mm >>	Key Start Speed	1200	
	Cycle Pulse	6400	Pulse	Shift Accel	5000	
	Max. Range	3000	mm	EStop Accel	20000	mm/sqr.s
	Origin Setting	5	mm	Max. Start Speed	2500	
	Limit polarity	Nega 👻		Max. Speed	80000	mm/min
	Dir Polarity	Nega 👻		Max. Accel	20000	mm/sqr.s
	I⊄ Key Reverse I⊄ S_Pulse I⊄ Enable Reset I⊄ Enable Limit Triger					
				Read	n _	Output
F						
Add Delete			put All	Read All	Apply	OK Car

(Fig.3-6-2)

Add: Add new device;

Delete: Delete the current device;

Read All: Read in the parameters of all page in device;

Output All: Output the parameters of all page in device;



Apply: Make the current modify valid;

OK: Make the current modify valid and close the dialog;

Cancel: The current modify is invalid and close the dialog.

3.6.1.1.Basic parameters

Modify: Modify the serial number for the current device;

Cycle Length: The distance that the head travels when the motor turns one cycle;

Cycle Pulses: The number of pulses output that the motor needs to turn one cycle;

Max.Range: The size of the work area of the device. This setting has to be compatible with the device; otherwise it might cause damage to the device;

Origin Setting: The logical origin position. if this axis enabled hard limit protection, it should be $2\sim5$ mm. If set 0, the axis moves to the min. coordinate 0, which might make the limit effective, so will trigger the hard limit protection wrongly and the machine will stop urgently. If disable hard limit protection, the value can be set $0\sim5$ mm;

Limit Polarity: it is used to set the high and low level mode of spacing/limit signal. When the motion axis arrives at the spacing/limit position and input a low-level signal to the controller, the spacing/limit polarity should be set to negative at this time;

Direction Polarity: Direction polarity modification can move the motor to the opposite direction. The modification purpose is to make the axis moving to the origin when resetting. If this axis moves far from the origin on resetting, it means the direction polarity setting is wrong and should be modified;

Key Start Speed: it means the starting speed to move the axis by way



of the keys on the keyboard;

Shif Accel: it means the acceleration to move this axis by way of the keys on the keyboard;

EStop Accel: if the "Enable Limit Triger" is used, when the axis moves to the position of the limit, it will be Emergency stop operation of the axis with EStop Accel;

Max.Start Speed: it means the speed of the motion axis in direct start from the idle condition. If this value is excessively large, it will make the motor lose steps, jar and even squeak; if small, it will reduce the running speed of the whole figure. If the inertia of the motion axis is larger (the axis is heavier), you can set a smaller jump-off speed; if smaller (the axis is lighter), the jump-off speed can be increased. For example, the typical value is 300~1800mm/min;

Max.Speed: it means the maximum limit of motion speed that this axis can bear. This parameter has something to do with the driving force of motor, the inertia of motion axis and its drive ratio. For example, the typical value is 12000~30000mm/s;

Max.Accel: it means the maximum acceleration of the motion axis in accelerated or decelerated motion;

Key Reverse: to control the motion direction when move the axis by pressing key manually. When set the direction polarity parameters correctly, if press the direction key on the panel, the axis will move to the reverse direction, so enable this item;

Single Pulse: Select"Single pulse"for this motor mode, otherwise as "Double pulses";

Enable Reset: if the machine is configured this axis, "Reset Enable" should be opened; if no, "Reset Enable" should be prohibited. This



parameter is mainly to control the "Reset Enable" option in user parameters and "axis reset" in function keys, to prevent user to reset one axis which is not exist in real;

Enable Limit Triger: it is used for whether the hard-spacing protection of this axis is Enabled;



After modified the configuration parameters in the manufacturer parameters, the system should be reset. Such a modification can function upon the resetting of

3.6.1.2. Motion Parameters

Basic Motion	Commun	ication User	parameters		
Home speed	5000	mm/min	Quick setup	Normal	•
Idle speed	20000	mm/min	Idle acc factor	100	(0%-200%)
Idle acc	2000	mm/sqr.s	Idle delay	0	ms
Move Setting					
Move acc	3000	mm/sqr.s	Start speed	200	mm/min
Move factor	100	(0%-200%)	Min acc	400	mm/sqr.s
Small circ	e speed li	mit	Speed factor	80	(0%-200%)
				Readin	Output

(Fig.3-6-3)

Home speed: This parameter determines the machine speed of returning to origin. When the machine is larger breadth, to set the higher reset speed, but cannot too larger.

Idle speed:It's the speed that the device moves in light-off. A higher idling speed can shorten the operation time of the entire figure, while excessively higher idling speed may cause dithering of the tracks, therefore, you should take all relevant factors into consideration



when setting;

Idle acc:match the accelerated speed of air travel time,idle acceleration must match idle speed,if set too slow the idle speed may can't reach the value which set before, if set too fast, the mechanical structure may not stand and shake. In general, idle acceleration slightly higher than move acceleration;

Idle delay: The extension of time when idle start work;

Idle acc factor:the coefficient of idle walking speed, the greater the ratio, the greater the idle speed;

Move acc: the speed of corresponding move acceleration

(move speed is the same as layer speed of layer parameter);

Move acc factor:the coefficient of moving speed, the bigger the ratio, the greater the working speed;

Start speed:The minimum speed when turning around.The start speed can be slowed down when there are many sawtooth in the processing graphics;

Min acc:It should matched with start speed;

Speed factor: The accelerated percentage when turning around;

3.6.1.3.Communication



(Fig.3-6-4)



There are two kinds of connection way :USB and network.Select the connection whether through USB or IP,and then click"Connection Test",if the connection is successful,then it is set up correctly.



 make sure the device IP and PC's IP belong to the same network segment;
 if PC can be connected to equipment, but can not send data, check the PC's network firewall-related settings;

3.WIN7 and above operating system. please set the

3.6.1.4.User parameters

Basic Motion Communication User parameters
Pen Control Delay
Drop Delay 0 ms Lift Delay 0 ms
Starting Position
C Top-left C Top-right 📀 Bottom-left C Bottom-right
Return Position
Absolute coordinate Return position Absolute origin
Readin Output

(Fig.3-6-5)

Drop Delay: It means the delay time set before pen drop down;

Lift Delay: It means the delay time set before pen lift up;

Starting Position: The position of head before start moving. The head will be back to this position once the process is done. You can set it to four corners of the working area;

Absolute Coordinate: You can directly check this option when you want the



graphics location in the graphics display area corresponding to the actual work location of processing. Then the graph position will be no longer related with the actual output position of the head and orientation point, but always regarding mechanical origin as the anchor point.

Return position: the mechanical origin, the locating point and no return, this parameter decides the head stop position when finished each processing.Drive.

3.6.2.User Parameters

Quick open the user parameters in the system settings.

3.6.3.Run Setting

Run	
Device	
Name: tett	 Attribute
State:	
Types: Plotter-LP	
IP: 192.168.1.1	100
Port:	🔲 Save As Offline File
Output Range	Send Offline File
• AI	Output Offline File
C Selected	
Startup Mode	
C Auto	C Series Running 1 Times
Manual	Interval 0 s
Cancel	Start

(Fig.3-6-6)

Device: Information about the selected Device, press attribute to see

the parameters of system setting;

Save as off-line file: Whether to output the file and save as off-line file; **Output Range:**



All: Select this button can run all graphics in work area; Selected: Select this button can run the select graphics in work area; Startup Mode: The machine is set as automatically start, manually start and continuous start, if choose the automatically start, then the file sends over, , the device will start to run the file, but the manual start requires human intervention to run the file, continuous start refers to keep running the same file, it requires human intervention only when the running start, you can set the number of continuous operation and the time interval between the two runnings;

Send Offline File: Send the saved off-line file to device;

Center Position: Before run the file, the head will be sent to center position of the graphics;



Choose the device in pull-down menu, will display in status bar whether it is successfully connect on with the current device, When send or deal with data, we can see the degree of progress.

3.6.4. Smoothing Setting

mooth parameters	×
Auto smooth	
Curve divide 0.4	Smoothness 0.9
	Cancel OK

(Fig.3-6-7)

Curve divide precision: It means precise value of divided curve.

Smoothness: The curve will more smooth when the accuracy is high.



3.6.5.Grid Setting(G)

Settings about grid, whether to show the grid, to snap to the grid and the style of the grid etc.

Grid Setting	(
X Gap 🔟 mm 🗆 Show	
YGap 10 mm □ Snap	
Style	
● Dot ○ Line ○ Dot and line	
Snap To	
 Top-left Top-right 	
C Bottom-left C Bottom-right	
OK Cancel	

(Fig.3-6-8)

Horizontal Gap: Horizontal distance between two neighbor grids lines;

Vertical Gap: Vertical distance between two neighbor grid lines;

Show Grid: Whether to show grid in the view or not;

Snap to Grid: Whether to snap the graphics to the grid position when they are moved;

Style: Style of the grid, could be Dot, Line or Dot and Line;

Snap Mode: Which point of the graphics to snap to grid.

3.6.6.0ptions(0)



(Fig.3-6-9)



StartUp

Auto-open recent files: The screen appeared in the interface of open software. (it will no appear startup screen if do no select this option);

File Import

DXF Char Remove: Whether skip the text when loading a DXF file;

CorelDraw 11 PLT: The size of the graphics in the PLT file generated by CorelDraw 11 is smaller than as designed. With this option checked, graphics from all CorelDraw PLT files will be scaled up to 101.6% to compensate. Check this if you are using CorelDraw 11;

DXF Arc Keep: When loading a DXF file, set the Arc change to curve or not;

PLT Vertical Mirror: If you select the PLT Vertical Mirror, when input the PLT file, the system will automatically turn this file into the vertical mirror and output it;

DXF Vector Merge: When loading a DXF file, whether connect the line segments into a path when they are close to each other, so that the working can go quickly;

Auto Smoothing: Auto smooth the input graphics to make working much more successful. You can adjust the smoothing parameters in its setting menu bar to get better result;

Auto-optimize path start:Automatic optimize the graphics' origin to corner, and the offer a speed and a effect;

Auto-Mirror Horizontally: Auto horizontally mirror when import a file;



Save

Auto Save: Select "Auto Save", set time interval, when close the dialog ,after a few time, the system will save a recoverable file in the"Recoverable File".

Process

Modify file name: allow to modify file name before file send to machine .

3.7.Help Menu

Select "Help" in the menu bar, the following menu will appear as Fig.3-7-1:



3.7.1.User's Manual

Launch the online User's Manual. You can select "User's Manual" in Help menu or press F1.

3.7.2. About Plotter(A)

Click this icon **2** in toolbar, Displays the version and copyright information. Users can get the latest information, technical substance, software upgrade through the web of Boye Laser, and can also contact with Boye Laser Company through phone, fax and email and so on.

