Operation Manual for BOK CAD

Contents

Software Operation Instructions

BOK Intelligent Garment Cloud CAD System V22 is the latest generation of intelligent garment CAD system developed by Shenzhen BOK Times Technology Development Co., Ltd. It is also currently the most intelligent intelligent garment cloud CAD system.

Section 1: System Introduction

I. Software Download and Installation

(1) Software Download

1.Enter the official website of BOK, www.bokecad.com, in the browser. Click on "Data Download" in the download center. You can also click on "Download BOK Free CAD Learning Edition" (as shown in Figure 1-1).

Figure 1-1

2.Find the corresponding product version and corresponding upgrade package, and click the download on the right (as shown in Figure 1-2).

Figure 1-2

(2) Software Installation

1.Find the installation program and install it by double-clicking the left mouse button

(as shown in Figure 1-3).

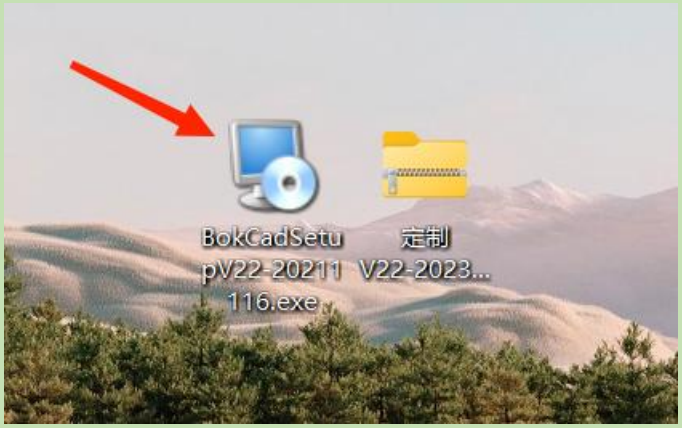


Figure 1-3

2.Click “Next” (as shown in Figure 1-4)

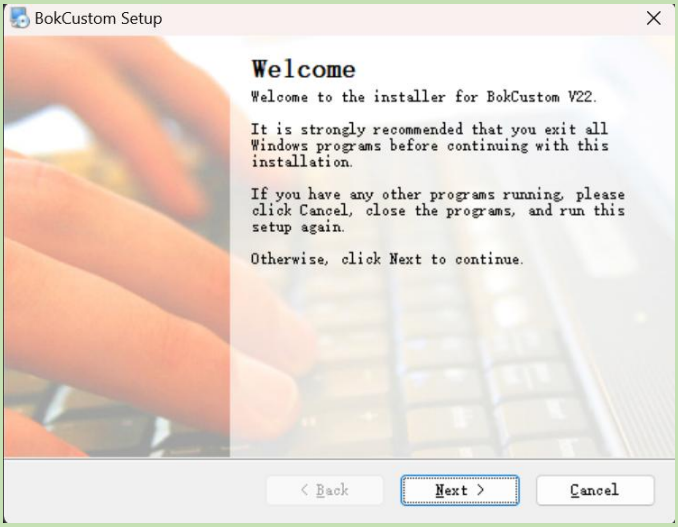


Figure 1-4

3.After entering the name, click “Next” (as shown in Figure 1-5).

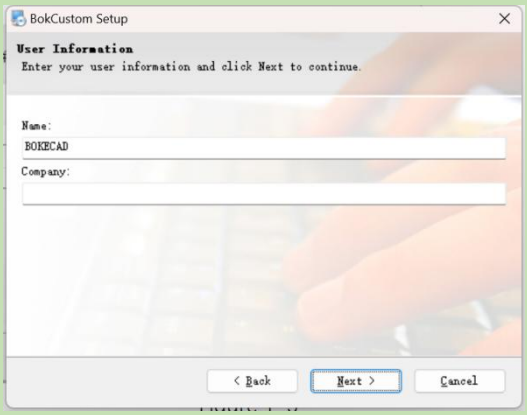


Figure 1-5

4.After changing the installation directory, click “Next” (as shown in Figure 1-6)

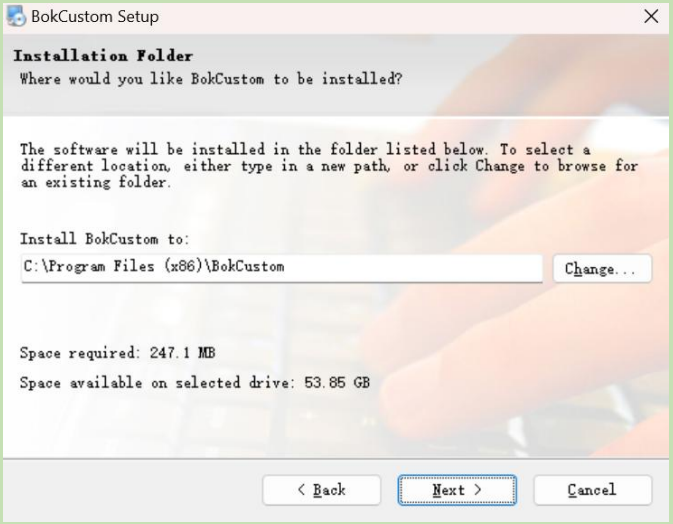


Figure 1-6

5. Please select the installation method:

Typical installation. The software comes with a material library, but the installation takes a long time.

Simple installation: There is no material library in the software, and the installation time is shorter.

Select an installation method according to your own needs. Click “Next” and wait for the installation to complete (as shown in Figure 1-7).

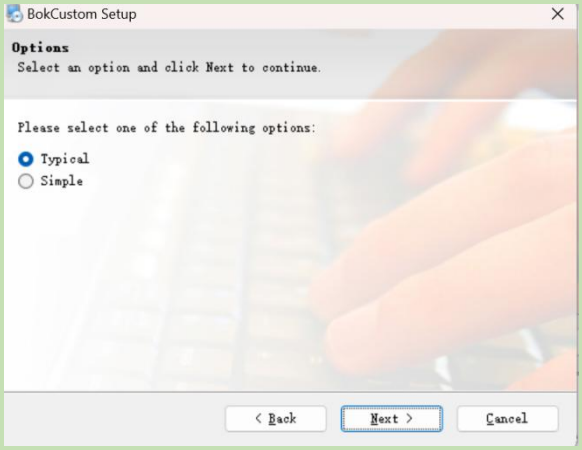


Figure 1-7

6． After the software installation is completed, shortcut icons for pattern making and material nesting will be automatically generated on the desktop. If not, you can find the pattern making icon in the software directory and then send it to the desktop as a shortcut (as shown in Figure 1-8).

Figure 1-8

(3) Software Upgrade

1.Find the upgrade package we downloaded, right-click to copy or cut, and paste the upgrade package in the software directory (as shown in Figure 1-9).

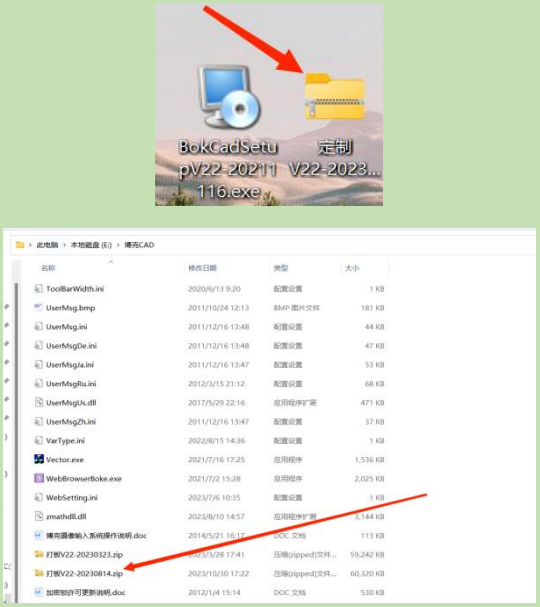


Figure 1-9

2.Place the mouse on the upgrade package, right-click and select "Extract to current folder"

3.A dialog box will pop up. Select "Yes" for all. After the replacement is completed, the upgrade can be completed.

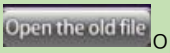
II. Introduction to the software startup interface.

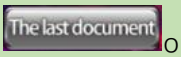
(1) Pattern making icon

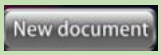
1.Double-click the desktop program shortcut icon with the mouse. 

, Then you can enter the startup interface of BOK Intelligent Garment Cloud CAD System V22 (as shown in Figure 1-12).

Figure 1-12

2.In the main startup interface, there are four startup modes： 

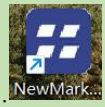
open the old documents、 

open the last document、 

create new document、 

Enter the cloud material center to select different parts and styles of clothing for automatic design.

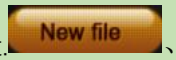
(2) Nesting icon

1.Double-click the desktop program shortcut icon with the left botton. 

， Then you can enter the startup interface of BOK Intelligent Garment Cloud CAD System V22 (as shown in Figure 1-13).

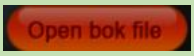
Figure 1-13

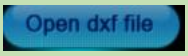
2.There are five startup modes in the main startup interface： 

、Open the file in map format. 

、 You can choose to open files in multiple formats.

3.There are three direct file reading modes in the main startup interface ： 

Directly read PLT files. 

Directly read bok files. 

read DXF files directly.

Section 2: Introduction to Pattern Making

I. Introduction to the upper toolbar.

(1) Menu bar.

1.File: You can choose to open and save various files.

2.Matter: You can open parts and pattern libraries (as shown in Figure 2-1).

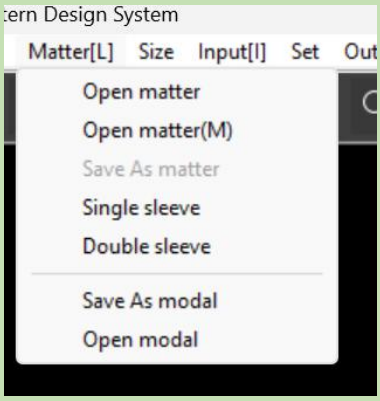


Figure 2-1

3.Size : Create a size chart, view parts, and variable tables (Figure 2-2).

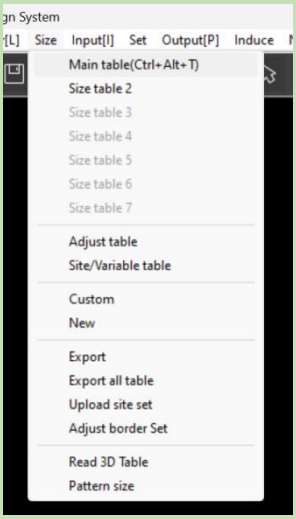


Figure 2-2

4.Input: Digital instrument (graphic reader), template machine, insert picture, camera file, picture vectorization (insert pattern graphic) (Figure 2-3).

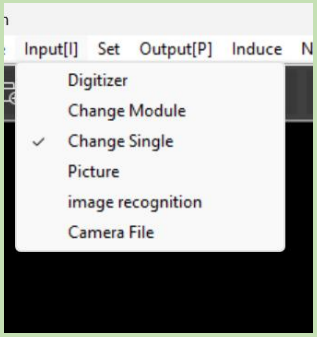


Figure 2-3

5.Settings: Software settings, nesting settings (Figure 2-4).

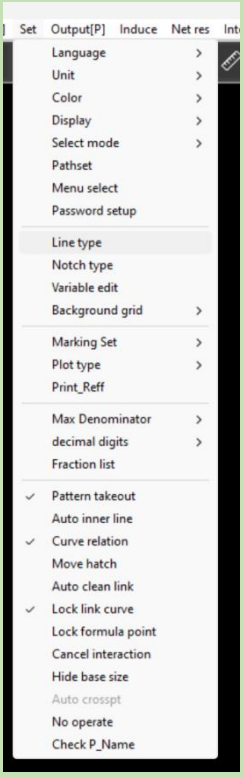


Figure 2-4

6.Output: Printing on A4 paper. The material layout diagram and preview diagram are all included (Figure 2-5).

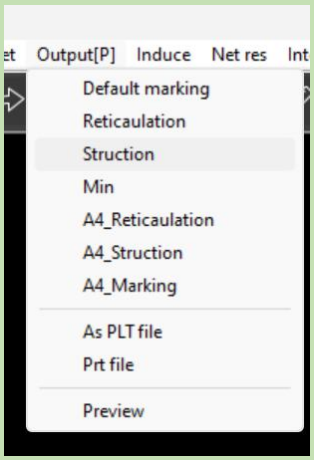


Figure 2-5

7.Induce: Perform size grading for order customer sizes.(Figure 2-6).

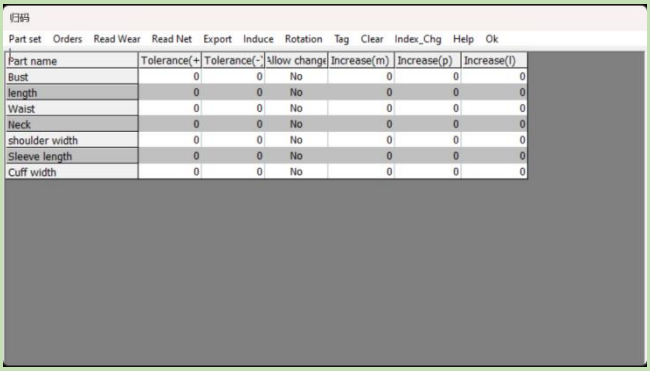


Figure 2-6

8.Net Resources: Online services, upgrades, etc. (Figure 2-7).

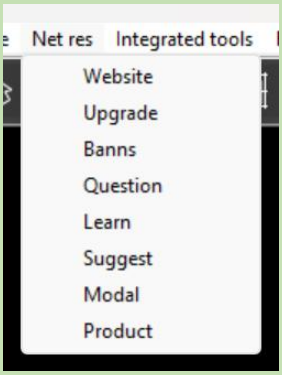
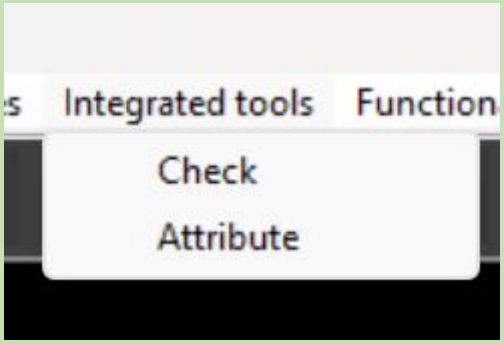


Figure 2-7

9.Integrated tools: Various point and line inspections. Graphic element properties: Full tangent and half tangent can be set here (Figure 2-9).



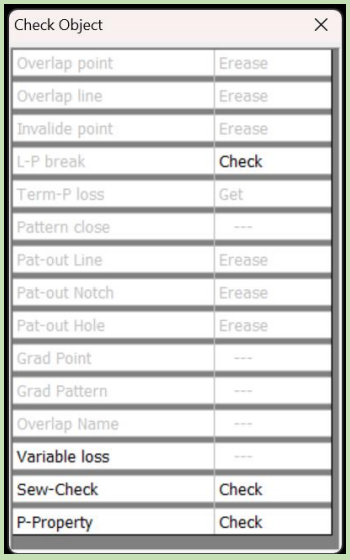


Figure 2-9

10.Function tools: Down filling, check stripe alignment, automatic grouping (Figure 2-10).

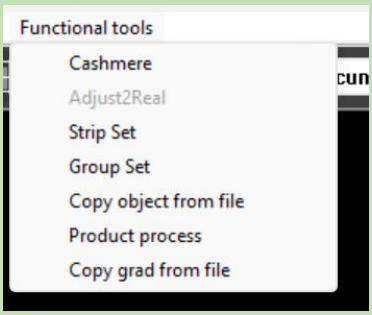


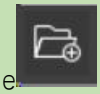
Figure 2-10

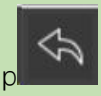
(2) Toolbar.

1.Create new file 

2.Open file 

3.Save file 

4.Save as file 

5.Go back to the previous step 

6.Restore the previous step 

7.Zoom in and zoom out 

8.Delete tool 

9.Modify the parameters of points and lines  （As shown in Figure 2-13）

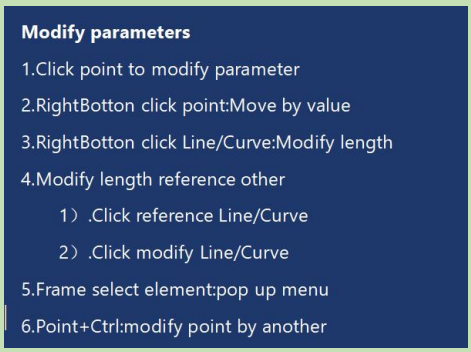
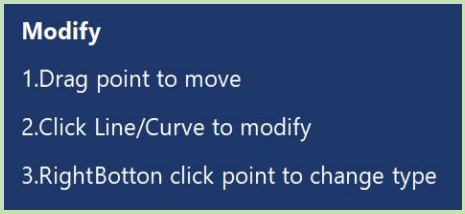


Figure 2-13

10.Graphic element modification: Drag, select, adjust, modify, etc.  （As shown in Figure 2-14）



As shown in Figure 2-14

11.Measurement tools: Measure length, width, angle, etc.  （Figure 2-15）

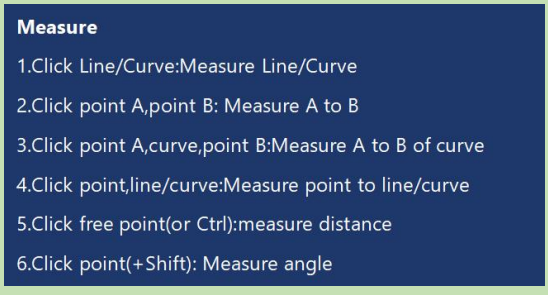


Figure 2-15

12.Text tool: Add text annotations.  （Figure 2-16）

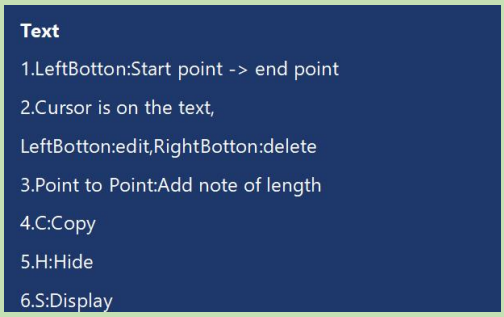


Figure 2-16

13.Show/hide construction lines and base map. 

14.Function playback: It can play back the drawing process on the software. 

15.Tool help: Click the question mark, and then click the tool in question to get an answer. 

16.Hide pattern pieces: It is possible to hide pattern pieces. 

17.Select the base map and change the color of the structure diagram (as shown in Figure 2-17).

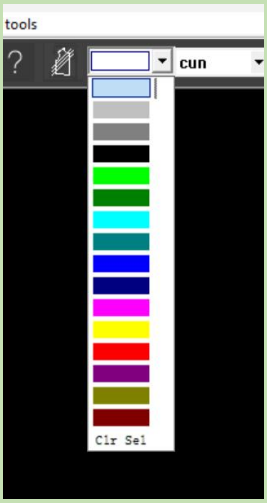


Figure 2-17

18.Select unit (as shown in Figure 2-18).

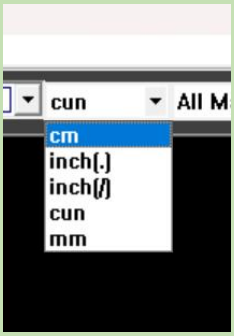


Figure 2-18

19.Select fabric (as shown in Figure 2-19).

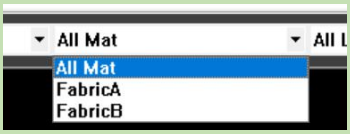
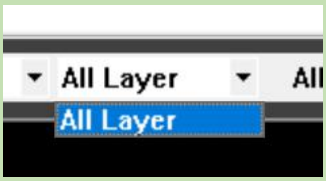


Figure 2-19

20.All layers: After setting the working layer, you can view it here， select and right-click to select the **other tools**, and set the working layer (as shown in Figure 2-20).



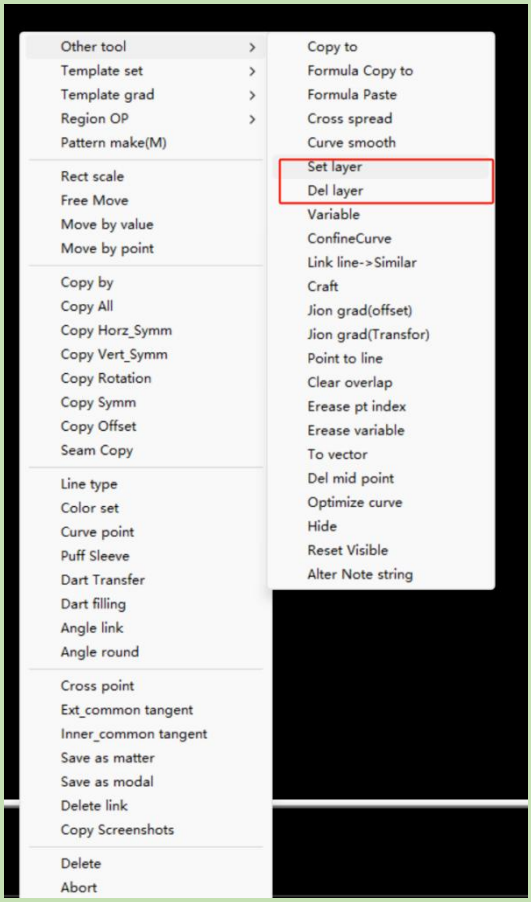


Figure 2-20

21.All pattern pieces: Select patterns (as shown in Figure 2-21).

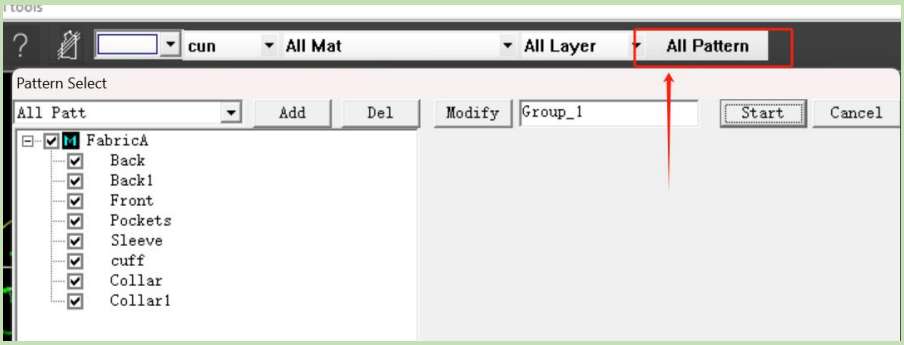


Figure 2-21

(3) Introduction to the right toolbar

1. Intelligent design mode: Intelligent pen, operate on the structure diagram. Design

2.Intelligent pattern mode: After generating pattern pieces, operations such as adding seam allowances, setting seam corners, and setting pattern piece attributes are all performed in the pattern mode. Pattern

3.Mark mode: After completing the drawing, arrange the pattern pieces and then output them to the print center. Mark

4.Base size: Switch between base size and mesh diagram. Base

5.Rough pattern: Switch between net pattern and rough pattern display. Net

6.SM：View the mesh diagram，check each size. SM

7.XY: Show/hide grading values. XY

8.Size chart: Open the window of size chart to quickly modify sizes and add parts. Size

9.Modify size: Open the quick modification size table to modify the size of a certain part. Modify

10.Toolbar: Return to the tool icon interface. (You can right-click on an empty area under the design monde, select Tool, and then select the icon tool you want.) Tool

（Figure 2-22）

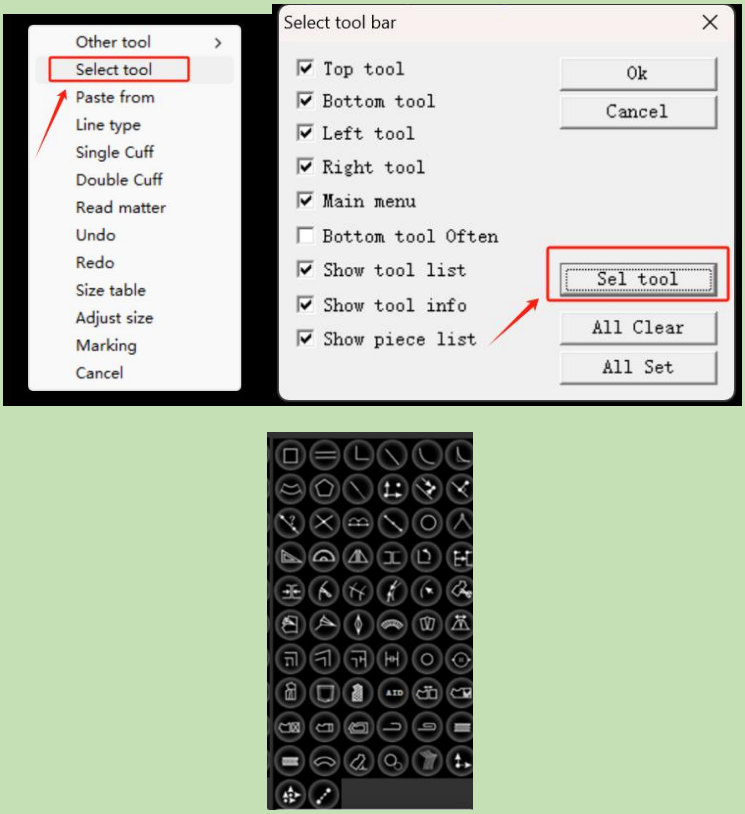


Figure 2-22

(4) Introduction to the bottom toolbar

1.Draw line.

2.Find a point.

3.special tools

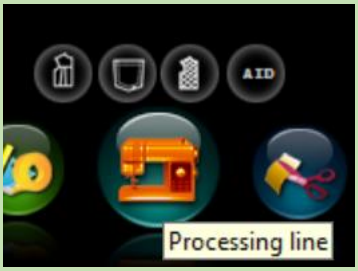
4.Point and line editing.

4.Make dart and pleats

6.Generate pattern pieces.

7.Pattern piece lable.

8.Process line.



9.Pattern segmentation.

10.pleat

11.Pattern rotation/modify.

12.grading tools

(5) Introduction to the left toolbar

1.Cloud material library: Enter the cloud material center to select different styles of clothing for automatic design. Log in to the account registered on Bok Cloud. If there is none, click "Register Now" and register with a mobile phone number. (As shown in Figure 2-23).

Note： The Cloud material library is currently only available in Chinese. The system of the English version is under development.

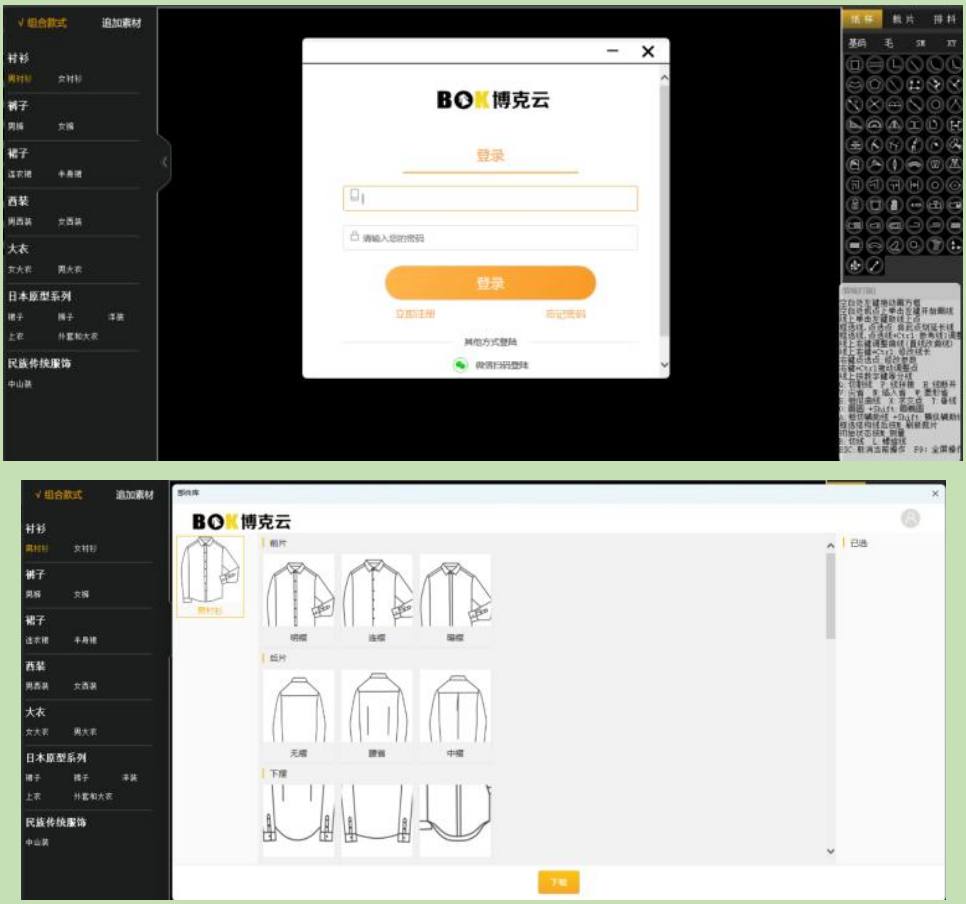


Figure 2-23

2.Click the corresponding style. For example, select "men's shirt". According to the needs, select the components in different parts. After clicking download, the selected components can be downloaded and combined into a new one. (As shown in Figure 2-24).

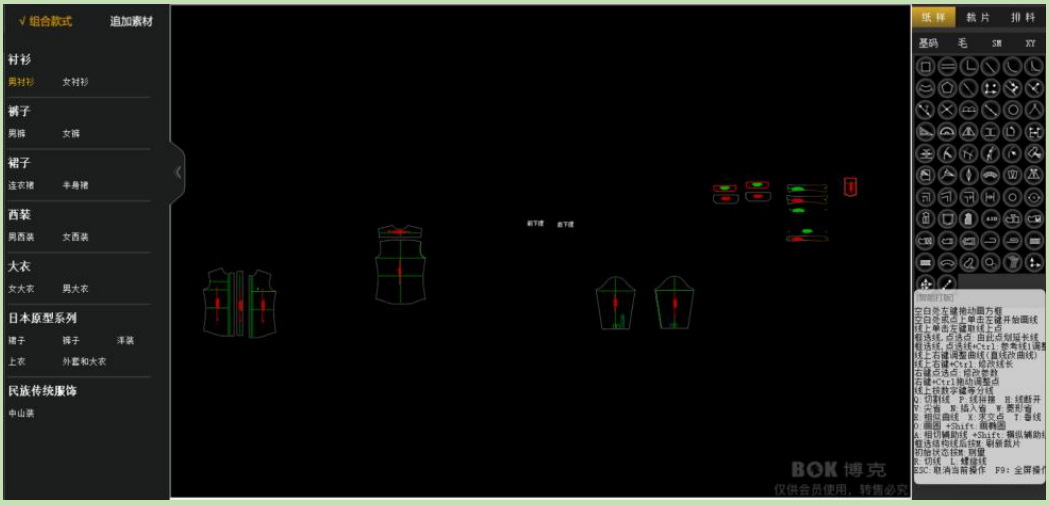
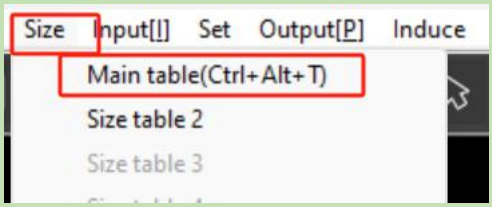


Figure 2-24

3、Modify the dimensions in the size chart and the system will automatically adjust the template.

Section 3: Size Chart

1.Open the size chart (Figure 3-1).



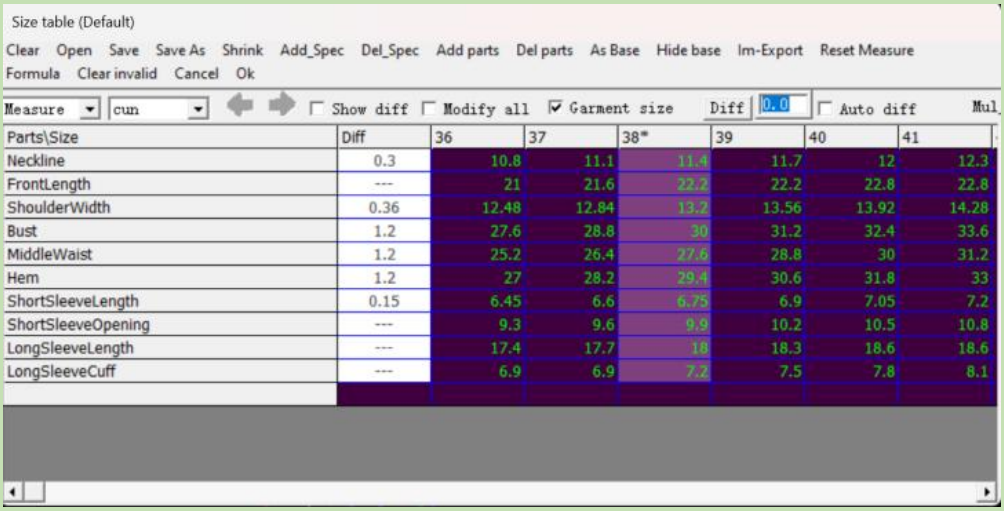


Figure 3-1

2.Clear: Clear the current or all sizes. (Figure 3-2)

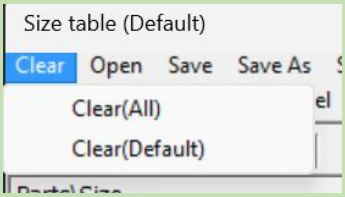


Figure 3-2

3.Open: open the commonly used size chart parts in SZ format. Open （Figure 3-3）

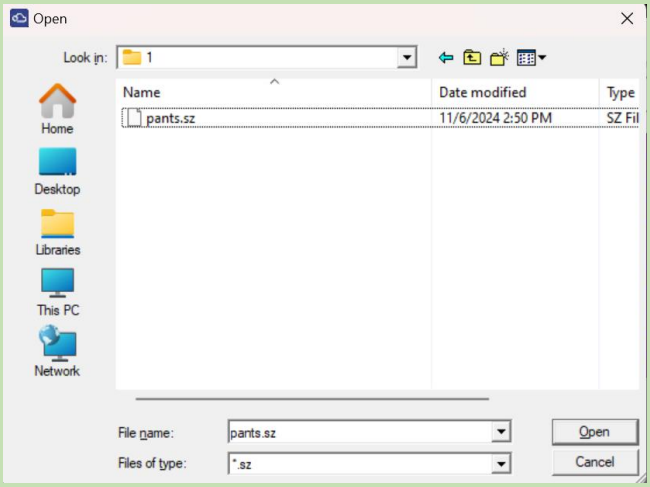


Figure 3-3

4.Save: Commonly used size chart parts can be saved in a file. (Figure 3-4)

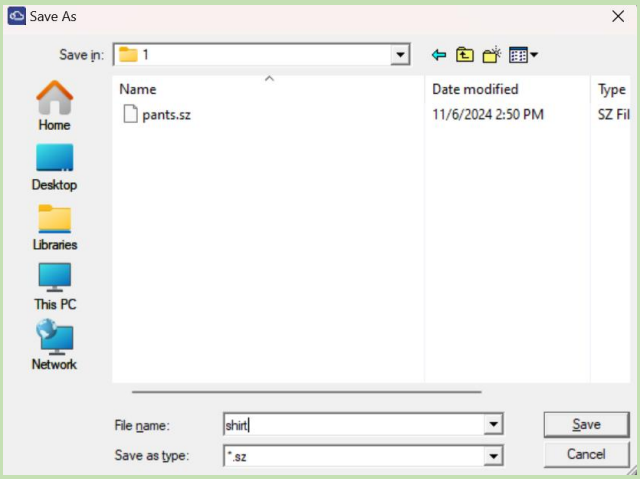


Figure 3-4

5.Save As: After opening the saved size chart part, save it as a size chart of another file. Save As （Figure 3-5）

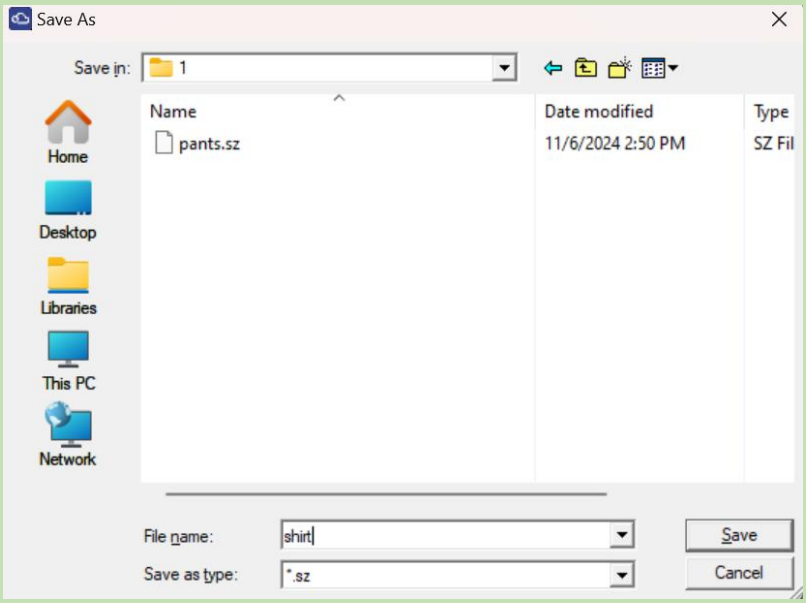


Figure 3-5

6.Shrinkage: The shrinkage rate of parts can be set. Shrink （Figure 3-6）

Figure3-6

7.Add specification: Add size. Add_Spec

8.Delete specification: Delete size. Del_Spec

9.Add part: According to different styles, add new parts. Add parts

10.Delete part: According to different styles, delete unnecessary parts. Del_Spec

11.Set as base size: The size with * at the back is the base size. Place the mouse on the base size and click it, then click "Set as base size". As Base

（Figure 3-7.）

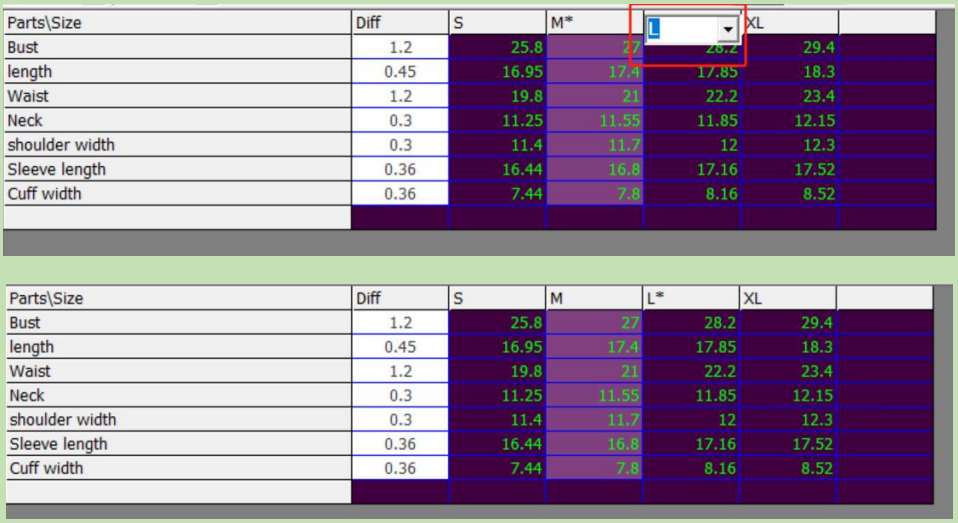
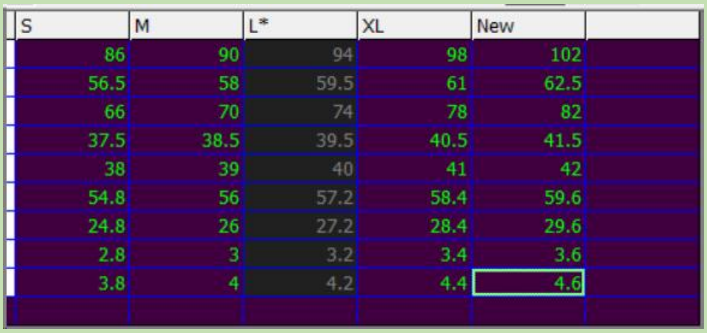


Figure3-7

12.Hide base size: Click "Hide base size" when importing a formulaic template. After hiding, the color of the base size will change. Hide base

（Figure 3-8.）



S	M	L*	XL	New
86	90	94	98	102
56.5	58	59.5	61	62.5
66	70	74	78	82
37.5	38.5	39.5	40.5	41.5
38	39	40	41	42
54.8	56	57.2	58.4	59.6
24.8	26	27.2	28.4	29.6
2.8	3	3.2	3.4	3.6
3.8	4	4.2	4.4	4.6

Figure3-8

13.Import and export: You can edit the size chart in the table and then import or export it. (Figure 3-9)

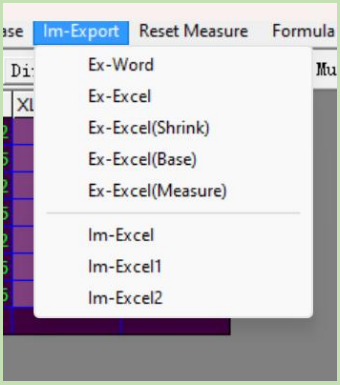


Figure 3-9

14.Common formula: For formula-based pattern making, it can be saved in common formulas for convenient use. Formula （Figure3-10）

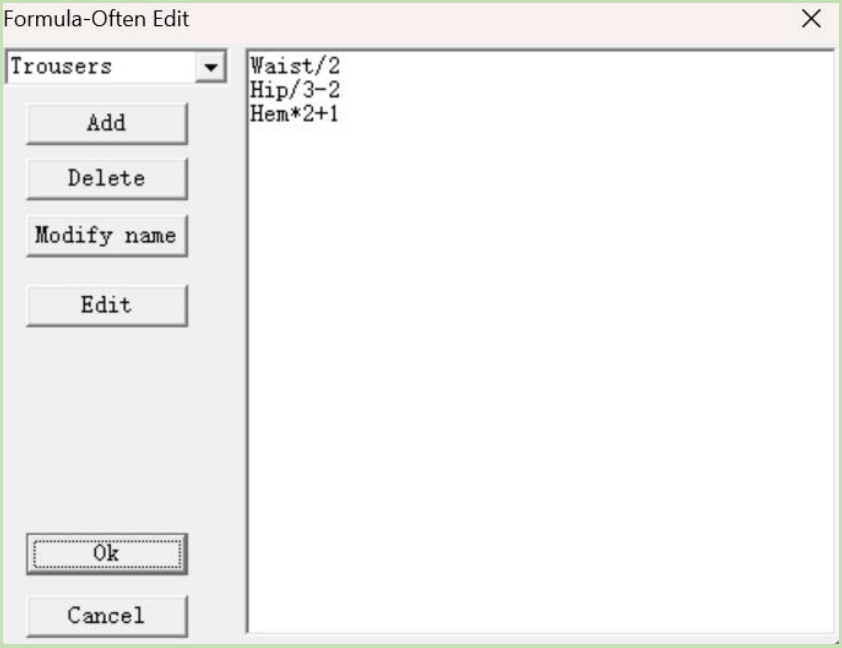
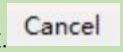
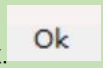


Figure 3-10

15.Auxiliary operation: Delete parts that are not used in the pattern.（Figure 3-11）

Figure 3-11

16.Cancel: Cancel the operation on the size chart. 

17.Confirm: After editing the size chart, click Ok. 

18.Measurement parts: You can select the category of the size chart here.（Figure3-12）

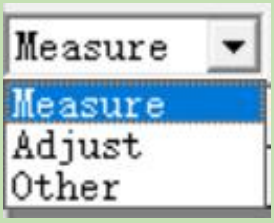


Figure 3-12

19.Unit: You can select the unit of the size chart. (Figure 3-13)

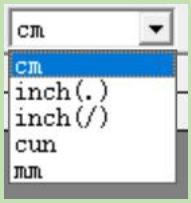


Figure 3-13

20.Show size increment: After checking this option, the size chart will display the size increment. 

（Figure 3-14）

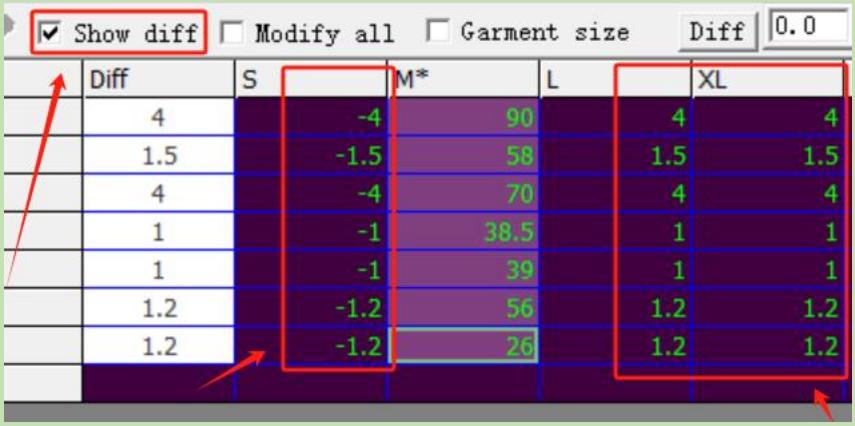


Figure3-14

21.Linkage modification: After checking this option, when the size is modified, other sizes will be synchronously modified according to the existing size increment. 

（Figure 3-15）

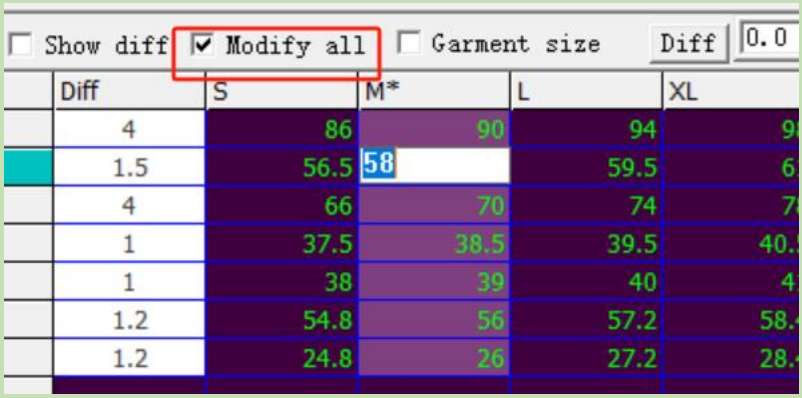
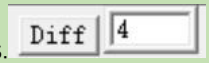


Figure 3-15

22.Size increment: Output regular size increments. For irregular size increments, directly input the date（number） of the sizes. 

（Figure 3-16）

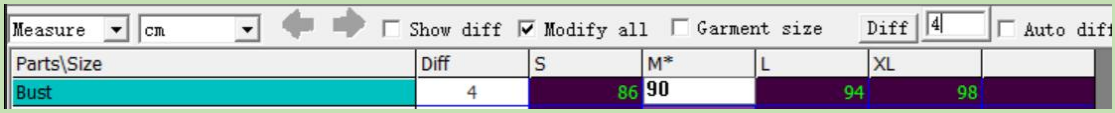


Figure3-16

23.Automatic size increment: When adding a new size (number), if automatic size increment is checked, the new size (number) will be automatically calculated according to the existing size increment. 

24.Multi-size skipping: You can set several sizes to skip a size increment. 

（Figure 3-17）

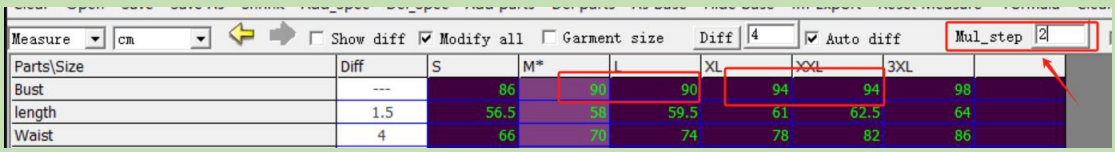
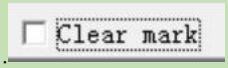


Figure3-17

25.Clear nesting diagram: When checked, if the base code is modified and confirmed, all nesting diagrams will be automatically deleted. 

Section 4. Intelligent Design Mode

I. Usage of drawing functions.

(1) rectangle

This tool is used to draw a rectangle. The length and width lines of the rectangle can be customized by the designer.

1. Operation method

Hold down the left mouse button and drag the mouse in the blank area, then release the left mouse button. (Figure 4-1)，A data setting dialog box pops up (Figure 4-2). Enter data in the parameter field to draw a rectangle.

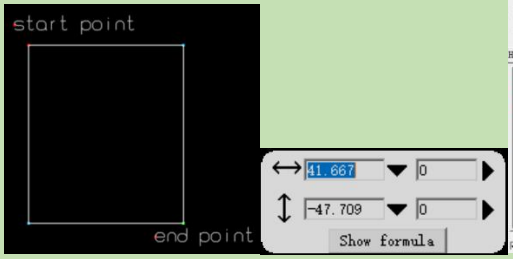


Figure4-1　　Figure4-2　　Figure4-3

（1）Data input.

Quantitative method: directly input data in the dialog box, as shown in Figure 4-2 above.

Parameter method: Enter the parameter setting dialog box by clicking the parameter setting button with the mouse to set parameters.

（2）Parameter setting in the parameter column.

a．If a formula is needed from the size chart, click ▼，The system will display the dialog box as shown in Figure 4-3 above，Select the formula. You can also input any value in the parameter column and then input the size increment after the box .（Note: No size increment needs to be input when calling a formula.），If it is an unequal size increment, click ▶.For the point picked on line, you can select a reference ratio. A mantissa can be added or subtracted after the ratio. The input methods for all partial parameters are the same.

(2) Parallel lines

1. Make a parallel line with reference to a certain line.

（1）Hold down the left button on the reference line and drag the mouse to the target side. Release the left button (Figure 4-4). A data setting dialog box will pop up (Figure 4-5).

（2）Input the number and spacing of parallel lines in the parameter column as needed (Figure 4-5).

Note: When multiple parallel lines are input, the spacing defaults to the data set in the

parameter settings (Figure 4-6).You can click the "List" button with the left mouse button (Figure 4-5).， Enter the spacing setting dialog box (Figure 4-7) to set unequal spacing parallel lines (Figure 4-8). When the line attribute is curve , the current operation is not available (as shown in Figure 4-9).

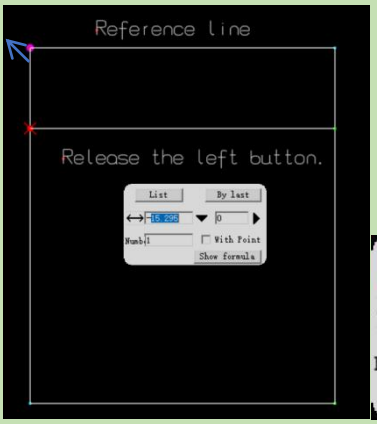


Figure 4-4

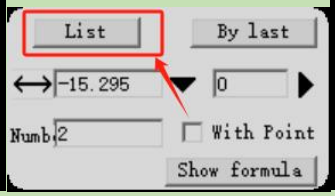


Figure 4-5

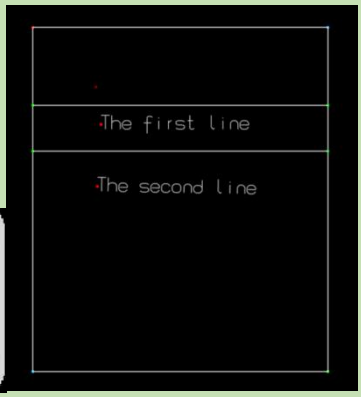


Figure 4-6

Figure 4-7

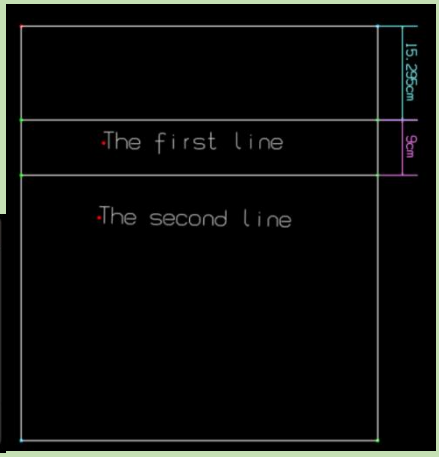


Figure 4-8

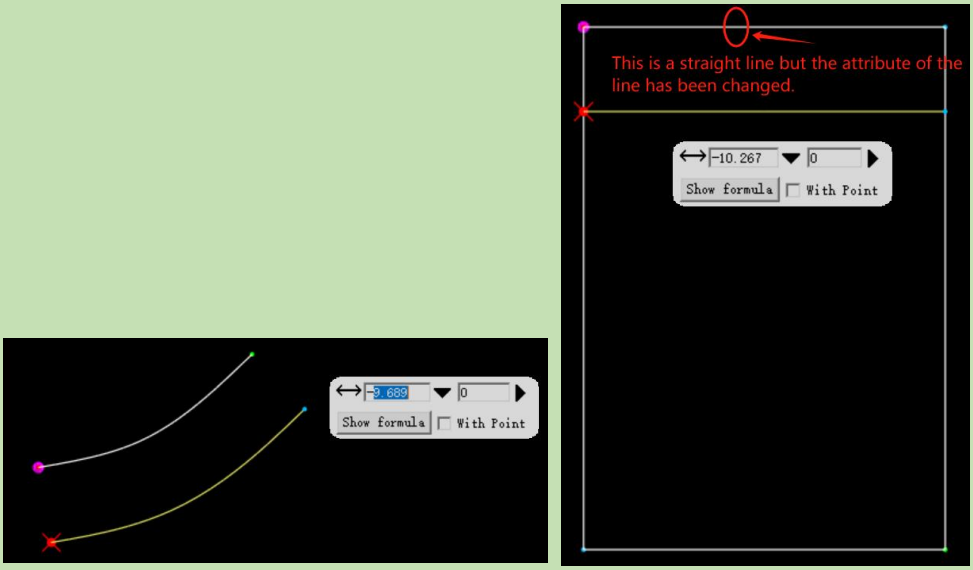


Figure4-9

2.Make a parallel line through a certain point outside the line.

（1）Select the reference line by selection (Figure 4-9).

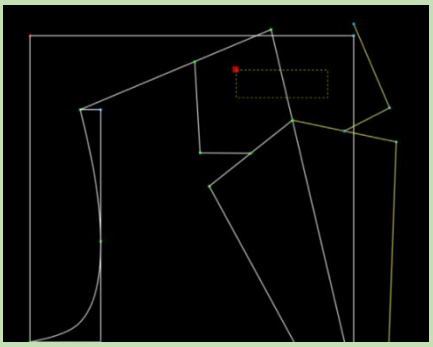


Figure 4-9

（2）Click the point outside the line with the left mouse button to make a parallel line.(Figure 4-10).

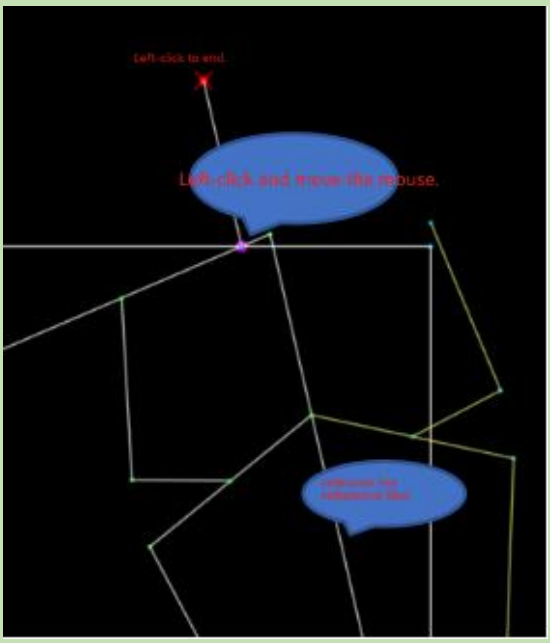


Figure 4-10

(3) Straight line

1.Click the left mouse button on a blank space or a point to determine the starting end of the straight line (as shown in Figure 4-11).

2.Click the left mouse button again on a blank space or a point to determine the end of the straight line (as shown in Figure 4-11).

3.Right-click to end and enter data (as shown in Figure 4-12).

Note：

a. After the first step is completed, you can switch between free straight lines and T-squares by right-clicking (as shown in Figure 4-13). (As shown in Figure 4-14).

b.If the end point is on a known point, there is no need to input data.

c.In addition to inputting line length and grading difference, a straight line can also input the included angle between the straight line and the horizontal direction, and the grading amount of the angle can also be input. The angle can also call the angle formula to

participate in automatic grading (as shown in Figure 4-15).

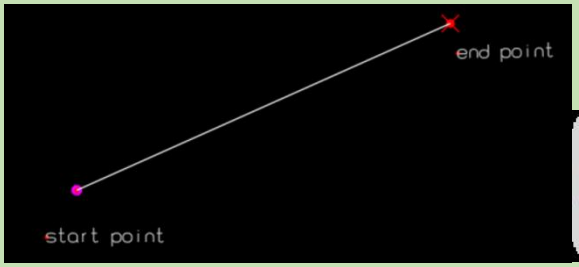


Figure4-11

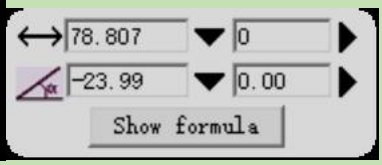


Figure4-12

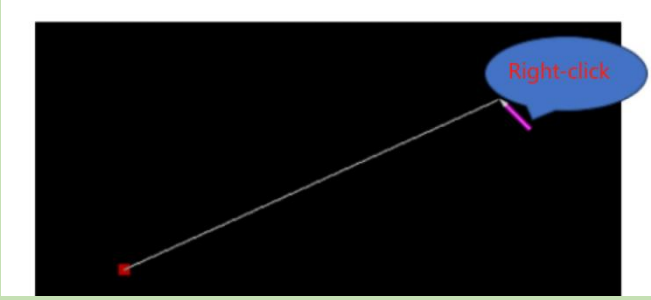


Figure4-13

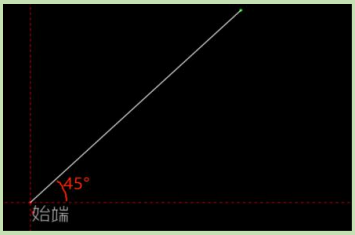


Figure4-14

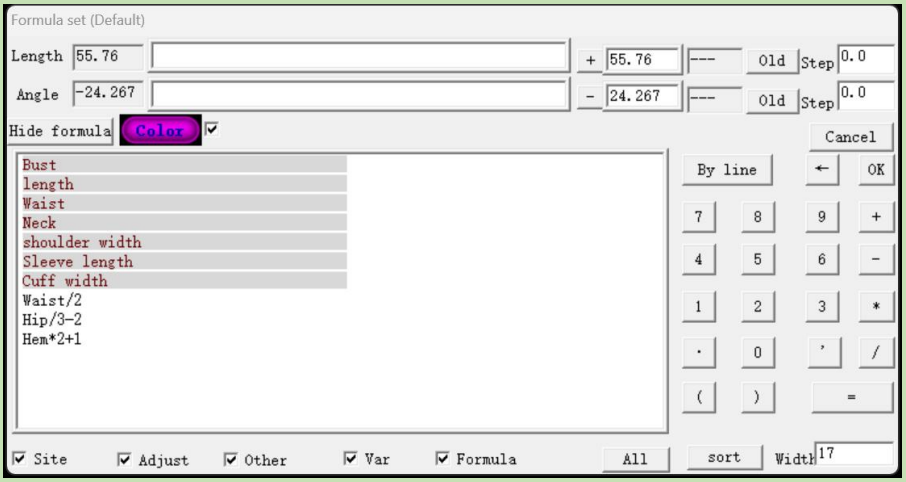


Figure4-15

(4) Curve.

1.Click the left mouse button on any point or in a blank space to start drawing a curve.
2.Move the mouse and click the left mouse button to determine the curve points (it can

be in a blank space or on a known fixed point) to draw the shape of the curve. Pressing the Z key can generate a turning point.

3.Right-click to determining the last point.

Note：a.During the process of drawing curve points, points can be taken on the line, or offset points can be generated with a certain point as the center (the Ctrl key needs to be held down to obtain offset points).When taking points on the line, it is automatically measured starting from one end. You can also choose "Reference the other end", "Reference a nearby point", and "Reference a specified point".

b.As shown in the following figure, when making a curve along an existing curve a and pressing the Shift key to draw curve b, it will coincide with the original curve (as shown in Figure 4-16).

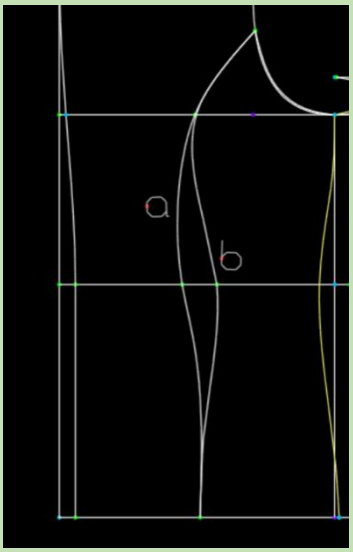


Figure 4-16

(5) Extended line.

1. Select the line segment that needs to be extended by box selection (as shown in Figure 4-17).

2. Click the left mouse button at the point to be extended. Move the mouse and click the left mouse button to determine. Then an extended line of the line be drawn (as shown in Figure 4-18).

3. Enter data (as shown in Figure 4-19).

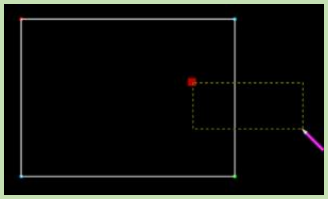


Figure4-17

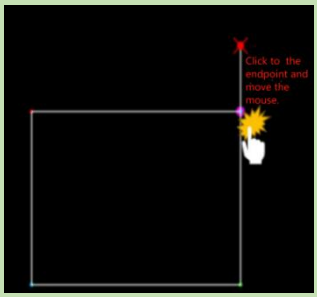


Figure4-18

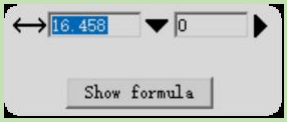


Figure4-19

(6) Similar lines.

1. Press the E key on the keyboard and click on the curve line (as shown in Figure 4-20).

2.left click the curve line again from the start end to the end end to copy the curve trend (as shown in Figure 4-21).

3.left click the corresponding start end (as shown in Figure 4-22).

4.left click the corresponding end; right-click to return to intelligent mode (as shown in Figure 4-23).

Note: The point marked in red on the reference line is the start end. The start point and end point can be determined in advance or selected on the line.

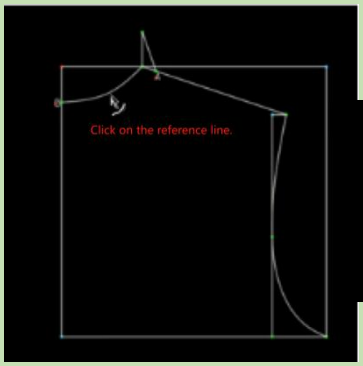


Figure4-20

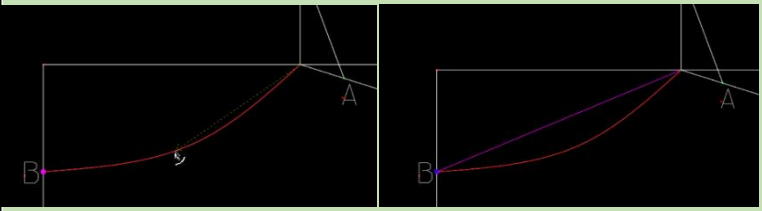


Figure4-21

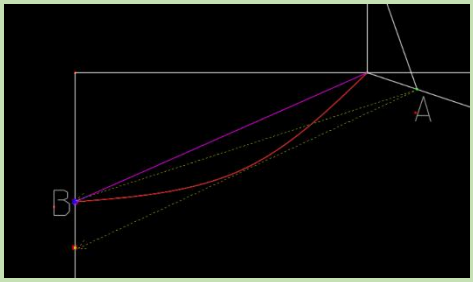


Figure4-22

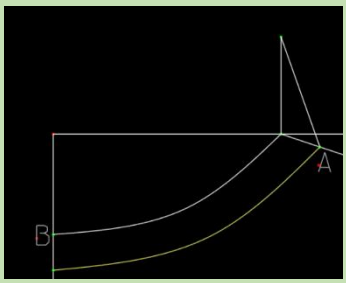


Figure4-23

(7) Perpendicular line.

1Draw a perpendicular line to a certain line through a point outside the line. After left-clicking the point outside the line, place the mouse on the line that needs to be perpendicular. Press the T key on the keyboard to draw the perpendicular line of that line.

2.Draw a perpendicular line to the line through a point on the line. First, left-click the point on the line (as shown in Figure 4-24), then place the mouse on the line and press the T

key on the keyboard. Then move the mouse to draw the perpendicular line of the line (as shown in Figure 4-25).

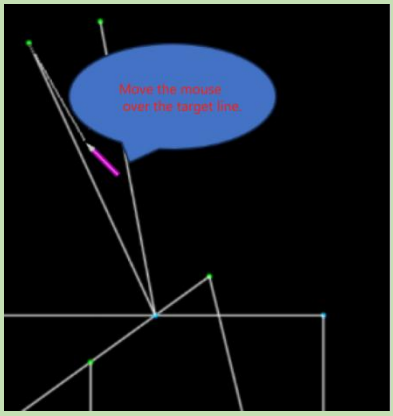


Figure4-24

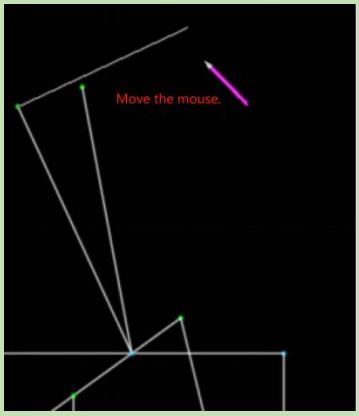


Figure4-25

(8) Tangent line.

1.Take the tangent line of the curve starting from a known point.

(1)Left click on the known point O.（Figure4-26）

(2)Move the cursor to the target curve and press the 'R' key.（Figure4-27）。

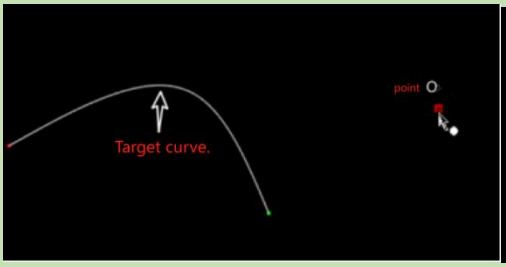


Figure4-26

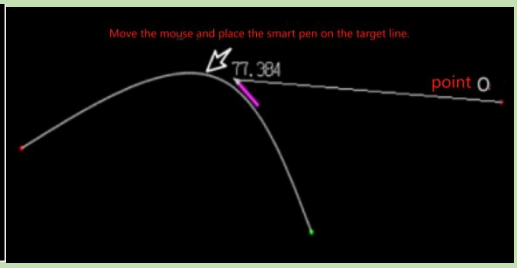


Figure4-27

2.Take the tangent line starting from the curve.

(1)Left-click a certain point on the line.（ Figure4-27），Then place the mouse on the line and press the 'R' key on the keyboard.

(2)Move the mouse to a point, line, or anywhere and click the left mouse button to end.（ Figure4-28）

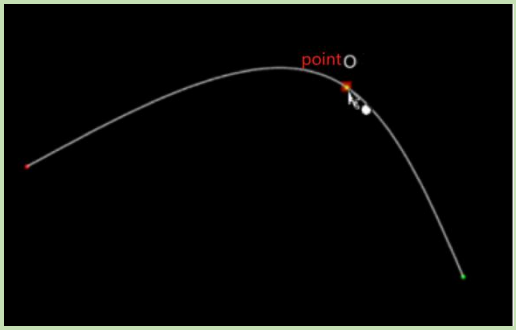


Figure4-27

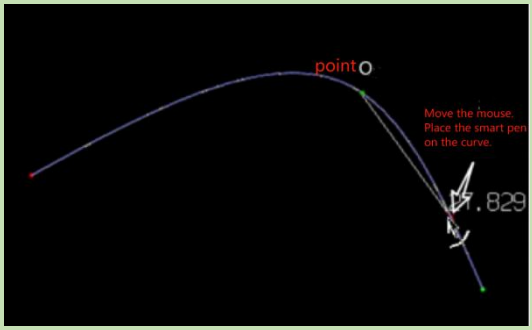


Figure4-28

(9) Offset point.

1.Start from a point （point O）and hold down the left mouse button and drag the mouse.

2.Enter the offset amount of horizontal, vertical, or point distance respectively（point A）.

Note: The system defaults to setting the offset amount of "horizontal and vertical" (Figure 4-29). Different offset methods can be set by selecting "point distance horizontal" (Figure 4-30) and "point distance vertical" (Figure 4-31).

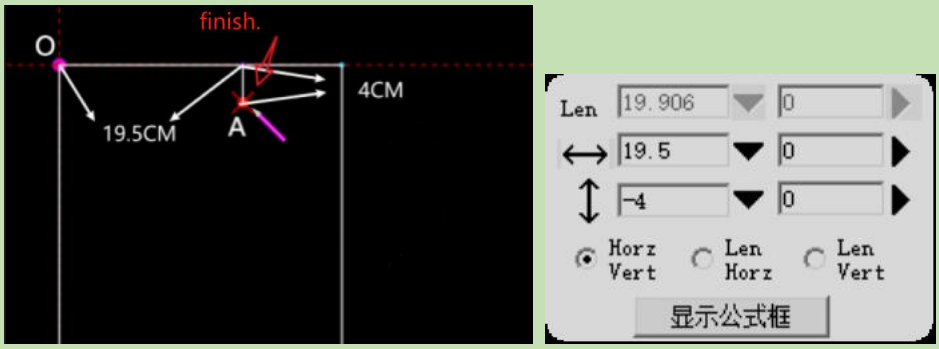


Figure4-29horizontal and vertical

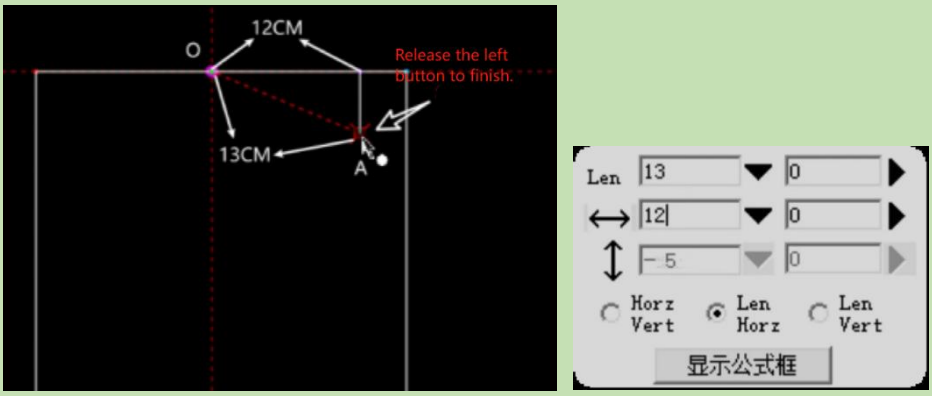


Figure4-30point distance horizontal

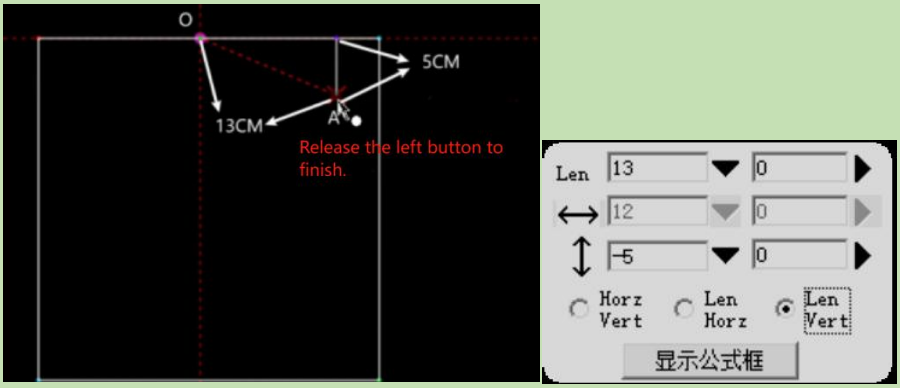


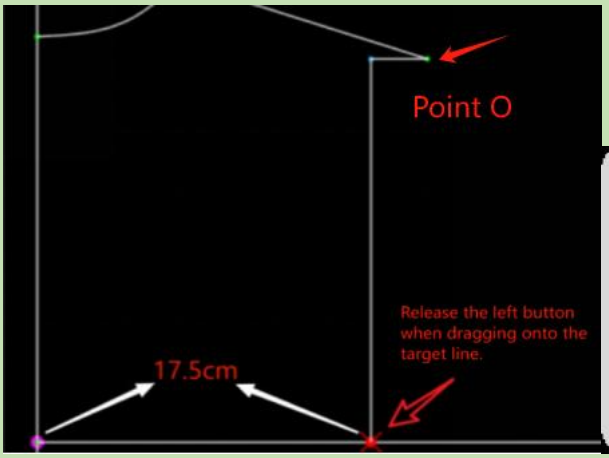
Figure4-31point distance vertical

(10) Intersecting lines.

1.Start from the known point O, hold down the left mouse button and drag the mouse to a point or line.（ Figure4-32）

2.Input the data of points on the line.（ Figure4-33），If the point is known, there is no need to input data.

Note: The system defaults to horizontal to vertical lines. Pressing Alt and dragging with the left mouse button results in vertical to horizontal lines.



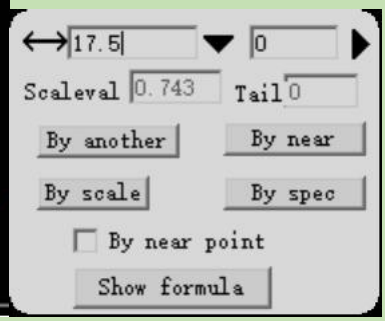


Figure4-32 Figure4-33

(11) Points on the line.

1.On line AB, close to end A, click the left mouse button.（ Figure4-34）

2.Input the length from the A point.（ Figure4-35）。

Note: When taking a point on a line, it automatically starts measuring from one end close to it as the reference point (marked by a purple point). You can also choose "Reference the other end", "Reference a nearby point", and "Reference a specified point".

Figure4-34 Figure4-35

(12) Equal division.

1.equidistant line

Place the cursor on the line and press the number on the keyboard.（ Figure4-36）

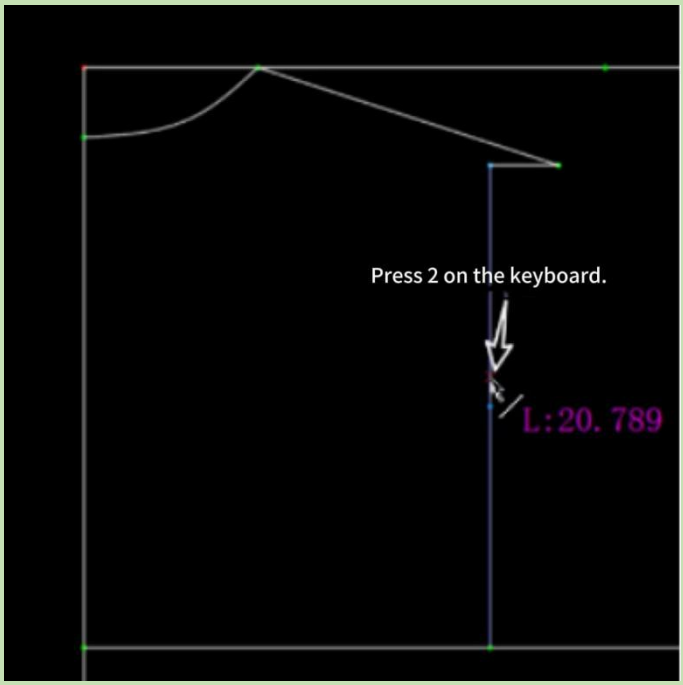


Figure4-36

2.Divide two points on the line equally：

(1)click the starting pointa A.（ Figure4-37）

(2)Place the cursor on the line and press the number on the keyboard（ Figure4-37）。

(3)click the end point B.（ Figure4-38）

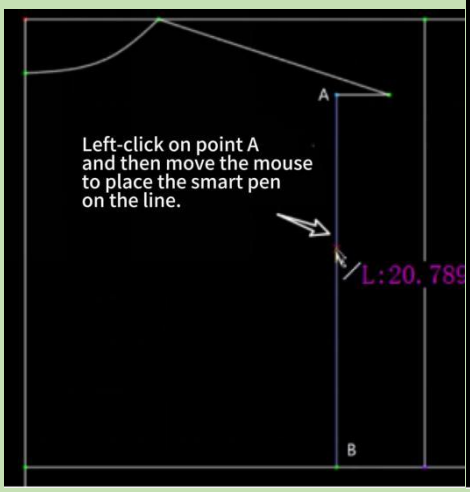


Figure4-37

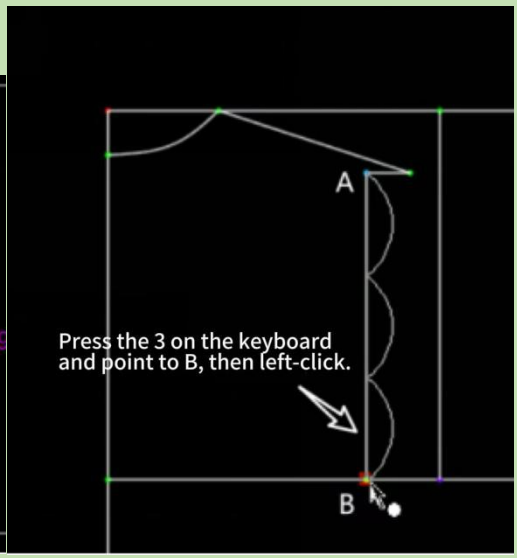


Figure4-38

3.Divide any two points in the free space equally：

(1)click start point A.（ Figure4-39）

(2)Place the cursor on the end point B and press the number key.（ Figure4-40）

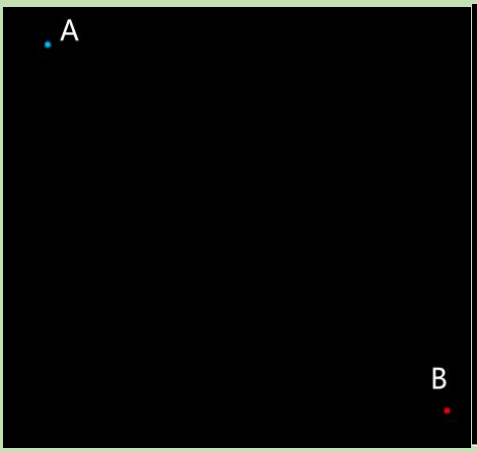


Figure4-39

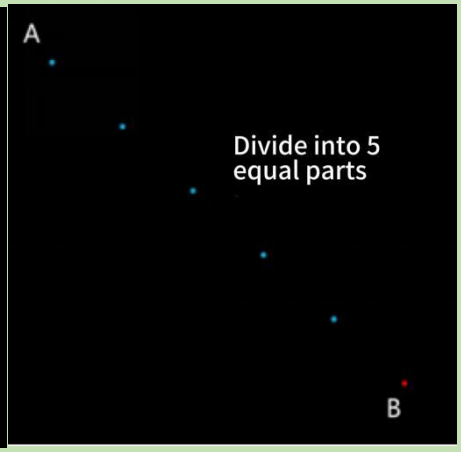


Figure4-40

(13) Intersection point.

1.Press and hold the X key and clicking on two intersecting lines respectively. Before intersection, it is shown as in Figure 4-41. After intersection, it is shown as in Figure 4-42.

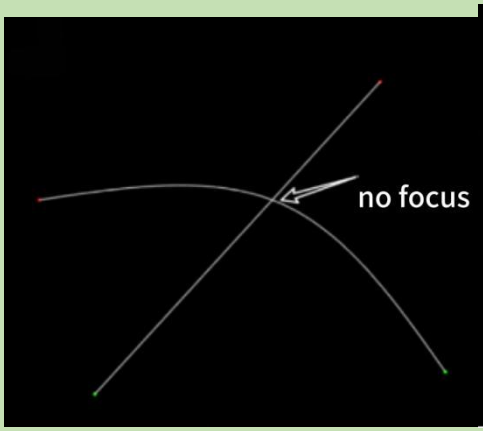


Figure4-41

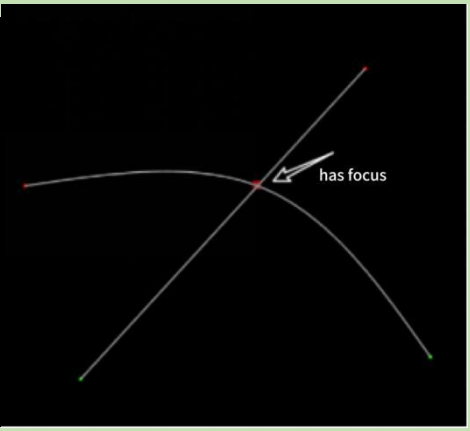


Figure4-42

(14) Single compass.

1.Click on point A.（ Figure4-43）。
2.Move the mouse to the target line and click the right button.
3.Input the length data from a point to a line.（ Figure4-44）。

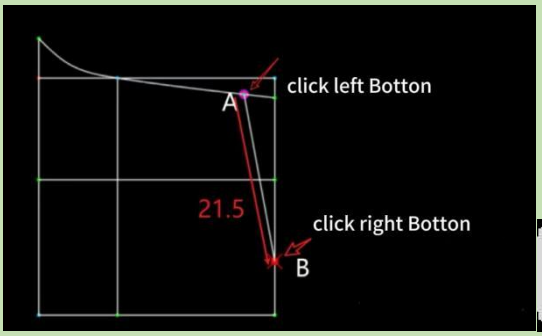


Figure4-43

Figure4-44

(15) Double compass.

1.Click on point A.（ Figure4-45）。

2.Move the mouse to point B.（ Figure4-45），Click the right button and then move the mouse.

3.Move the mouse to point C （ Figure4-45）Click the left button

4.Input the lengths of two radius.（ Figure4-46）

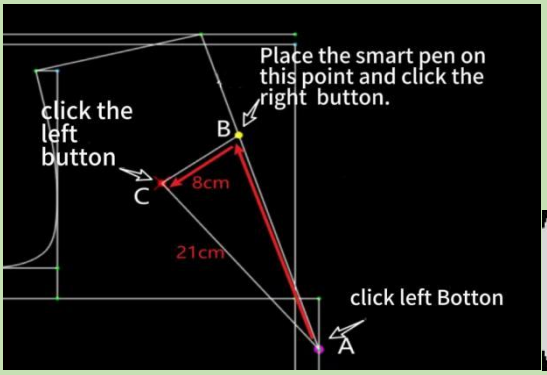


Figure4-45

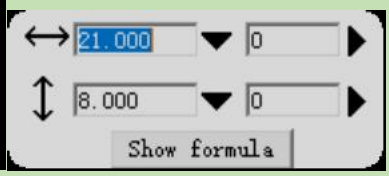
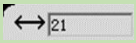


Figure4-46

Note：



The input data is the distance between the point A and the point B ，

It is the distance between the B point and the C point .

(16) Circle.

Place the cursor at a certain position (the center of the circle) and press the O key. Move the cursor and click the left button .（ Figure4-47），then input parameters.（ Figure4-48）

Note: Press Shift+O to draw an ellipse.

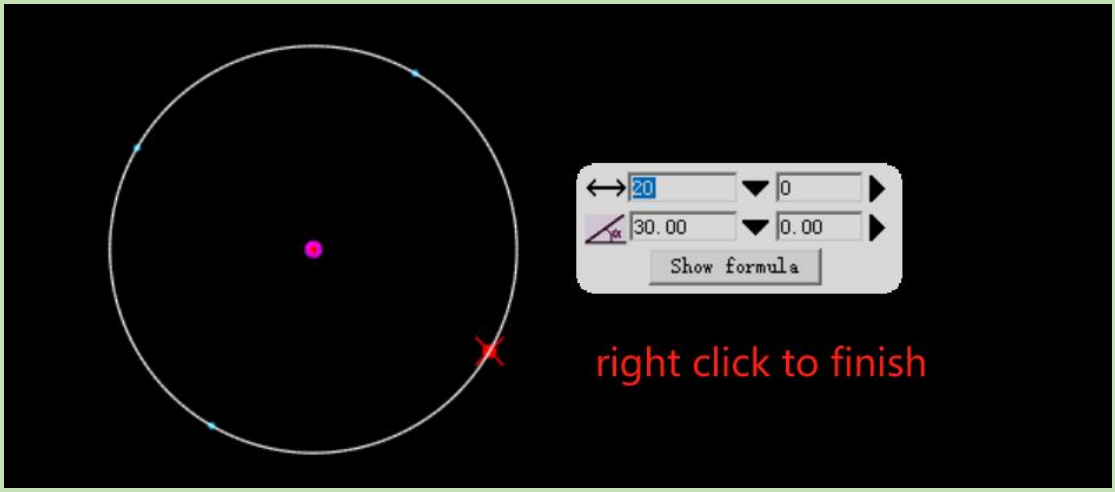


Figure4-47 Figure4-48

(17) Helix.

1.Place the cursor on the existing point O.（ Figure4-49），
2.Press the letter L key on the keyboard to pop up the setting dialog box.（ Figure4-50）。
3.Input data as needed.（ Figure4-50），Click [OK] to end.

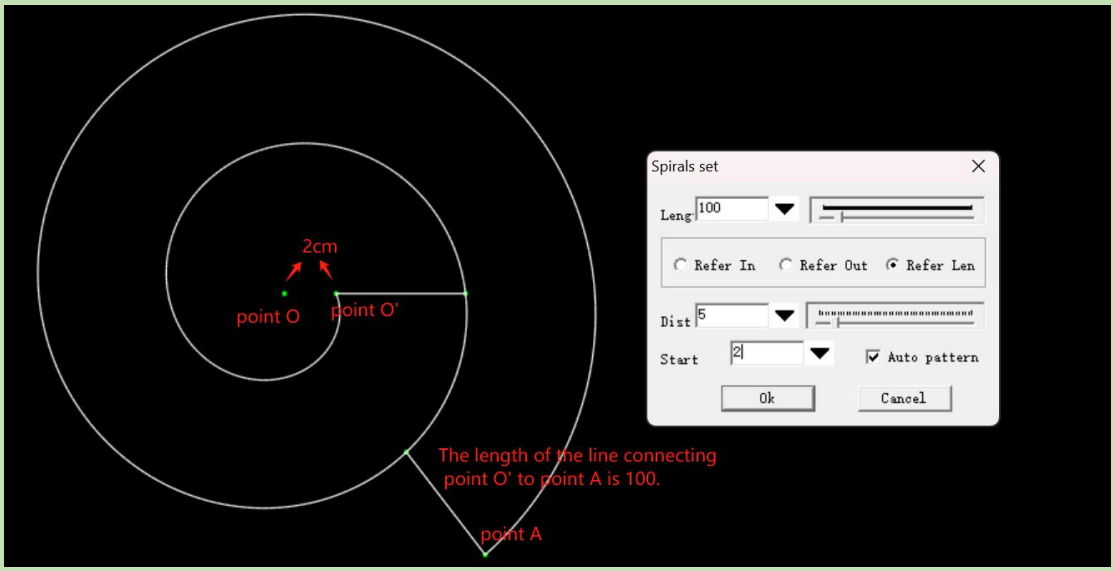


Figure4-49 Figure4-50

II. Editing functions.

(1) Curve adjustment.

1.Right-click on the line that needs to be adjusted.（ Figure4-51）。
2.Drag the point with the left button to adjust the shape of the curve.（ Figure4-52）
3.Right-click in the blank area to confirm.

Note： Dragging on the line can add adjustment points. Double-clicking on an adjustment point can change a curve point to a turning point.（ Figure4-53），Right-click on an adjustment point to cancel the adjustment point. When adjusting a line, pressing the S key can display the line length data of the curve and the vertical length from the adjustment point to the connection line of the two endpoints.（ Figure4-54）

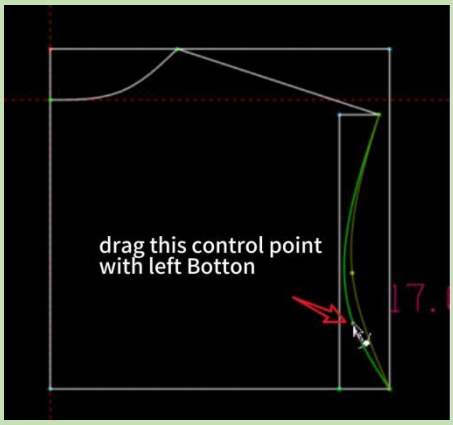


Figure4-51

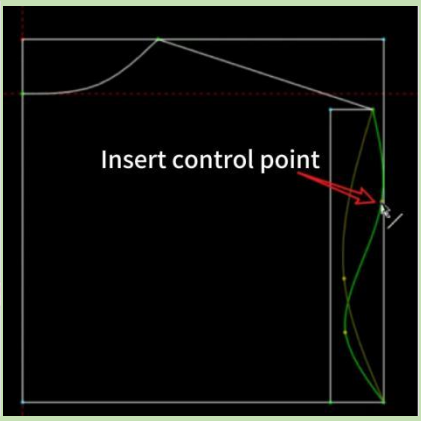


Figure 4-52

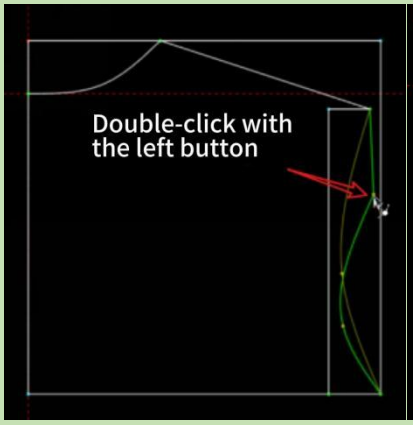


Figure4-53

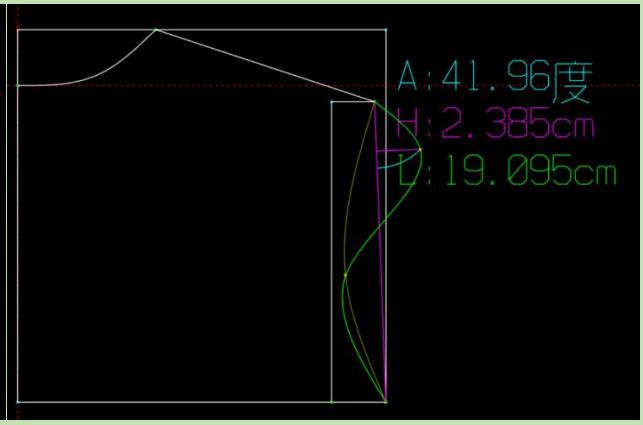


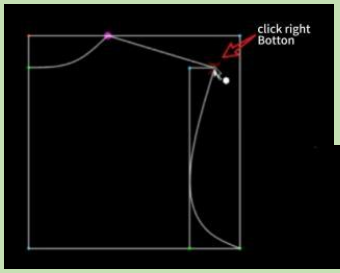
Figure4-54

(2) Modify data.

1.Right-click on the target point.（ Figure4-55）。

2.Quantitative modifications can be made as needed.（ Figure4-56），Parameters can also be modified.（ Figure4-57）。

Note: Hold down the Ctrl key and right-click to drag the object to be modified.



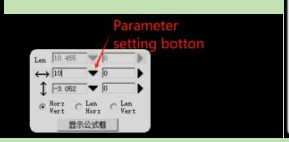


Figure4-55

Figure4-56

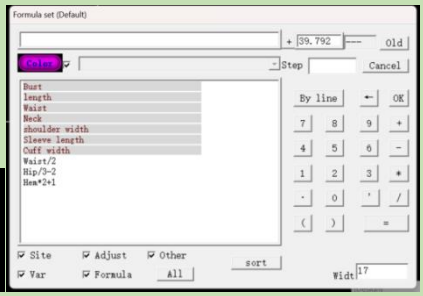


Figure4-57

(3) Adjusting line length

1.Select the reference line by dragging with left botton（ Figure4-58）

2.Hold down the Ctrl key and click on the adjustment line .（ Figure4-59）

3.Select different adjustment methods, input relevant data and confirm.（ Figure4-60）

Note: You can respectively select three different adjustment methods: equal length, difference, and slope. You can also select the movement method.

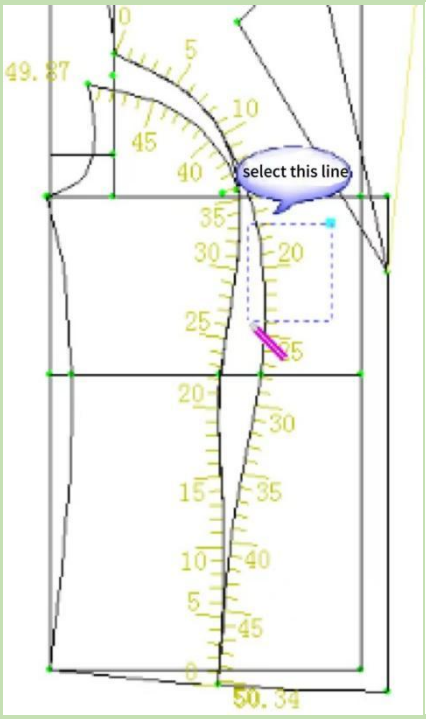


Figure4-58

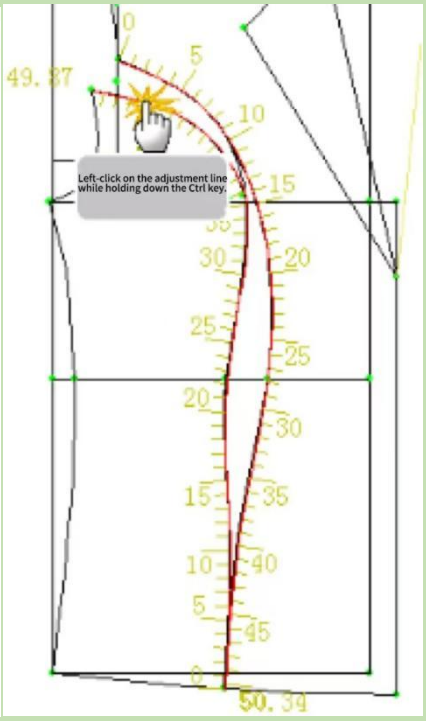


Figure4-59

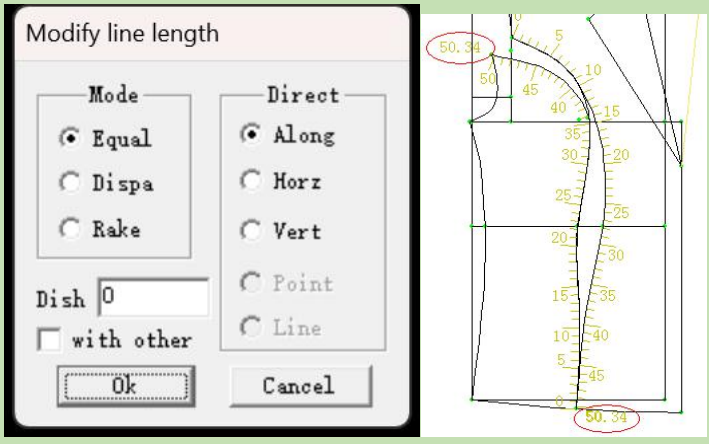


Figure4-60

(4) Line cutting.

1.While holding down the Q key, click on the cutting line.（ Figure4-61）

2.While holding down the Q key, click on the retained end of the cut line.（ Figure4-62）

Note：

a.Multiple lines can be continuously cut.

b.Press and hold the Q key and click on the cutting line. Then, press and hold the Ctrl key and click on the retained segment. The cut line will be retained.

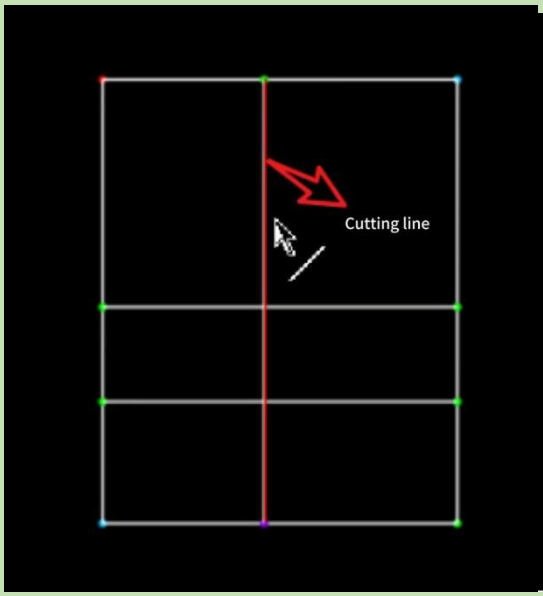


Figure4-61

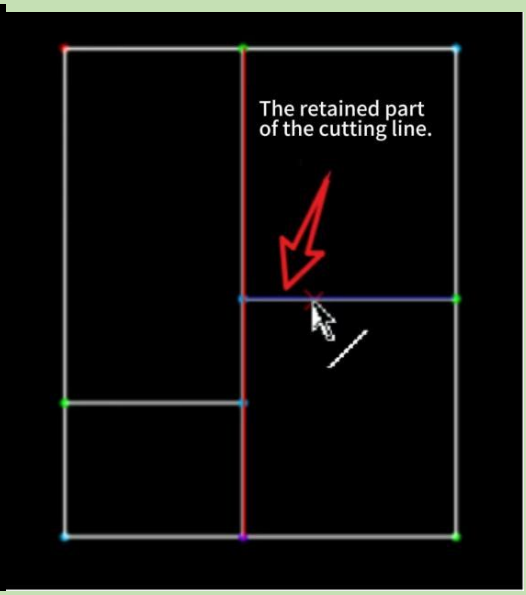


Figure4-62

(5) Line splicing.

Press and hold the P key and click on two line segments with a common intersection point respectively.

(6) Line breaking

1.Click the H key (note :pressed and then released it).

2.click at any position on the line that needs to be broken.（ Figure4-63，point O）click left botton

3.Input data to determine the specific location of the break point.（ Figure4-64）。

Note: When breaking a line at a point on the line, after pressing the H key, click the point and then click the line.

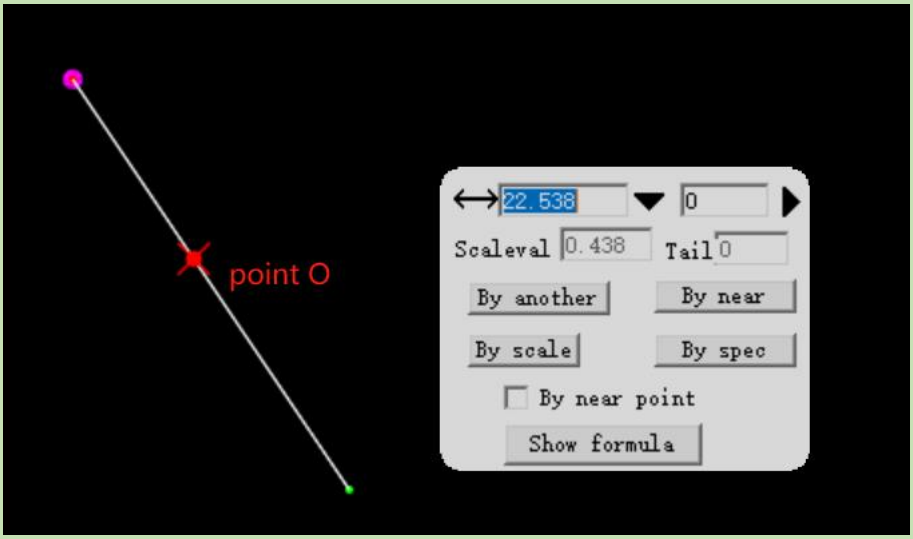


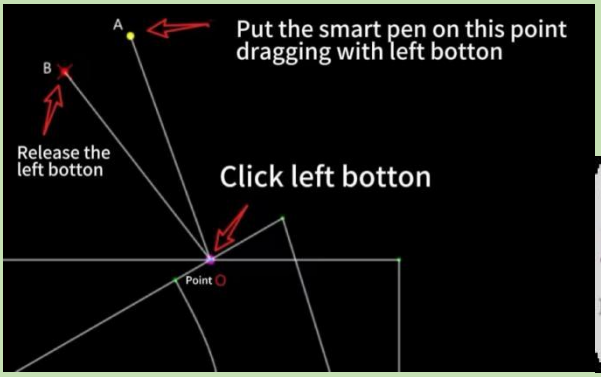
Figure4-63 Figure4-64

(7) Protractor function

1.Click the center of the circle.（ Figure4-65， point O）；

2.Move the mouse to the reference point.（ Figure4-65，point A）Press and hold the left mouse button and drag the mouse to a certain position (Figure 4-65, point B) .

3.Input corresponding parameters.（ Figure4-66）



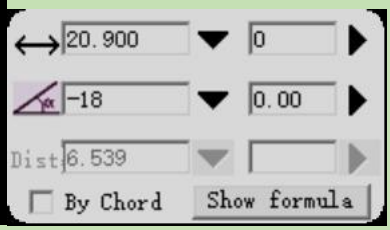
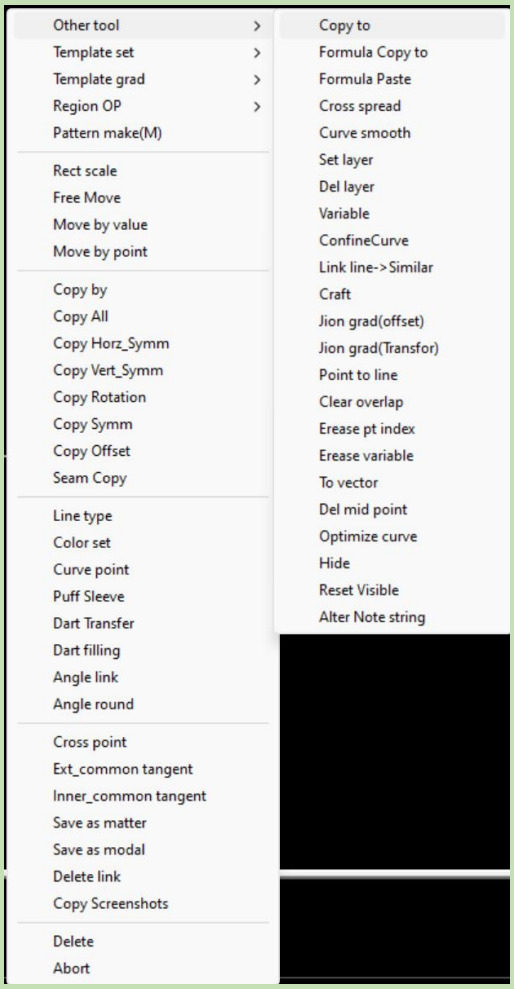


Figure4-65 Figure 4-66

(8) Selecting and editing



Continuous selection (by default, it is selection by pressing left botton. After the line selected, Then right-click to display the following function options：

1.Other tools.

1）Copy to: The selected object can be copied to another pattern-making interface.

2）Formula copy to: Copy the formula used by the selected object to another one.

3）Paste formula: Paste the copied formula.

4）Cross spread.

a．Select contour lines in sequence.

b．Right-click menu selection: Other tools -> Cross spread, and a setting dialog box will pop up.(Figure4-67)

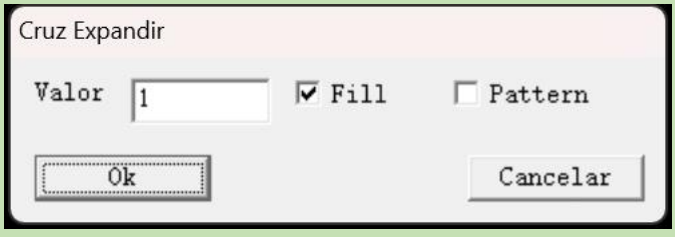


Figure4-67

c．Valor : Enter the spread amount.

d．Fill: When checked, dart fill will be added automatically.

e．Patterns: If checked, patterns will be generated automatically.

Note:

①Select contour lines in sequence.

②The expansion line can only be straight line.

③The endpoints of the spread line must be on the contour line.

④When curve relation is checked, the new curve is associated with the original curve.（ Figure4-68）

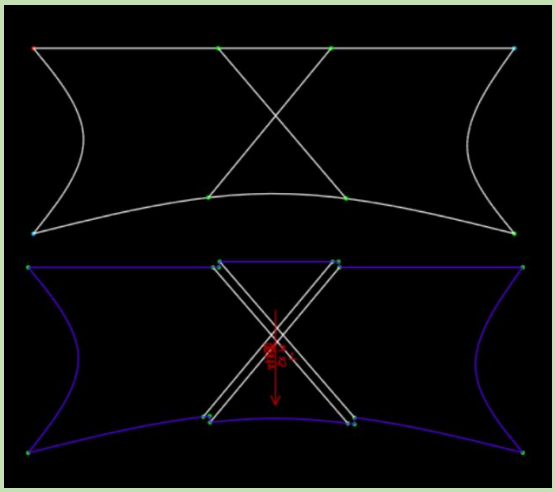


Figure4-68

5）Curve smoothing: Smooth selected curve.

6）Set layer：

When all layers are selected, all patterns are displayed. For other options, only the patterns on the selected layer are displayed.（ Figure4-69）。

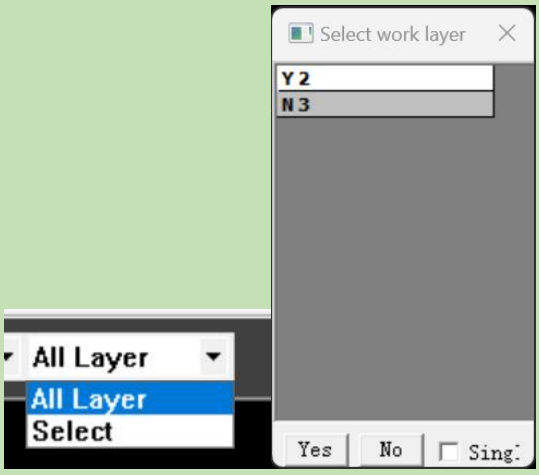


Figure4-69

a．Method 1 : for setting the working layer: In intelligent pattern mode to box-select the patterns to be set to different working layers. Select "Set working layer" from the right-click menu,A dialog box will pop up. Just enter the required layer number (layer number >= 0).

b． Method 2: for setting the working layer:In intelligent design mode， selects the primitives to be set to different working layers,Select "Set working layer" from the right-click

submenu.,The same dialog box in a will pop up. Just enter the required layer number (layer number >= 0). Meanwhile, if the pattern pieces corresponding to the selected graphic elements are also set to the same working layer.（ Figure4-70）

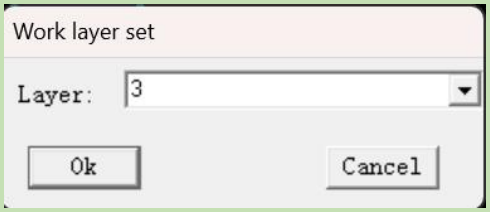


Figure4-70

c. If the layer number is set to 0, it means that this graphic element/pattern piece has no working layer and it will always be displayed.

d. The pattern pieces that are not on the current working layer will not be displayed when entering the mark mode and will not be marked either.

7）Del Layer: Cancel the working layer that was set previously.

8）Variable: Save the accumulated lengths of all the selected straight lines and curves as variables.

9）Confinecurve: Intelligent Pattern Tools,Click on the curve while pressing the "Shift" key and the left mouse button. At this time, the formula setting box will pop up, which is used to set the length of the curve.（Lock Line Length - Formulas, Variables）

Note:

①This operation is ineffective on the yellow line.

②The error is less than 0.01 centimeters.

10）link Line → Similar: For various types of replicated yellow curves, such as the curves on the linked pattern pieces, right-click on the line while holding down the Alt key, and then adjust the line shape with the left mouse button. The original line and the associated lines will be adjusted together.

For the linked similar lines and parallel lines, by pressing Alt + right mouse button, it will directly jump to the activated state of the right mouse button on the original curve, allowing for adjustments with the left mouse button.

11）Jion grad(offset)：Stitch all the box-selected curves together in sequence to form a new curve. The originally box-selected curves (including the endpoints) will change according to the grading results of the new curve.（ Figure4-71）

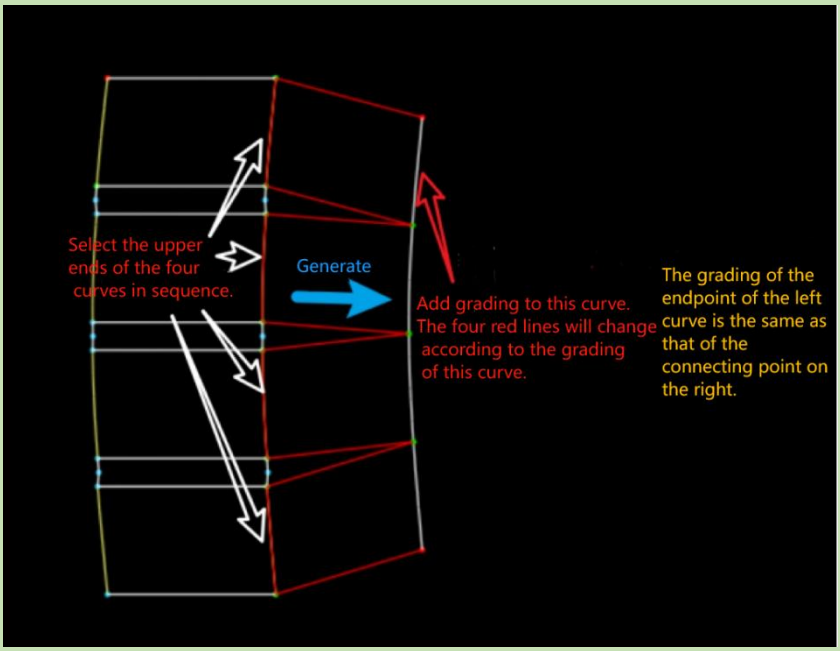


Figure4-71

Note: When selecting curves, box-select/point-select the front end of the curves.

12）Jion grad(Transfor): Stitch all the box-selected curves together in sequence to form a new curve. The originally box-selected curves (including the endpoints) will change according to the grading results of the new curve.

Note: When selecting curves, the method is the same as that of "Smoothing the Corner Connection".

13）Point to line: Move the free points near the line onto the line.

Operation Steps:

a. Select the Figure elements to be processed by using the box selection method.

b. Right-click and select "Point-Line Connection".

c. Enter the "Tolerance" in the pop-up dialog box, which is used to determine the distance between the points and lines to be modified.

14）Clear overlap: Automatically delete the points/lines that are completely overlapping.

15）Erease variable: Detect and delete invalid variables.

16）To vector: Vectorize the selected area to turn it into an integrated pattern.

17）Del mid point: Delete the intermediate grading points of the selected curves.

Note: After selecting continuous curves with the intelligent pattern tools,

Press the "P" key: The selected curves will be spliced together, and the intermediate grading points will be deleted.

Press the "q" key: The selected curves will be spliced together, and the intermediate grading points will be retained.

18）Optimize curve: It is used to handle the problem of excessive curve control points read from DXF, PLT, etc.

19）Hide: Add the hidden attribute to the selected graphic elements to hide them.

20）Reset Visible: Cancel the hidden attribute that was set previously.

21）Alter Note string: Replace and modify the same characters in the annotation text within the selected range.（ Figure4-72）。

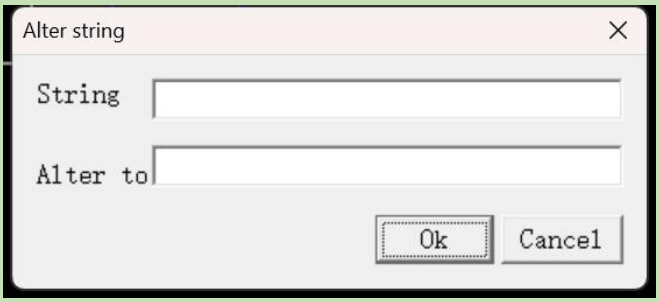


Figure4-72

2.Region Op: Copy a closed selected area. select the area, select the operation to be performed, select the internal lines, and the subsequent operations are the same as those corresponding to each type of copying.

Note:

a. When performing area copying, select lines in the same way as generating pattern pieces.

b. At the end of area copying: +Ctrl to translate along the X-axis; +Shift to translate along the Y-axis.

1) Region paralle: Parallel copy the selected graphic elements to a closed area.

2)Region copy: copy the selected graphic elements with closed area.

3)Region transto: Baste and copy the selected graphic elements to a closed area.

3.Pattern make(M)

Automatically generate pattern pieces from the sequentially selected lines.

Note: The system will prompt you to select the internal lines. After clicking or box-selecting, right-click to end the selection (if there are no internal lines, just right-click directly). Then, set the information of the pattern pieces. "Automatically Add Notches to Internal Lines" Option: If the endpoints of the internal lines are on the edges, notches will be automatically added.（ Figure4-73）

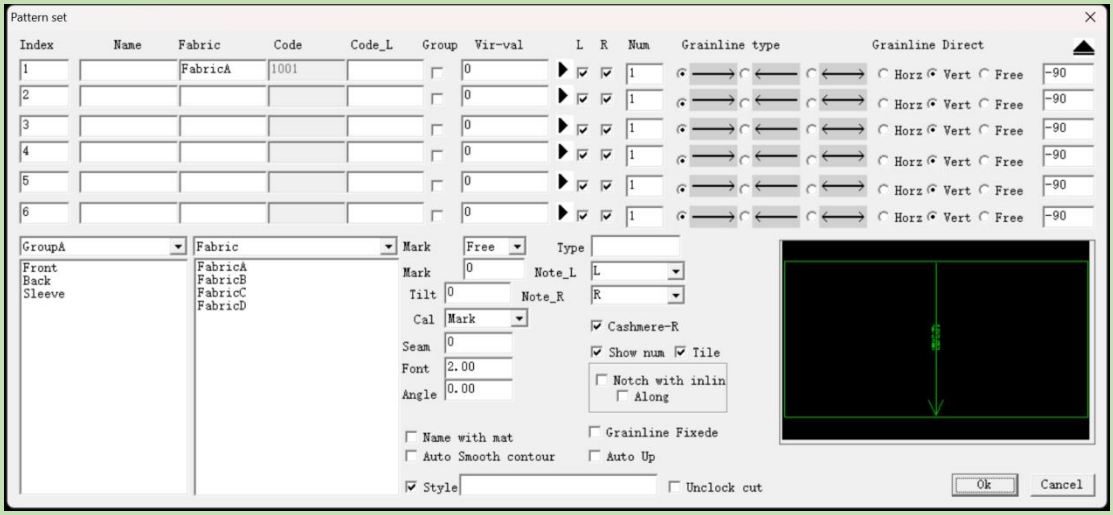


Figure4-73

The input box for pattern type can correspond to the pattern piece category.（ Figure4-74）

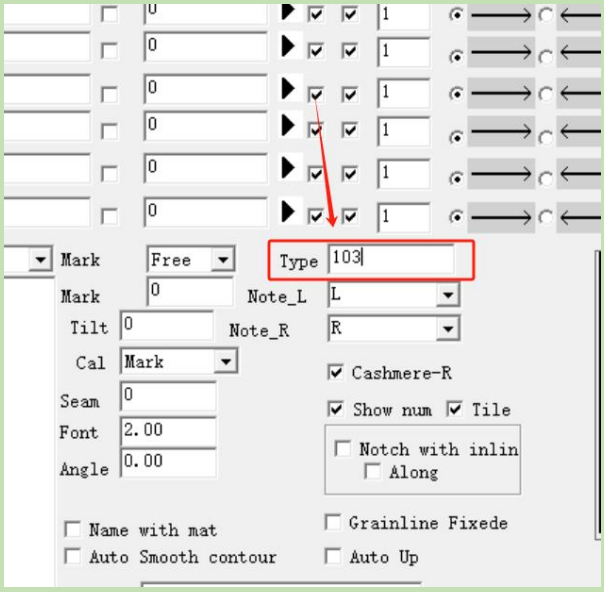


Figure4-74

When generating pattern pieces, saving, or saving as, if there are pattern pieces with the same name, a prompt "Whether to continue" will be displayed.

4.Rect scale

Scale the selected objects proportionally.（ Figure4-75）

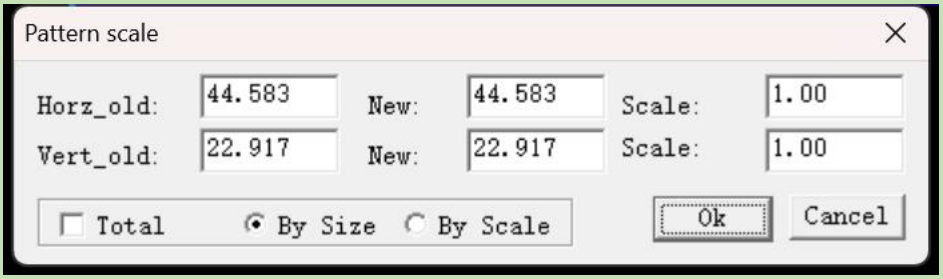


Figure4-75

5.free move

Move the object to any position.

Note: When translating, press +Ctrl to translate along the X-axis, and +Shift to translate along the Y-axis.

6.Move by value

Move the selected part by a certain size. It is used to modify the size of the template.

Note: Translate along the auxiliary line when there is one.

Movement amount edit box: Enter the amount of movement for one time.

Up, Down, Left, Right: Move the selected points (the highlighted points) in the corresponding directions.

Under this dialog box, when re-selecting new points, +Shift: Add the new points to the range to be moved. Otherwise, cancel the originally selected points and only move the newly selected points.

Press "OK" or the right mouse button to end the moving operation (Figure 4-76).

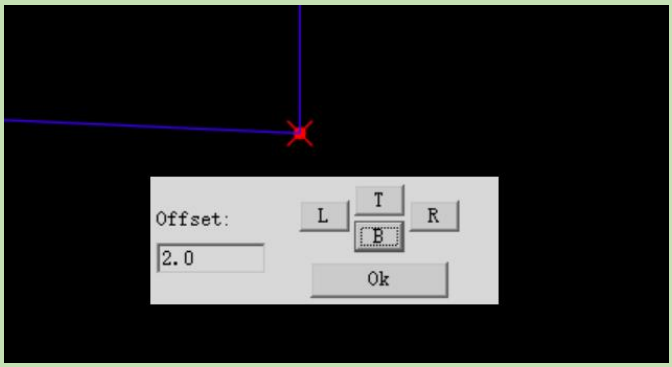


Figure4-76

7.Move by point

Select any point on the figure and the target point to which this point is to be moved respectively. Then the figure will be moved according to the specified points.

Note: After point-to-point translation, the corresponding points will be automatically joined together. If you don't want them to be joined, press the Ctrl key (Figure 4-77).

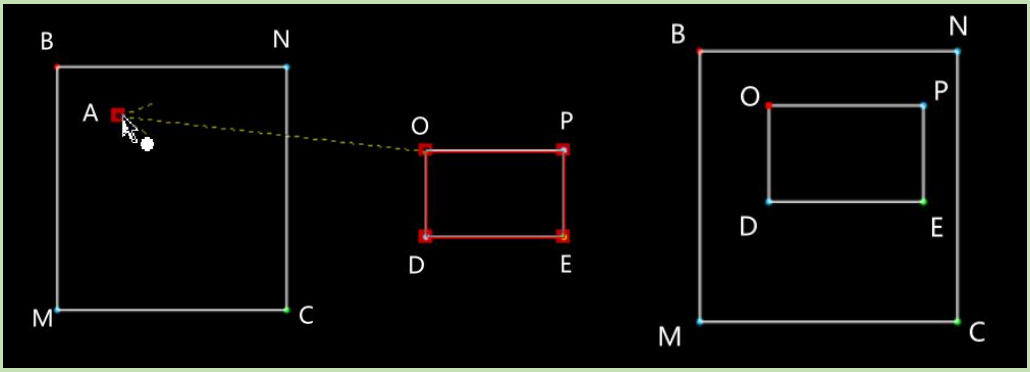


Figure4-77

8.Copy by: Copy an identical figure that is associated with the original figure.

9.Copy All: Copy an identical figure that has no association with the original figure.

10.Copy Horz Symm： Perform a horizontal symmetrical copy to create a figure that is the same as the original one, and this copied figure has no association with the original figure.

11. Copy Vert Symm: Vertically copy a figure that is identical to the original one, and this copied figure has no association with the original figure.

12.Copy Rotation: First, select the center of rotation, and then drag any point to perform the rotation.

13.Copy Symm: You can simply click on the axis of symmetry or the symmetrical point. Note: If two points are selected consecutively, the line connecting the two points will be regarded as the axis of symmetry. If you click twice on a point, it means taking that point as the center of symmetry.

14.Copy Offset: Just select a point on the figure and its corresponding point after translation respectively.

15.Seam Copy: Select a point to be copied, its corresponding point where it is to be copied to, and then select another point to be copied along with its corresponding point respectively.

Note: The lines of rotational copy, symmetrical copy, translation copy and basting copy

are yellow and will change along with the changes of the original line shape (Figure 4-78).

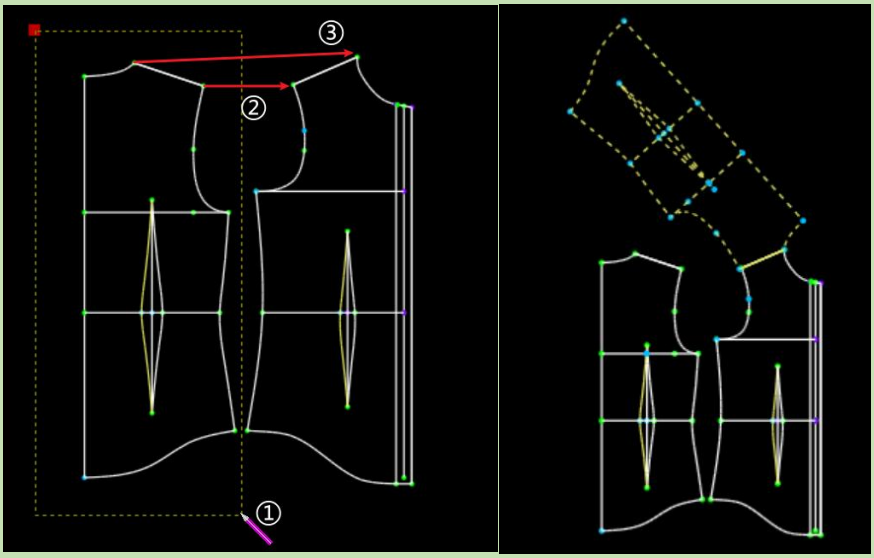


Figure4-78

16. Line Type: The selected line shape can be modified to a dashed line, a wavy line, etc.

17.Color set: After selecting the desired color, frame the objects to be changed, and then right-click and select "Modify Color".

18.Curve point: Set the number of control points for this curve.

19.Puff sleeves: Check the usage of special functions.

20.Dart Transfer: Check the usage of special functions.

21.Dart filling ： Check the usage of special functions.

22.Angle link: Frame the straight lines that need corner connection; then right-click and select "Corner Connection" (Figure 4-79).

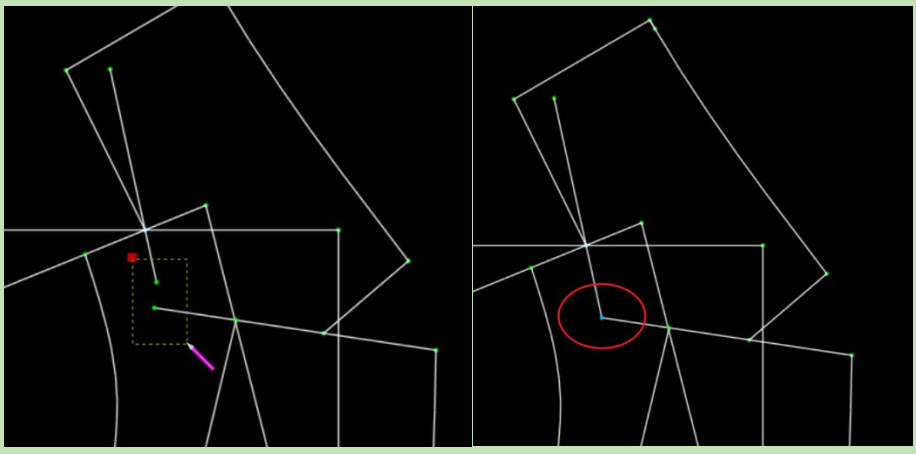
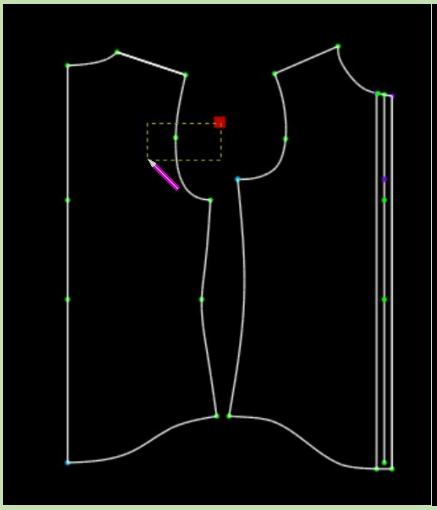
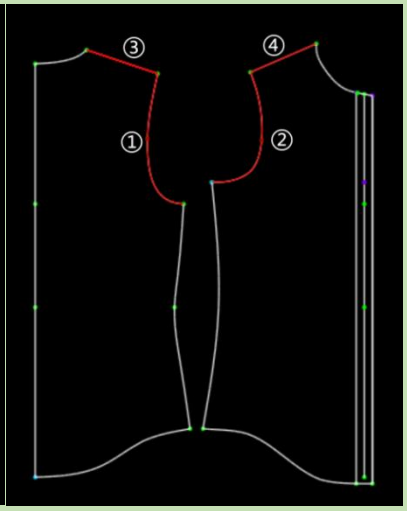
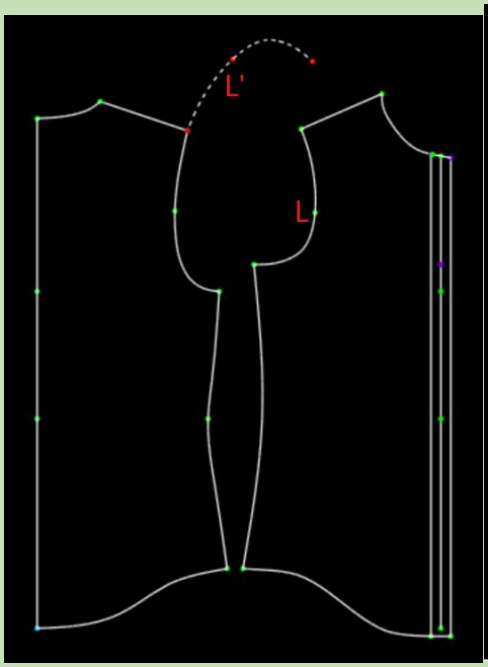


Figure4-79

23.Angle round: Select the joining lines one by one; then select the stitching lines one by one. Right-click and choose "Smooth Corner Connection". Adjust the shape of the joining curve and right-click again to confirm (Figure 4-80).







24. Cross point: Select the line segments that need to intersect; then right-click and select "Taking the Intersection Point".

25.Ext common tangent,Inner common tangent

(1) select the arcs on the two circles where common tangents can be drawn.

(2) Select "External common tangent" or "Internal common tangent" in the right-click menu.

If the linkage has been cancelled, follow the steps below:

a. Select the arcs on the two circles where common tangents can be drawn (the arc selected first is Arc A, and the one selected later is Arc B).

b. Click on the center of Arc A.

c. Click on any point on Arc A.

d. Click on the center of Arc B.

e. Click on any point on Arc B.

f. Select "External common tangent" or "Internal common tangent" in the right-click menu.

Note: If the tangent cannot be drawn, it may be due to incorrect selection of objects or incorrect order.

26.Save as matter: The framed objects can be saved to the component library (in.sck format for easy retrieval).Enter the name and click OK.

27.Save as modal: The framed objects can be saved to the template library (in.gdm format for easy retrieval in the future). You need to enter a name and then click OK .

28. Delete link: The framed parts will have their association relationship removed (after canceling the association, a certain part can be deleted randomly, which will affect automatic grading).

29. Copy Screenshots: The framed parts can be copied to other software such as Word.

30. Delete: Delete the selected objects.

31. Abort: Cancel the selection operation and restore to the initial state of the intelligent mode.

III. Usage of special functions.

(1) V Dart.

1.Place the cursor on the line where a dart is needed and press the V key.

2. Enter the distance from the self-reference end and confirm.

3. Drag the mouse to draw the dart line perpendicular to the dart opening line (note that the angle can be modified). You can either click the left mouse button in the blank area to determine the dart tip, or click the left mouse button on a known point to determine the dart tip.

4. Make the necessary settings in the pop-up setting box and then confirm.

5. After adding a dart, a "dart primitive" will be automatically generated. You can select it in the intelligent tools to modify it (Figure 4-83).

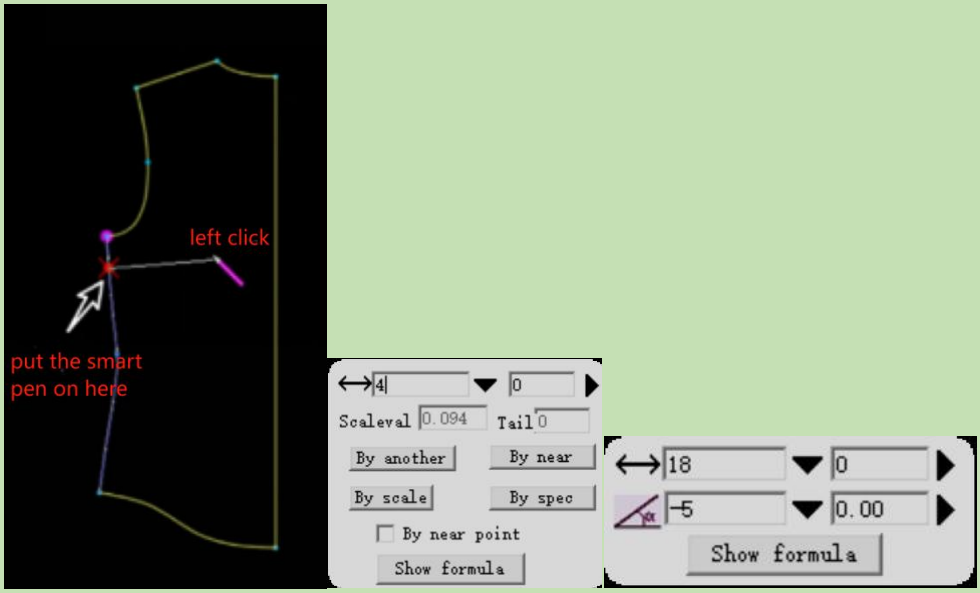
Note: a. By selecting "straight edge/curved edge", you can set the dart line to be straight or curved, and the curvature of the curve can be adjusted.

b. The dart opening direction can be selected as "double, clockwise, anticlockwise".

c. After selecting the hole position, you can set the distance between the hole position and the dart tip.

d. After selecting to insert the dart, you can insert the dart amount in the clockwise or anticlockwise direction so that the length of the dart-added line remains unchanged. Additionally, the insertion length can be selected in different ways such as "along the line, horizontal, vertical", etc.

e. After selecting "lable", you can set the dart notch.



Note: The dart amount and dart length in the dialog box can call formulas and perform automatic grading.

(2)Diamond dart

1. Press the "W" key at the center point of the dart.
2. Enter the relevant data and then click OK (Figure 4-84).

Note:

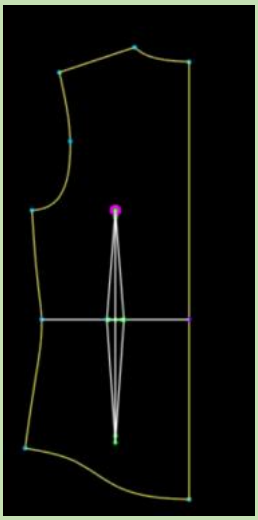
a. Data such as the length and width of the dart can be freely modified (the data can also be modified in the intelligent mode after confirmation).

b. There are two hole positions, namely the hole position from the tip of the dart length and the hole position from the tip of the dart width.

c. The default inclination angle is 90 degrees, and it can also be modified to any angle.

d. By selecting "line/curved", the dart line can be set as a straight line or a curve. The

curvature of the curve can be adjusted (it can be adjusted by dragging the slider on the curved edge, and the shape of the curve can also be continuously adjusted by using the intelligent mode or the curve adjustment method after confirmation).



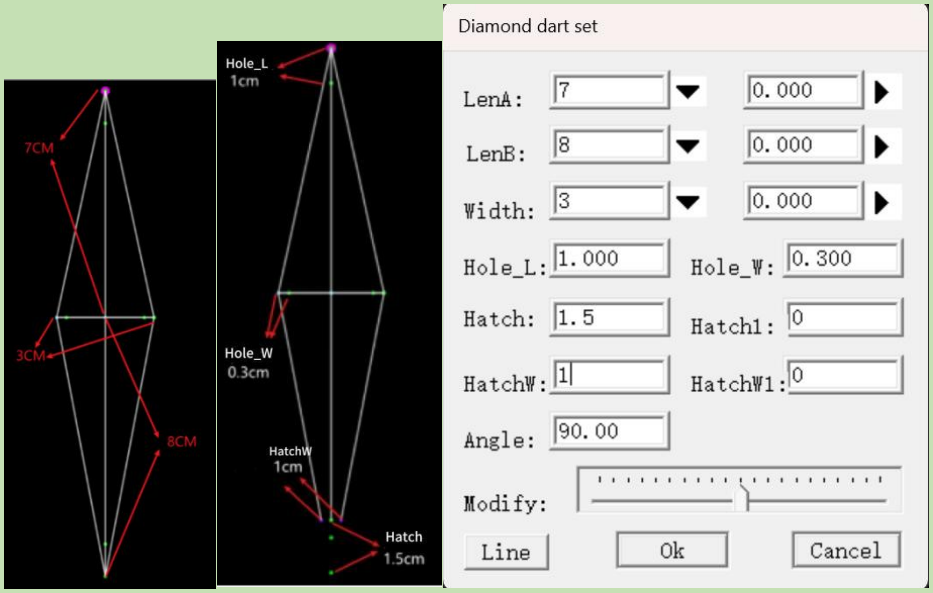


Figure4-84

(3)Transfer the dart

Click this icon  , select the operation area. Then, frame or click on the dart line and the target line one by one. Next, click on the center point and right-click to confirm. A dialog box will pop up. Set the amount of transfer, the dart notch and the direction. Finally, confirm it. The specific operation is shown in Figure 4-85.

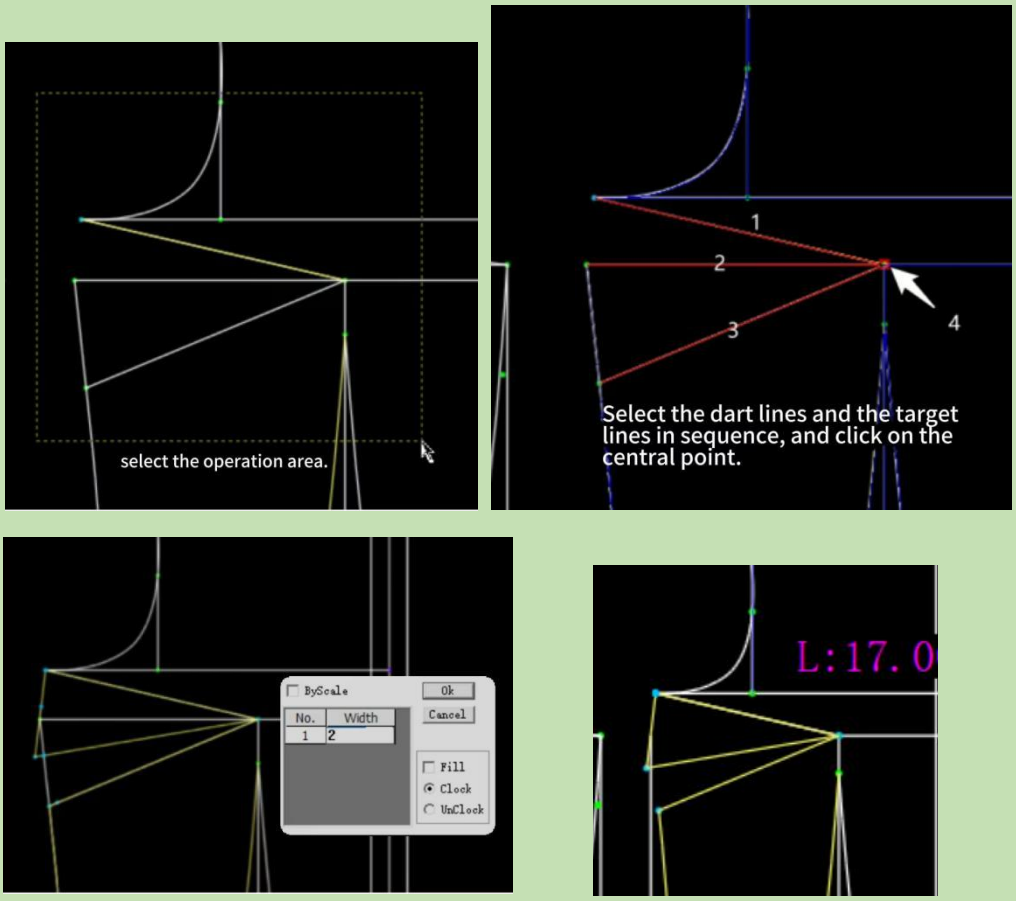
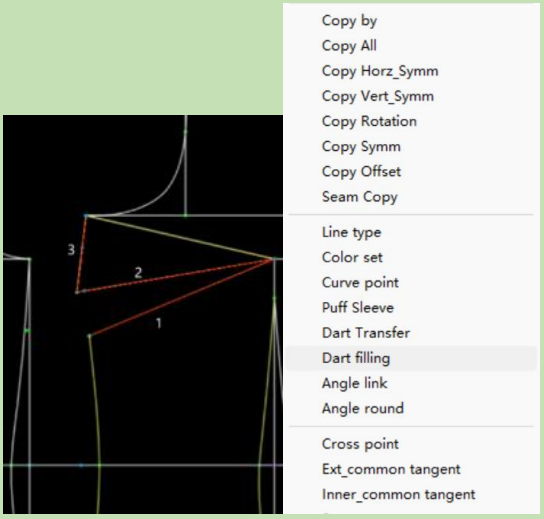


Figure4-85

(4)Add dart fill

Select the dart line and the side where the dart notch is to be inverted respectively, and the system will automatically add the dart filling (Figure 4-86).



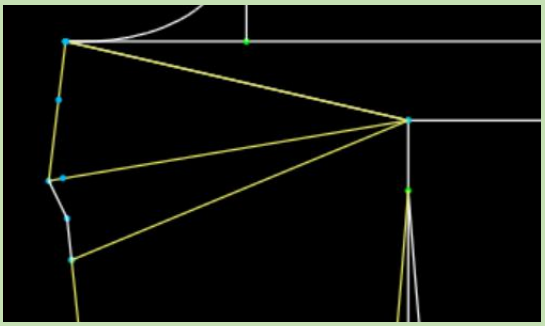


Figure4-86

(5)Insert dart

1. Press the "N" key on the line where the dart needs to be added (Figure 4-87).
2. Enter the distance from the self-reference end and confirm.
3. Move the mouse to draw the dart line perpendicular to the dart opening line (note that the angle can be modified). You can either click the left mouse button in the blank area to determine the dart tip, or click the left mouse button on a known point to determine the dart tip (Figure 4-88).
4. Click on the rotation fixed point.
5. Frame or click on the lines that need to be moved.
6. Right-click to confirm and enter the parameters (Figure 4-89).

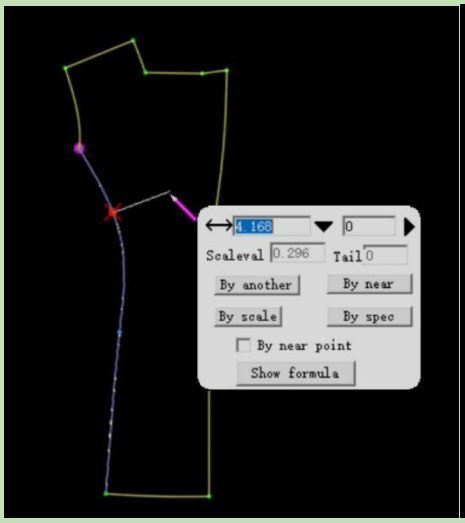


Figure4-87

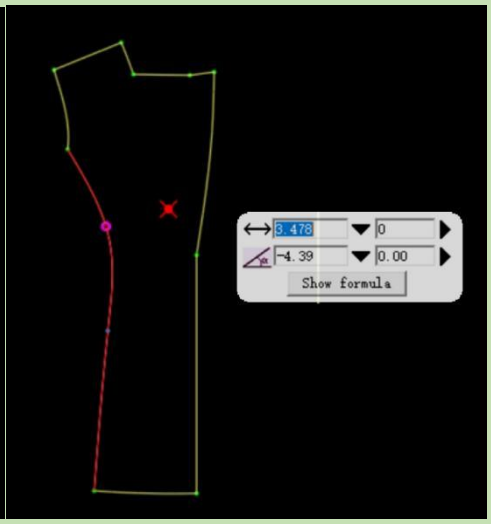


Figure4-88

Figure4-89

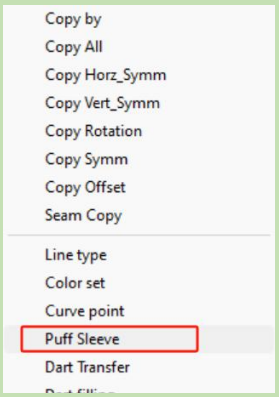
(6)Puff sleeves

1. Draw the unfolding line at the position where the insertion is required.
2. Frame the sleeve cap curve, and then frame or click on the unfolding line.
3. Right-click and select "Puff Sleeve".
4. Enter the unfolding amount, select the insertion type, and then click OK (Figure 4-90).

Note:

a. There are four different insertion types: "Pointed Dart, Box Pleat, Gathered Pleat, and Slit Pleat". The four types of pleats are shown in Figure 4-91.

b. For the pointed dart, you can choose to add the dart notch automatically, or add the dart notches one by one after it is made (in this way, different directions can be added respectively)



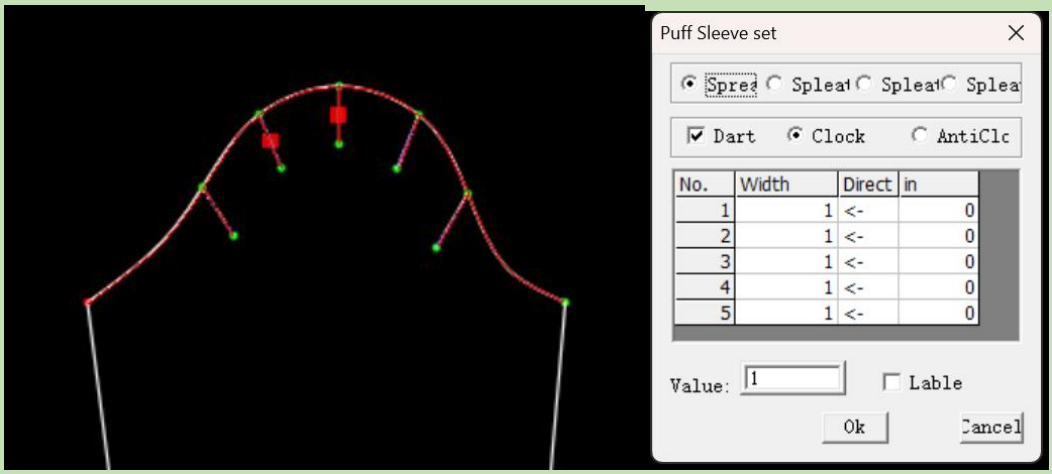
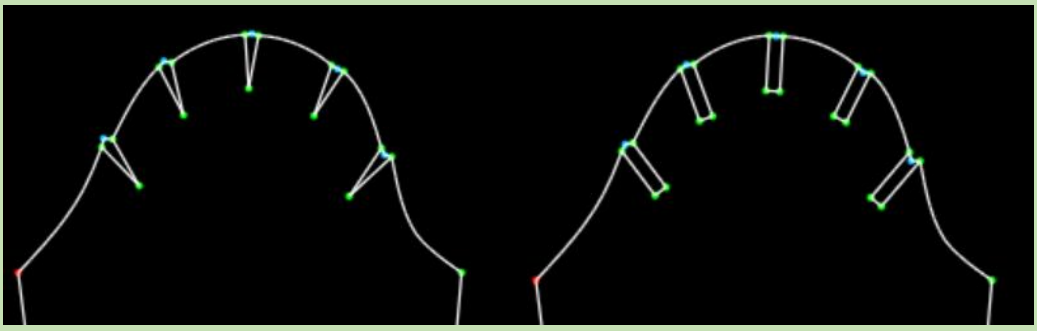
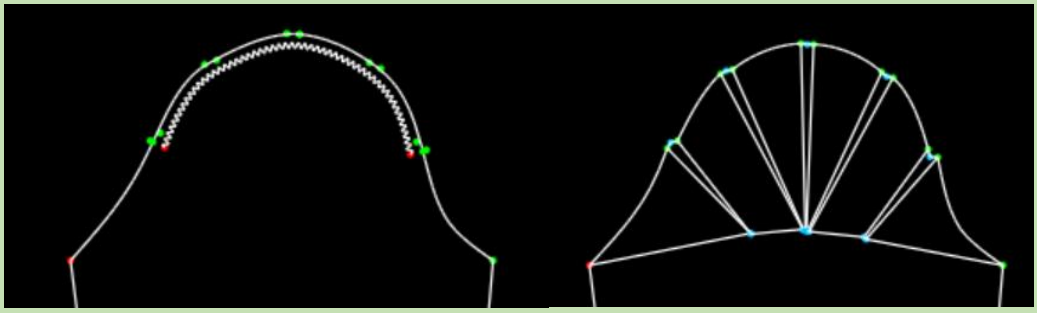


Figure4-90



尖省　　活褶



碎褶　　开褶

Figure4-91

IV. Right-click Function Switching

Right-click in the blank area under the intelligent mode, and you can quickly switch (Figure 4-92):

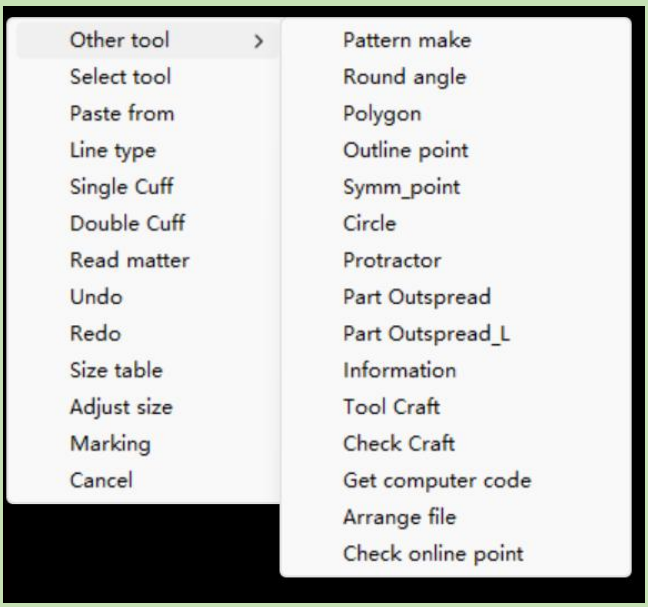


Figure4-92

(1)Other tools

Switch to other tools (invoke tools).

Note: After invoking other tools, you can return to the intelligent mode by pressing the ESC key.

1. Pattern make: After selecting "Generate pattern", frame the main structural lines of the pattern to be generated respectively. Then right-click once. The system will prompt for internal lines by default. If there are no internal lines, right-click to bring up a dialog box and set it according to your needs. If there are internal lines, click on the required internal lines and then right-click to perform the same operation as above.

2. Round angle: After selecting the fillet tool, left-click on the parts where fillets need to be added with the mouse.

For example, in the following figure: First click on line A and then line B. Then drag the mouse along the direction of the included angle. A dialog box will pop up when you right-click. Set it according to your needs (Figure 4-93).

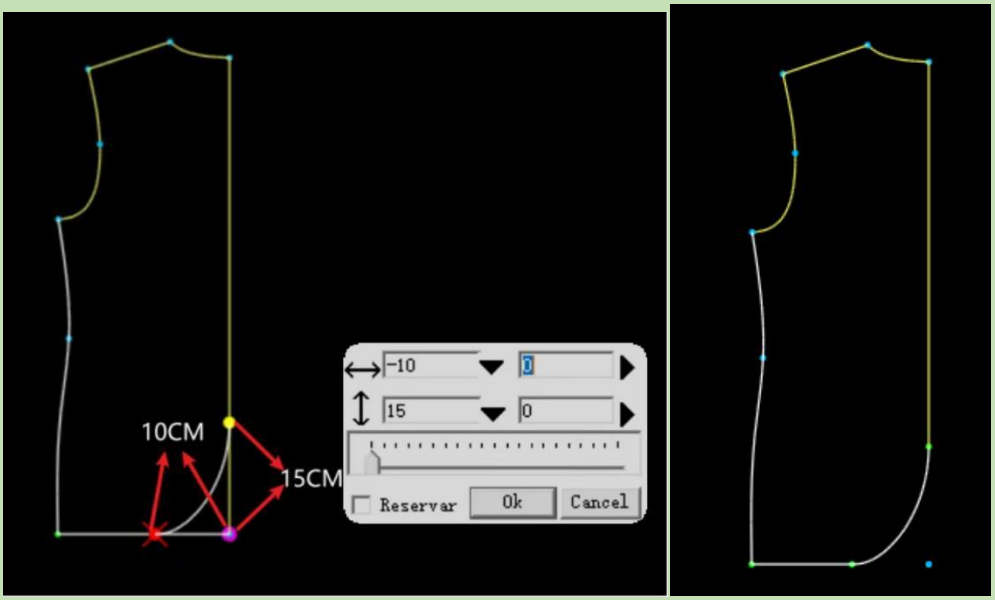
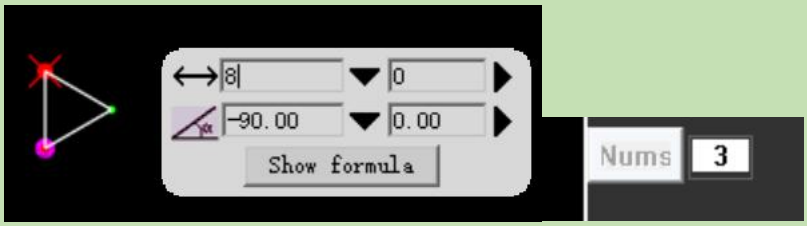


Figure4-93

3. Polygon: Select the polygon tool, and a dialog box will pop up. Input the required information in the dialog box, and then drag the mouse with the left button in the blank area.



4. Outline point: Select the point outside the line tool. Click on the two endpoints of the line respectively. Then, hold down the left mouse button at the end point and drag the mouse. Next, click the left mouse button to make a dialog box like the one shown in the following figure pop up. Finally, set it according to your needs (Figure 4-94).

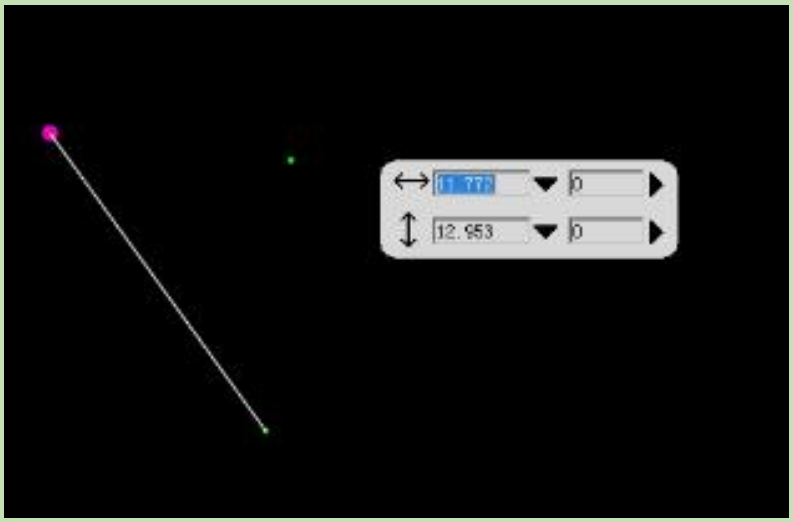


Figure4-94

5.Symm_point: Take point M as the center in the figure below. Then find two points A

and B on both sides that are at an equal distance from M. (After left-clicking from point M, move the mouse onto the line and then left-click again. Input the required information after the dialog box pops up (Figure 4-95).)

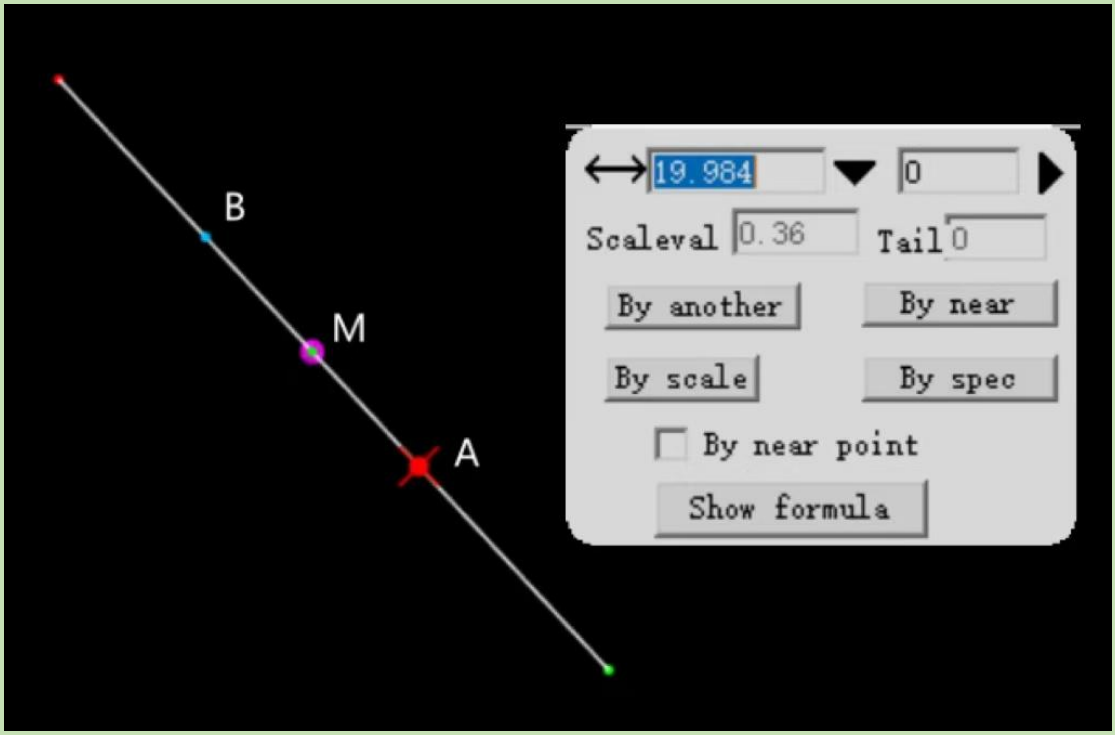


Figure4-95

6. Circle: After selecting the arc tool, click on the center of the circle to draw an arc. Press Shift: to draw an ellipse.

Move the cursor to determine the radius (Figure 4-96).

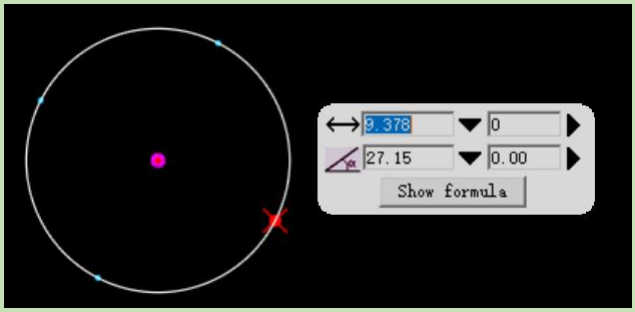


Figure4-96

The ellipse has a major axis and a minor axis (Figure 4-97).

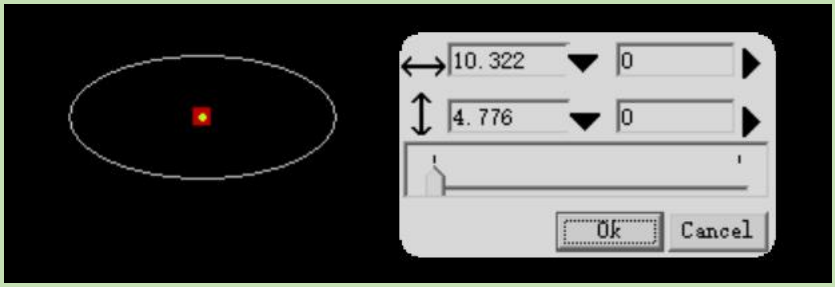


Figure4-97

7. Protractor : After selecting the protractor tool, left-click to fix the vertex. Then click on

the other end point, release the left click, drag the mouse, and click again. After the dialog box pops up, set it according to your needs.

8. Part Outspread: For the rectangle ABCD in the following figure, after selecting the uniform multiple pleats, find a fixed end (the AB end in the following figure). Left-click on AC (close to the A end) and BD (close to the B end) respectively with the mouse. Then left-click on the following moving line (the CD line), and right-click. After the dialog box pops up, set it according to your needs (for specific content, refer to the operation introduction of the special tool group), as shown in Figure 4-98.

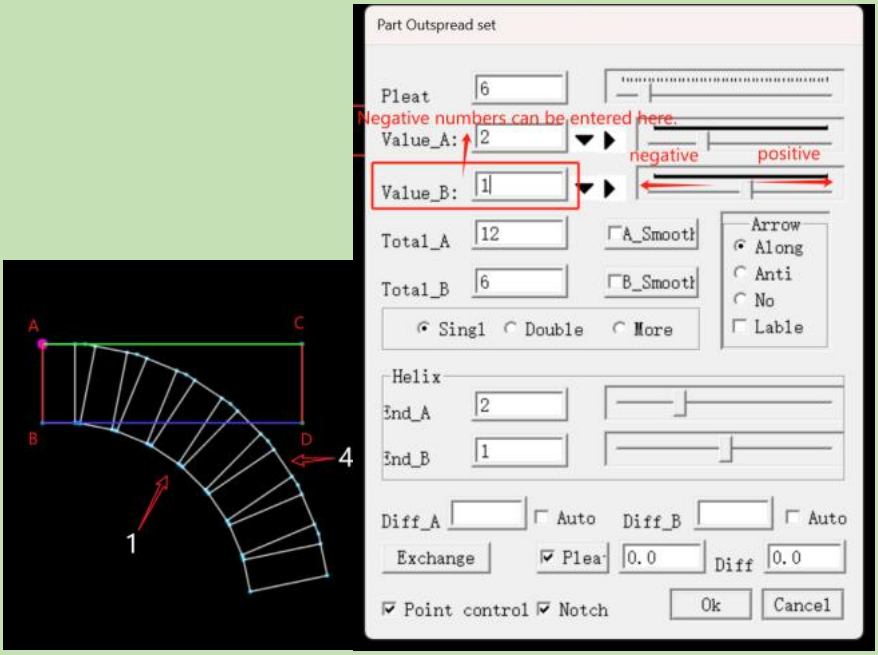


Figure4-98

9. Part Outspread_L: For the figure shown in the following figure, after selecting any pleat, click on lines AC and BD respectively. Then click on the unfolding line EF (right-click in the blank area after left-clicking it). Finally, click on the following moving line CD and right-click. After the dialog box pops up, set it according to your needs (for specific content, refer to the operation introduction of the special tool group), as shown in Figure 4-99.

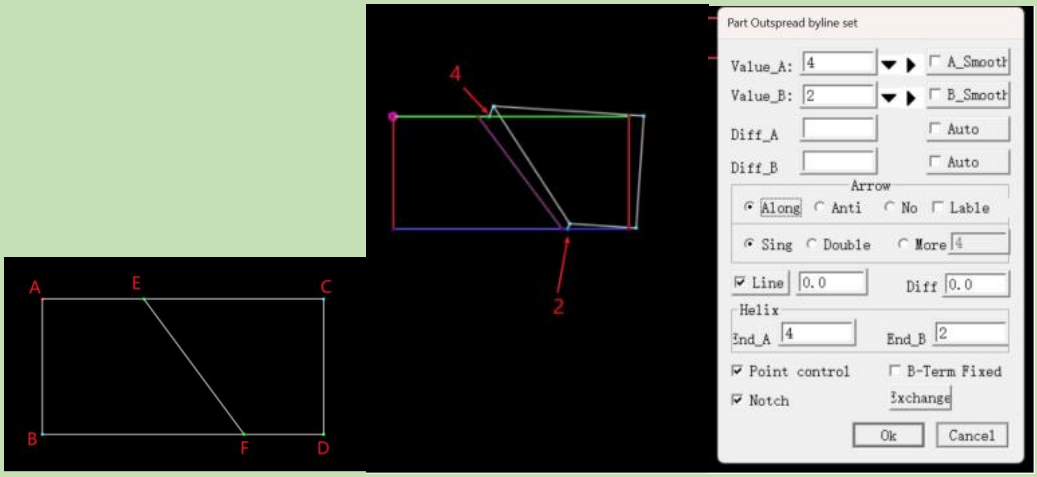


Figure4-99

10. Information: After selecting the text tool, left-click at the place where text needs to be added, release the click, and then click again (to fix the position). Input text in the popped-up dialog box and click OK when you finish.

11. Check Craft: Check whether there are any missing variables.

12. Get computer code:

13. Arrange file: It is used to deal with problems such as invalid data and overly large file sizes in sample files.

14. Check online point: It is used to find the free points on the line.

(2)Select tool

Switch between full-screen operation display and tool display, and check the options as needed.

(3)Paste from

Paste the copied objects into the current file.。

(4)Line type

Set the line styles to be drawn .

(5)single Cuff

Automatically design a one-piece sleeve by simply inputting the relevant data.（ Figure4-100）。

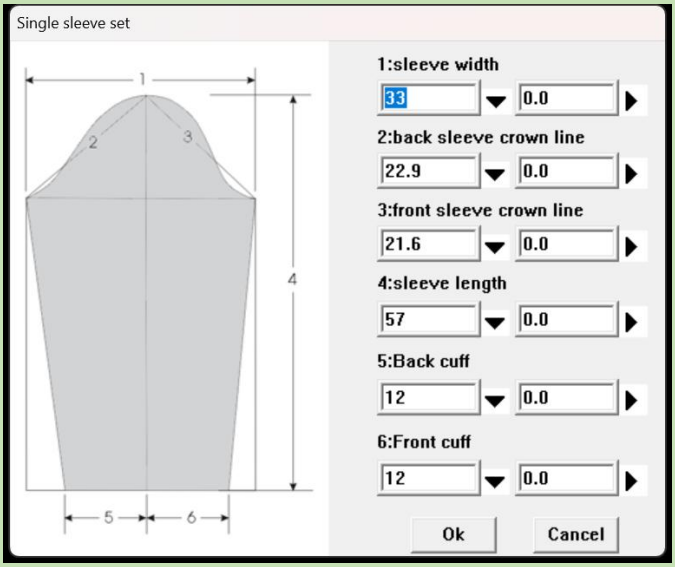


Figure4-100

(6)Double Cuff

Automatically design a two-piece sleeve by simply inputting the relevant data.（ Figure4-101）。

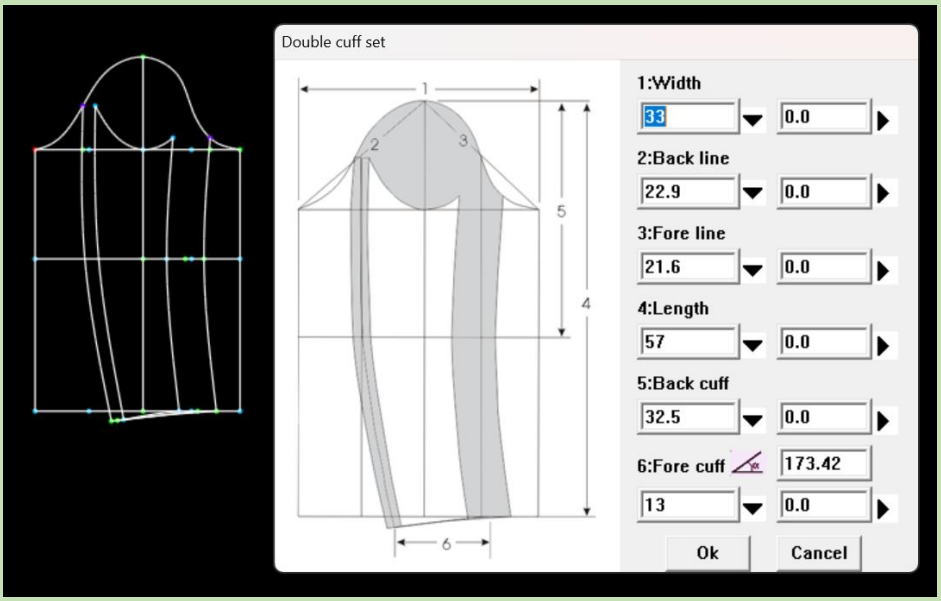


Figure4-101

(7)Read matter

Call in the components from the component library.（Figure4-102）。

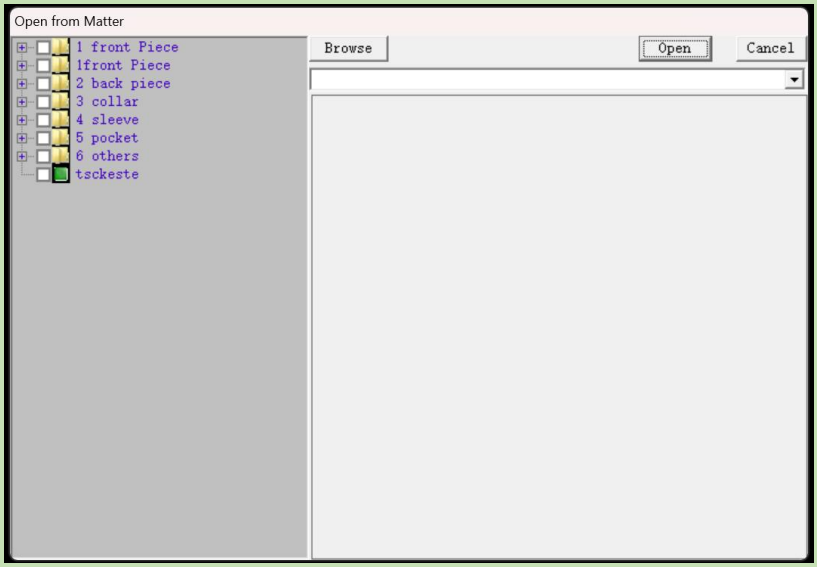


Figure4-102

(8)Undo, Redo

You can respectively undo the previous step and restore the undone steps after undoing.

(9)Size table

Enter the size chart editing.

(10)Marking

Enter the layout center.

Section 5 Intelligent Pattern Mode

Intelligent Mode in the pattern Center Pattern It encompasses most of the functions of various tool groups in the pattern center. Depending on the operation methods and objects, it can respectively achieve seam allowance settings, notching markings, process line and internal line settings, pattern segmentation, pattern rotation and movement, as well as point grading and other types of processing.

I. Seam set

（1）Seam allowance setting

1.Seam allowance size

Left-click on the outline (net pattern) line of the pattern with the mouse in the pattern mode, and a dialog box will appear as shown in Figure 5-1. Enter the required seam allowance size (Note: Once one seam allowance is set to "negative", all seam allowances will be defaulted to "negative"). The system defaults to equal seam allowances on both sides，by The seam allowance can be set to "unequal at two ends" or "folded in half". When it is setted “**no same**”, the widths of the starting end and the ending end can be set respectively. As shown in Figure 5-2, the "segment difference" can also be set (Note: The starting end and the ending end are determined according to the clockwise direction of the pattern contour).

Figure5-1

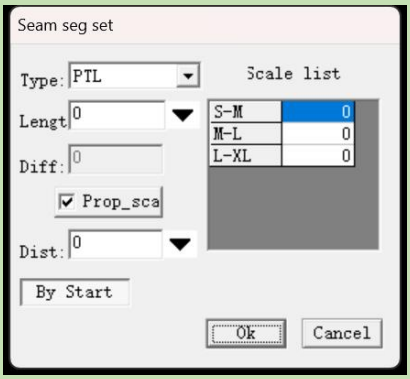


Figure5-2

2.Automatic Notch

Click notch ,automatic notches will be added when adding seam allowances.

（2）shink part

After selecting a certain seam allowance, click on "shink_part". Enter the required data in the pop-up setting box as shown in Figure 5-3, and then click OK (Note: "Fabric Shrinkage Rate" refers to the uniform shrinkage rate within the fabric layout system).

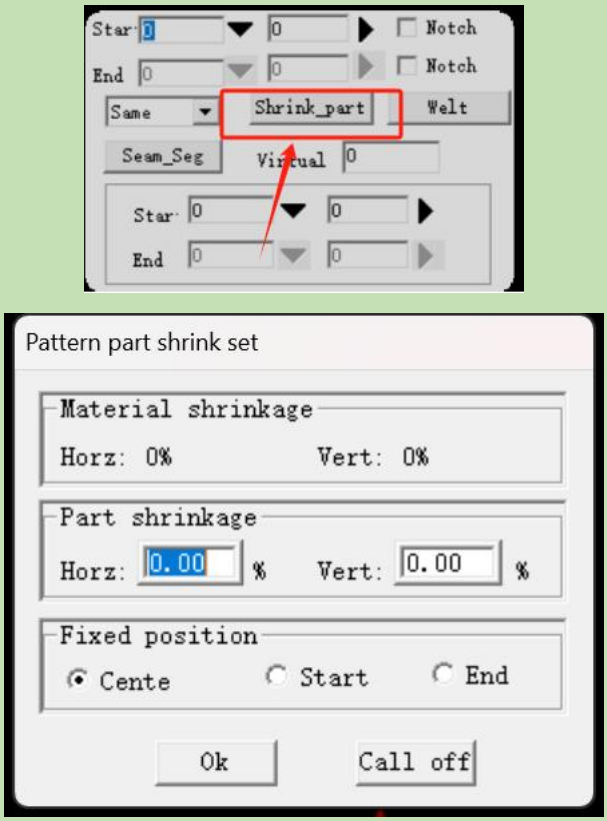


Figure5-3

（3）Welt

After selecting a certain seam allowance, click on "welt" as shown in Figure 5-5 (Note: You can hold down the Ctrl key and click on the seam allowance to directly set the facing. Other facings with the same width can be quickly generated by holding down the Shift key. For the hem of a folded pattern, the facing cannot be directly obtained. It can only be folded after the facing is taken). Enter the width of the facing and the indentation size and confirm (Note: The width of the facing refers to the additional width on the basis of the seam allowance of this fabric).

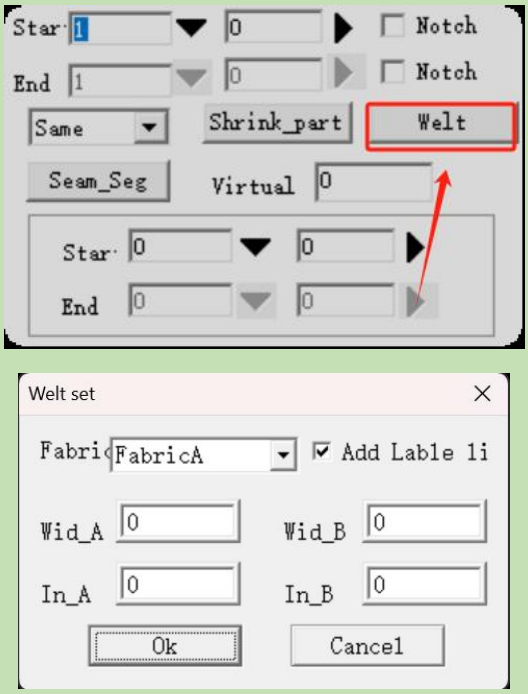
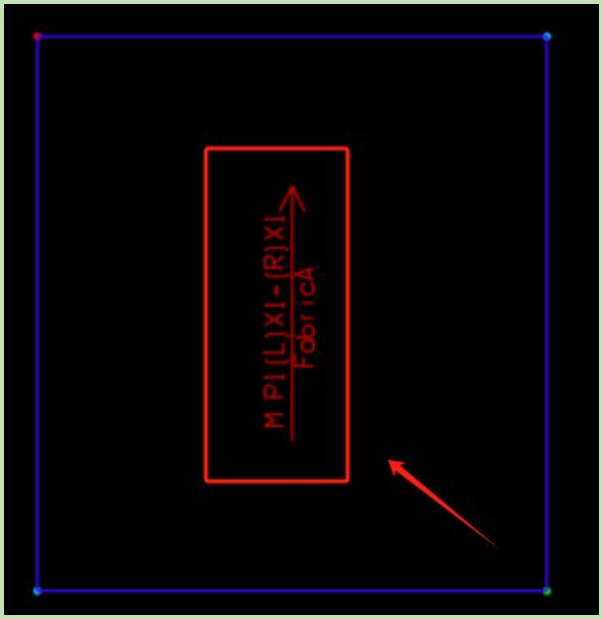


Figure5-5

（4）Grain Line Setting

You can select the starting end of the grain line and then move it to any position. You can also select the ending end of the grain line and adjust the direction of the grain line arbitrarily (Note: If it needs to be parallel to a certain straight line, please select the two endpoints of that straight line respectively; hold down the Shift key to set it to 0°, 55°, 90° and move the cursor to make a selection).



Ⅱ.Notch Setting

（1）Notch Setting

1.make notch

It can be summarized : "Left-click on the Point, Right-click on the Line". That is, left-click on an existing point on the outline, or right-click at any position on the outline. Then a dialog box will appear as shown in Figure 5-5, and you can enter the distance of that point.(1) Continuously click on different outlines to set notches with the same distance. If you wish to set different notches, place the mouse on the blank area, right-click to end, and then proceed with the next operation (Note: When the seam allowance is too wide and the notch direction is incorrect, adjust it manually).

(2) Ctrl + left-click on the notch: Adjust the direction of the notch.

(3) Shift + right-click on the notch: Modify the parameters of the notch.

(4) The notch type  can be set separately.

Figure5-5

2.Notch for alignment

(1) While selecting the notch for alignment tool or pressing the H key, left

click on the starting end of the outline of the first group of notches for alignment, and right-click to end.

(2) Then successively left click on the starting end of the outline of the second group of notches for alignment, and right-click to end.

(3) Right-click again to confirm and a dialog box will appear as shown in Figure 5-6. Enter the relevant notch information.

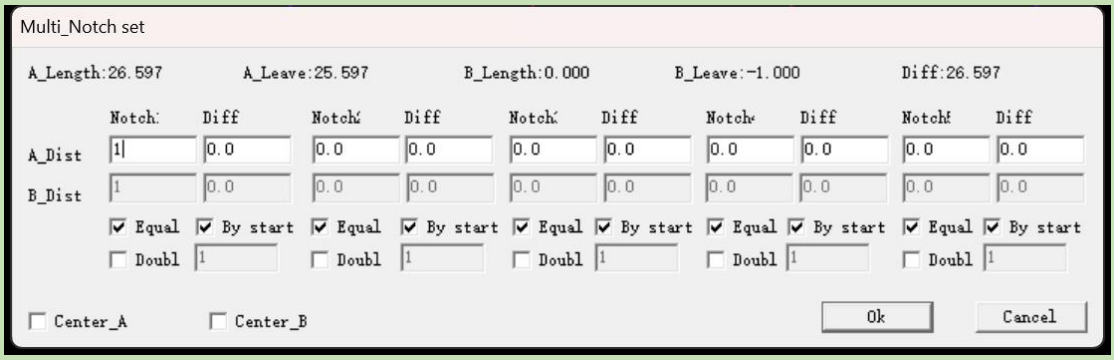


Figure5-6

（2）Marker Point Setting

Just left-click on the point inside the pattern.

（3）Button Setting

Select the button position tool or hold down the N key, then directly click on a line or continuously click on two points to bring up a dialog box as shown in Figure 5-7. Enter the button position information and click OK.

1. You can set a single button position by left-clicking twice at the same point. When there are multiple buttons and the equal division option is not selected, unequal distances can be set through the spacing list.

2. The "Fold in Half" option is used for selecting the button position setting on the folded pattern.

3. Marking: If "Center Point" is selected, a mark will be added at the center of the button position; if "Reference Point" is selected, a mark will be added on the control point.

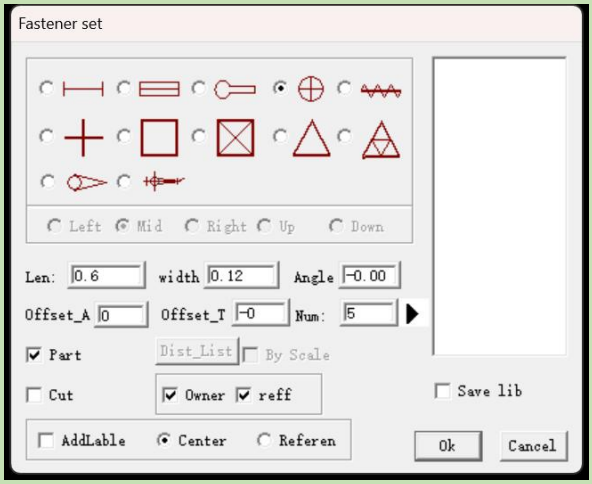


Figure5-7

III. Seam Corner

Right-click at the seam corner of the pattern. Select the relevant seam corner type as shown in Figure 5-8, and then proceed with the next operation according to the prompts.

Figure5-8

（1）Extension Angle

After selecting "Extension Angle", the system will automatically set the seam corner to an extended angle. The comparison figure before and after setting the extended angle is shown in Figure 5-9.

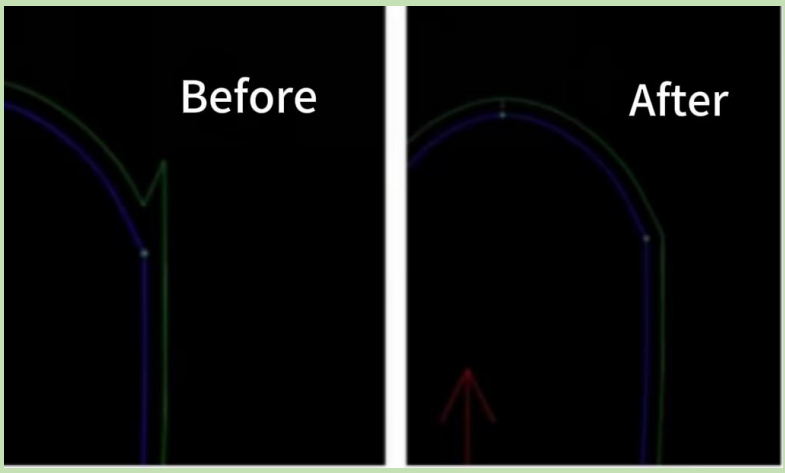


Figure5-9

（2）Angle

After selecting "Angle", a dialog box will pop up as shown in Figure 5-10. Enter the relevant data and click OK (Note: There are three setting methods for cutting angles, which can be selected according to actual needs). The comparison figure before and after setting the cutting angle is shown in Figure 5-11.

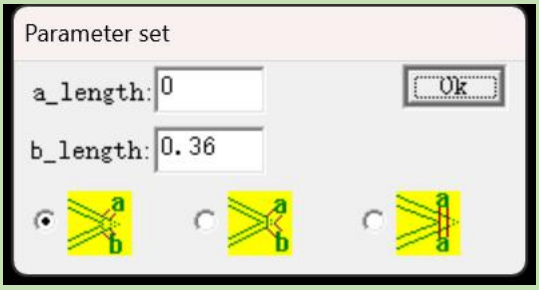


Figure5-10

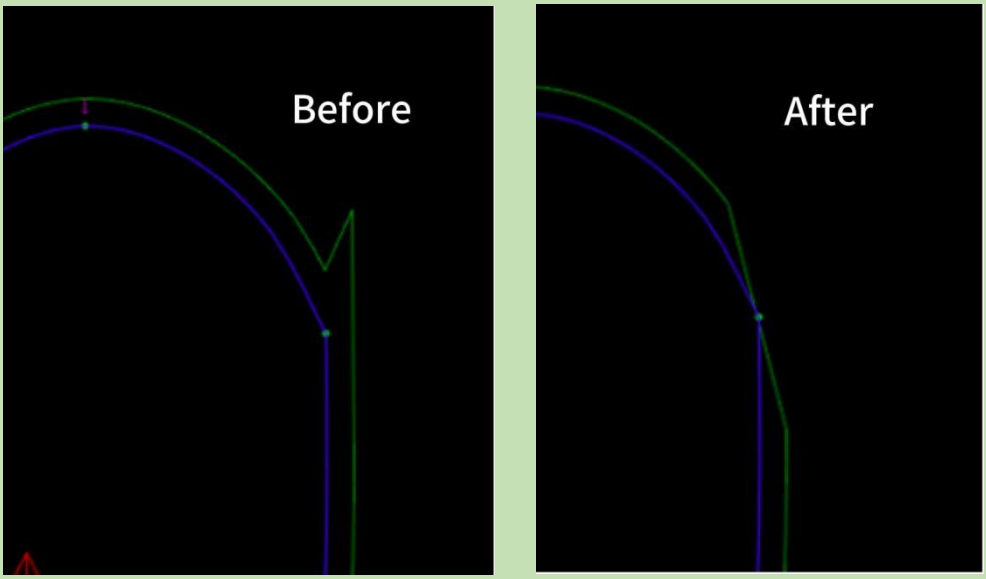


Figure5-11

（3）Symmetry Angle

1. Right-click and select "Symmetry Angle".
2. Click on the symmetrical side.
3. Enter the length of the axis of symmetry, as shown in Figure 5-12.
4. Click OK. The comparison figure before and after setting the folded angle is shown in Figure 5-13, and Figure 5-15 shows the effect of secondary folding (Note: Regarding special folded angles (normal folding is ineffective): Enter a "negative" length of the axis of symmetry in the input box, and the absolute value of this length is the line length from the corner point to the position to be folded on the folded side).

Figure5-12

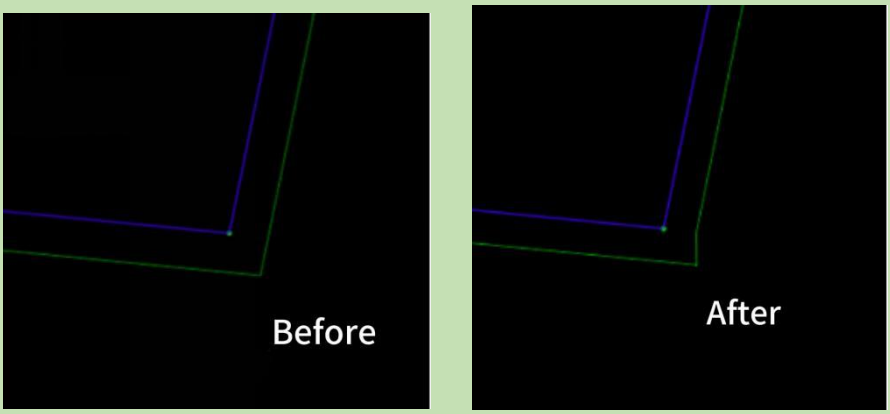


Figure5-13

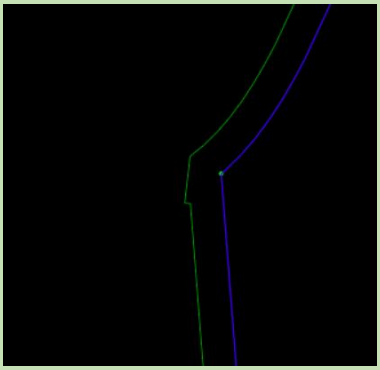


Figure5-15

（4）Right angle

1. Right-click and select "Right Angle".
2. Click on the near end of the vertical side of this pattern.
3. Click on the near end of the vertical side of the other pattern. The comparison figure before and after setting the right angle is shown in Figure 5-15.

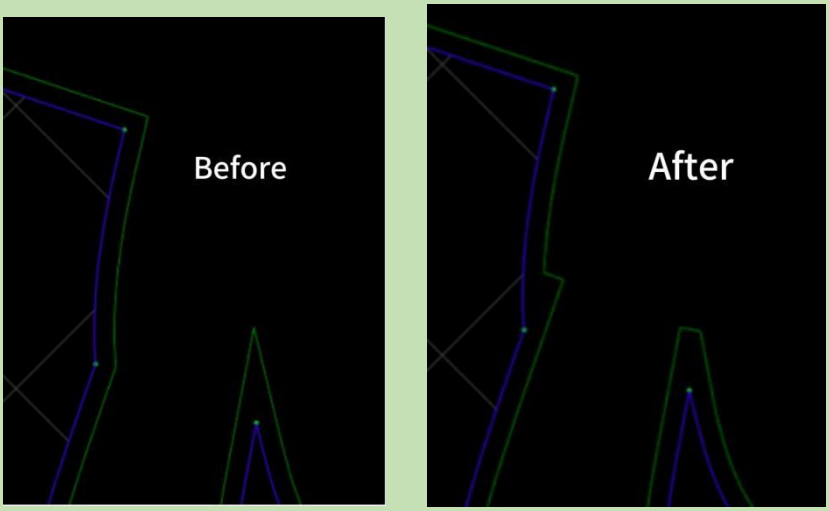


Figure5-15

（5）Single right angle

1. Right-click and select "Single Right Angle".

2. Click on the near end of the vertical side. The comparison figure before and after setting the single right angle is shown in Figure 5-16.

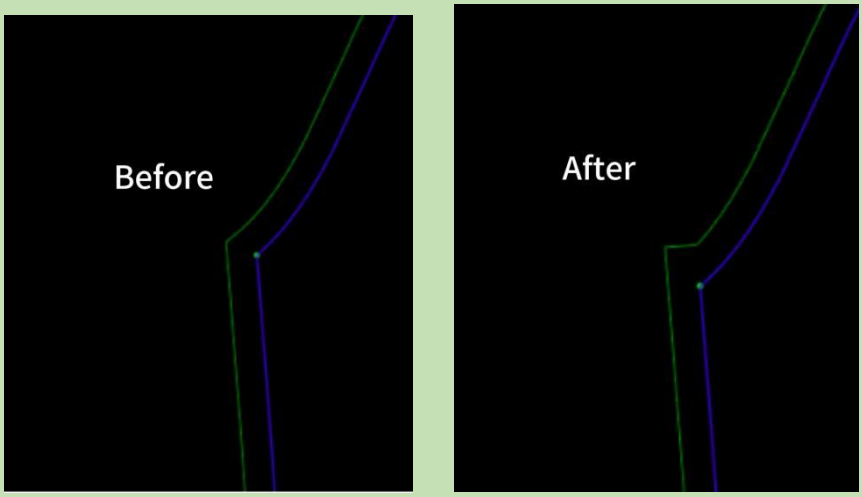


Figure5-16

（6）Right Angle by data

1. Right-click and select "ight Angle by data".

2. Click on the near end of the vertical side.

3. Enter the length from the cusp to the right-angle side as shown in Figure 5-17, and then click OK. The comparison figure before and after setting the right angle with limited length is shown in Figure 5-18.

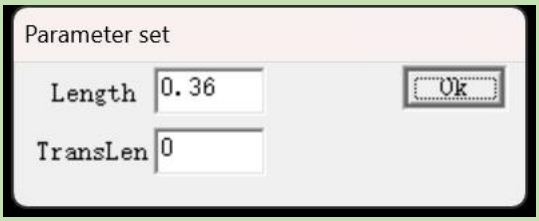


Figure5-17

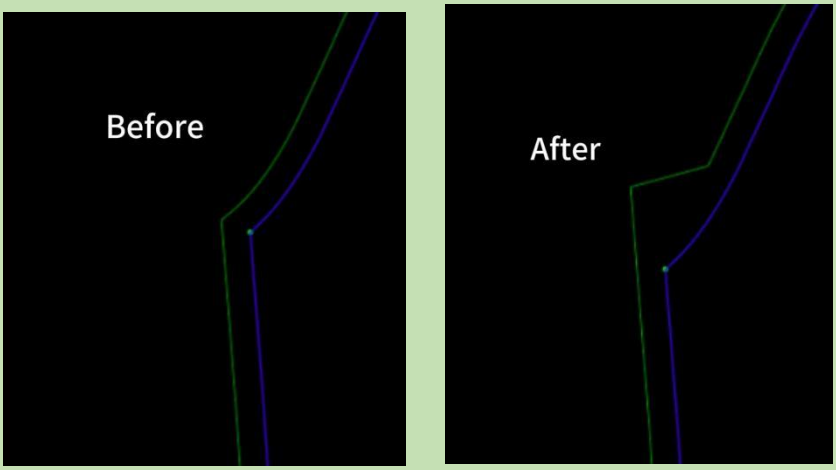


Figure5-18

（7）Pucker Angle

1. Right-click and select "Pucker Angle".

2. Set the reserved length as shown in Figure 5-19 and click OK; the comparison figure before and after setting the folding angle is shown in Figure 5-20. (Note: When the amount of seam allowance modification is increased, the system defaults this angle to be a folding angle.)

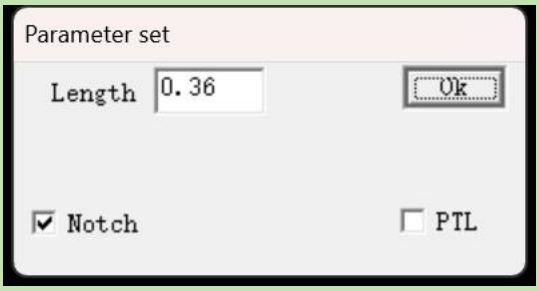


Figure5-19

Figure5-20

（8）Fold Angle

1. Right-click on the reference pattern (at the pointed corner position) and select "Fold Angle".

2. Click on the near end of the vertical side of this pattern.

3. Click on the near end of the reversed folding side of the other pattern. The comparison figure before and after the setting of the reversed folding angle is shown in Figure 5-21.

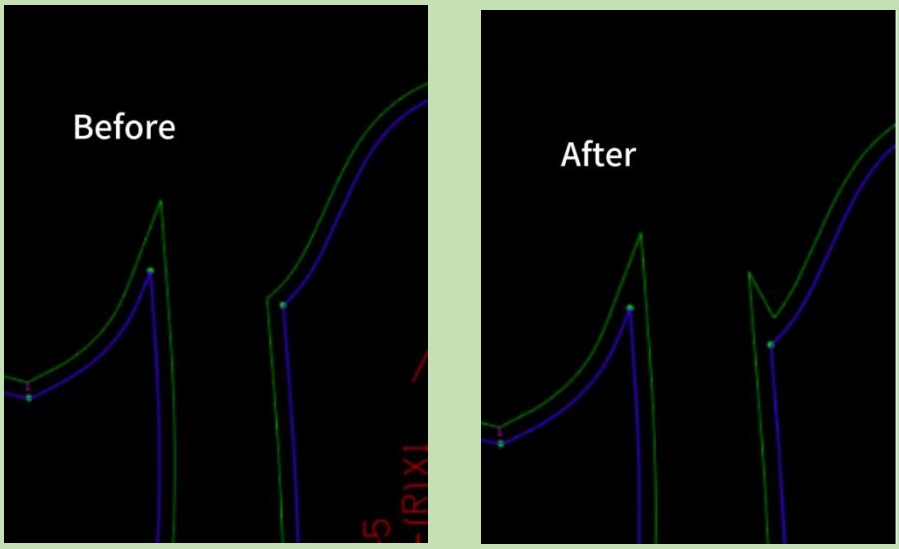


Figure5-21

（9）Default Angle

Right-click and select "Default Angle". The effect of the Nature Corner is shown in Figure 5-22.

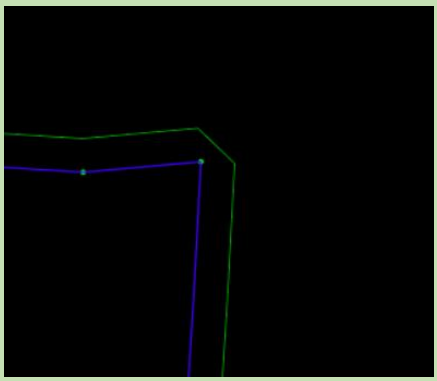


Figure5-22

（10）More Ref Angle

Right-click and select "More Ref Angle". The setting dialog box is shown in Figure 5-23, and the effect after setting is shown in Figure 5-25.

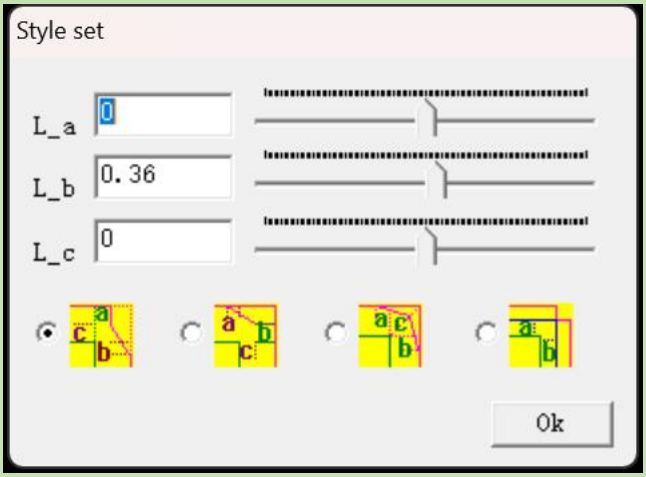


Figure5-23

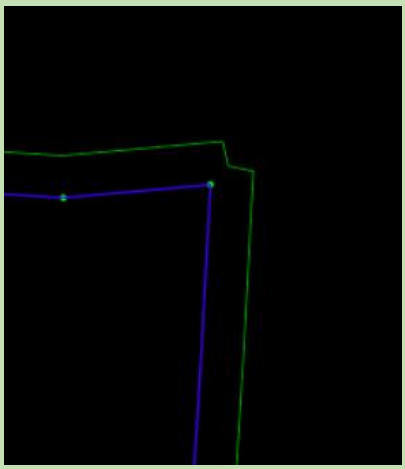


Figure5-25

（11）Cross Angle

Special corner-cutting tools for slit positions. The effect after setting is shown in Figure 5-25.

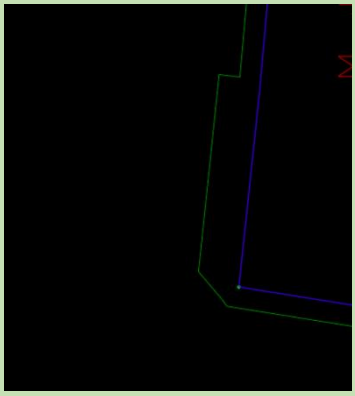


Figure5-25

（12）Arc Angle

Right-click to create rounded corners. As shown in Figure 5-26: a: front indentation, b: back indentation, c: intersection indentation; the effect after setting is shown in Figure 5-27.

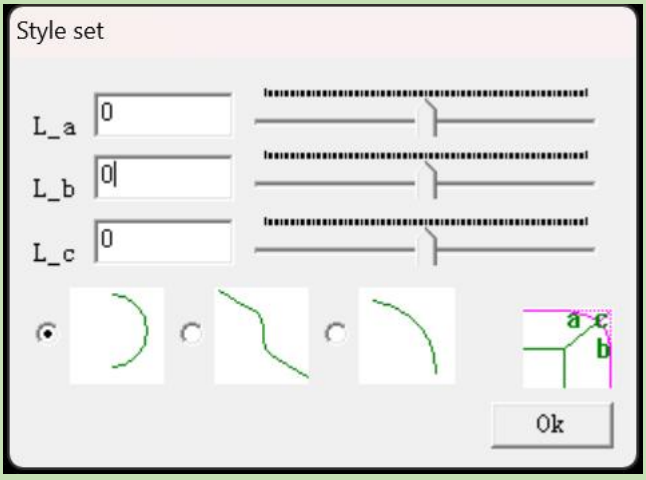


Figure5-26

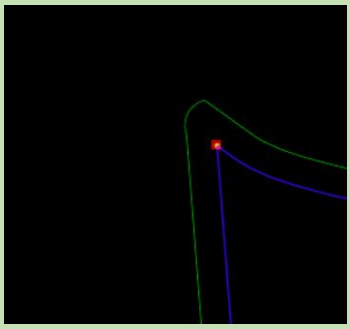


Figure5-27

（13）Copy Angle/Copy Angle Symm

Used for copying seam angle types.

Ⅳ.Settings for Process Lines and Internal Lines

（1）Add internal lines

Just click on the structural lines that need to be added. If the Ctrl key is pressed simultaneously, the internal line cutting/stroke switching processing will be carried out.

To display the structural lines, you can select 

（2）Delete the internal lines

click on the internal lines that need to be deleted.

（3）Add process lines

While holding down the G key, continuously select the contour lines that need to be set. Right-click to end the selection and then set the line type, spacing, etc. as shown in Figure 5-28.

As shown, click "OK" .（Note: The system defaults to equal spacing at both ends. By clicking on the checkbox in front, it can be changed to unequal spacing at both ends. If the set process line is not in the required direction, its direction can be changed by clicking on "Change Direction".）

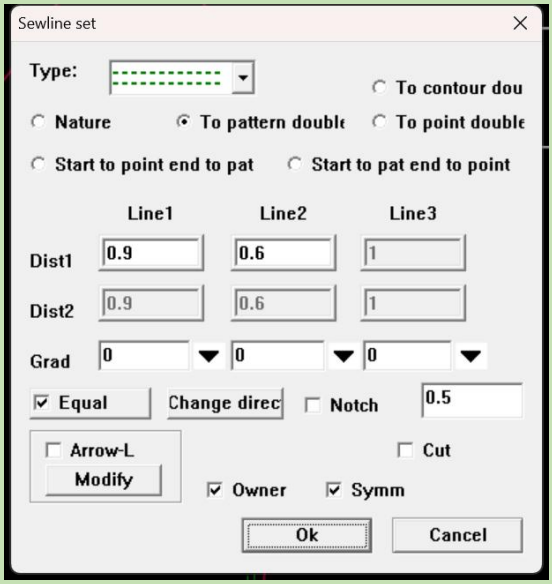


Figure5-28

（4）Add quilting stitches

Press the "W" key and click the left mouse button on the required pattern as shown in Figure 5-29. You can also select turning points, curves, and turning points to set grid lines for the local area of the pattern.（Note: You can reset the quilting stitches by clicking.）

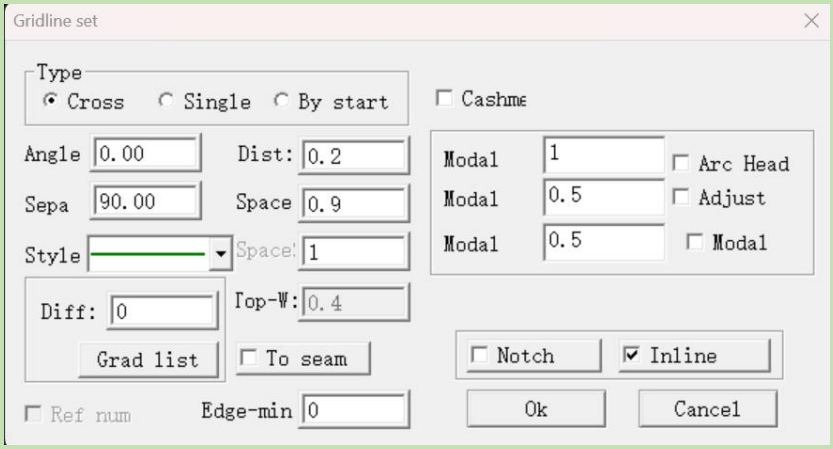


Figure5-29

V. Pattern Division

Right-click on the structural line that needs to be divided. The following menu will appear as shown in Figure 5-30:

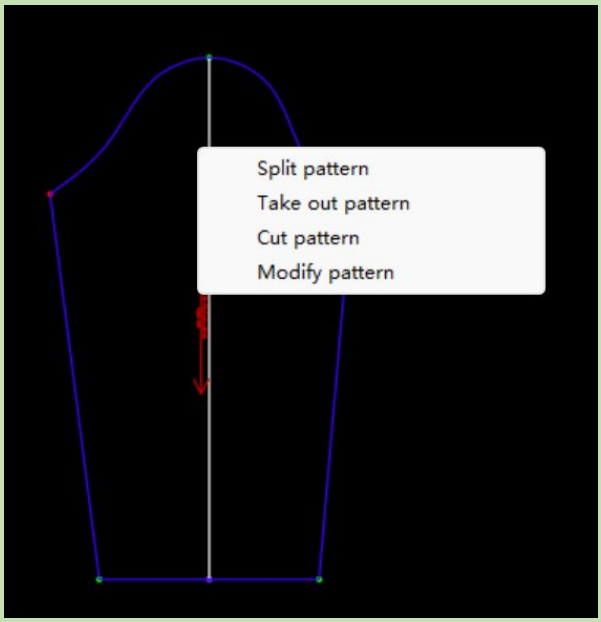


Figure5-30

（1）Split pattern

The pattern is divided into two pieces, as shown in Figure 5-31.

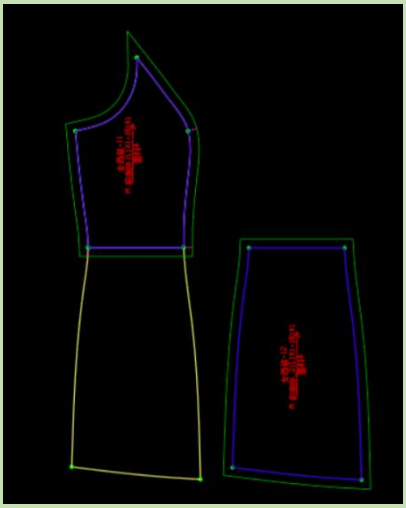


Figure5-31

（2）Take out pattern

Click on the part that needs to be taken out, and a pattern of this part will be automatically taken out, as shown in Figure 5-32 (Note: The original pattern still exists).

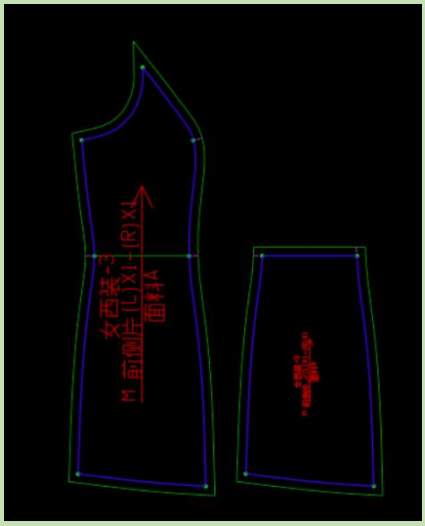


Figure5-32

（3）Cut pattern

Click on the part that needs to be cut out, and this part of the pattern will be automatically cut out, as shown in Figure 5-33.

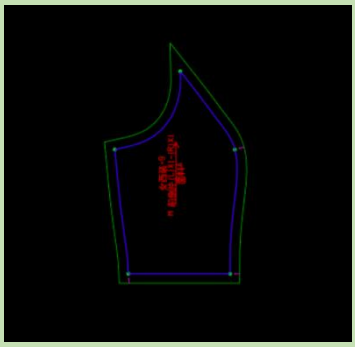


Figure5-33

VI. Pattern Movement

In the intelligent pattern mode, you can simply hold down the left mouse button and drag the mouse on the pattern, or you can select the pattern by dragging a box around it and then drag it to the corresponding position.

VII. Point Grading

Operation Steps: Use the point grading tool to select one or more grading points by framing from the blank area. Select the grading type as shown in Figure 5-35. Then enter the grading amount.

(Note:

a. For multiple points with the same grading amount, you can hold down the Shift key to frame-select the points that have already been graded, then click or frame-select other grading points, and right-click to end.

b. The grading amount can be entered manually, or you can use the drop-down arrow behind the input box to select the relevant formula.

c. After selecting, you can enter the shrinkage rate. This ensures accurate grading for fabrics with a relatively high shrinkage rate.)

The operations for different grading types are as follows:

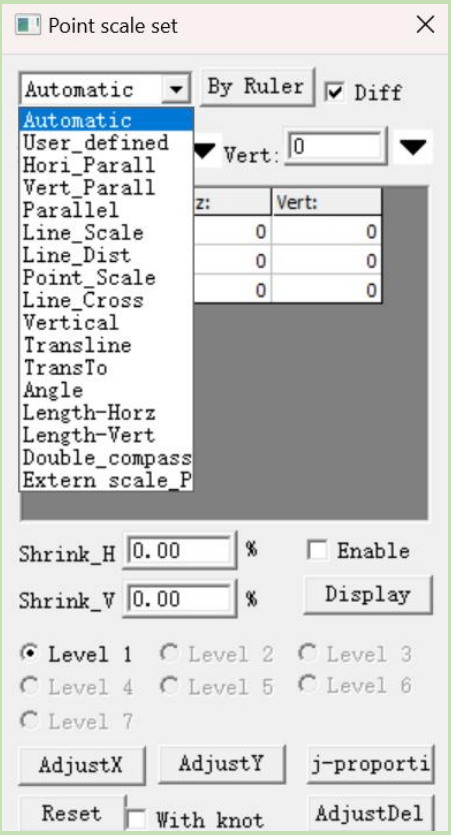


Figure5-35

(1) Automatic

Scale according to the grading points horizontally (transversely) and vertically (longitudinally).

Just enter the transverse and longitudinal data as shown in Figure 5-35. If unequal difference grading is required, then the grading amount of this specification needs to be modified

(Note: Values without a "-" sign indicate the rightward and upward directions, while those with a "-" sign indicate the leftward and downward directions).

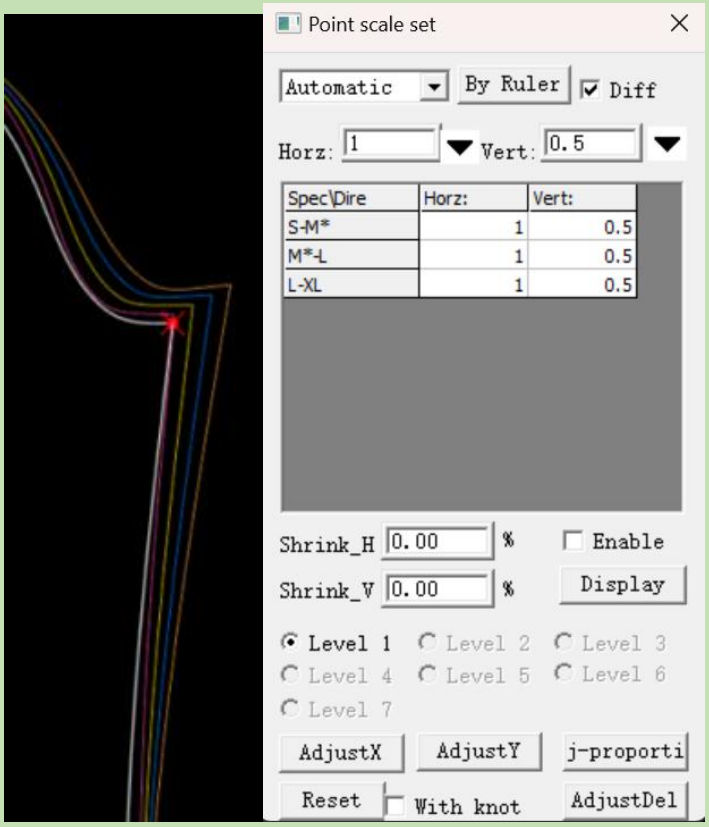


Figure5-35

(2) User defined

Adjust the grading direction as needed (operate when displaying the grading amount).

1. Enter the grading data as shown in Figure 5-36.
2. Left-click to select the grading point .
3. Confirm with the left mouse button

(Note: When adjusting the direction, it will automatically approach the direction of the extended lines on both sides. You can also hold down the Ctrl key to adjust it to any direction. When customizing grading, the angle with the reference line will be displayed when the angle is modified. After confirmation, you can enter the angle data, paying attention to the positive and negative signs of the angle).

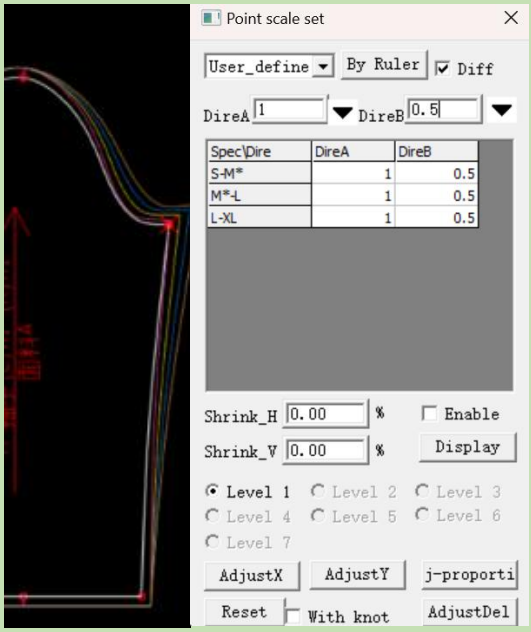


Figure5-36

（3）Hori_parall

According to the set grading amount, perform grading in horizontal parallel with the other end of the selected reference line. After completion, the horizontal lines remain parallel.

1. Set the grading amount.
2. Click on the line that needs to be parallel as shown in Figure 5-37.

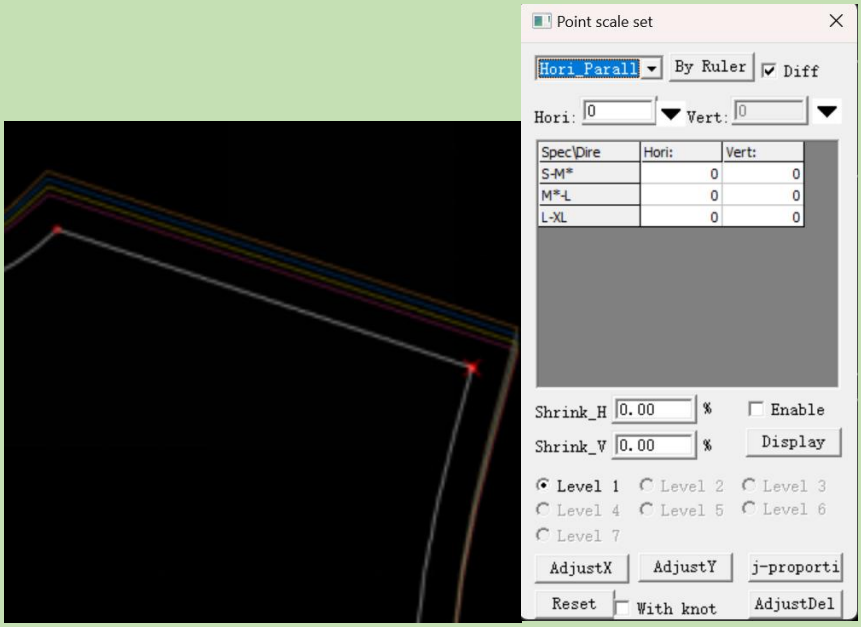


Figure5-37

(4) Vert_Parall

According to the set grading amount, perform grading in longitudinal parallel with the other end of the selected reference line. After completion, the longitudinal lines remain parallel.

1. Set the grading amount.
2. Click on the line that needs to be parallel as shown in Figure 5-38.

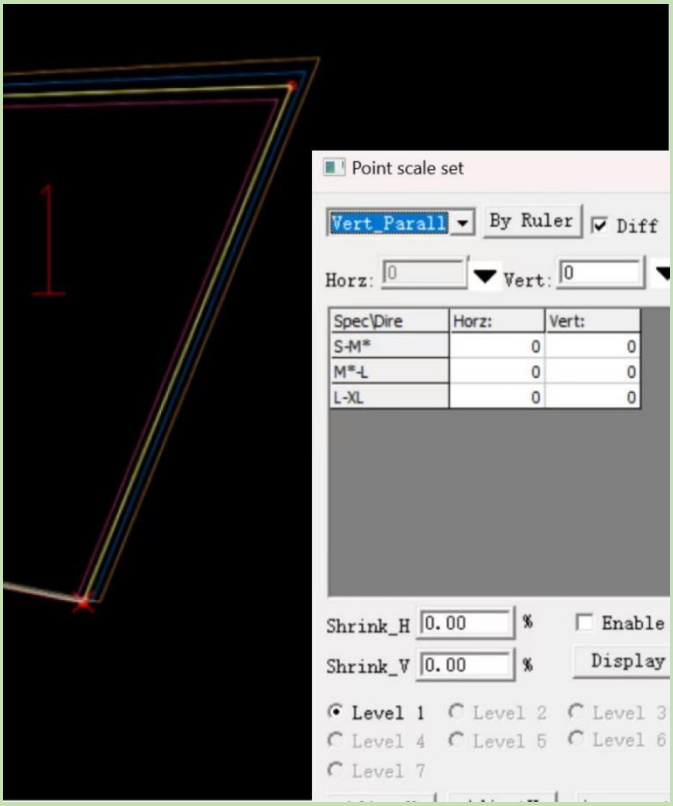


Figure5-38

（5）Parallel

Perform grading in two-way parallel with the other ends of the two selected reference lines. The grading points will be automatically graded according to the grading amounts of the adjacent points. After completion, both the horizontal and vertical lines remain parallel.

Select the lines that need to be parallel respectively as shown in Figure 5-39.

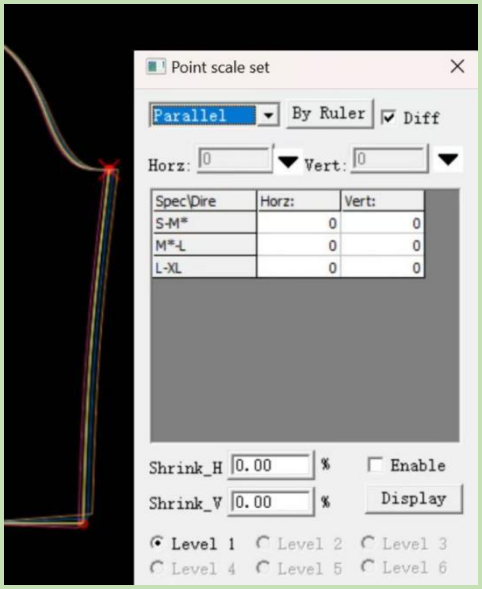


Figure5-39

（6）Line _Scale

Perform automatic proportional grading according to the original position of this point on the line.

Click on the line where this point is located as shown in Figure 5-50.

Figure5-50

（7）Line Dist

The points on the line are graded by extending the line according to the set length.

1. Click on the reference part of the line where the point is located.
2. Set the grading amount as shown in Figure 5-51.

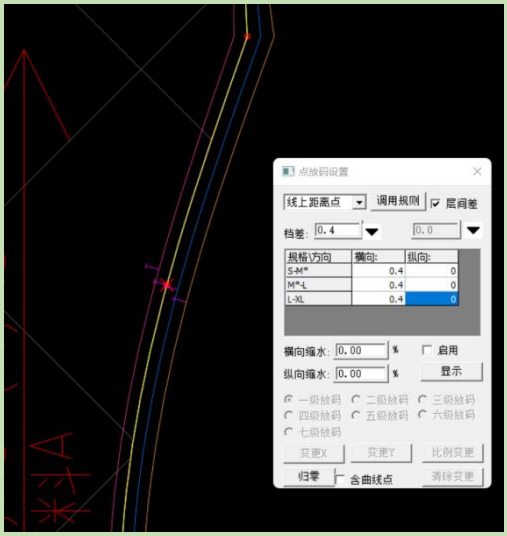


Figure5-51

（8）Point Scale

Perform automatic proportional grading according to the original position of this point between the two points where it is located.

1.Select the grading point C.

2.Select the two reference points A and B respectively. The effect is shown in Figure 5-52.

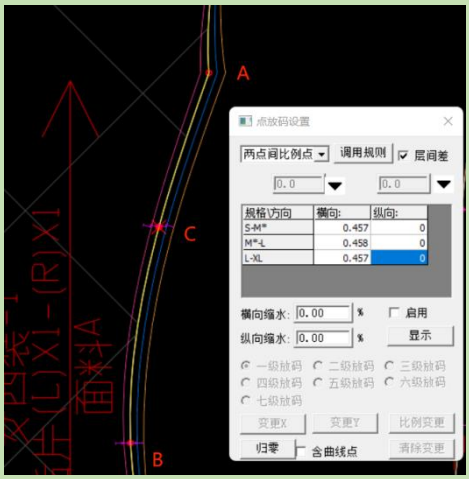


Figure5-52

（9）Line Cross

Perform grading along the line according to the original intersection point of the selected reference line and the line where this point is located.

Just click on the reference line as shown in Figure 5-53.

Figure5-53

（10）Vertical

Perform grading in the direction perpendicular to a certain straight line or the line connecting two points.

1. Select "Vertical Grading".
2. Click on the reference line, or select the two reference points in sequence as shown in Figure 5-55.

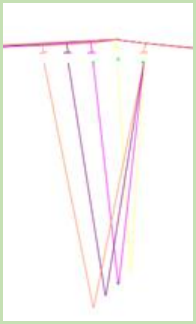


Figure5-55

（11）Transline

Perform grading according to the direction of the extended line of the selected reference curve.

1. Select "Grading along the Extended Line".
2. Click on the reference curve. 3. Enter the grading difference as shown in Figure 5-55 (Note: a. This point must be the control endpoint of the reference curve; once one endpoint has selected "Grading along the Extended Line", the other endpoint either does not perform grading, or else also needs to select "Grading along the Extended Line"; after an endpoint has selected "Grading along the Extended Line", the grading amount of the control points in the middle will be ignored).

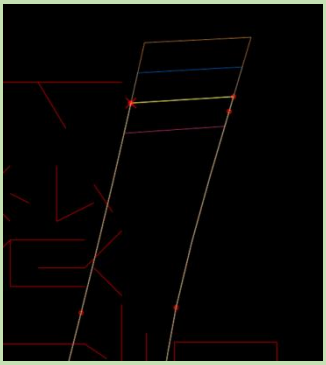


Figure5-55

(12) TransTo

Perform grading along the extended line of the curve with this point as the endpoint and make it intersect with another line (curve/straight line), as shown in Figure 5-56. It is generally used for grading the internal lines of multiple pattern pieces. (Note: There can only be one curve with this line as the endpoint; otherwise, the result cannot be determined.)

Figure5-56

(13) Angle

1. Select the reference point.
2. Enter the grading amount (line length, angle) as shown in Figure 5-57 (Note: The grading amount of the angle is positive in the clockwise direction and negative in the counterclockwise direction).

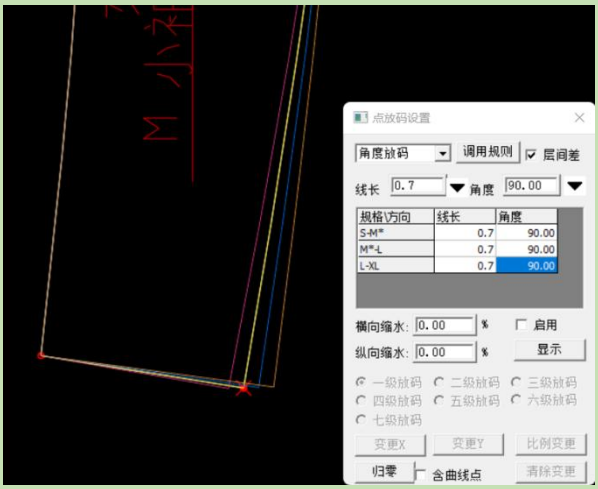


Figure5-57

(14) Length-Horz

For this point, the longitudinal grading amount is automatically calculated according to the selected reference line and the set grading amount. Meanwhile, the transverse grading amount and the length of the reference line are maintained at the set values.

1. Select the grading points and click on the reference line.
2. Enter the transverse grading amount and the line length as shown in Figure 5-58.

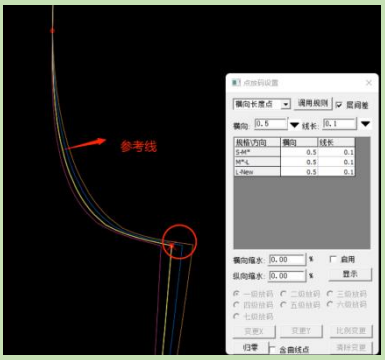


Figure5-58

(15)Length-Vert

This point is graded longitudinally based on the reference point and the line length. The transverse grading amount is automatically calculated according to the selected reference line and the set grading amount.

1. Select the grading points and click on the reference line.
2. Enter the longitudinal grading amount and the line length as shown in Figure 5-59.

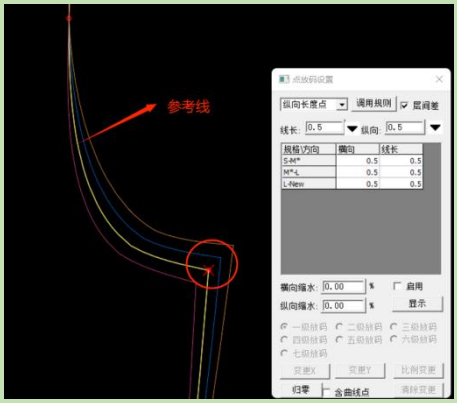


Figure5-59

(16) Double compass

1. Select reference line A.
2.Select reference line B.
3. Enter the grading amount as shown in Figure 5-50.

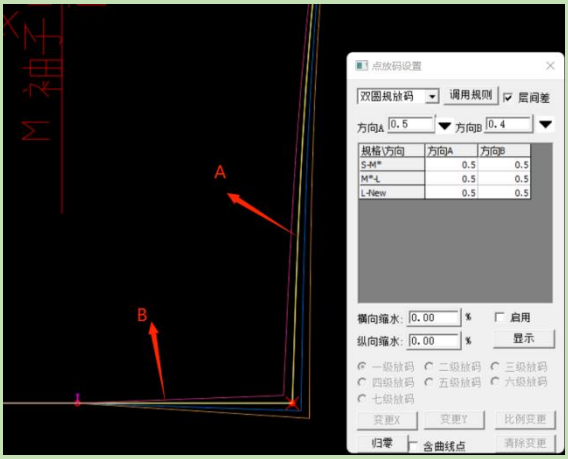


Figure5-50

(17)Extern scale P

1. Select the reference point A.

2. Select the reference point B, as shown in Figure 5-51.

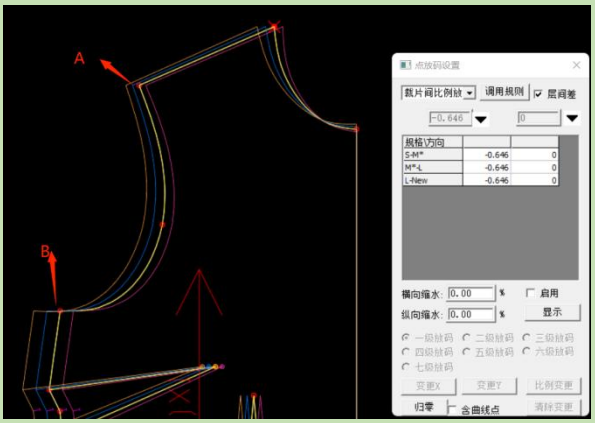
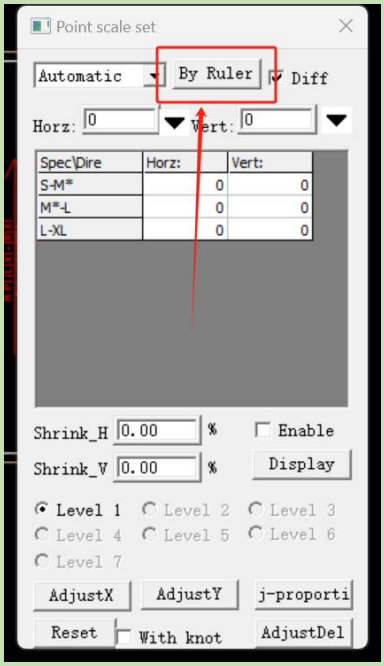


Figure5-51

（18)Invoke Rules

Directly call the existing grading rules.

Operation method: Select the points and open the calling rules as shown in Figure 5-52.



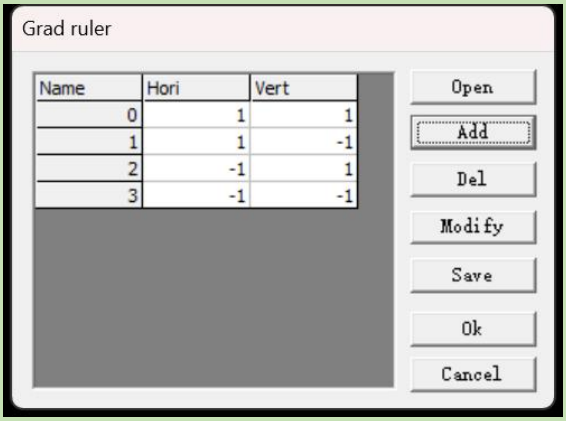


Figure5-52

1. Open the rule table: Open the previously saved rule table.
2. Save the rule table: Save the modified rule table for future use.
3. Delete the rule: Delete a certain rule.
4. Modify the rule: Modify the existing grading rules.

VIII. Curve Grading

Frame-select a curve (Note: Points should not be included), and the curve grading dialog box will pop up as shown in Figure 5-53 (Note: a. It only takes effect once; b. The endpoints should be graded first).

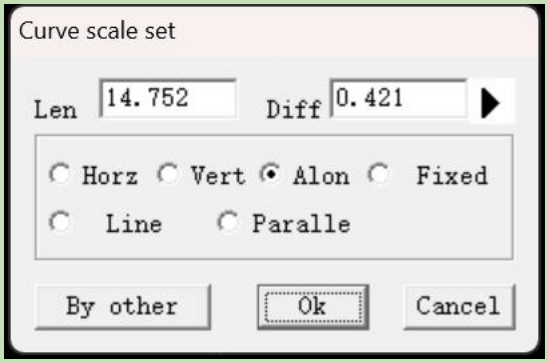


Figure5-53

IX. Right-click Function Menu on Pattern Pieces

(1) Other Tools

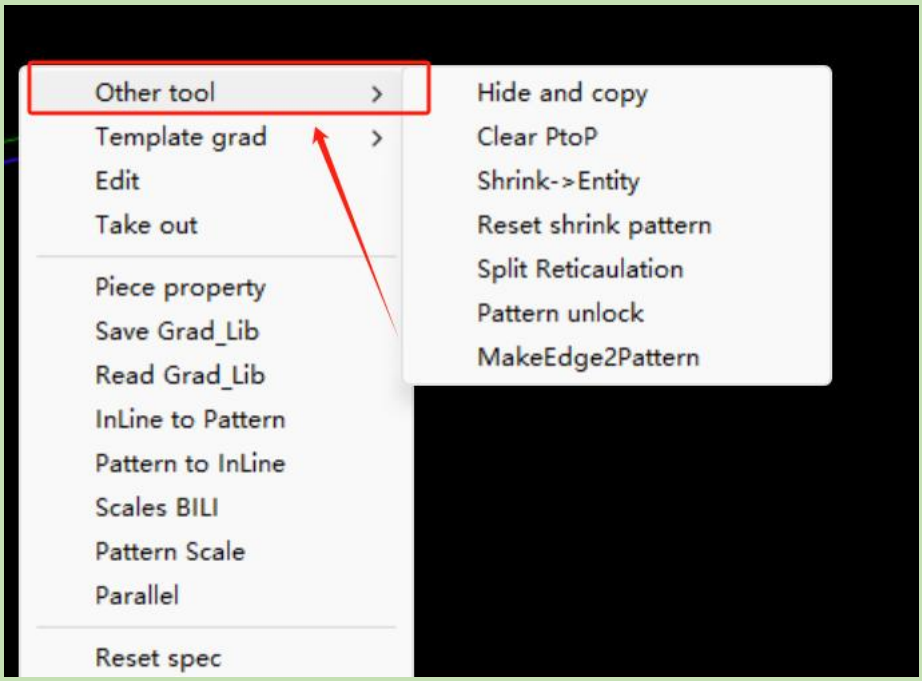


Figure5-55

1. Hide and copy: Copy the shadow of the pattern piece to enable comparison after the operation.

2. Clear PtoP: Clear the set stripe and grid alignment settings.

3.Shrink->Entity: The shrunk part of the pattern piece with shrinkage added is virtual. After solidifying, it is as convenient to modify and measure as a newly generated pattern piece, as shown in Figure 5-55.

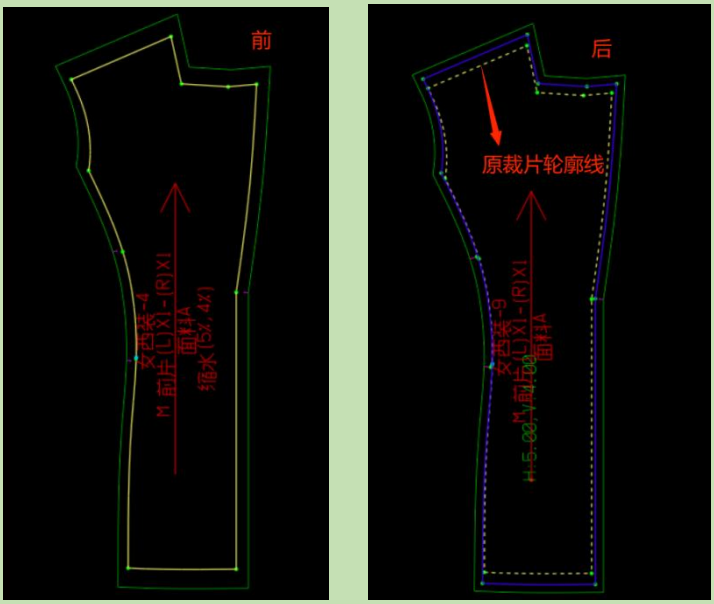


Figure5-55

4. Reset shrink pattern: Restore it to the shrunk pattern piece so that the shrinkage rate can be further adjusted.

5. Split Reticaulation: Used to disassemble the graded pattern piece into one pattern piece for each size for the purpose of modification.

6.Pattern unlock: Unlock the pattern piece that was previously locked in position.

7. MakeEdge2Pattern: Extract the outer outline line formed by the seam allowance of the pattern piece, and the seam allowance can be added again.

(2) Edit

1. Reset the attributes of the pattern pieces such as the pattern piece name, fabric name, quantity of pattern pieces, and grain line, etc., as shown in Figure 5-56.

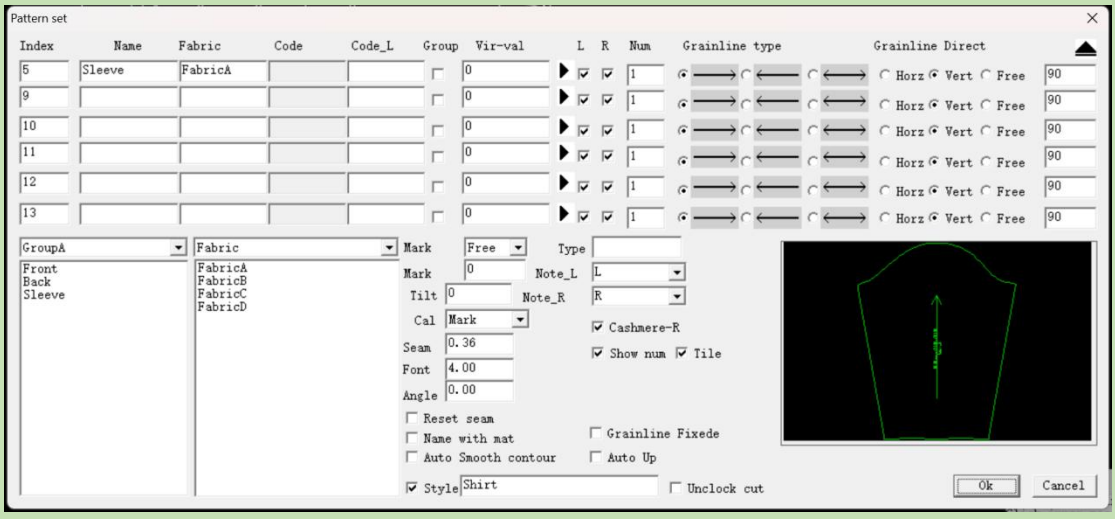
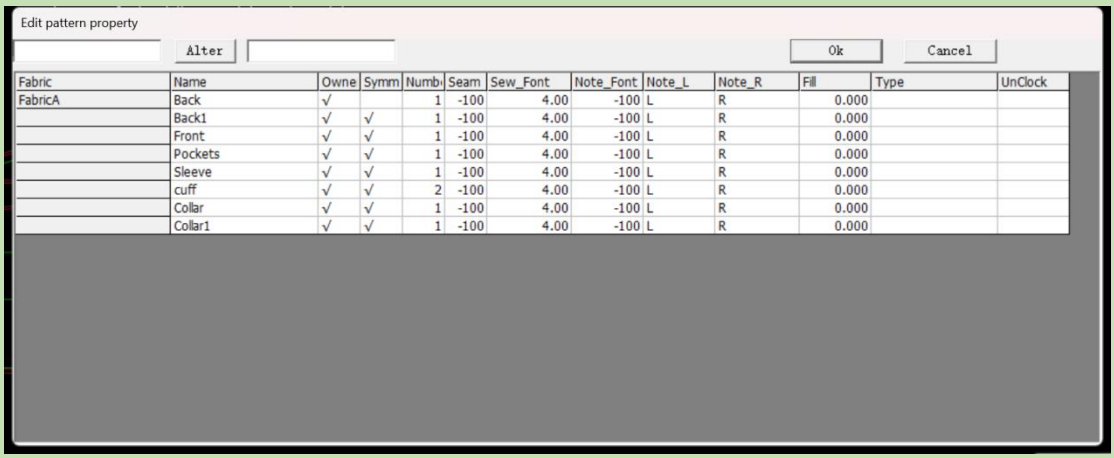


Figure5-56

2. In the pattern mode as shown in Figure 5-57, right-click on the blank area - All pattern modfy. The name part replacement function allows the same characters to be replaced with another character completely, and the category can be modified uniformly.



Fabric	Name	Owne	Symm	Numb	Seam	Sew_Font	Note_Font	Note_L	Note_R	Fill	Type	UnClock
FabricA	Back	√		1	-100	4.00	-100	L	R	0.000		
	Back1	√	√	1	-100	4.00	-100	L	R	0.000		
	Front	√	√	1	-100	4.00	-100	L	R	0.000		
	Pockets	√	√	1	-100	4.00	-100	L	R	0.000		
	Sleeve	√	√	1	-100	4.00	-100	L	R	0.000		
	cuff	√	√	2	-100	4.00	-100	L	R	0.000		
	Collar	√	√	1	-100	4.00	-100	L	R	0.000		
	Collar1	√	√	1	-100	4.00	-100	L	R	0.000		

Figure5-57

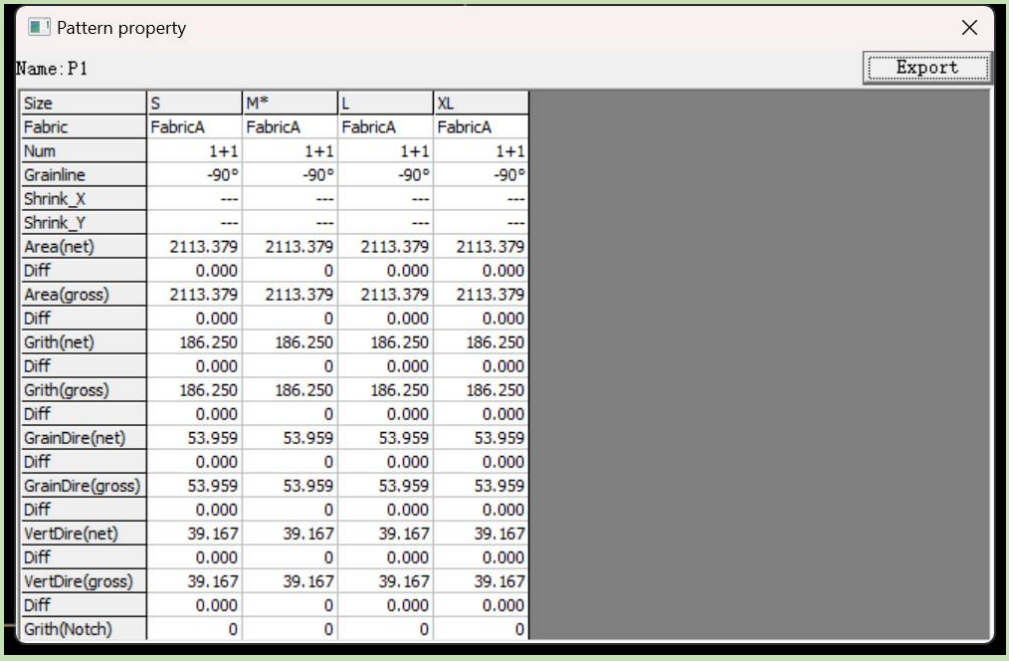
(3) Take out

Take the pattern pieces out from the original structural drawing. As shown in Figure 5-58, when taking them out, if the option of associating with the original pattern pieces is selected, the taken-out pattern pieces will retain the original grading; if the option of associating with the original pattern pieces is not selected, the taken-out pattern pieces will not retain the original grading. By default, the system takes out the pattern pieces of all sizes, but it is also possible to select the pattern pieces of any one size. After taking out the pattern pieces of any one size, special treatments such as adding internal lines, adding darts, and transferring darts can be carried out, which is very useful when making clothing patterns for some special sizes.

Figure5-58

(4) Piece property

As shown in Figure 5-59, the relevant attributes of the pattern pieces can be seen.



Size	S	M*	L	XL
Fabric	FabricA	FabricA	FabricA	FabricA
Num	1+1	1+1	1+1	1+1
Grainline	-90°	-90°	-90°	-90°
Shrink_X	---	---	---	---
Shrink_Y	---	---	---	---
Area(net)	2113.379	2113.379	2113.379	2113.379
Diff	0.000	0	0.000	0.000
Area(gross)	2113.379	2113.379	2113.379	2113.379
Diff	0.000	0	0.000	0.000
Grith(net)	186.250	186.250	186.250	186.250
Diff	0.000	0	0.000	0.000
Grith(gross)	186.250	186.250	186.250	186.250
Diff	0.000	0	0.000	0.000
GrainDire(net)	53.959	53.959	53.959	53.959
Diff	0.000	0	0.000	0.000
GrainDire(gross)	53.959	53.959	53.959	53.959
Diff	0.000	0	0.000	0.000
VertDire(net)	39.167	39.167	39.167	39.167
Diff	0.000	0	0.000	0.000
VertDire(gross)	39.167	39.167	39.167	39.167
Diff	0.000	0	0.000	0.000
Grith(Notch)	0	0	0	0

Figure5-59

(5) Save Grad Lib

Save the grading parameters of the selected pattern pieces this time for future use.

(6) Read Grad Lib

Read the grading parameters of the pattern saved last time and directly apply them.

(7) InLine to Pattern

Used to generate pattern from closed internal lines.

(8) Pattern to InLine

Turn a pattern into the internal line of another pattern (Note: For the operation of pattern -> Internal Lines, the two pattern must be moved to the appropriate positions first).

(9)Scales BlLI

Select this option and enter the grading proportion in the dialog box. If you want to cancel, click the cancel button in the dialog box.

(10) Pattern Scale

The whole pattern is graded according to "proportion" or "grade difference" (grading for footwear). (Note: When using this grading method, the grain line should be horizontal.)

(11) Parallel

After entering the allowance, generate a rough cut garment piece, which is used for the garment piece to be precisely cut again after rough cutting. The contour of the generated pattern is the contour with the net sample as the reference.

(11) Reset spec

Used to select the valid specifications of the secondary pattern.

(13) Move PtoP

Move a pattern from one point to another.

1. Select "Point-to-Point Translation".
2. Select any point on the pattern.
3. Select any point to which it will be moved.

(14) Rotation move

Rotate and align two pattern as shown in Figure 5-60.

1. Select reference point 1 and select destination point 1.
2. Select reference point 2 and select destination point 2.

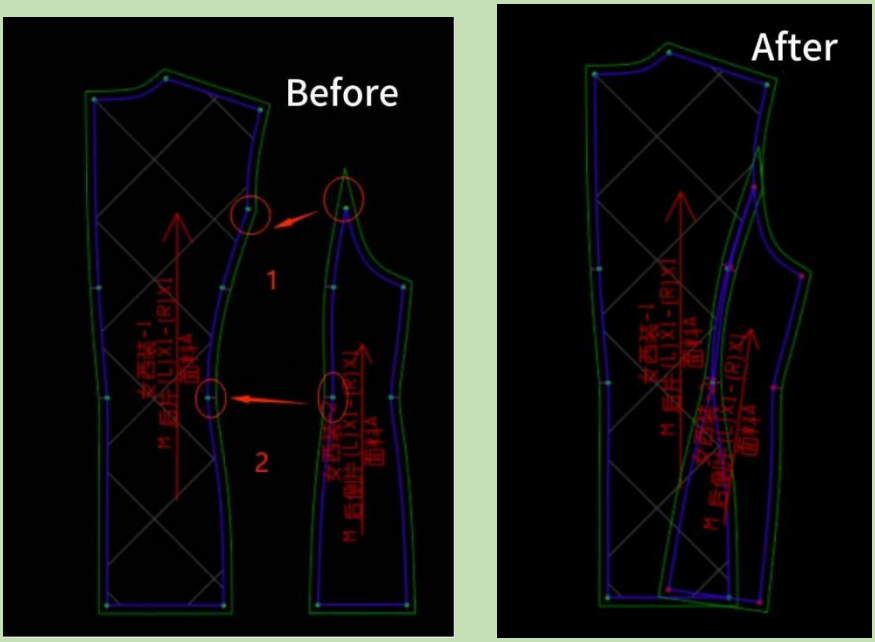


Figure5-60

(15) Jion

Join two pattern into one pattern as shown in Figure 5-61.

1. Right-click on the pattern and select "pattern Joining".
2. Select the corresponding joining points respectively.

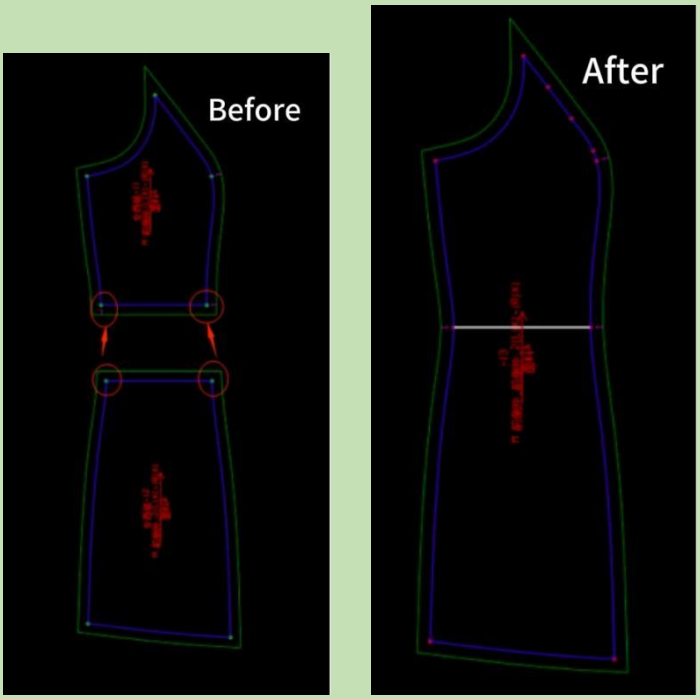


Figure5-61

(16) Check

1. Click on the reference point on the moving pattern.

2. Move the mouse to the corresponding reference point on the other pattern.

3. Press the left mouse button and move the mouse. If the Ctrl key is pressed simultaneously: rotate clockwise; if the Shift key is pressed simultaneously: rotate counterclockwise.

4. Right-click to end the check. At this time, the prompt "Automatically restore to the original position" will appear; if "Y" is selected, the active pattern will be restored to the position and angle before alignment; if "N" is selected, the pattern will remain in the current position and angle.

5. Right-click + Ctrl: Add notches for alignment. Add notches simultaneously at the overlapping positions on the two pattern.

(17) Single Shrink

Set the shrinkage rate for this pattern as shown in Figure 5-62. If the option to apply to all pattern of the current fabric is selected, then all pattern of the current fabric will be set to the same shrinkage rate. (Note: After shrinking, changes in the size and shape of the pattern can be seen, and shrinkage data will be displayed. It is generally used for canceling the shrinkage situation of small pattern such as loops and binding strips (to avoid the pattern

becoming too large after shrinking and being unable to use the pulling tube).)

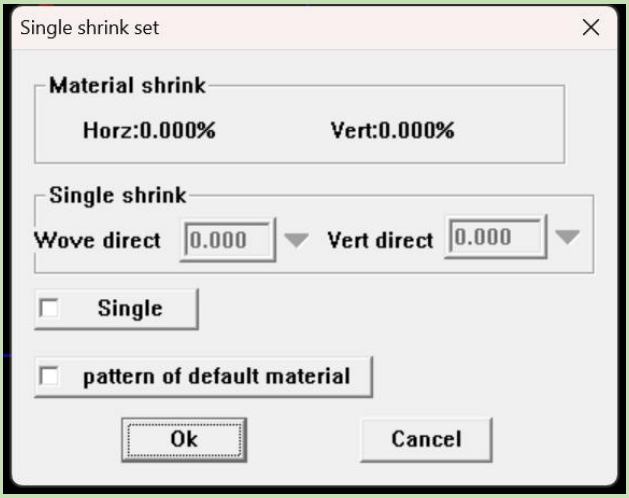


Figure5-62

(18) Pattern scale

Perform scaling processing on the whole pattern as shown in Figure 5-63.

1. When all pattern are checked. If "Reference Size" is selected, all pattern will be scaled according to the difference between "After Modification" and "Before Modification"; if "Reference Proportion" is selected, all pattern will be scaled according to the set "Scaling Proportion".

2. When not all pattern are checked, only the current pattern will be scaled according to the set proportion.

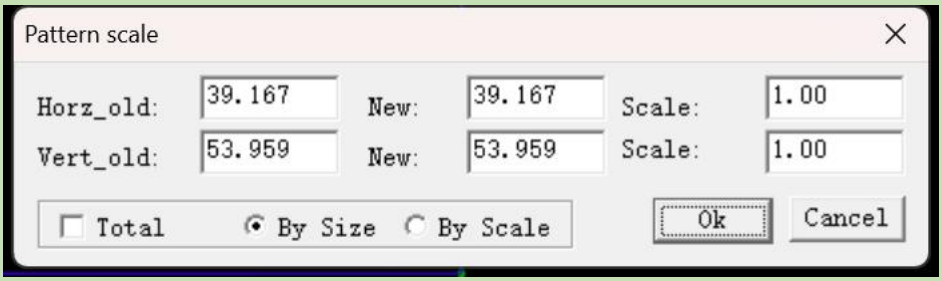


Figure5-63

(19) Gridline set

Add grid lines on the pattern as shown in Figure 5-65.

1. Right-click on the pattern and select "Set Quilting Lines".
2. Click on the starting point of the grid line.
3. Make necessary settings in the grid line setting window and confirm.

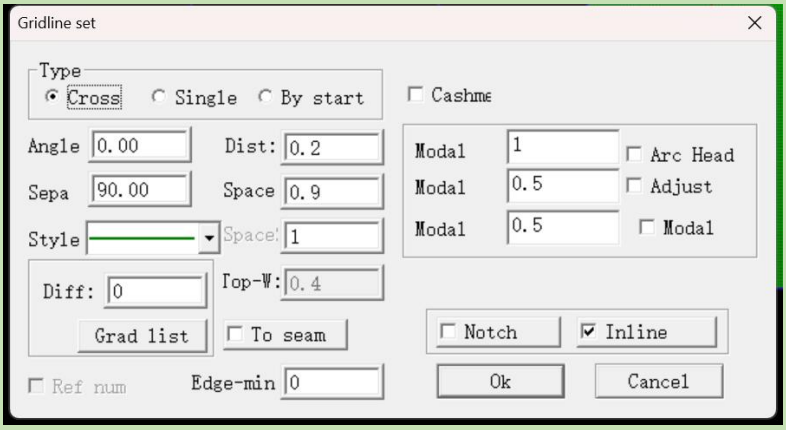


Figure5-65

(20) Sewvi line

Set technological lines around the pattern as shown in Figure 5-65.

Just select the necessary line types, spacing, etc., and then confirm.

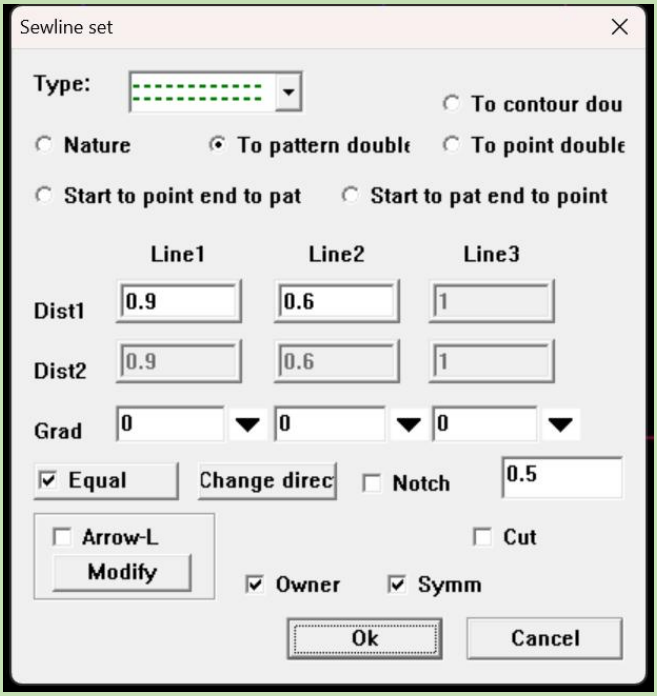


Figure5-65

(21) Rotate

Rotate the pattern by a certain angle as shown in Figure 5-66.

Click on the required rotation method and confirm. For the "All pattern" option, once selected, all pattern will be rotated together. (Note: Only the unassociated pattern can be

rotated and converted to numerical grading.)

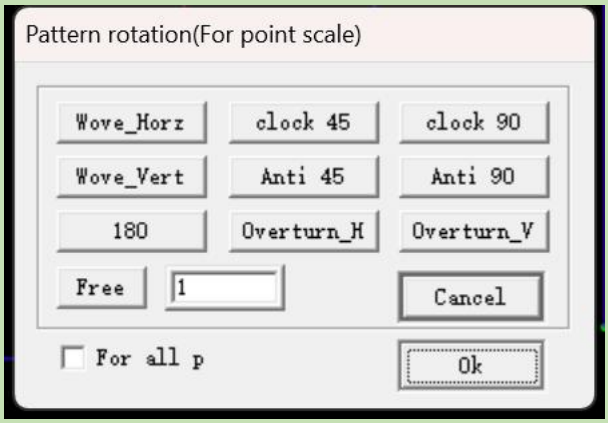


Figure5-66

(22) Copy All

Copy an identical pattern.

(23) Copy Rot

Copy a pattern that has been rotated 180 degrees.

(24) Copy Hori Symm

Copy a pattern with horizontal symmetry.

(25) Copy Vert Symm

Copy a pattern with vertical symmetry.

(26) Mat Edit

Modify or delete the name of the fabric and perform other such operations.

(27) Export DXF

Export this pattern separately as a DXF file.

(28) Edge to pattern

Turn the seam allowance of this pattern into the contour line of the pattern, and additional seam allowance can be added. Meanwhile, the original contour line becomes an internal line, as shown in Figure 5-67. If it is a negative seam allowance, a positive seam allowance amount will be automatically added, which is equivalent to automatically exchanging the inner and outer lines, as shown in Figure 5-68.

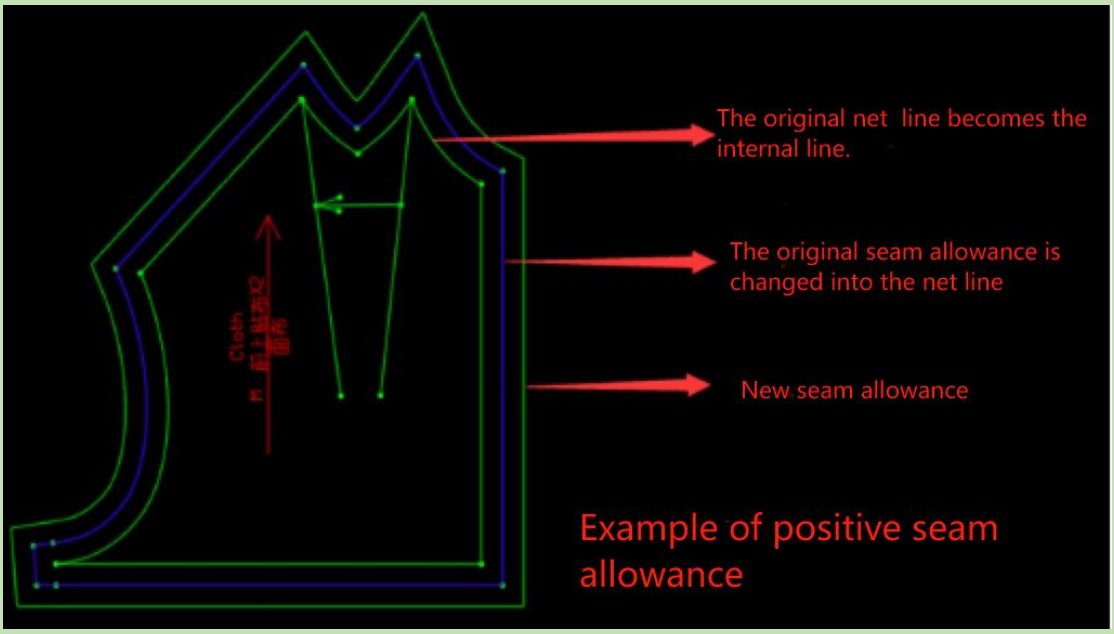


Figure5-67

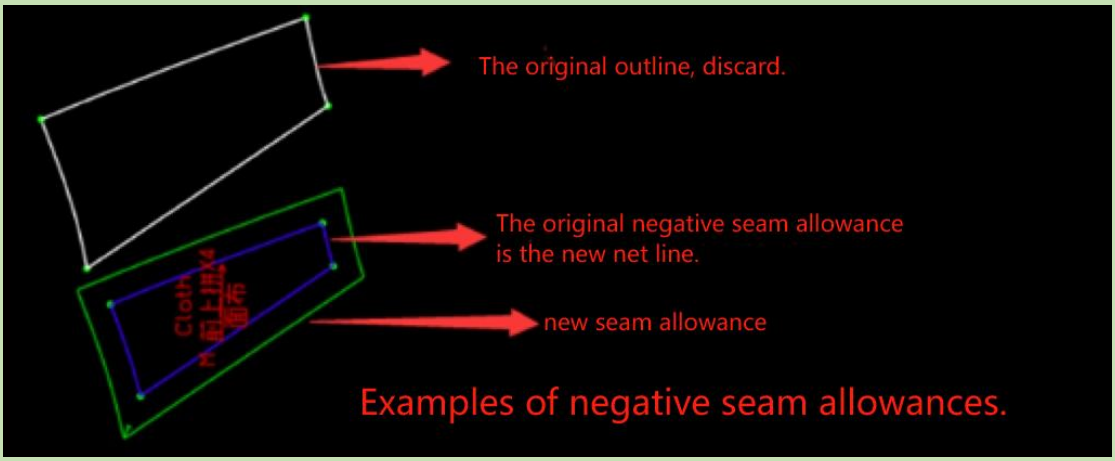


Figure5-68

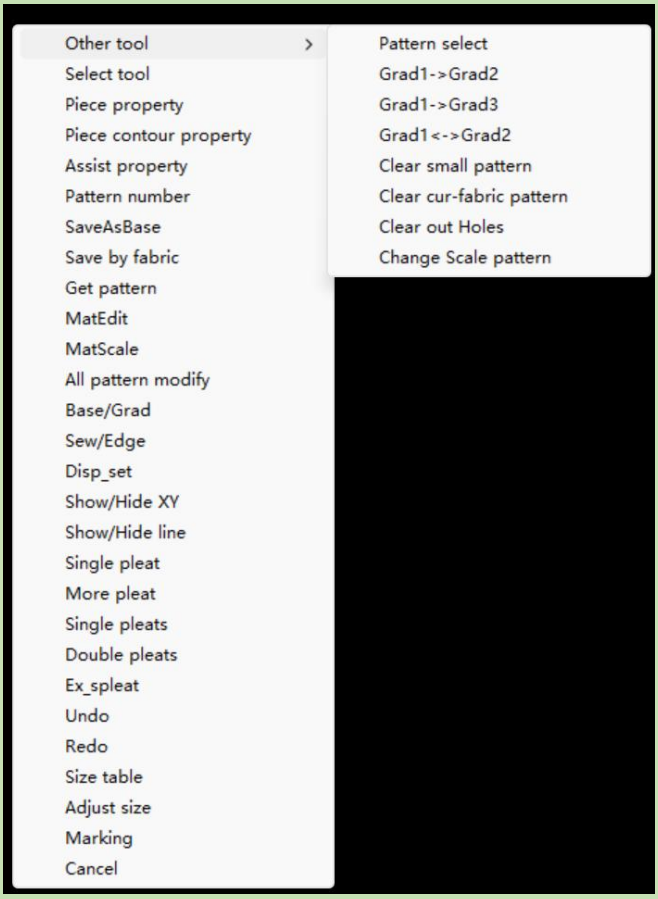
(29) Delete

Delete the current pattern.

(30) Abort

Cancel the current operation.

X. Right-click Function Menu in the Blank Area



(1) Other Tools

1. pattern Select: Select pattern for relevant operations as shown in Figure 5-69.

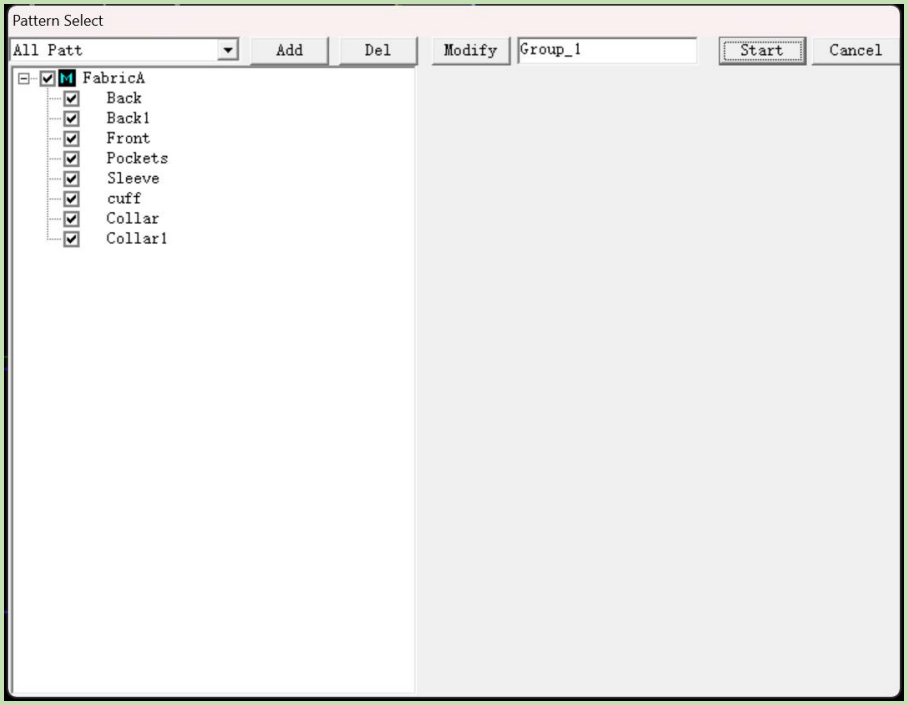


Figure5-69

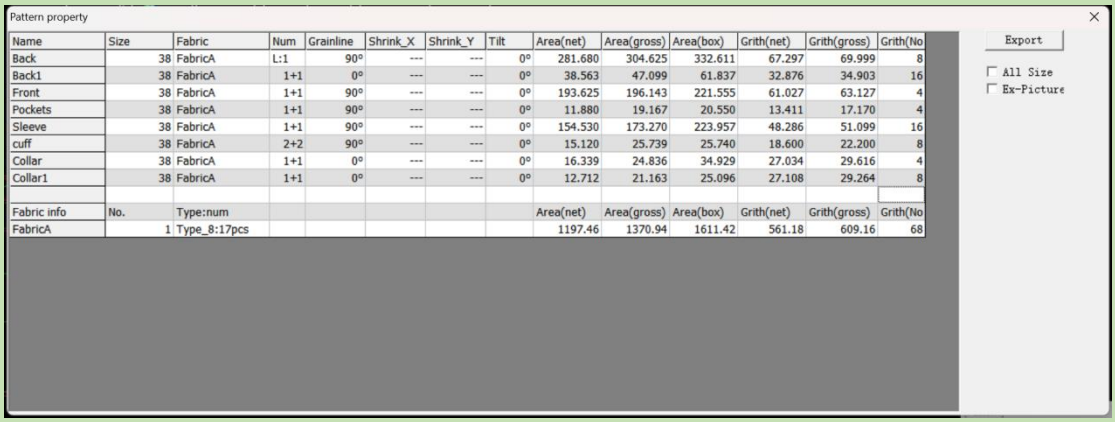
2. Clear small pattern.
3. Clear cur-fabric pattern: Delete all pattern of the currently displayed fabric.
4. Clear out Holes
5. Change Scale pattern

(2) Select tool

Used to select tools, menus, etc. according to one's own needs.

(3) Piece property

Display the relevant information of pattern as shown in Figure 5-70.

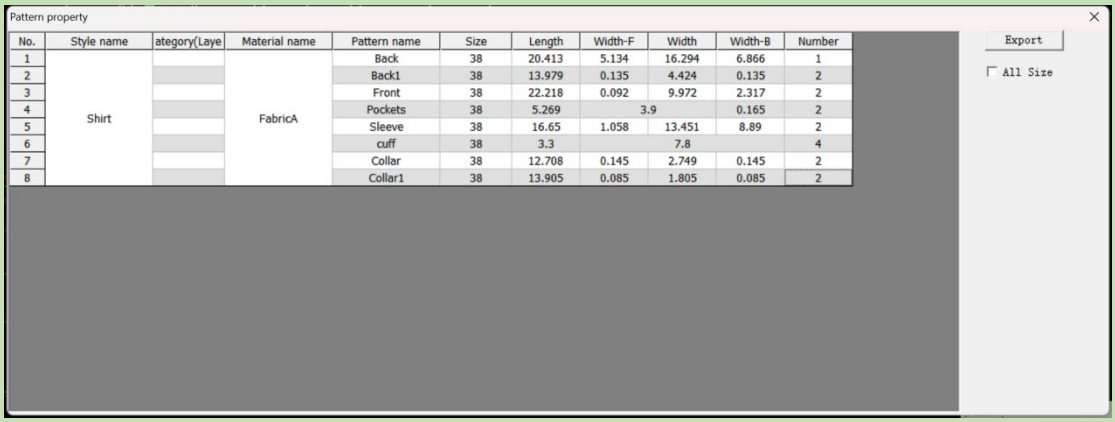


Name	Size	Fabric	Num	Grainline	Shrink_X	Shrink_Y	Tilt	Area(net)	Area(gross)	Area(box)	Grith(net)	Grith(gross)	Grith(No
Back	38	FabricA	L:1	90°	---	---	0°	281.680	304.625	332.611	67.297	69.999	8
Back1	38	FabricA	1+1	0°	---	---	0°	38.563	47.099	61.837	32.876	34.903	16
Front	38	FabricA	1+1	90°	---	---	0°	193.625	196.143	221.555	61.027	63.127	4
Pockets	38	FabricA	1+1	90°	---	---	0°	11.880	19.167	20.550	13.411	17.170	4
Sleeve	38	FabricA	1+1	90°	---	---	0°	154.530	173.270	223.957	48.286	51.099	16
cuff	38	FabricA	2+2	90°	---	---	0°	15.120	25.739	25.740	18.600	22.200	8
Collar	38	FabricA	1+1	0°	---	---	0°	16.339	24.836	34.929	27.034	29.616	4
Collar1	38	FabricA	1+1	0°	---	---	0°	12.712	21.163	25.096	27.108	29.264	8
Fabric info	No.	Type:num						Area(net)	Area(gross)	Area(box)	Grith(net)	Grith(gross)	Grith(No
FabricA	1	Type_8:17pcs						1197.46	1370.94	1611.42	561.18	609.16	68

Figure5-70

(4) Piece contour property

The perimeter of the pattern contour is shown in Figure 5-71.

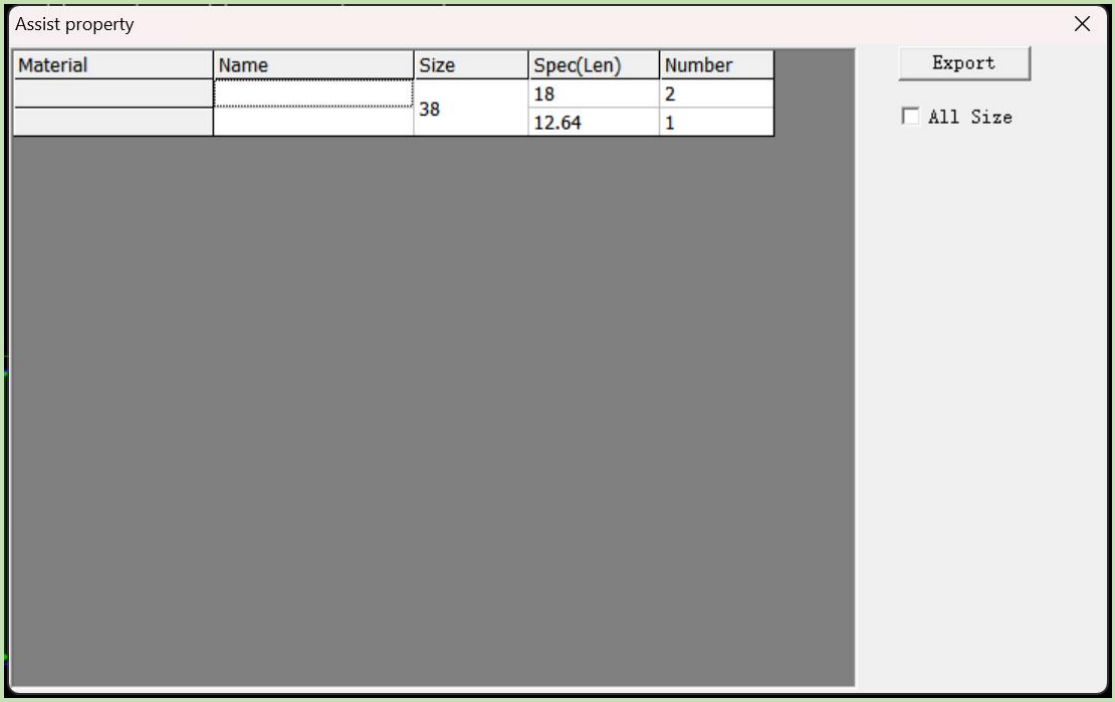


No.	Style name	ategory(Laye	Material name	Pattern name	Size	Length	Width-F	Width	Width-B	Number
1	Shirt		FabricA	Back	38	20.413	5.134	16.294	6.866	1
2				Back1	38	13.979	0.135	4.424	0.135	2
3				Front	38	22.218	0.092	9.972	2.317	2
4				Pockets	38	5.269	3.9		0.165	2
5				Sleeve	38	16.65	1.058	13.451	8.89	2
6				cuff	38	3.3		7.8		4
7				Collar	38	12.708	0.145	2.749	0.145	2
8				Collar1	38	13.905	0.085	1.805	0.085	2

Figure5-71

(5) Assist property

The relevant information about accessories is shown in Figure 5-72.



Material	Name	Size	Spec(Len)	Number
		38	18	2
			12.64	1

Figure5-72

(6) Pattern number

It is used to display the quantity of pattern.

(7) SaveAsBase

As shown in Figure 5-73, any specification can be saved as the base size so that it can be graded again as another file (Note: The grading amounts in the original file are retained).

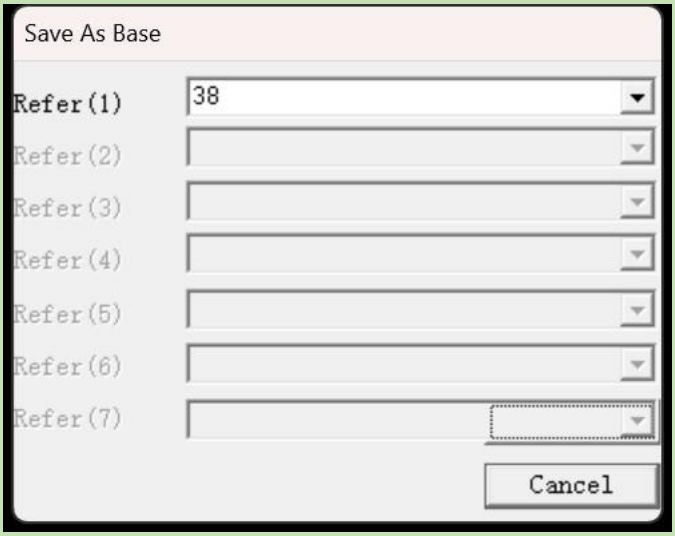


Figure5-73

(8) Save by fabric

As shown in Figure 5-75, save the pattern according to the selected fabric.

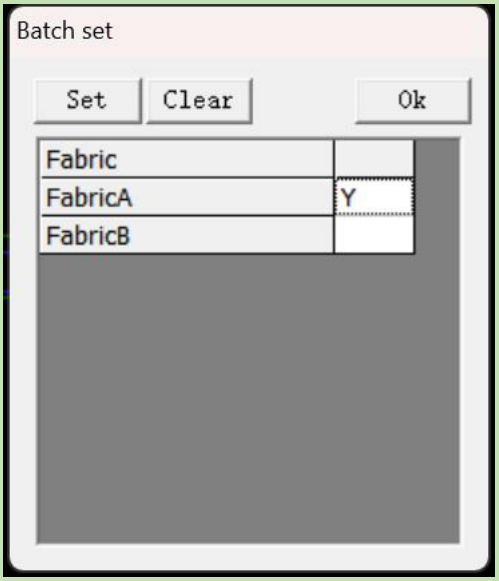


Figure5-75

(9) Get pattern

Only keep the pattern and remove the construction lines, and they cannot be restored.

(10) MatEdit

As shown in Figure 5-75, operations such as modifying or deleting the fabric names are carried out.

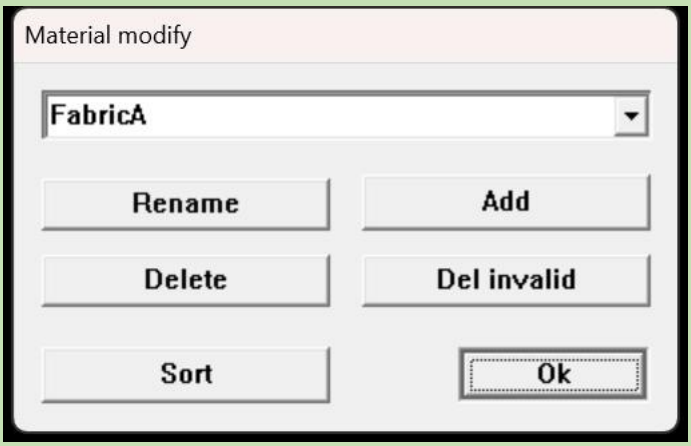


Figure5-75

(11) MatScale

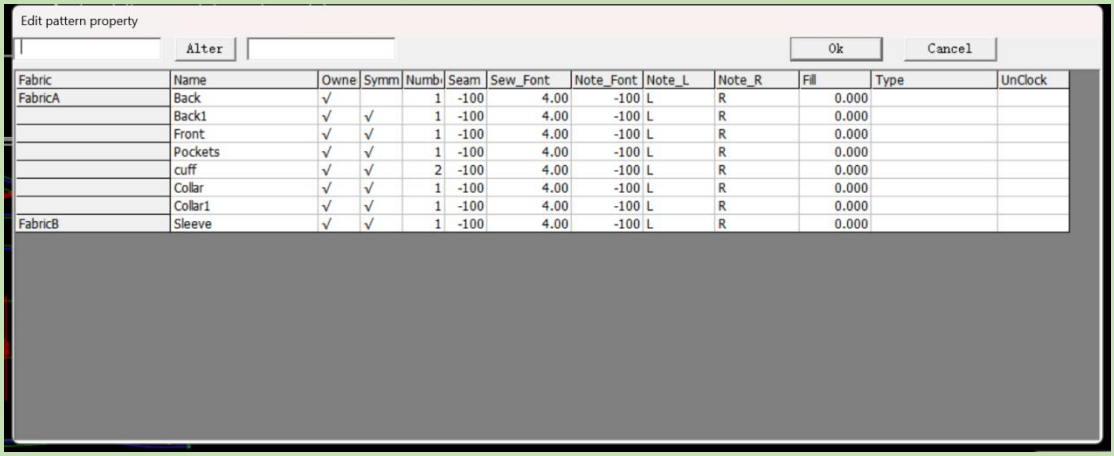
As shown in Figure 5-76, set the shrinkage rate uniformly for the current fabric (Note: This method is the same as the shrinkage rate function in the layout center).

Figure5-76

(12) All pattern modify

As shown in Figure 5-77, uniformly modify the attributes of the pattern such as the seam allowance and the type of the grain line (Note: After selecting all fabrics, the modified

content can be applied to the pattern of all fabric types; otherwise, it only applies to the pattern of the current fabric).



Fabric	Name	Owne	Symm	Numb	Seam	Sew_Font	Note_Font	Note_L	Note_R	Fil	Type	UnClock
FabricA	Back	√		1	-100	4.00	-100	L	R	0.000		
	Back1	√	√	1	-100	4.00	-100	L	R	0.000		
	Front	√	√	1	-100	4.00	-100	L	R	0.000		
	Pockets	√	√	1	-100	4.00	-100	L	R	0.000		
	cuff	√	√	2	-100	4.00	-100	L	R	0.000		
	Collar	√	√	1	-100	4.00	-100	L	R	0.000		
	Collar1	√	√	1	-100	4.00	-100	L	R	0.000		
FabricB	Sleeve	√	√	1	-100	4.00	-100	L	R	0.000		

Figure5-77

(13) Base/Grad

The pattern are displayed either in the base size or in the form of a mesh diagram.

(14) Sew/Edge

The mesh diagram is displayed in the form of a clean pattern or a rough pattern.

(15) Disp_set

Different specifications can be set for display.

(16) Show/Hide XY

Show or hide the grading amounts.

(17) Show/Hide line

Show or hide the construction lines.

(18) Single Pleat

Refer to the pattern mode Tool. 

(19) More Pleat

Refer to the pattern mode Tool. 

(20) Single pleats

Refer to the pattern mode Tool. 

(21) Double pleats

Refer to the pattern mode Tool. 

(22) Ex spleat

Refer to the pattern mode Tool. 

(23) Undo

Undo the previous operation.

(24) Redo

Restore the operation that was undone in the previous step.

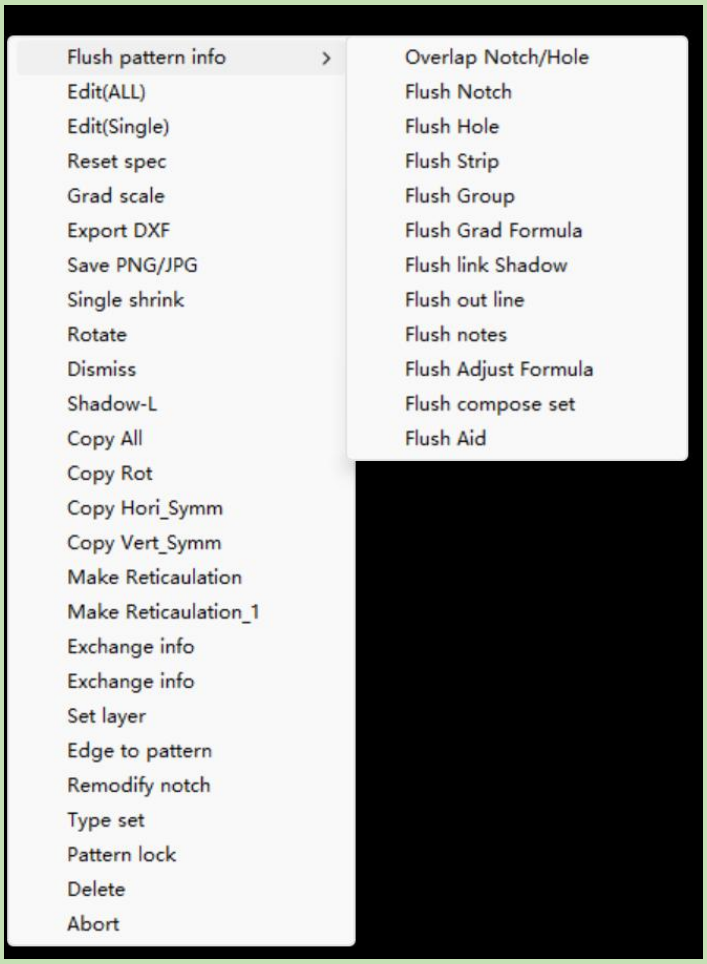
(25) Size table

Enter the size chart editing.

(26) Marking

Enter the fabric layout center.

XI. Select pattern pieces by selection and right-click.



(1) Flush pattern info.

1. Overlap Notch/Hole: Delete overlapping notches or holes on the selected pattern pieces.

2. Flush Notch: Delete all notches on the selected pattern pieces.

3. Flush Hole: Delete all holes on the selected pattern pieces.

4. Flush Strip: Delete the stripe and grid settings on the selected pattern pieces.

5. Flush Group: Cancel the grouping of grouped pattern pieces.

6.Flush Grad Formula: Delete the grading formulas on the selected pattern pieces.

7. Flush link Shadow: Delete the added associated shadows of pattern pieces.

8. Flush out line: Delete the internal lines outside the pattern pieces.

9. Flush notes: Delete the annotations of the selected pattern pieces.
10. Flush Aid: Delete all accessories.

(2) Edit(ALL)

Modify the attributes of the selected pattern pieces, as shown in Figure 5-78.

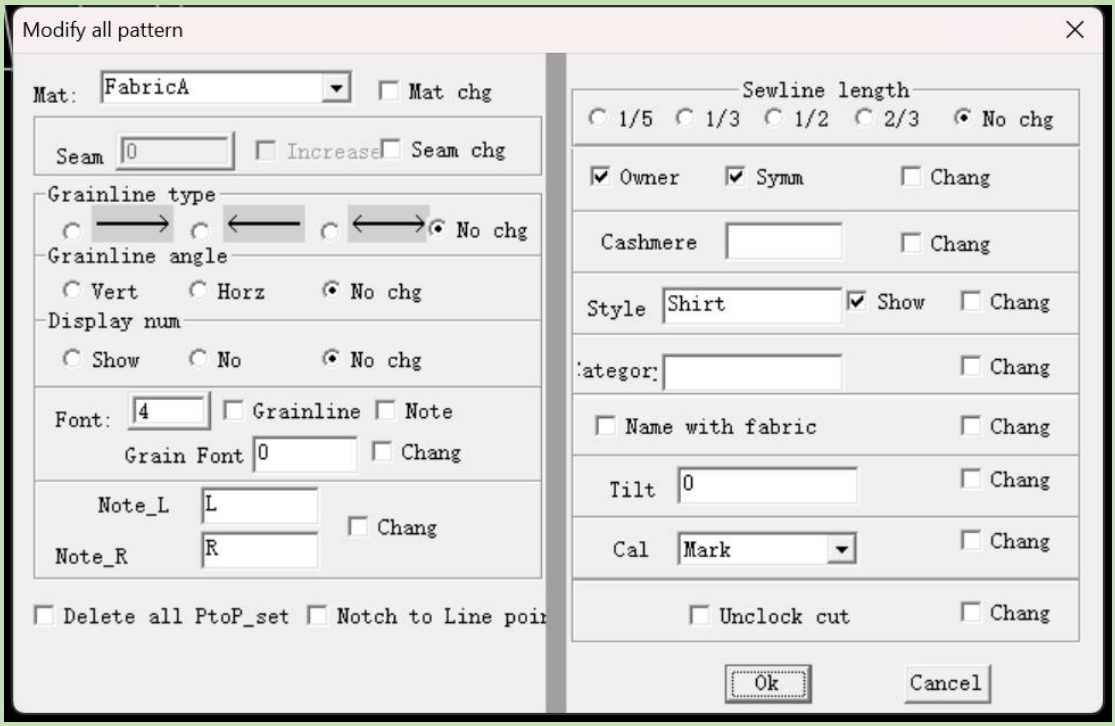


Figure5-78

(3)Reset spec.

As shown in Figure 5-79, checking which specification will display that specification.

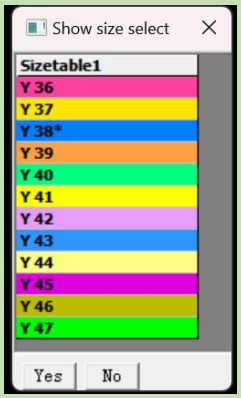


Figure5-79

(4)Grad scale

As shown in Figure 5-80, the selected pattern pieces are graded proportionally.

Figure5-80

(5) Export DXF

Export the selected pattern pieces as DXF files. A dialog box appears as shown in Figure 5-81.

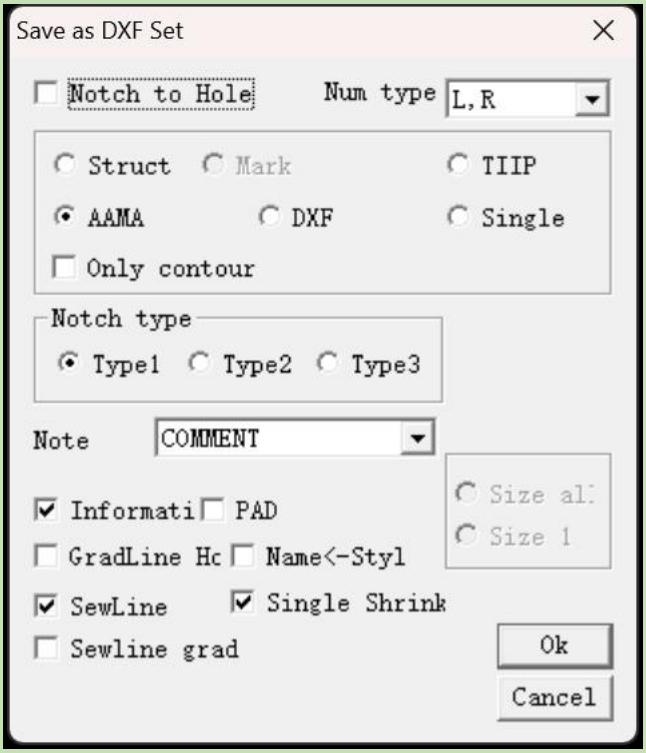


Figure5-81

(6) Save as PNG/JPG

Save the selected pattern pieces as PNG/JPG files, as shown in Figure 5-82

Figure5-82

（7） Single shrink

Set the shrinkage rate for the selected pattern as shown in Figure 5-83.

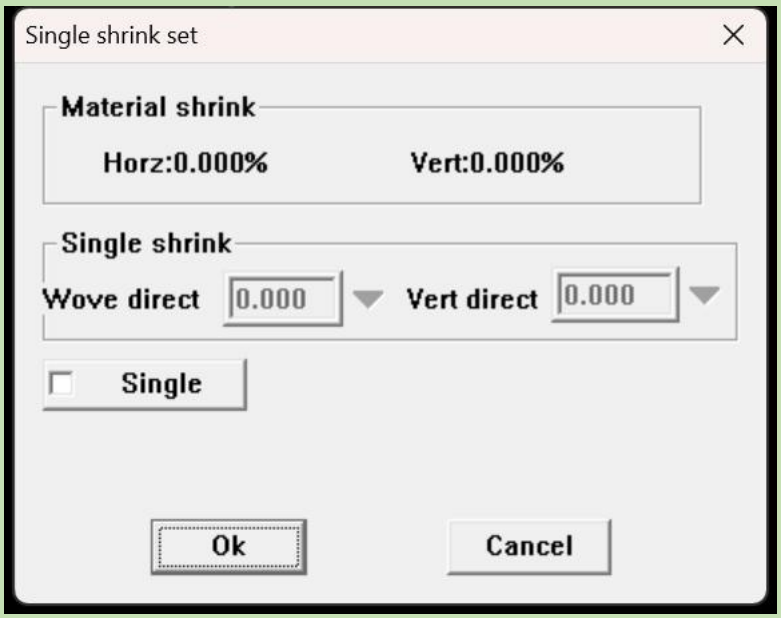


Figure5-83

(8)Rotate

Rotate the selected pattern to any angle as shown in Figure 5-84.

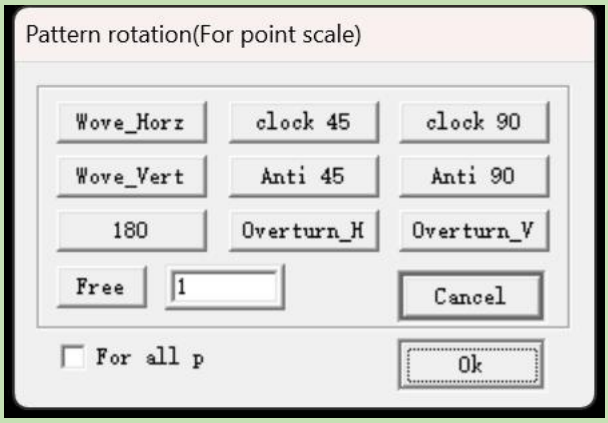


Figure5-84

(9) Dismiss

Disassemble the folded pattern into a complete pattern, as shown in Figure 5-85.

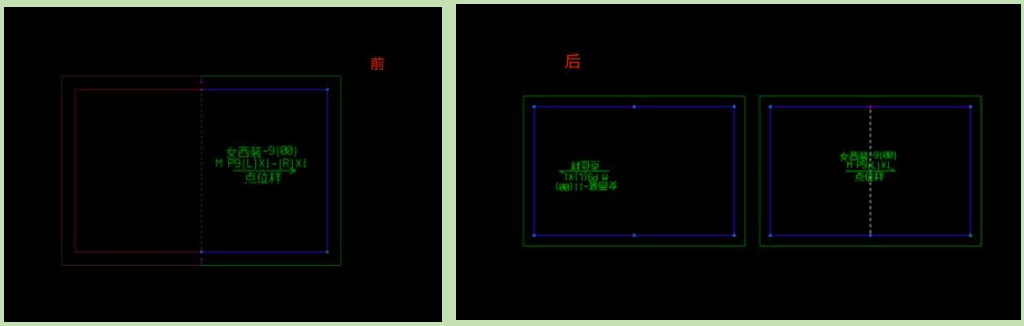


Figure5-85

(10) Shadow-L

Generate shadows for the seam allowances of the selected pattern, as shown in Figure 5-86.

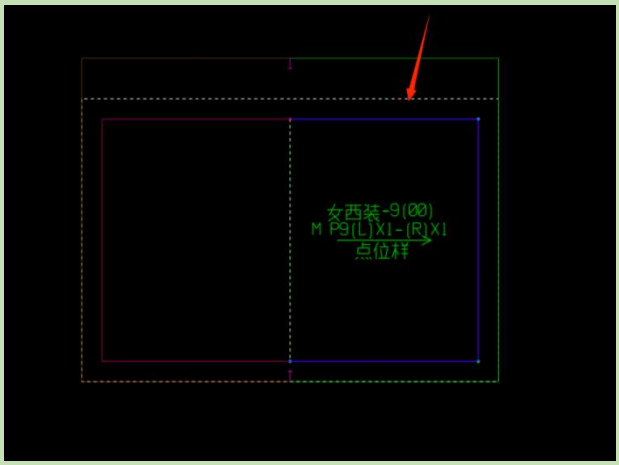


Figure5-86

(12) CoPy All

Copy the selected pattern.

(13) Copy Rot

Copy the selected pattern and rotate them by 180 degrees.

(14) Copy Hori Symm

Copy out pattern with horizontal symmetry.

(15) Copy Vert Symm

Copy out pattern with vertical symmetry.

(16) Make Reticaulation

(17) Make Reticaulation 1

(18) Exchange info

Select two pattern, and the two pattern will exchange their information with each other.

(19) Set Layer

(20) Edge to pattern

Turn the seam allowances of the selected pattern into the outline of the pattern. Additional seam allowances can be added, and the original outline becomes an internal line. (If it is a negative seam allowance, a positive seam allowance amount will be automatically added, which is equivalent to automatically exchanging the internal and external lines.)

(21)Remodify notch

Modify the notch types of the selected pattern.

(22) Type set

(23) Pattern lock

Lock the positions of the pattern so that they cannot be moved.

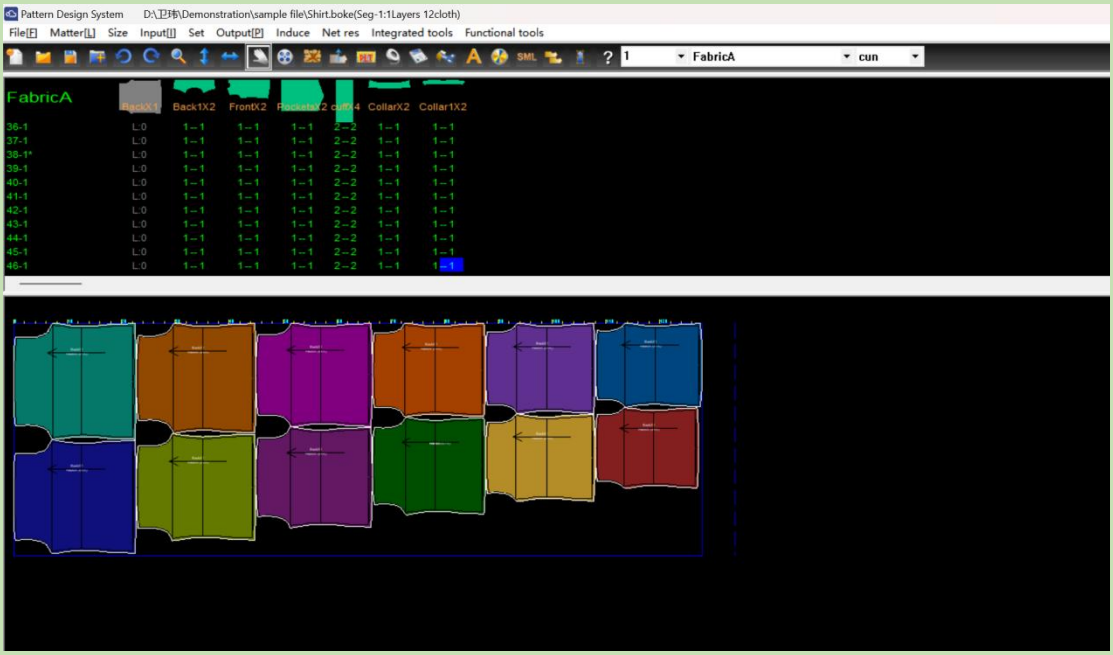
(24) Delete

Delete the currently selected pattern.

(25) Abort

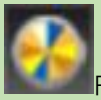
Cancel the current operation.

Section 6: Intelligent Mark Mode



The interface of the fabric layout center (Figure 6-1)

I. Settings

(1)  Fabric Settings: Used to set the properties of the fabric.

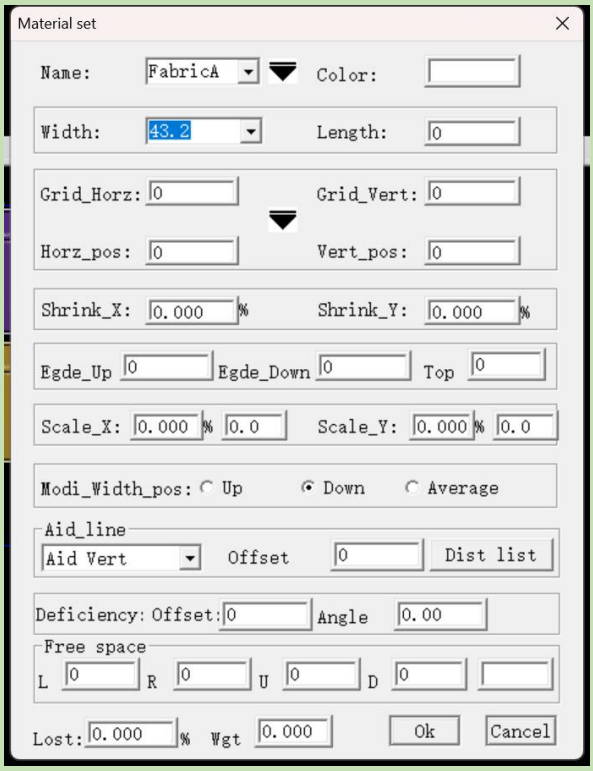


Figure6-1-1

1.Name: Selection of fabric varieties, such as outer fabric, lining fabric, interlining fabric, etc.

2. Width: Set the width of the fabric.

3. Length: Set the length of the fabric.

4. Grid Horz : Set the size of the stripes in the weft direction.

5. Grid_Vert: Set the size of the stripes in the warp direction.

6. Horz_pos : Set the starting position of the stripes in the weft direction.

7. Vert_pos : Set the starting position of the stripes in the warp direction.

8. Shrink X: Set the shrinkage rate in the warp direction.

9. Shrink Y: Set the shrinkage rate in the weft direction.

10. Egde_Up and Egde_Down: Set the width of the fabric edges. During layout, a certain number of pattern can be pressed against the edges to save material.

11. Scale_X: Set the expansion and contraction rate of the pattern in the warp direction (a negative number can be entered to make all pattern smaller in order to save fabric).

12. Scale_Y: Set the expansion and contraction rate of the pattern in the weft direction (a negative number can be entered to make all pattern smaller in order to save fabric).

13. Modi_Width pos: Set the way to change when the width of the already laid-out fabric changes. The width can be increased or decreased from the upper side, the lower side, or both sides.

14. Aid line: Set the position and direction of the auxiliary lines. They will be arranged continuously after the interval is entered. For vertical auxiliary lines, different intervals can be entered. Note: A maximum of 100 lines are allowed.

15. Deficiency: Set the weft skew size of the fabric. The pattern can automatically adjust

their weft skew shapes according to this data.

16. Free space: The gap between the layout pattern. It can be set in four directions.

(2) 

Specification Settings: Set the quantity of each specification and the direction of the laying-out yarn. The width of the single-bed fabric can also be set.

Note: If the width is modified in the fabric settings, it will be modified for all beds.

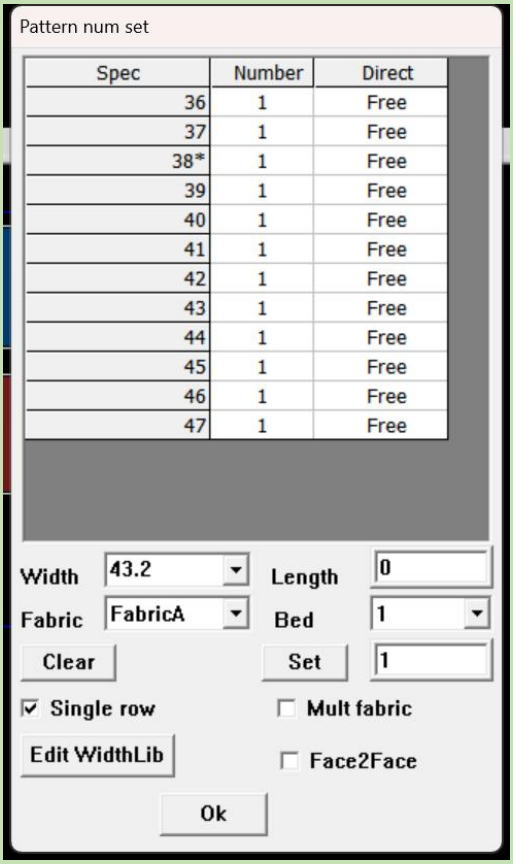


Figure6-1-2

(3) 

Bed: Set different bed numbers. The system defaults to starting from "1", and other numbers can be entered to generate different bed numbers. After selecting different bed numbers, separate-bed layout can be achieved.

If a certain bed number is to be deleted, the operations are as follows:

1. Select this bed;
2. Move the cursor to the layout area;
3. Press the Delete key.

For other settings, refer to the layout settings in the previous chapter.

II. Fabric Layout / Marker Making

(1)  **: Used to pick up and place pattern.**

1. Ways to pick up pattern:

(1) Double-click the number in the pattern area, and the pattern will be automatically placed in the fabric layout area.

(2) Frame-select the number in the pattern area, and the selected pattern will be automatically placed in the fabric layout area.

(3) Click the number in the pattern area, move the mouse to the fabric layout area, and click the left mouse button to place the pattern.

2. Ways to place pattern:

(1) Move the pattern to the target position and click the left mouse button to place it. The pattern will automatically align with the nearest pattern.

(2) After selecting a pattern, hold down the left mouse button and drag the mouse in the blank area of the fabric layout area to the target direction, and then release it. The pattern will automatically align with the specified direction.

(3) After selecting a pattern, click the direction keys on the keyboard, and the pattern will automatically align with the specified direction. Press Enter to confirm the placement.

3. Adjustment of pattern direction:

(1) Space bar: Rotate the pattern by 180 degrees;

(2) < key: Flip left and right;

(3) > key: Flip up and down;

(4) ← key: Rotate left;

(5) → key: Rotate right;

(6) ↑ key: Rotate left by 90 degrees;

(7) ↓ key: Rotate right by 90 degrees;

(8) Shift key: Arbitrary rotation and fine-tuning. While holding down the Shift key, click the pattern, and the following setting window will appear. Click the corresponding options to perform rotation and fine-tuning.

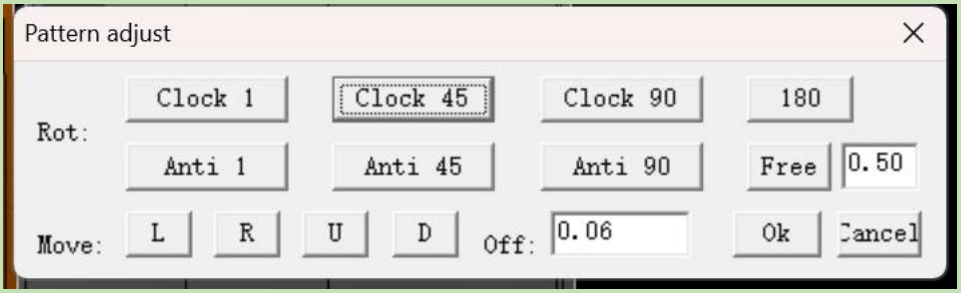


Figure6-2-1

(9) For the folded pattern, the folding state can be toggled by pressing the T key. (For tubular materials)

4. Overlap Settings:

(1) After selecting a pattern, place it on top of the pattern that needs to be overlapped (or on the edge of the fabric), press Enter, input the overlap amount, and then confirm.

(2) While holding down the Shift key, click on the pattern, and a setting window will appear. Click on the corresponding options to make fine adjustments and set the overlap according to the set displacement amount

5.Grouped pattern: (1) select a group of already arranged pattern, and the following options will appear after right-clicking.

Figure6-2-2

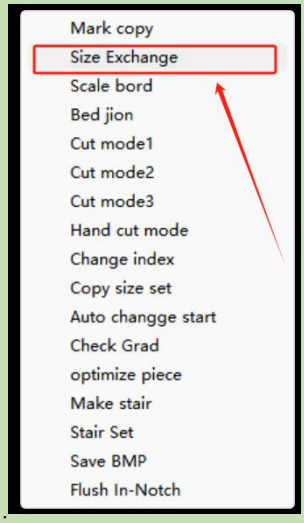
(2) Select operations such as translation, copying, and symmetry to achieve the corresponding group processing.

6. Area Waiting for Layout: The area behind the dotted line in the fabric layout area and the lower part of the fabric layout area are the areas waiting for layout. pattern can be temporarily placed in the area waiting for layout to facilitate the adjustment of the positions among the pattern.

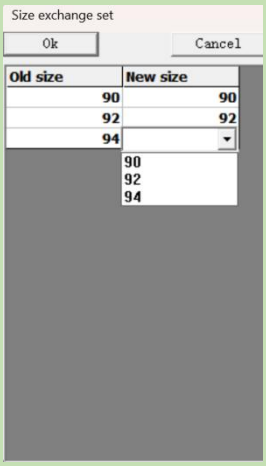
7.Right-click on the pattern in the fabric layout area to pop up.

Select to replace this pattern with a pattern of another specification.

Add "Size exchange" to the right-click menu in the fabric layout area.



Selecting this menu will pop up:

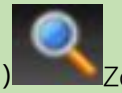


Set new specifications corresponding to the original specifications. The pattern corresponding to the original specifications will be automatically modified to the pattern set with the new specifications.

This function is available in independent fabric layout.

(2)  The built-in super fabric layout function allows you to set the layout method, direction, fabric, etc. according to your requirements. Once you click "Start", the fabric will be laid out within the set time.

III. Display

(1)  Zoom Tool: Zoom in or out on the fabric layout diagram. There are two ways

to use it: frame selection and scrolling the wheel key. Note: After using this tool once, it will automatically return to the toolbar. 

（2）  Full Width Display: The fabric layout diagram is displayed in full width mode.

（3）  Full Length Display: The fabric layout diagram is displayed in full length mode.

IV. Detection

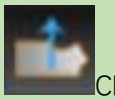
（1）  Measurement Tool: The length between any two consecutive points can be measured by clicking on them successively.

（2）Overlap Detection: Select the menu "Settings" - "Fabric Layout Settings" - "Overlap Check". All overlapping pattern in the fabric layout diagram can be displayed in a list. After closing the list, all overlapping pattern will be shown in a colorless state.

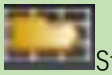
Note: During fabric layout, as long as there are overlapping pattern, the smaller pattern will be displayed in a colorless state.

V. Clearance

（1）  Clear the Fabric Layout Area: Select all the pattern in the fabric layout area and put them back to the pattern area.

（2）  Clear the Area Waiting for Layout: After clicking, all the pattern in the area waiting for layout will be put back to the pattern area.

VI. Matching Stripes and Checks

 Stripe and Check Matching Tool: It is used for stripe and check alignment, with two methods: matching pattern to the fabric and matching pattern to each other.

Matching pattern to the Fabric ：

Operation Steps:

1. Set the width of the stripes and checks in the fabric settings.

2. Select the stripe and check matching tool.

3. Click on the notches or corners of the pattern.

4. Hold down the Ctrl key and left-click at the target position in the fabric layout area.

5. Select the check matching method as well as the horizontal and vertical positions, and then confirm.

（2）Operation Steps for Matching pattern to Each Other:

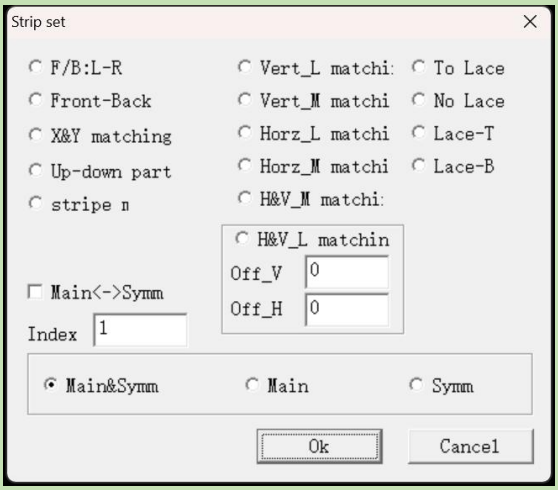
1. Set the width of the stripes and checks in the fabric settings.

2. Select the stripe and check matching tool.

3. Click on the notches or corners of the pattern.

4. Hold down the Ctrl key and left-click on the positions of the notches and corners of the target pattern in the fabric layout area.

5. Select the check matching method and confirm.



VII. Nesting Report

 Nesting Report: Information such as nesting length, utilization rate, weight conversion, cost, etc.

Operating Steps: 1. click 

2. Input the relevant information and select "Reset". (After entering information such as gram weight and cost, you need to click on "Reset".)

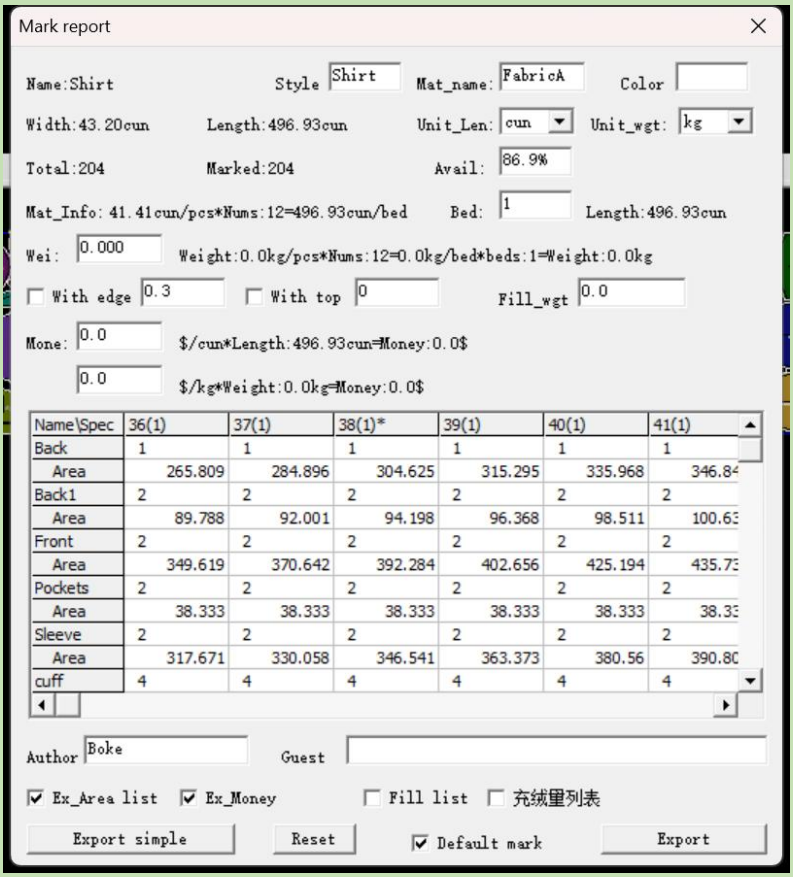


Figure6-7-1

3. Click on "Export ", and the nesting information and thumbnail images will be automatically imported into the Word document.

Mark report(Bok CAD)

Author:Boke Guest: Date:2024-11-29

Name:Shirt Style:Shirt Mat:FabricA Color:

Width:43.20cun Length:496.93cun Unit_L:cun Unit_W:kg

Total:204 Marked:204 Avail:86.9%

Mat:41.41cun/pcs*Nums:12=496.93cun/bed*beds:1=Length:496.93cun

PerW:0.000 Weight:0.0000kg/pcs*Nums:12=0.0000kg/bed*beds:1=Weight:0.0000kg

Money:0.0$/cun*Length:496.930cun=Money:0.000$

0.0$/kg×Weight:0.000kg=Money:0.000$

Name\Spec	36(1)	37(1)	38(1)*	39(1)	40(1)	41(1)	42(1)	43(1)	44(1)	45(1)	46(1)	47(1)	Total(12)
Back	1	1	1	1	1	1	1	1	1	1	1	1	12
Area	265.809	284.896	304.625	315.295	335.968	346.846	368.456	379.552	402.086	413.394	436.864	448.383	4302.175
Back1	2	2	2	2	2	2	2	2	2	2	2	2	24
Area	89.788	92.001	94.198	96.368	98.511	100.631	102.726	104.8	106.845	108.869	110.871	112.846	1218.454
Front	2	2	2	2	2	2	2	2	2	2	2	2	24
Area	349.619	370.642	392.284	402.656	425.194	435.735	459.164	469.877	494.206	505.111	530.341	541.414	5376.243
Pockets	2	2	2	2	2	2	2	2	2	2	2	2	24
Area	38.333	38.333	38.333	38.333	38.333	38.333	38.333	38.333	38.333	38.333	38.333	38.333	459.998

Figure6-7-2

Note:

a. The estimated material usage can be calculated for both the already nested fabrics and the fabrics that haven't been nested yet (for the fabrics that haven't been nested, the estimated utilization rate needs to be input).

b. When calculating the weight of knitted fabrics, different weight units can be selected. To ensure accurate estimation, the width of the fabric edge needs to be input.

c. When making down garments, the weight of down can be further calculated based on the area of the pattern; the amount of thread used for hemming the pattern can be calculated according to the perimeter of the pattern.

d. After the nesting is completed, information such as the nesting length and utilization rate can also be viewed through the nesting information at the bottom of the nesting area.

VIII. Others

(1)  Divide garment pieces: Used for cutting the pattern.

1. When the dividing method is set to the parameter mode, the pattern can be divided horizontally or vertically.

Operating Steps:

(1) Click on the pattern that needs to be divided.

(2) Select horizontal or vertical division, and choose the woolen line or the net line. Enter the spacing and the seam allowance, and then confirm. The spacing can be set with reference to the other side. The center division method can also be chosen.

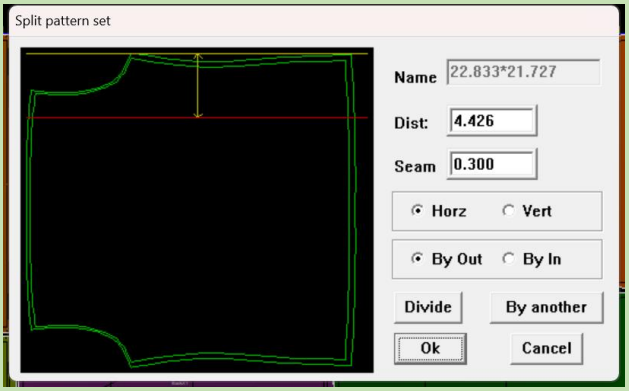
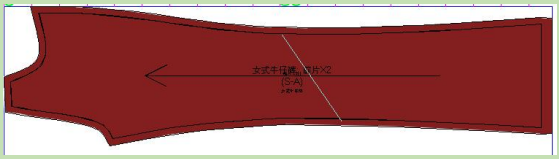


Figure6-8-1

2. When the dividing method is set to the mouse mode, the dividing position and direction can be defined arbitrarily.

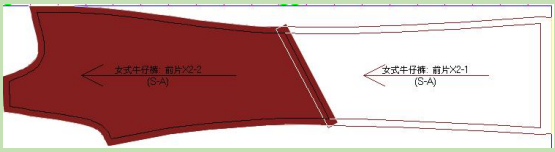
Operating Steps:

(1) Set the dividing positions respectively at the target positions on the edge of the pattern.



(2) Input the seam allowance size at the dividing position and confirm.

3. The division is completed.



（2）  Text Tool:

1. It is used to input text on the nesting figure.

Operating Steps:

(1) Left-click on the required pattern to determine the starting point of the text.

(2) Move the mouse to determine the direction of the text and then left-click again.

(3) Input the text information, set the font size, and then confirm. (There can be at most three lines of text information on the same pattern.)

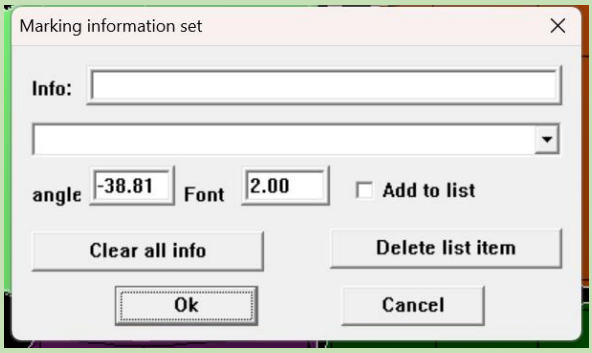


Figure6-8-2

2. It is used for dividing the marker. After selecting the text tool, while holding down the Ctrl key, left-click in the marker area and move the mouse, and then left-click again to pop up a dialog box where the text information can be entered.

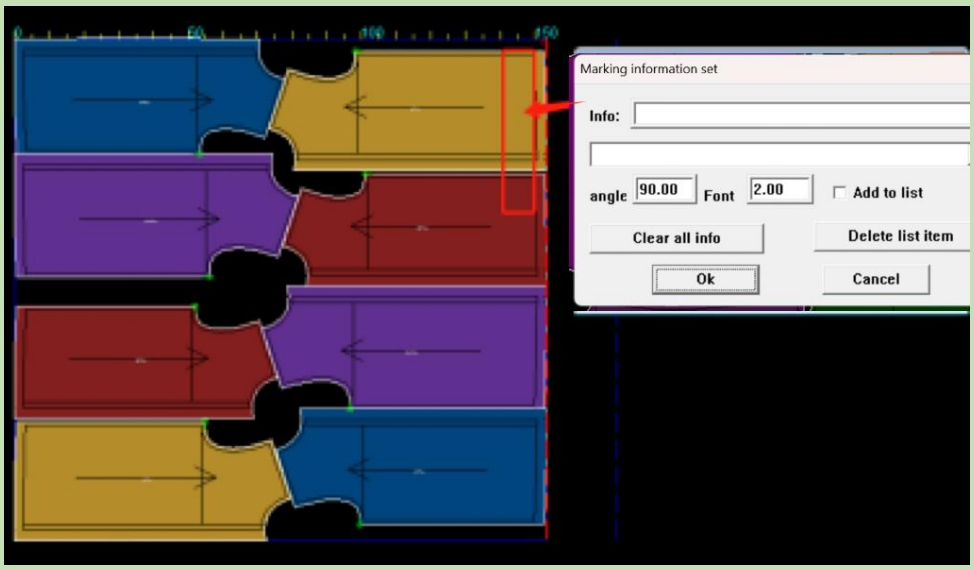


Figure6-8-3

（3）  Piece-by-piece Inspection: Check the nesting position of a certain piece of clothing.

Operating Steps:

1. Select the tool.
2. Click on any pattern in the nesting area.
3. All the pattern of this specification will be displayed in a colorless state.

IX. Operations in the pre-layout area

1. When selecting the pattern in the nesting and cutting piece area: continue the nesting operation.

2. On the fabric in the upper left corner:

(1) Left-click: each pattern will automatically take only one piece.

(2) Double left-click: take out all the pattern and automatically place them in the nesting

area.

3. Ctrl + left-click on the quantity of the pattern: increase a single pattern.

4. Right-click on the pattern:

(1) Reset: used to modify the quantity, type, etc. of the pattern.

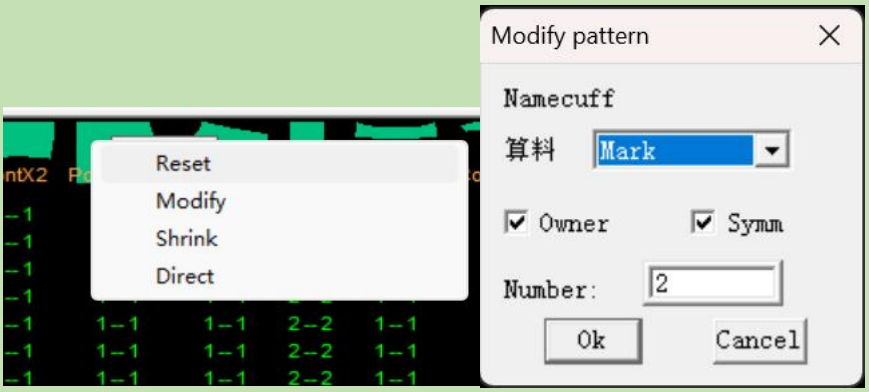
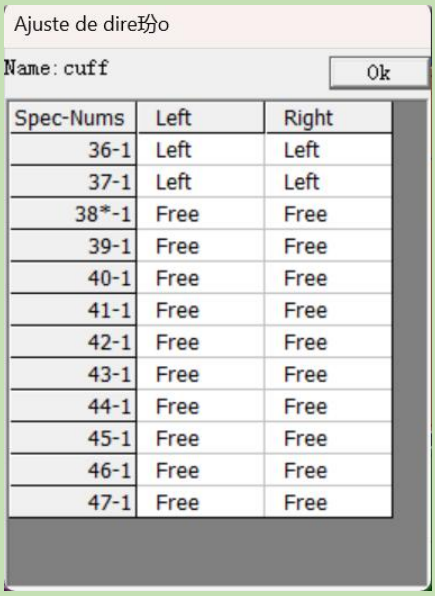


Figure6-9-1

Modify: Adjust the shape of the pattern.

Shrink: Adjust the shrinkage rate of the pattern.

Direct: Adjust the direction setting of this pattern.



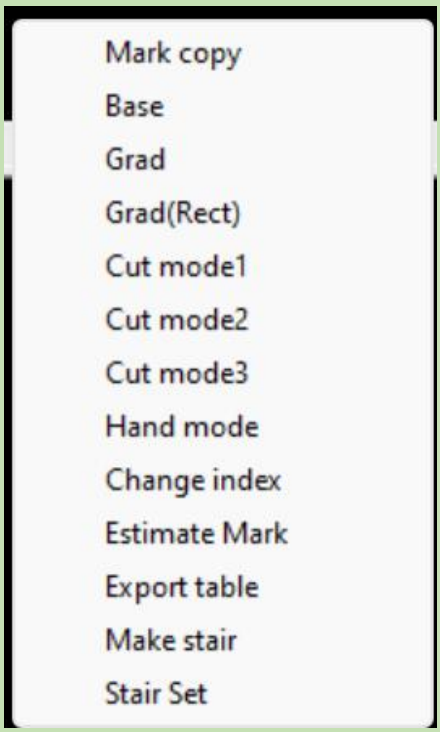
Spec-Nums	Left	Right
36-1	Left	Left
37-1	Left	Left
38*-1	Free	Free
39-1	Free	Free
40-1	Free	Free
41-1	Free	Free
42-1	Free	Free
43-1	Free	Free
44-1	Free	Free
45-1	Free	Free
46-1	Free	Free
47-1	Free	Free

Figure6-9-2

X. Fabric Layout Area

Use the scroll wheel to zoom in and out of the fabric layout center. Hold down the shortcut key (Ctrl) to move it.

(1) Right-click on the Blank Area:



1. Mark Copy: Copy the previous batch of fabric layout as a template to layout the current batch.

2. Base: One piece of each type of pattern of the base size will be selected and laid out for making the first sample.

3. Grad: Compose all the pattern into a network diagram.

4. Grad (External Rectangle): The pattern form a rectangular network diagram with a certain interval between each pattern.

5. Cut mode 1, 2, and 3: Set the cutting route of the pattern.

6.Hand mode: Manually set the order of cutting.

7. Change index: Modify the cutting sequence of a single piece.

8. Estimated Mark: Continuously layout in various ways, which requires high computer performance and is not recommended.

9. Export table: Generate a report with relevant information.

10. Mark stair: After setting the width and height of the marking, the marking will be added automatically. The pattern that are not marked will be displayed in gray. Press the Enter key to cancel the gray display.

11.Stair Set: Set the size of the marking. If you add the marking manually, use this value.

Note: Mark Movement: Press the T key at the preset marking position near the edge of the pattern with the cursor to adjust the position of the marking.

Mark Deletion: Press the Delete key on the pattern to delete the marking.

(2) Frame Selection of pattern: Group pattern, select multiple pattern for unified processing.

1. After Grouping pattern, Left-click:

1) Press the Space key to rotate 180 degrees.

2) Press the PageUp key to rotate counterclockwise.

3) Press the PageDown key to rotate clockwise.

2. Group Copy to Different Batches: After copying, just change the batch number.

(3) Shift + Right-click on the Laid-out pattern: The pattern modification dialog box will pop up, allowing you to modify a single piece. After confirmation, the modified graphic will be saved. If you want to cancel the modification, right-click to bring back this pattern and pull it out from the sample area again.

Operation Instructions:

1. Left-click and Drag the Point: Move the point.

2. Left-click and Drag the Curve: Adjust the curve.

3. Press and Drag the Left Mouse Button on the Blank Area: Translate the graphic.

4. Double-click the Key Point of the Curve with the Left Mouse Button: Switch between smooth and corner.

5. Right-click the Key Point of the Curve: Cancel this key point.

6. Scroll the Mouse Wheel: Zoom in or out.

(IV) Press the Enter key (Enter) when moving the pattern to the target position: Adjust the edge pressing of the pattern.

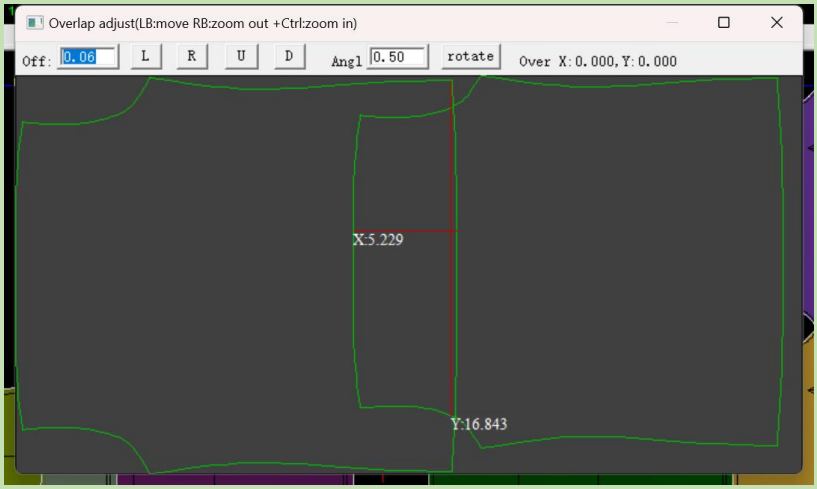


Figure6-10-1

XI. Mixed Layout

It is a separate program that can arrange the pattern from different files together.

Operation Steps:

1. Through the menu: File - Load Pattern Document, select the required files and confirm, and then set the quantity of pattern for each specification.

2. Use the same method to load all the required pattern files and set the number of pattern.

3. Set the properties of the fabric.

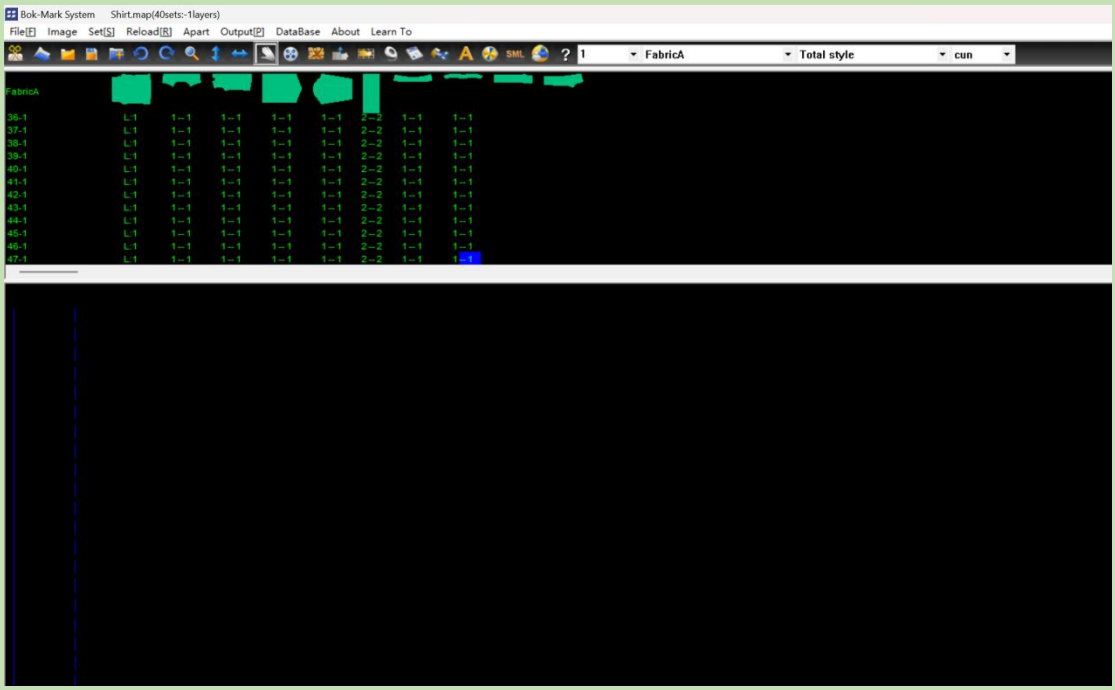
4. Through the window. 

Select different pattern files for fabric layout. When pattern from different files are needed, use the same method to select different pattern files.

Section 7: Super Nesting

Double-click the desktop icon. 

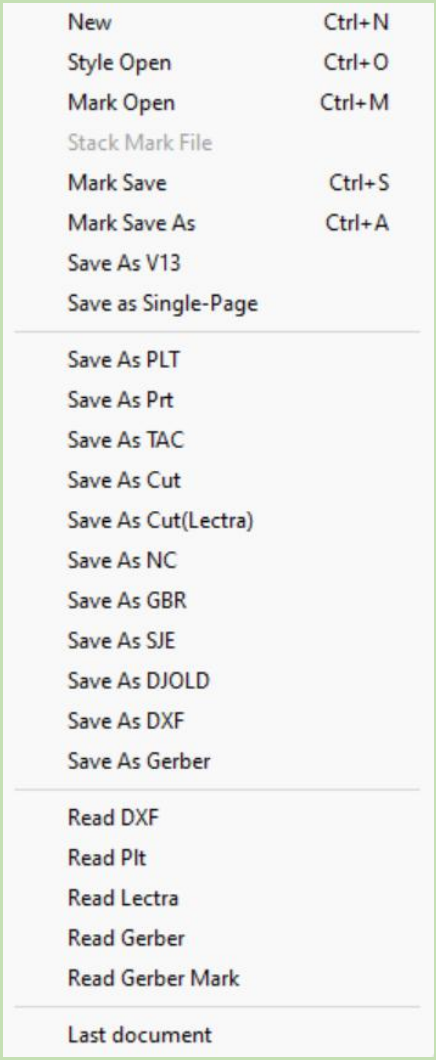
Then the Super Fabric Layout interface of Bok Intelligent Garment CAD can be opened.



Fabric Layout Center Interface（Figure7-1）

I. Menu Introduction

(1) File:



1. New: Create a new document.

2. Style Open: Open the style file created by the Boke CAD system.

3. Mark Open: Open the document that has already been laid out. The file extension is.map.

4. Stack Mark File: Save the current fabric layout document. The file extension is.map.

5. Mark Save As: Save the current fabric layout document with a different name. The file extension is.map.

6. Save As V13 : Save the fabric layout document in the lower version V13 format.

7. Save As PLT File: Save as a file in PLT format.

8. Save As Prt File: Save as a file in Prt format. A dialog box will appear for settings, and then the Prt file can be generated.

9. Save As TAC File: Save as a cut table file in TAC format.

10. Save As CUT File: Save as a cut table file in CUT format.

11. Save As CUT (Lectra): Save as a cut table file in CUT (Lectra) format.

12. Save As NC: Save as a file in NC format.

13. Save As GBR: Save as a file in GBR format.

14. Save As SJE : Save as a file in SJE format.

15. Save As DJOLD: Save as an old version CUT file.

16. Save As DXF File: Save as a file in DXF format.

17. Save As Gerber: Save as a Gerber document that can be opened with Gerber software.

18.Read DXF: Open a file in DXF format.

19. Read plt: Open a file in PLT format.

20. Read Lectra: Open the document generated by Lectra software.

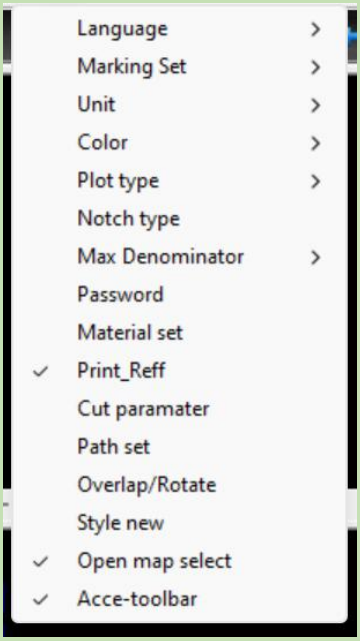
21. Read Gerber: Open the document generated by Gerber software.

22. Read Gerber Mark: Open the fabric layout document of Gerber software.

23. Last document: Open the previous fabric layout document.

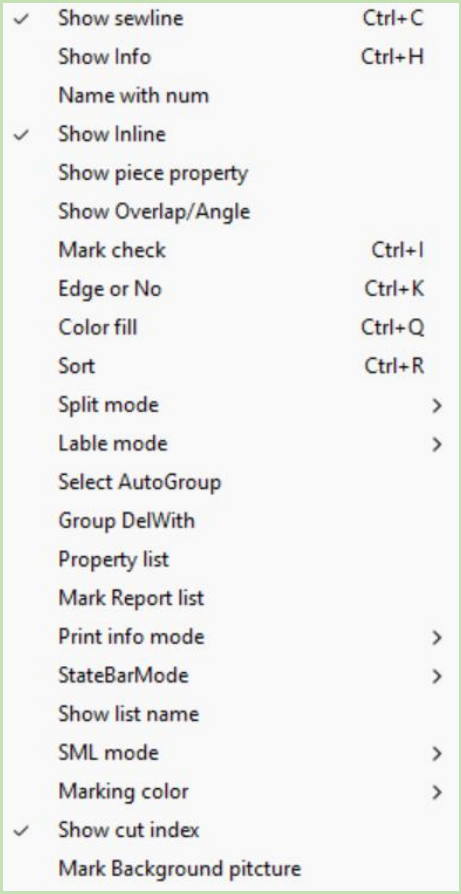
(2) Image： Connect to the plotter

(3) Settings:



1. Language: There are three language options to choose from.

2.Marking Set: Set various items within the fabric layout system.



1) Show sewline: When selected, the clean pattern lines will be displayed in the fabric layout diagram; otherwise, they will not be shown.

2) Show Info: You can choose whether to display the text information in the fabric layout diagram.

3) Name with num: After selection, the style number information of the pattern will be displayed.

4) Show Inline: When selected, the internal lines of the pattern will be displayed during fabric layout; otherwise, they will not be shown.

5) Show piece property: Display the relevant information of the pattern.

6) Show Overlap/Angle: When selected and the mouse is placed on a certain pattern in the fabric layout diagram, the overlap amount and rotation angle of that pattern can be displayed.

7) Mark check: After clicking this option, all overlapping pattern in the fabric layout diagram can be displayed in a list. After closing the list, all overlapping pattern will be shown in a colorless state.

8) Edge or No: Set clean pattern fabric layout or rough pattern fabric layout respectively.

9) Color fill: Set whether to display the color of the pattern in the fabric layout diagram.

10) Sort: After clicking this option, the pattern in the area waiting for layout will be arranged in descending order of area.

11) Split mode: There are two types: parameter method and mouse method (refer to the division tools in the fabric layout center for specific differences).

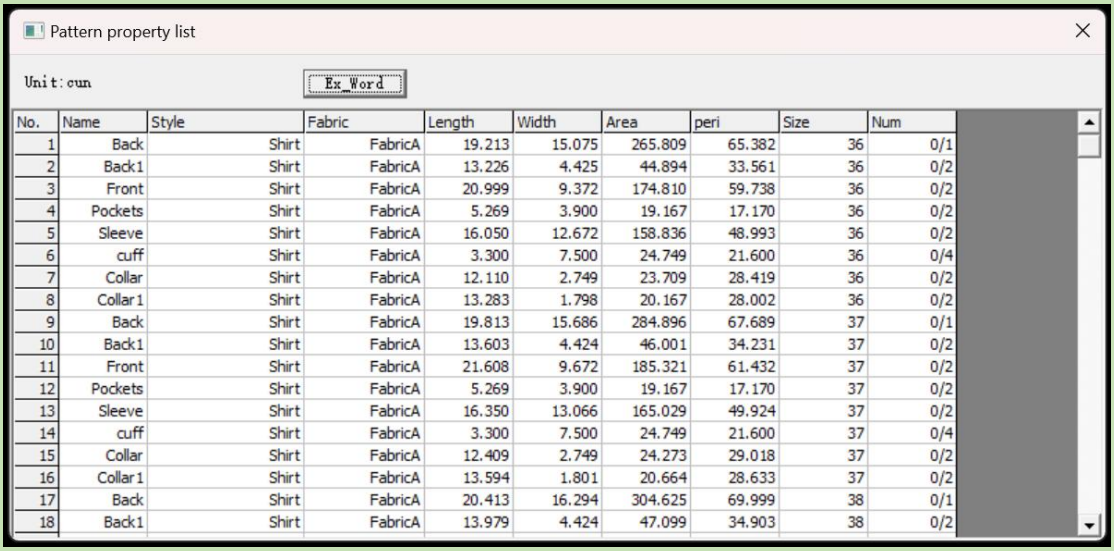
12) Lable mode: You can choose between letter and number types. Its function is to sort

the pattern to distinguish each pattern.

13) Select AutoGroup: Automatically group the pattern when they are frame-selected.

14) Group DelWith: If one pattern in a group is deleted, all the pattern in the group will be deleted.

15) Property list:

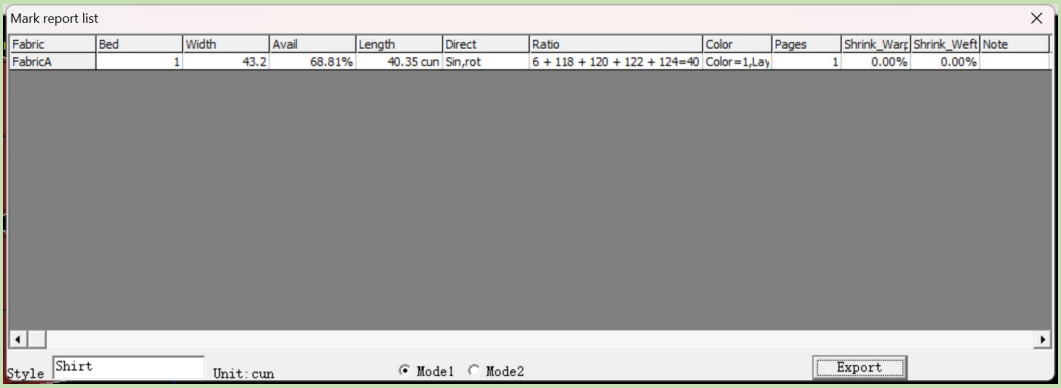


No.	Name	Style	Fabric	Length	Width	Area	peri	Size	Num
1	Back	Shirt	FabricA	19.213	15.075	265.809	65.382	36	0/1
2	Back1	Shirt	FabricA	13.226	4.425	44.894	33.561	36	0/2
3	Front	Shirt	FabricA	20.999	9.372	174.810	59.738	36	0/2
4	Pockets	Shirt	FabricA	5.269	3.900	19.167	17.170	36	0/2
5	Sleeve	Shirt	FabricA	16.050	12.672	158.836	48.993	36	0/2
6	cuff	Shirt	FabricA	3.300	7.500	24.749	21.600	36	0/4
7	Collar	Shirt	FabricA	12.110	2.749	23.709	28.419	36	0/2
8	Collar1	Shirt	FabricA	13.283	1.798	20.167	28.002	36	0/2
9	Back	Shirt	FabricA	19.813	15.686	284.896	67.689	37	0/1
10	Back1	Shirt	FabricA	13.603	4.424	46.001	34.231	37	0/2
11	Front	Shirt	FabricA	21.608	9.672	185.321	61.432	37	0/2
12	Pockets	Shirt	FabricA	5.269	3.900	19.167	17.170	37	0/2
13	Sleeve	Shirt	FabricA	16.350	13.066	165.029	49.924	37	0/2
14	cuff	Shirt	FabricA	3.300	7.500	24.749	21.600	37	0/4
15	Collar	Shirt	FabricA	12.409	2.749	24.273	29.018	37	0/2
16	Collar1	Shirt	FabricA	13.594	1.801	20.664	28.633	37	0/2
17	Back	Shirt	FabricA	20.413	16.294	304.625	69.999	38	0/1
18	Back1	Shirt	FabricA	13.979	4.424	47.099	34.903	38	0/2

Figure7-1-1

The list of information related to the pattern can be exported to WORD.

16) Mark Report list:



The list of information related to the marker can be exported to EXCEL.

17) Print info mode: When printing the fabric layout information, you can choose to place it at the end, the beginning, or both ends of the fabric layout Figure.

18) StateBarMode: There are four schemes for display.

19) Show list name: It is used to set the display of all pattern names in the sample area.

20) SML mode: There are "Single Bed Setting" and "Overall Setting" inside. Select "Single Bed Setting": It is the same as before. Select "Overall Setting": The quantity will be set uniformly.

21) Marking color: 1. Single size with single color, 2. Single piece with single color, 3. Color-coded by fabric.

22) Show cut index: Display the cutting sequence of the cutting table.

23) Mark Background pitcture: Set the background Figure of the fabric layout area.

3. Unit: Select the unit according to your needs.

4. Color: You can set the color of the fabric layout Figure and the background color.

5. Plot type: You can set the plotting language and different types of plotters.

6. Notch Type: Different notch types can be set.

7. Maximum Denominator: Set the maximum denominator of the fraction. (Selected when dealing with inch fractions)

8. Password : It is used by pattern makers to encrypt their own files so that others cannot read them.

9. Path Set: Set the location for saving relevant types of files.

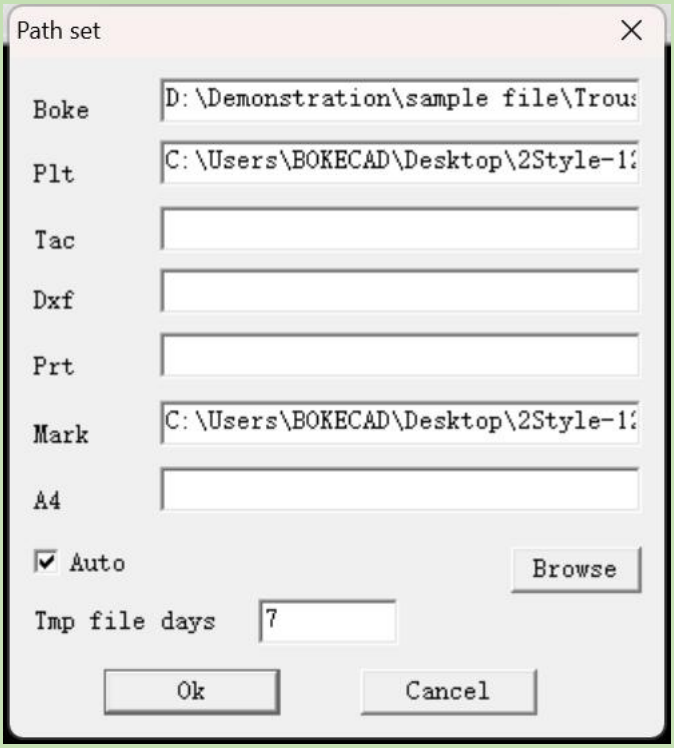


Figure7-1-2

10. Print Reff: Set the up-down reverse direction when outputting and printing the fabric layout Figure.

11. Cutting Parameters: Set the parameters for the cutting machine to cut the pattern.

12. Overlap/Rotation: A reminder will be given when there is overlap or rotation of the pattern.

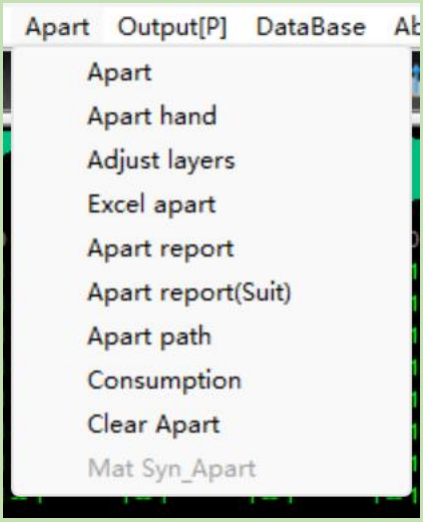
13. Style new: A prompt will be given when the style is updated.

(4) Reload:

When there are changes in the laid-out files, using the refresh function can update the changed files into the current fabric layout file.

(5) Apart:

(Requires a bed division license)



1.Select Apart, and the following dialog box will appear. Input the corresponding data, and the Bok Garment Cutting Plan Bed Division System will be called to perform bed division. Then, fabric layout after bed division can be carried out.

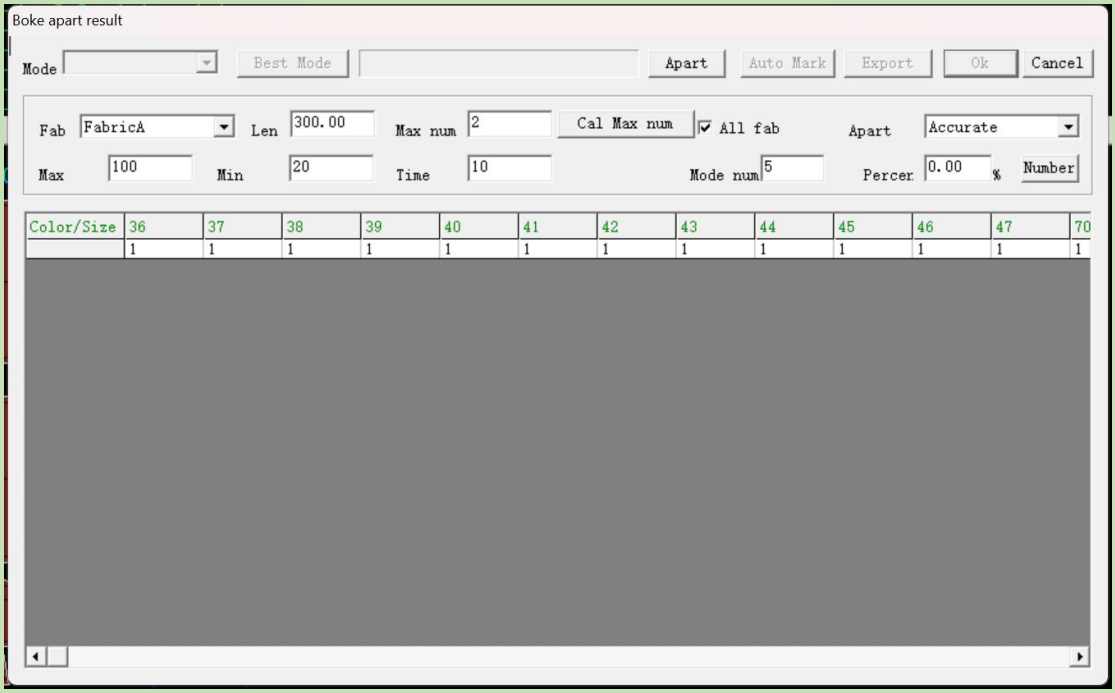


Figure7-1-3

2. Apart hand: Set bed division manually.

3. Adjust layers: Import an Excel spreadsheet for bed division.

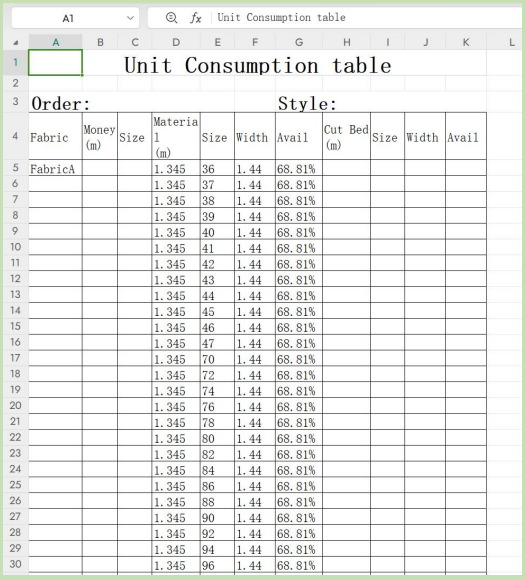
4. Excel apart: Set up high-low beds.

5. Apart report: Generate a bed division report.

6. Apart report(Suit): Generate a complete set of bed division reports.

7. Apart path: The location where the files are saved after bed division.

8. Consumption: Export the consumption amount of a single piece of a single specification (diagram).



Unit Consumption table

Order: Style:

Fabric	Money (m)	Size	Material (m)	Size	Width	Avail	Cut Bed (m)	Size	Width	Avail
FabricA			1.345	36	1.44	68.81%				
			1.345	37	1.44	68.81%				
			1.345	38	1.44	68.81%				
			1.345	39	1.44	68.81%				
			1.345	40	1.44	68.81%				
			1.345	41	1.44	68.81%				
			1.345	42	1.44	68.81%				
			1.345	43	1.44	68.81%				
			1.345	44	1.44	68.81%				
			1.345	45	1.44	68.81%				
			1.345	46	1.44	68.81%				
			1.345	47	1.44	68.81%				
			1.345	70	1.44	68.81%				
			1.345	72	1.44	68.81%				
			1.345	74	1.44	68.81%				
			1.345	76	1.44	68.81%				
			1.345	78	1.44	68.81%				
			1.345	80	1.44	68.81%				
			1.345	82	1.44	68.81%				
			1.345	84	1.44	68.81%				
			1.345	86	1.44	68.81%				
			1.345	88	1.44	68.81%				
			1.345	90	1.44	68.81%				
			1.345	92	1.44	68.81%				
			1.345	94	1.44	68.81%				
			1.345	96	1.44	68.81%				

Figure7-1-4

(1) Fill in manually in the blank area.

(2) Before exporting, each fabric and each size must be laid out for one bed (multiple pieces can be laid out).

(6) Output:

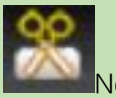
1. Default marking: Output the current fabric layout.
2. Min: Output the current fabric layout in a network manner.
3. A4 Marking: Output the current fabric layout in the form of thumbnails.
4. Preview: Print preview the fabric layout diagram.

(7) Database: Connect with other systems.

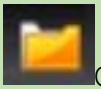
(8) About: Relevant information about the software.

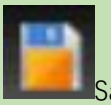
(9) Learn to: Enter the official website of Boke to view learning videos and various materials.

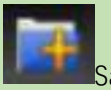
II. Introduction to Tools

（1）  New: Used to create new files.

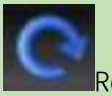
（2）  Open Bok Document: Used to open existing Bok files.

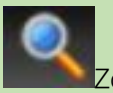
（3）  Open mark Document: Open the document that has already been laid out.

（4）  Save: Used to save files.

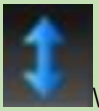
（5）  Save As: Used to save as a new file.

（6）  Undo: Used to reverse the previous step.

（7）  Redo: After undoing, this tool can be used to redo one step.

（8）  Zoomfactor: Zoom in or out on the fabric layout diagram. There are two ways to use it: frame selection and scrolling the mouse wheel.

Note: After using this tool once, it will automatically return to this tool. 

（9）  Widthshow: The fabric layout diagram is displayed in full width mode.

（10）  All show: The fabric layout diagram is displayed in the full length mode.

（11）  Marking: Used to pick up and place pattern.

1. pattern Picking Methods:

1) Double-click the number after the specification in the pattern area, and the pattern of

this specification will be automatically placed in the fabric layout area.

2) Click the number after the specification in the pattern area, and a single pattern of this specification will be automatically placed in the fabric layout area.

3) Frame-select the numbers in the pattern area, and the selected pattern will be automatically placed in the fabric layout area.

4) Click-select the numbers in the pattern area, move the mouse to the fabric layout area, and click the left mouse button to place the pattern.

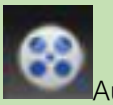
5) Click on a pattern in the pattern area, and all single pieces of all specifications will be automatically placed in the fabric layout area.

6) Double-click on a pattern in the pattern area, and all pattern of all specifications will be automatically placed in the fabric layout area.

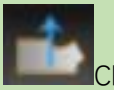
2. pattern Placing Methods:

1) Move the pattern to the target position, click the left mouse button to place the pattern, and the pattern will automatically align with the nearest pattern.

2) After selecting a pattern, move the mouse to the target direction and click the left mouse button.

3）  Auto marking: See details in Part Five - Automatic Fabric Layout.

4）  Clear marking: After clicking, all the pattern in the fabric layout area will be put back to the pattern area.

5）  Clear wait: After clicking, all the pattern in the pending layout area will be put back to the pattern area.

6）  Stripe: Used for stripe and check alignment, with two methods: matching pattern to fabric and matching pattern to each other.

Operation Steps for Matching pattern to Fabric:

a . Set the width of stripes and checks in the fabric settings.

b .Select the stripe and check matching tool.

c . Click on the notches or corners of the pattern.

d . Hold down the Ctrl key and click the left mouse button at the target position in the fabric layout area.

e . Select the check matching method as well as the horizontal and vertical positions, and then confirm.

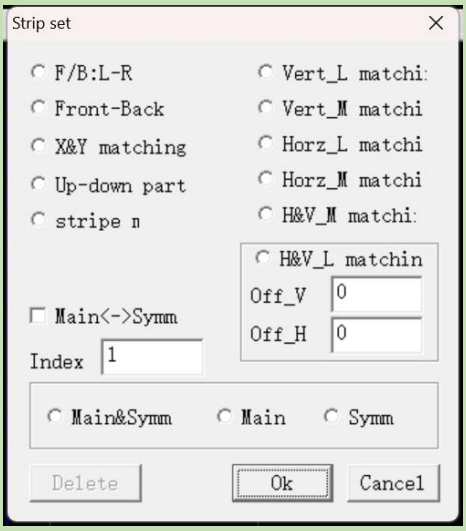


Figure7-2-1

7)  Measure: The length between any two consecutive points can be measured by continuously clicking on them.

Overlap Detection: Click on the menu "Settings" - "Fabric Layout Settings" - "Overlap Check", and all the overlapping pattern in the fabric layout diagram can be displayed in a list. After closing the list, all the overlapping pattern will be shown in a colorless state.

Note: When laying out the fabric, as long as there are overlapping pattern, the smaller pattern will be displayed in a colorless state.

8)  Mark Report: Information such as fabric layout length, utilization rate, weight conversion, cost, etc.

Operation Steps: a. Select 

b. Enter relevant information and select Reset. (After entering information such as gram weight and cost, you need to click "Reset".)

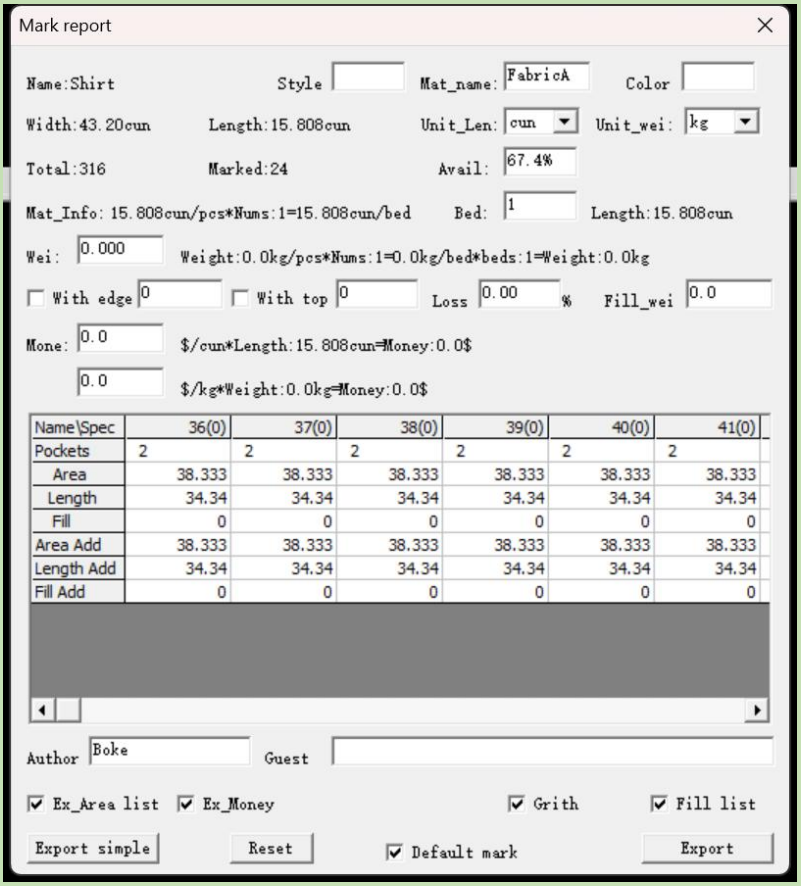
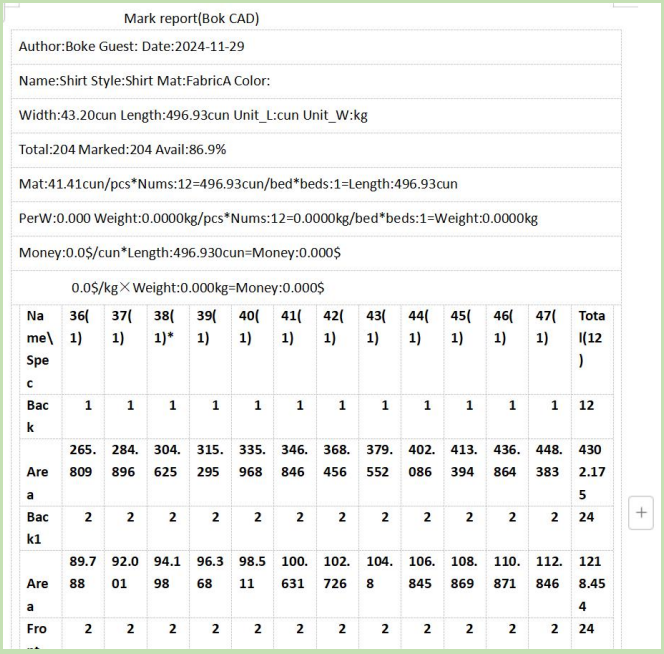


Figure7-2-3

c. Click "Export to Word", and the fabric layout information and thumbnail will be automatically imported into the Word document.



Mark report(Bok CAD)

Author:Boke Guest: Date:2024-11-29

Name:Shirt Style:Shirt Mat:FabricA Color:

Width:43.20cun Length:496.93cun Unit_L:cun Unit_W:kg

Total:204 Marked:204 Avail:86.9%

Mat:41.41cun/pcs*Nums:12=496.93cun/bed*beds:1=Length:496.93cun

PerW:0.000 Weight:0.0000kg/pcs*Nums:12=0.0000kg/bed*beds:1=Weight:0.0000kg

Money:0.0$/cun*Length:496.930cun=Money:0.000$

0.0$/kg×Weight:0.000kg=Money:0.000$

Name\Spec	36(1)	37(1)	38(1)*	39(1)	40(1)	41(1)	42(1)	43(1)	44(1)	45(1)	46(1)	47(1)	Total(12)
Back	1	1	1	1	1	1	1	1	1	1	1	1	12
Area	265.809	284.896	304.625	315.295	335.968	346.846	368.456	379.552	402.086	413.394	436.864	448.383	4302.175
Back1	2	2	2	2	2	2	2	2	2	2	2	2	24
Area	89.788	92.001	94.198	96.368	98.511	100.631	102.726	104.8	106.845	108.869	110.871	112.846	1218.454
Front	2	2	2	2	2	2	2	2	2	2	2	2	24

Figure7-2-4

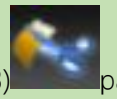
Note: a. The estimated material usage can be calculated for both the already laid-out fabric and the fabric that has not been laid out yet (for the unlaid-out fabric, the estimated

utilization rate needs to be entered).

b. When calculating the weight of knitted fabrics, different weight units can be selected. To ensure accurate estimation, the width of the fabric selvage needs to be entered.

c. When making down garments, the down weight can be further calculated based on the area of the pattern; the amount of thread used for hemming the pattern can be calculated based on the perimeter of the pattern.

d. After the fabric layout is completed, the information such as the fabric layout length and utilization rate can also be viewed through the fabric layout information below the fabric layout area.

(18)  pattern cut

1. When the splitting method is set to the parametric method, the pattern can be split horizontally or vertically.

Operation Steps:

1) Click on the pattern that needs to be split.

2) Select horizontal or vertical splitting, and choose the woolen line or the net line. Enter the spacing and the seam allowance, and then confirm. The spacing can be set with reference to the other side. The center-splitting method can also be selected.

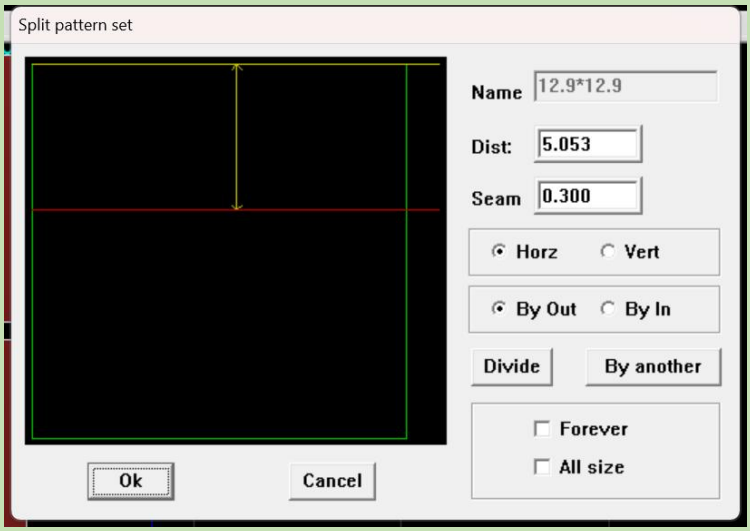


Figure7-2-5

2. When the splitting method is set to the mouse mode, the splitting position and direction can be defined arbitrarily.

Operation Steps:

1) Set the splitting positions respectively at the target positions on the edge of the pattern.

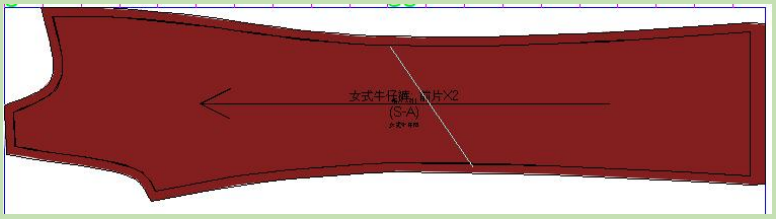


Figure7-2-6

2) Enter the seam allowance size at the splitting point and confirm.

3) The splitting is completed.

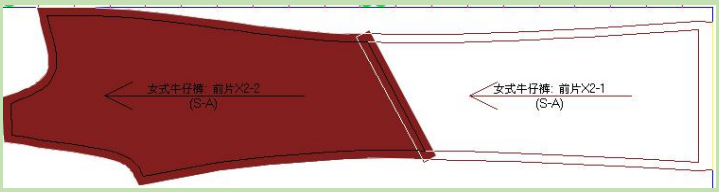


Figure7-2-8

(19)  Information：

1. It is used to input text on the fabric layout diagram.

Operation Steps:

1) Click the left mouse button on the required pattern to determine the starting point of the text.

2) Move the mouse to determine the direction of the text and then click the left mouse button.

3) Input the text information, set the font size, and confirm. (There can be at most three lines of text information on the same pattern.)

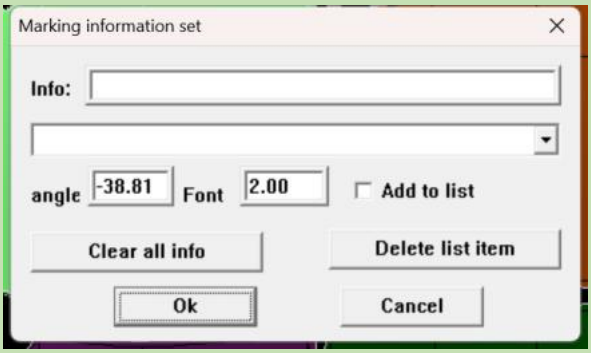


Figure7-2-9

2. It is used for dividing the marker layout into sections. After selecting the text tool, hold down the Ctrl key, click the left mouse button in the marker layout area and move the mouse, and then click the left mouse button again to bring up a dialog box where text information can be entered.

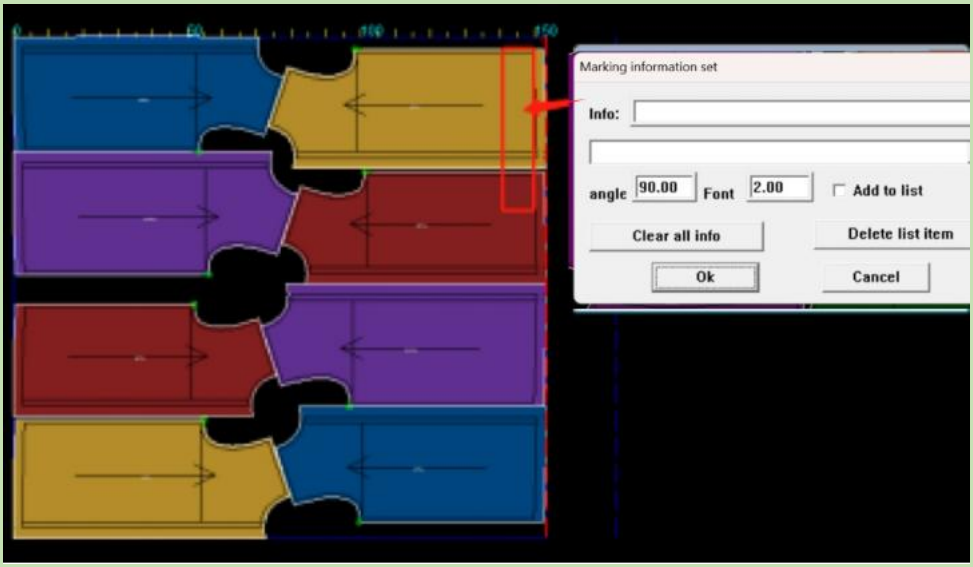


Figure7-2-10

(20)  Fabric Set: Used to set the properties of the fabric.

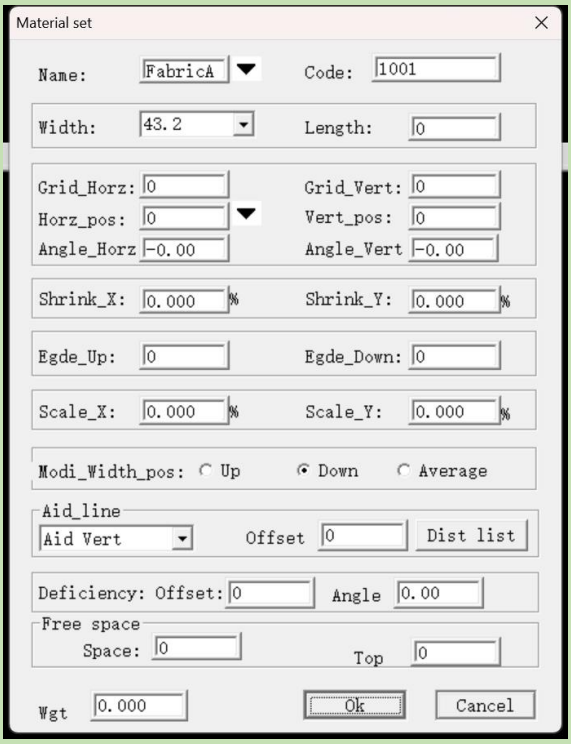


Figure7-2-11

1.Name: Options include outer fabric, lining fabric, interlining fabric, etc.

2.Width: Set the width of the fabric.

3.Length: Set the length of the fabric.

4. Grid Horz: Set the size of stripes and checks in the weft direction.

5. Grid Vert: Set the size of stripes and checks in the warp direction.

6. Horz _pos : Set the starting position of stripes and checks in the weft direction.

7. Vert_pos : Set the starting position of stripes and checks in the warp direction.

8. Angle Horz: Set the angle of stripes and checks in the weft direction.

9. Angle Vert: Set the angle of stripes and checks in the warp direction.

10. Shrink X: Set the shrinkage rate in the warp direction.

11. Shrink_Y: Set the shrinkage rate in the weft direction.

12.Egde_Up and Egde_Down: Set the width of the fabric edges. To save fabric during layout, a certain number of pattern can be placed along the edges.

13. Scale_X:Set the expansion and contraction rate of pattern in the warp direction (to save fabric, a negative number can be entered to make all pattern smaller).

14.Scale_Y: Set the expansion and contraction rate of pattern in the weft direction (to save fabric, a negative number can be entered to make all pattern smaller).

15. Modi Width pos: Set the way to change when the width of the already laid-out fabric changes. Options include increasing or decreasing the width from the upper side, lower side, or both sides.

16. Aid_line: Set the position and direction of auxiliary lines. They will be arranged continuously after the interval is entered. For vertical auxiliary lines, different intervals can be entered. Note: A maximum of 100 lines are allowed.

17. Deficiency Offset: Set the weft skew size of the fabric. pattern can automatically adjust their weft skew shape according to this data.

18. Free space: Set the interval between pattern during layout. It can be set for four directions (applicable to manual layout).

19. Top: Set the length of the fabric end, which can be used for fabric calculation.

20. Wgt: Set the gram weight of the fabric.

（21） 

Specification Settings: Set the quantity of each specification and the direction of the laying-out yarn. The width of the single-bed fabric can also be set.

Note: If the width is modified in the fabric settings, it will be modified for all beds.

1. When the "Show All" checkbox is checked, all specifications (including those with a quantity of 0) will be shown in the list. Otherwise, only the specifications with a non-zero quantity will be shown, and the specifications with a quantity of 0 will be shown in the right list box. See the figure:

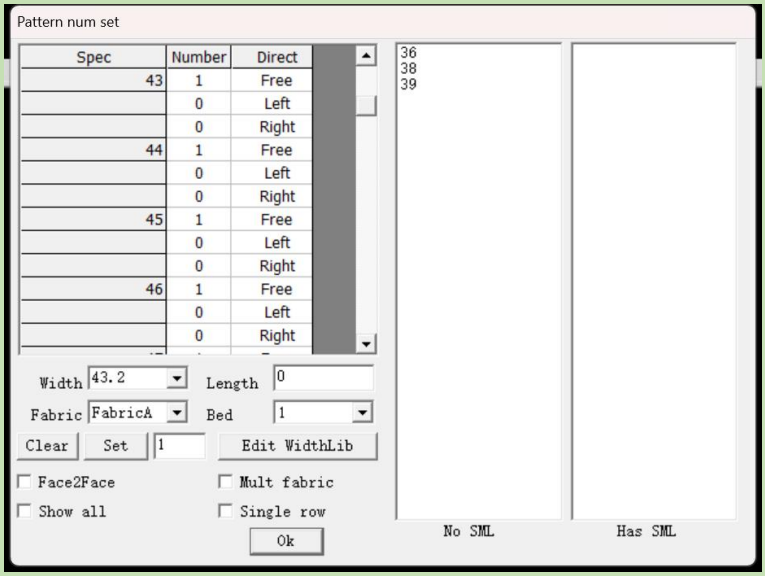
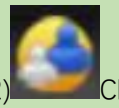


Figure7-2-12

At this time, right-click on the corresponding specification in the left table to set the quantity of this specification to 0 and refresh the display.

Double-click the left mouse button on the corresponding specification in the right list box to set the quantity of this specification to 1 and refresh the display.

(22)  Check: View the layout position of a certain piece of clothing.

Operation Steps:

1. Select the tool.
2. Click on any pattern in the layout area.
3. All pattern of this specification will be displayed in a colorless state.

(23)  Help: Used to view the usage help for each tool.

(24)  Bed Number Setting: Set different bed numbers. The system defaults to starting from "1", and other numbers can be entered to generate different bed numbers. After selecting different bed numbers, separate bed layout can be achieved.

If you want to delete a certain bed number, the operations are as follows:

1. Select this bed;
2. Move the cursor to the layout area;
3. Press the Delete key.

Refer to the layout settings for other settings.

(25) Fabric Selection: Select the fabric to be laid out, and then the current fabric can be laid out.

（26） 

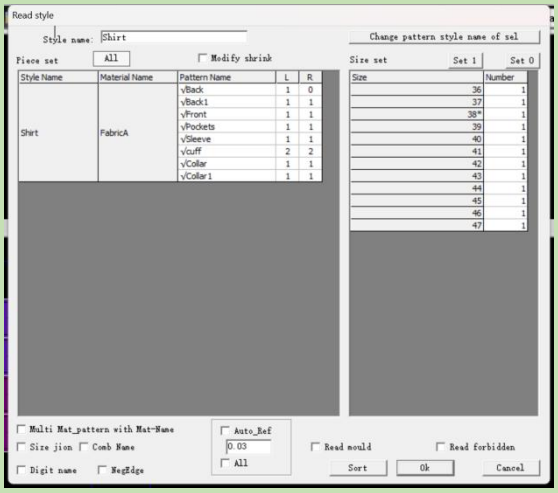
Style Selection: Different styles can be selected to be

laid out separately, or several styles can be laid out together.

(27) Unit Selection: Select the corresponding units of the pattern for layout.

III. Operations in the Pre-layout Area

(1) Operations in the Sample Area:

In the operation interface click on  Open the boke file, or select "Open Style File" from the "File" menu, and then it will appear.select the boke file. After opening it, the following will appear. 

The sizes to be nested, the number of pieces, the pattern and their quantities can be determined. After confirmation, the nesting operation can be carried out.

1. Double-click on the pattern in the cutting area, and the pattern will be automatically placed in the layout area.

2. Frame-select the numbers in the cutting area, and the selected pattern will be automatically placed in the layout area.

3. Click on the number in the cutting area, move the mouse to the layout area, and then click the left mouse button to place the pattern.

4. When frame-selecting pattern in the layout sample area, press Ctrl: Relay layout.

5. On the size label in the upper left corner:

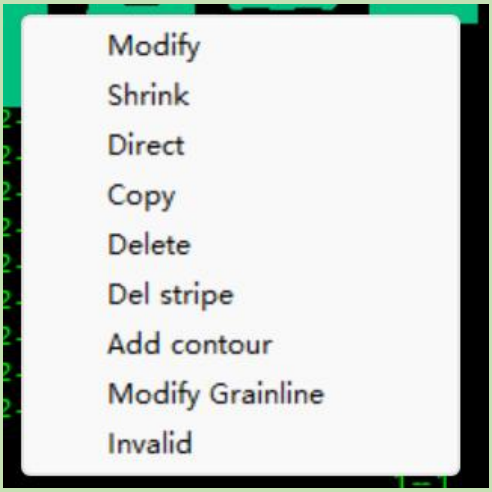
1) Click the left mouse button: Only one piece of each pattern will be automatically taken.

2) Double-click the left mouse button: All pattern will be taken out and automatically placed in the layout area.

6. Press Ctrl + left mouse button on the pattern quantity: Increase a single pattern.

7. Click the left mouse button on the pattern: All single pieces of this pattern in all sizes will be automatically placed in the layout area.

Right-click on the pattern:



1. Modify: Used to modify the quantity, type, etc. of the pattern.

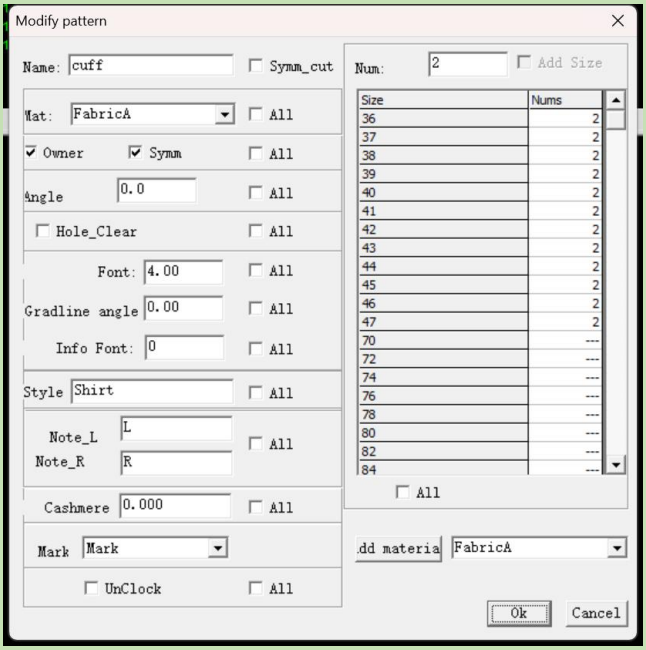


Figure7-3-1

2. Shrink: Adjust the shrinkage rate of the pattern.
3. Direct: Adjust the direction setting of the pattern.

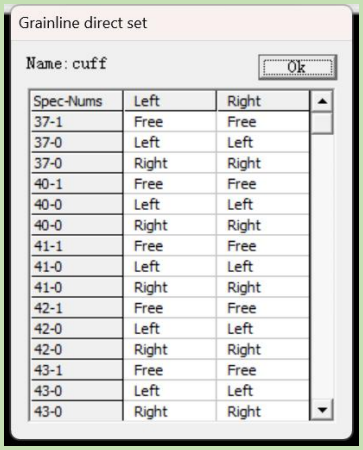
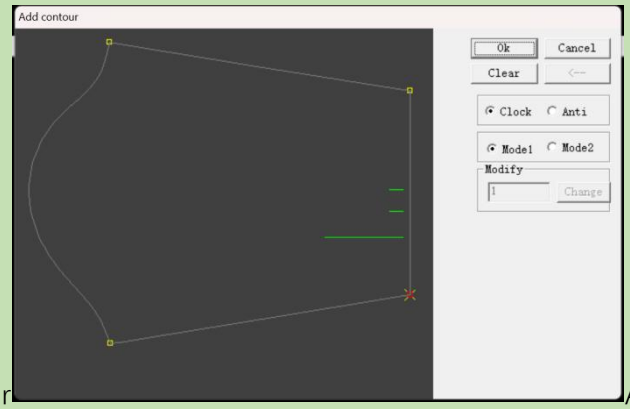


Figure7-3-2

4. Copy: Copy the selected pattern, and the quantity and other aspects can all be changed.

5. Delete: Delete the current pattern.

6. Del Stripe: Delete the stripe and check settings of the pattern.

7.Add contour 

Add a certain amount of seam allowance to the pattern so that it is convenient to trim them after cutting.

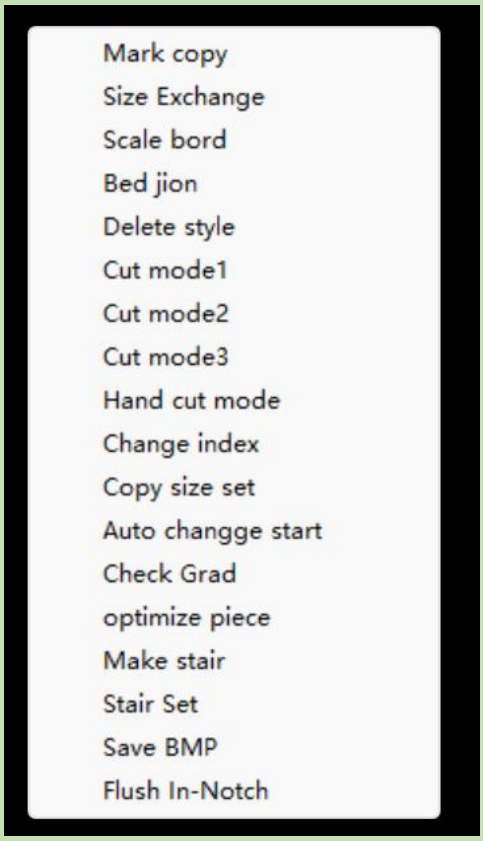
8. Modify Grainline: Modify the position and direction of the grain line of the pattern.

9. Invalid: Set the pattern as invalid so that they will not participate in the layout.

IV. Operations in the Fabric Layout Area

(1) For zooming in and out of the fabric layout center, use the scroll wheel. Hold down the shortcut key (Ctrl) to enable movement.

(2)Right-click on the blank area:



1. Mark copy: Copy the previous cutting bed's fabric layout as a template and use it to layout the current cutting bed.

2. Size Exchange: Change the specifications of the pattern.

3. Scale bord: Add an extended seam allowance to the pattern. If the "Auto Notch" option is checked, the seam allowance will be notched.

4. Bed jion: Merge the marker of the previous cutting bed with that of the current cutting bed.

5. Delete style: Delete all the pattern of the current fabric.

6. Cut mode 1, 2 and 3: Set the cutting routes of the pattern.

7. Hand cut mode: Manually set the cutting order.

8. Change index: Modify the cutting order of individual pieces.

9. Copy size set: Copy the current specification settings to other fabrics.

12. Auto changge start: Automatically modify the starting point of cutting the pattern.

13. Check Grad: View the mesh figure of the pattern.

14. optimize piece: Optimize the pattern.

15. Make stair: After setting the width and height of the label, the label will be automatically added. The pattern without the label added will be displayed in gray. Press

Enter to cancel the gray display.

16. Stair Set: Set the size of the label. If adding the label manually, use this value.

17. Save BMP: Batch save in the BMP figure format.

18. Flush In-Notch: delete the notches inside the pattern.

(3)Left-click on the pattern: Move the pattern to perform fabric layout.

(4) Right-click on the pattern: Return the pattern to the area waiting for layout.

(5)Frame-select the pattern: Group the pattern, select multiple pattern for unified processing.

1. After grouping the pattern:

1) Press the Space key to rotate 180 degrees.

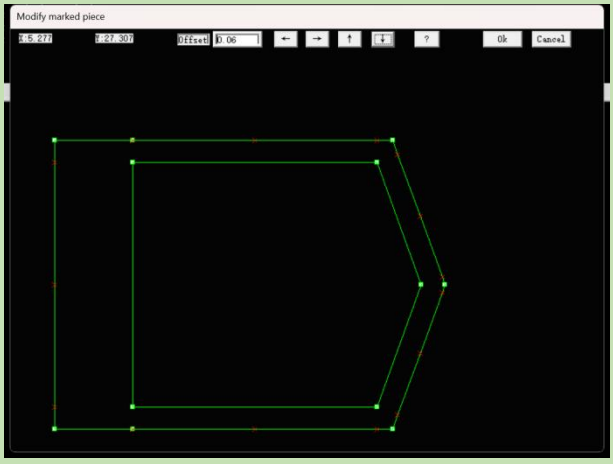
2) Press the PageUp key to rotate counterclockwise.

3) Press the PageDown key to rotate clockwise.

2. Right-click after grouping the pattern: Select options such as translation, copy, and symmetry to achieve corresponding group processing.

3. Copy the grouped pattern to different cutting beds: After copying, just change the cutting bed number.

(6)Shift + Right-click on the already laid-out pattern: A pattern modification dialog box will pop up.



The single piece can be modified. After confirmation, the modified figure will be saved. If you want to cancel the modification, right-click to return this pattern and pull it out again from the pre-layout area.

Operation Instructions:

1. Drag the point with the left mouse button: Move the point.

2. Drag the curve with the left mouse button: Adjust the curve.

3. Press the left mouse button in the blank area and then drag: Translate the figure.

4. Double-click the key point of the curve with the left mouse button: Switch between smooth and corner.

5. Right-click the key point of the curve: Cancel this key point.

6. Roll the mouse wheel: Zoom in / Zoom out.

(7)Press the **Enter** key when moving the pattern to the target position: Adjust the edge pressing of the pattern.

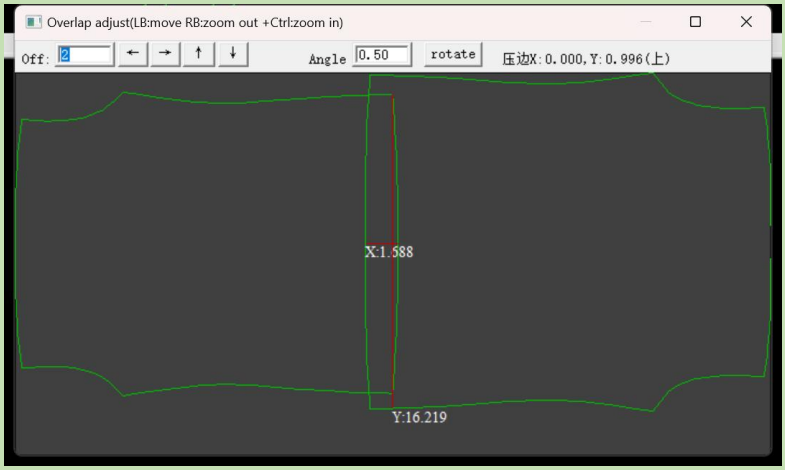


Figure7-4-1

(8)Adjustment of pattern Direction:

1. Spacebar: Rotate the pattern 180 degrees.
2. < Key: Flip horizontally.
3. > Key: Flip vertically.
4. ← Key: Rotate to the left.
5. → Key: Rotate to the right.
6. ↑ Key: Rotate 90 degrees to the left.
7. ↓ Key: Rotate 90 degrees to the right.
8. Shift Key: Rotate freely and make fine adjustments. While holding down the Shift key, click on the pattern, and the following setting window will appear. Click on the corresponding options to perform rotation and fine adjustment.

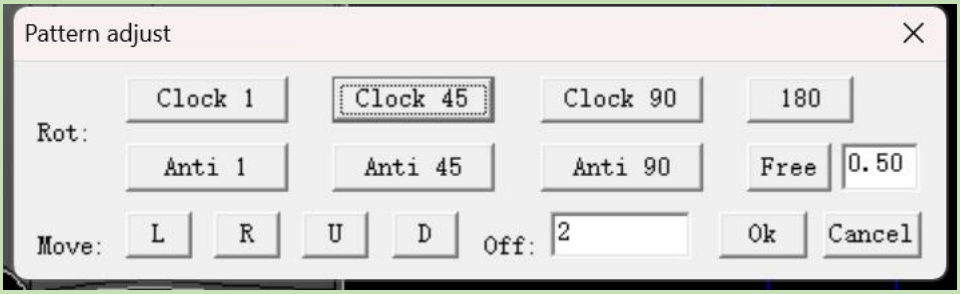


Figure7-4-2

(9) The folded pattern can be switched for folding by pressing the T key. (Tube material)

(10) Overlap Settings:

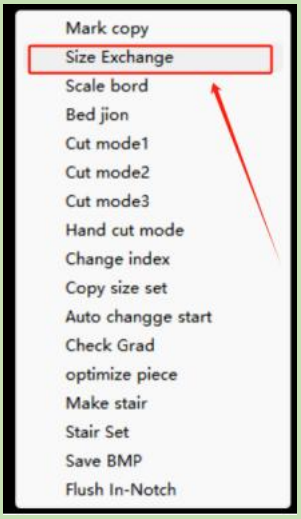
1. After selecting the pattern, place it on the pattern that needs to be overlapped (or on the edge of the fabric), press Enter, input the overlap amount, and then confirm.
2. While holding down the Shift key, click on the pattern, the setting window will appear. Click on the corresponding options for fine-tuning, and set the overlap according to the set displacement amount.

(11) Area to be Nested: The area behind the dotted line in the nesting area and the lower part of the nesting area are the areas to be nested. The pattern can be temporarily placed in the area to be nested to facilitate the adjustment of the positions between the pattern.

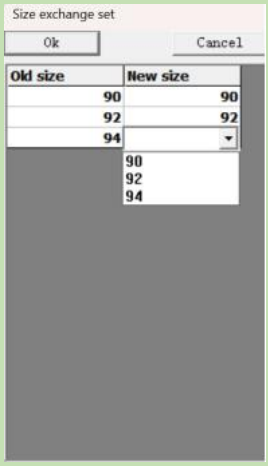
(12) Right-click on the pattern in the nesting area to pop up.

Select to replace this pattern with a pattern of another specification.

Click "size exchange" to the right-click menu in the nesting area.

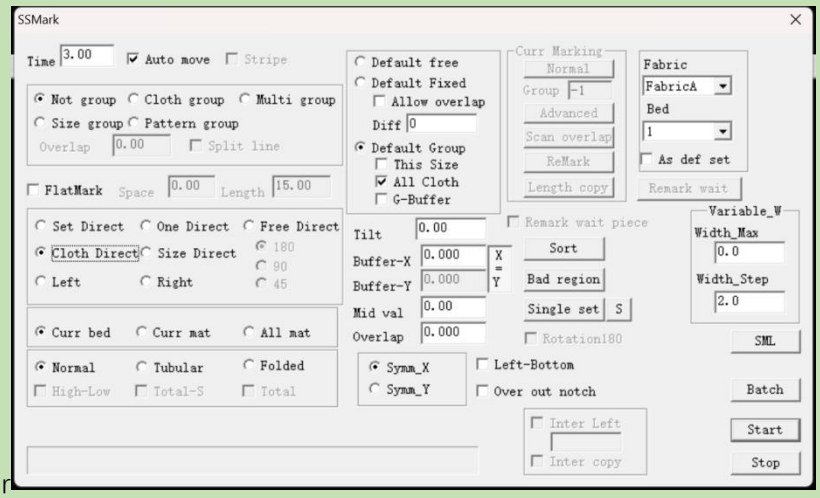


Select this menu to pop up：



4.Set the new specifications corresponding to the original specifications, and the pattern corresponding to the original specifications will be automatically modified to the pattern set by the new specifications.

V. Automatic Nesting

click  appear 

Automatic nesting can be carried out after making relevant settings.

(1) Not group: Intersperse and mix the nesting for the current fabric.

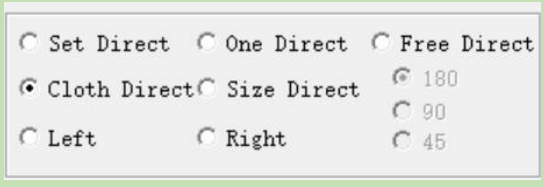
(2) Cloth group: The pattern of one piece are arranged together.

(3) Multi Group: Several sizes can be grouped together for nesting.

Double-click on the numbers that are to be grouped respectively to form a group. Then click "Add Group". Next, double-click on the numbers that are to be grouped again to form another group. Repeat this process until all the groupings are completed.

(4) Size Group: The pattern of the same size are arranged together.

(5) Pattern Group: The pattern with the same name are arranged together.

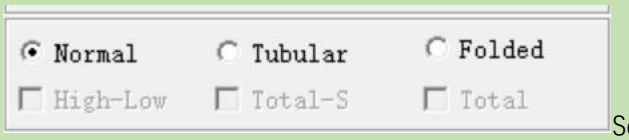
（6） 

Set the nesting direction of the pattern .

（7） 

Select whether it is the current

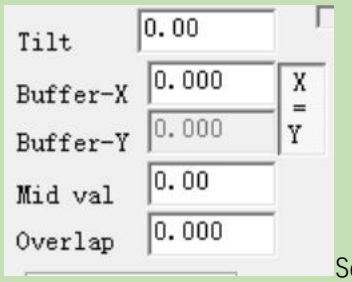
cutting table, the current material, or all material that are being set.

（8） 

Select the nesting method.

（9） 

Select the movement mode for nesting.

（10） 

Set the tilt angle, interval, etc. of the pattern.

（11） 

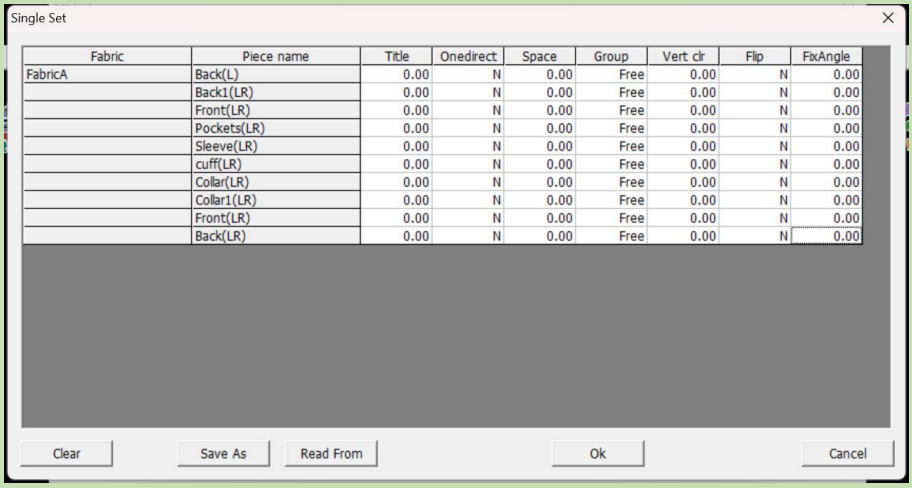
The fabric layout diagrams that have already been laid out can be further optimized, rearranged, etc.

（12） 

Fabric and Cutting Bed Number Settings

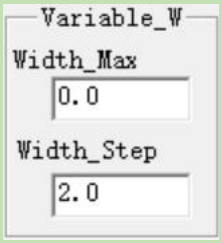
（13） 

1. Arrange the pattern in sequential order.
2.Bad region: Set the areas where no fabric layout is allowed.
3. Single set: Make relevant settings for individual pieces.



（14）Start the fabric layout process. It can also be stopped during the process.

Batch Fabric Layout: Conduct batch fabric layout for the ones that have been sorted into different cutting beds.



(15) Automatic Fabric Layout Dialog Box: ,Achieve fabric layout with unfixed width.

Maximum Width: Set the maximum allowed width.

Width Step: Set the interval of the width during trial layout.

The minimum width is the width set for this cutting bed.

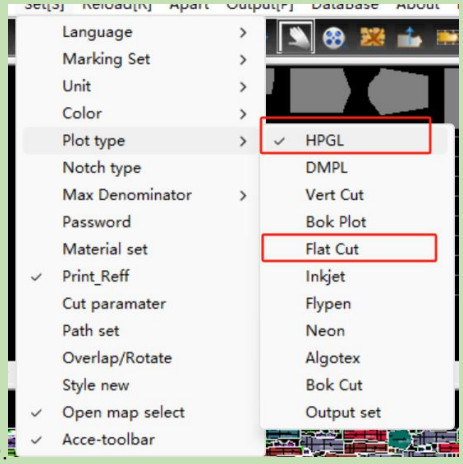
After the trial layout, the program will automatically select the result with the highest utilization rate and modify the width of this cutting bed.

For example: If the width set for this cutting bed (minimum width) is 150, the maximum width is 160, and the width step is 2, then the program will conduct a trial layout once for each of the widths 150, 152, 154, 156, 158, and 160. Then it will select the result with the highest utilization rate as the final result and set the width of the current cutting bed to the corresponding width.

Section 8: Print Output

I. Output for Plotter

First, select the type of the machine in the plotter settings within the settings. For pen plotters and inkjet plotters, generally select the HPGL language. For cutting machines, select the flatbed cutting machine.



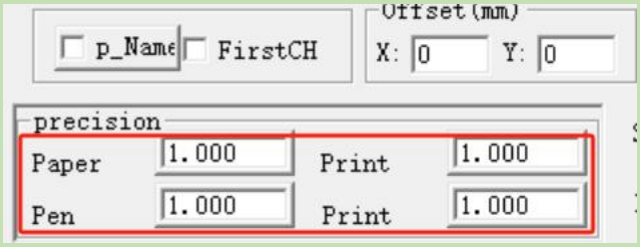
(1) Precision

(Note: If there are errors in the printed size, this function can be used for calibration.)

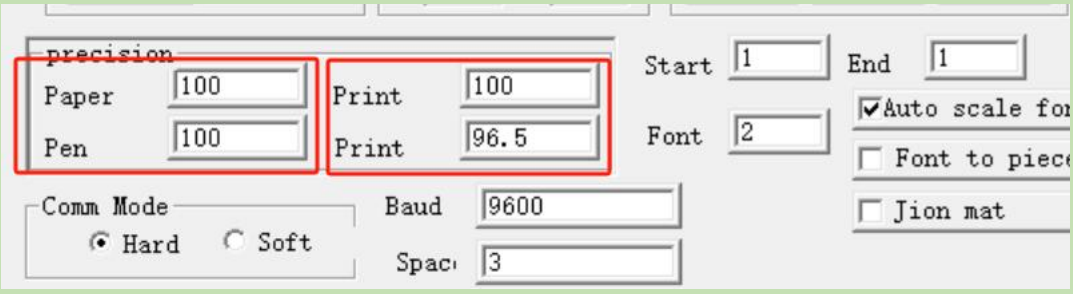
Operation Steps:

1. Create a pattern of 100 X 100 (with a seam allowance of zero).

2. After printing in the 1:1 state, measure the printed sizes respectively.



3. Enter 100 respectively in the paper feeding and pen moving items, and enter the actually measured printing size in the printing item.



4. After printing again, it can be calibrated to the normal size.

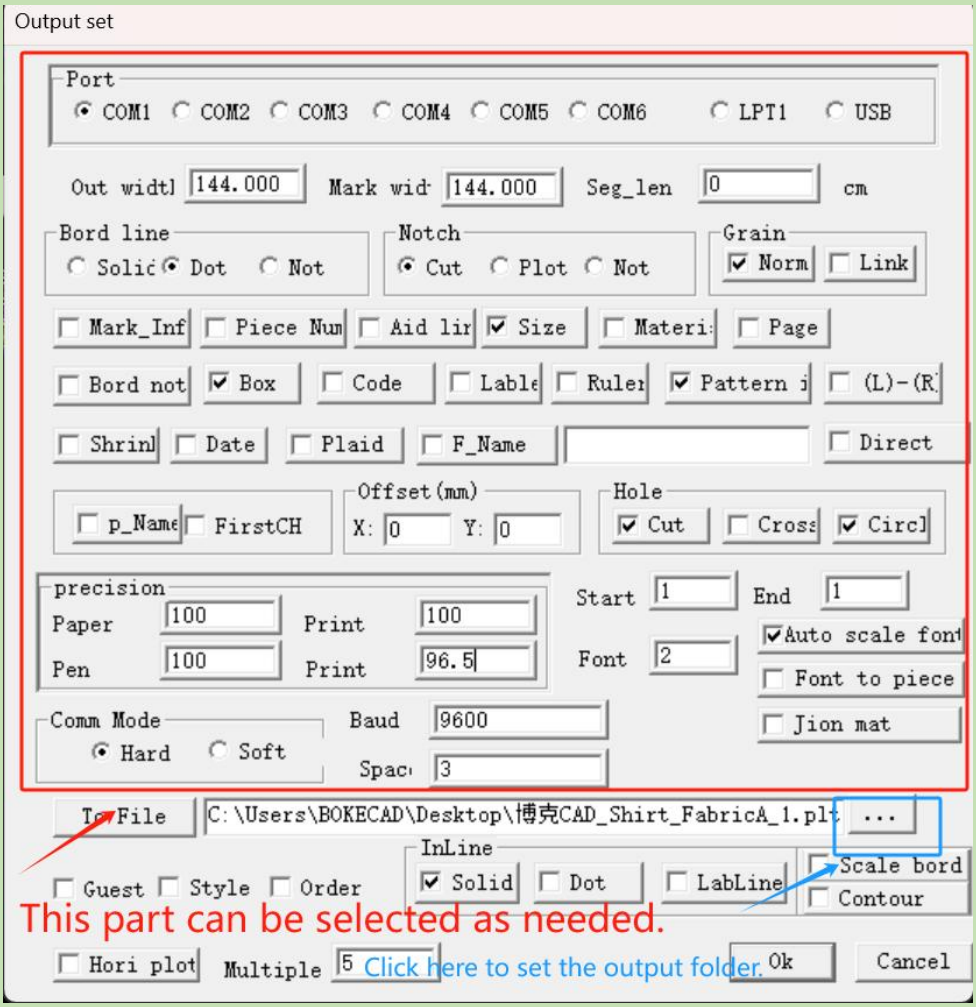
(2) Output of the Fabric Layout Diagram

Operation Steps:

1. Click on the "Print" menu and select "Default marking".

2. Set the printing content, tick the options that need to be output, and set the font size, notch, information etc.

3. Click the button with three dots below, select the output location, and after confirmation, the file can be output to the selected folder.



(Note: For the fabric layout diagrams whose width exceeds that of the plotter, segmented output can be adopted. The method is as follows: Enter the maximum width that the plotter can print within the output width. The system will automatically output the set width, and then automatically output the width of the remaining part after completion. Just splice the two parts together.)

(3) Reticulation

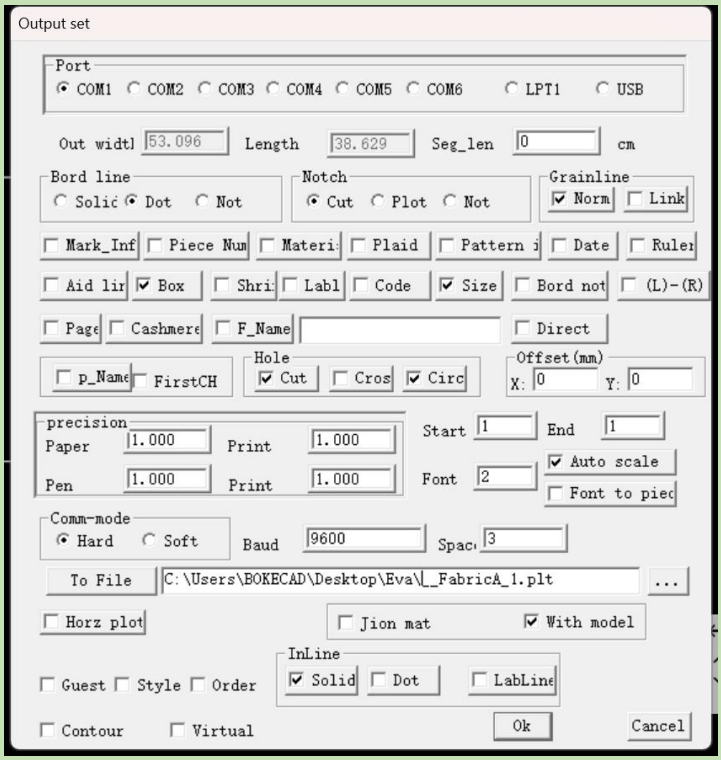
Operation Steps:

1. Set the output range of the mesh figure (using the box tool + Ctrl key).

2. Click on the "Output" menu and select "Reticulation".

3. Set the port, segment length, set the printing content by ticking the options that need to be output, and set the font size, notch type, length, width, etc.

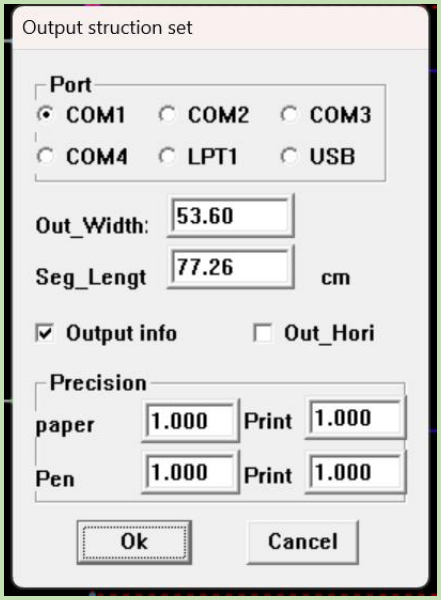
4. Confirm.



(4) Struction

Operation Steps:

1. Set the output range of the structure diagram (select with left botton + Ctrl key).
2. Click on the "Output" menu and select "Struction".
3. Set parameters such as "Port", "Output Width", and "Segment Length".
4. Confirm.



(5) Min

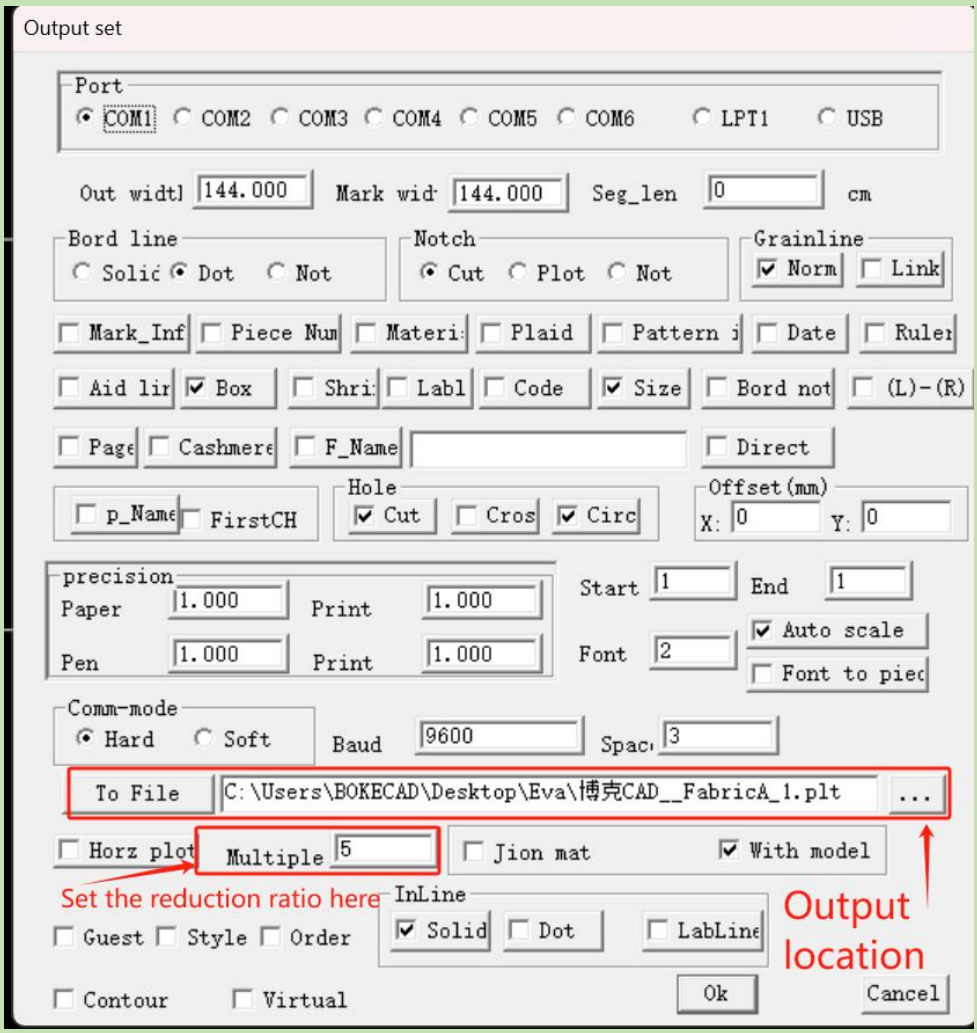
Operation Steps:

1. Click on the "Output" menu and select "Min".
2. Set the printing content, tick the options that need to be output, and set the font size,

notch type, length, and width, etc.

3. Set the reduction factor of the current fabric layout thumbnail.

4. Select the output location and confirm.



(6) Output to Shared Folder

(Note: Users of multiple sites can use the output to shared folders.)

Operation Steps:

1. Set up the shared folder properly.

2. When outputting the PLT file, select the shared folder as the path.

3. Confirm.

II. Output for Cutting Machine

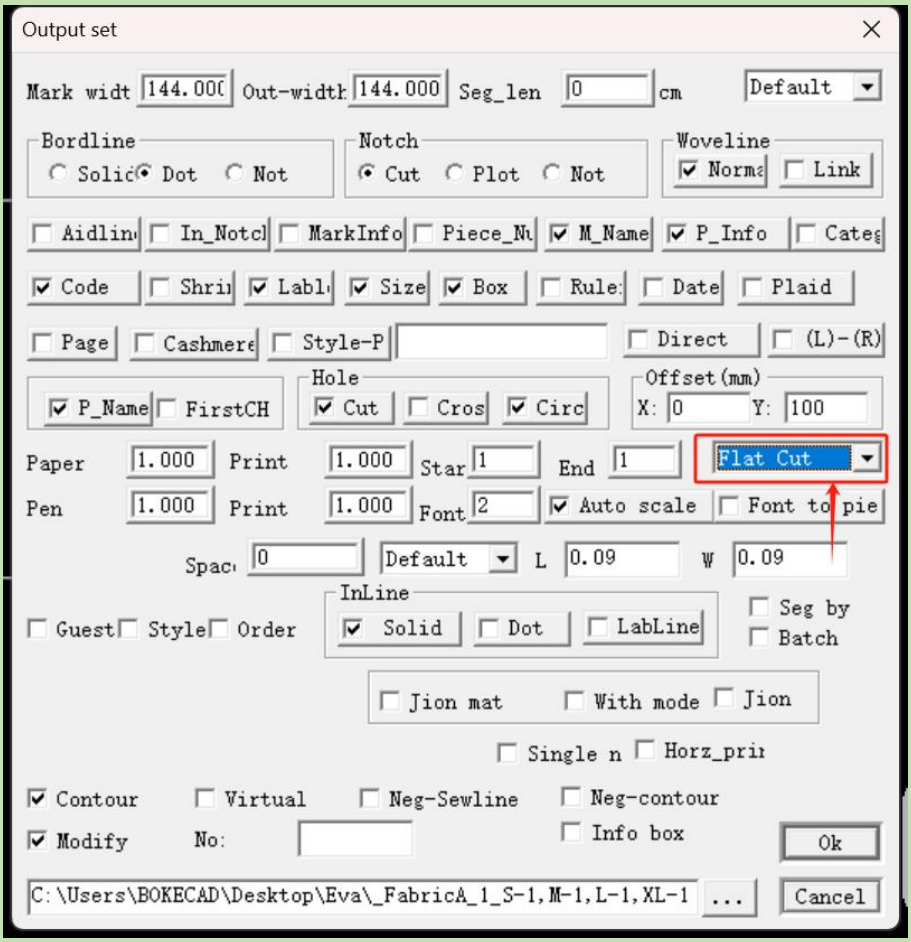
Operation Steps:

1. Click on the "File" menu and select "Save as PLT" or "Save as cut".

2. Set the printing content, tick the options that need to be output, and set the font size, notch type, length, width, etc.

3. Click the button with three dots below, select the output location, and the file can be output to the selected folder after confirmation.

4. Confirm. (Note: The machine should be selected as the flatbed cutting machine.)

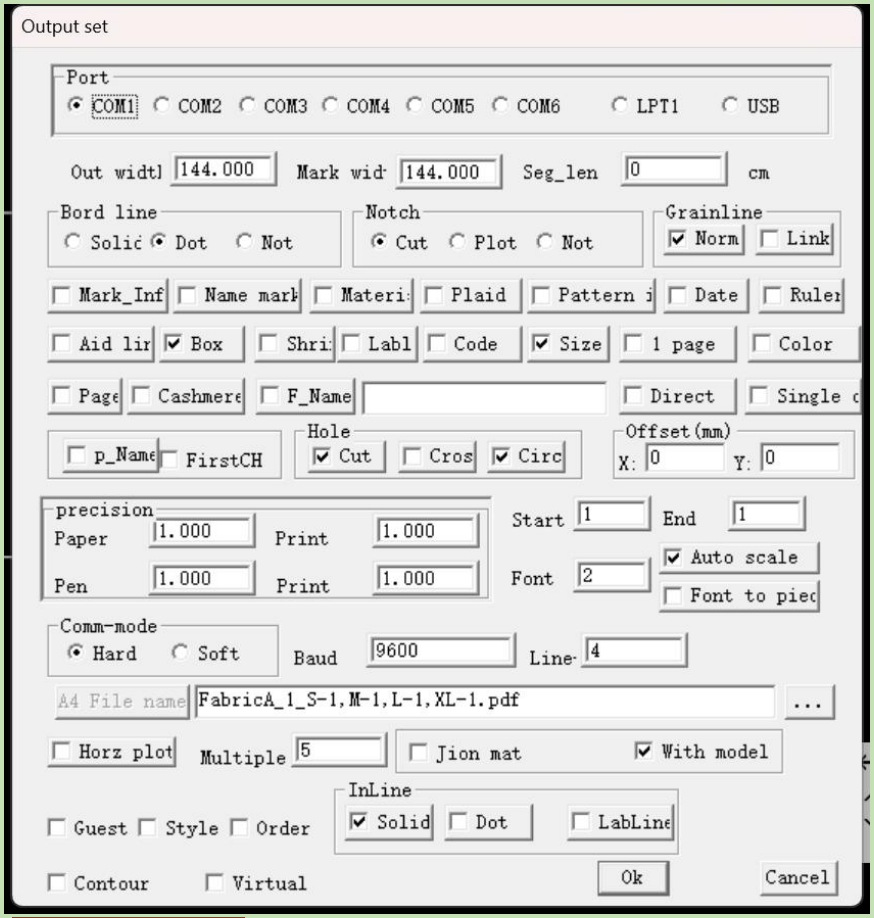


III. Output from A4 Printer

(1) A4 Reticaulation

Operation Steps:

1. Set the output range of the mesh figure (using the pattern center box tool + Ctrl key).
2. Click on the "Output" menu and select "A4 Reticaulation".
3. Select the type of printer.
4. Confirm.



(2) A4_Struction

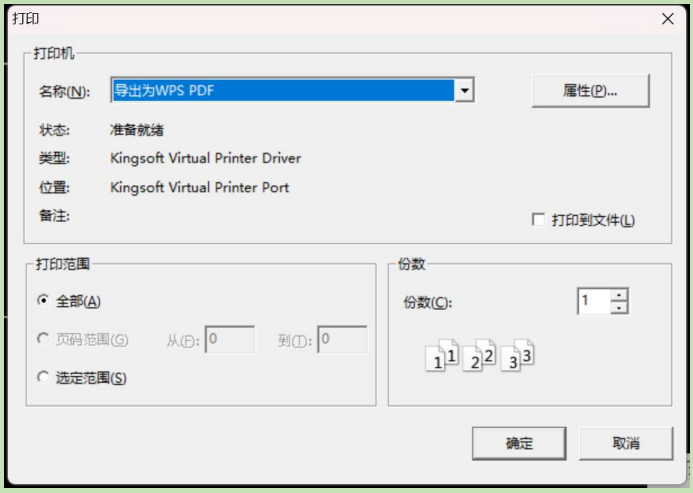
Operation Steps:

1. Set the output range of the structure figure (using the pattern center box tool + Ctrl key).

2. Click on the "Output" menu and select "A4_Struction".

3. Select the type of printer.

4. Confirm.



(3)A4_Marking

Marker Thumbnail Output:
Operation Steps: 1. Click on the "Output" menu and select "A4_Marking".
2. Select the type of printer.
3. Confirm.

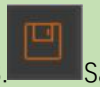
Print Preview: Preview the image to be printed.

Section 9 Design Tools

I. Commonly Used Tools in the Pattern design Center

1 .  New: Used to create new files.

2.  Open: Used to open existing files.

3.  Save: Used to save files.

4.  Save As: Used to save as a new file.

5.  Undo: Used to reverse the previous step.

6.  Redo: This tool can be used to redo one step after undoing.

7.  Magnifying tool: Used to change the local or overall display scale.

Operation Method: Select a local area by framing or click on a local area to enlarge it. Right-click to reduce it back to full-screen display. Under any tool, scrolling the wheel key can enlarge or reduce the overall display scale.

8.  Delete: Used to delete objects such as line segments, points, and pattern.

Operation Method: Click or frame-select objects such as line segments or points (they will turn red after being selected), and then click the left mouse button again to delete them.

9.  **:Modify parameters：**

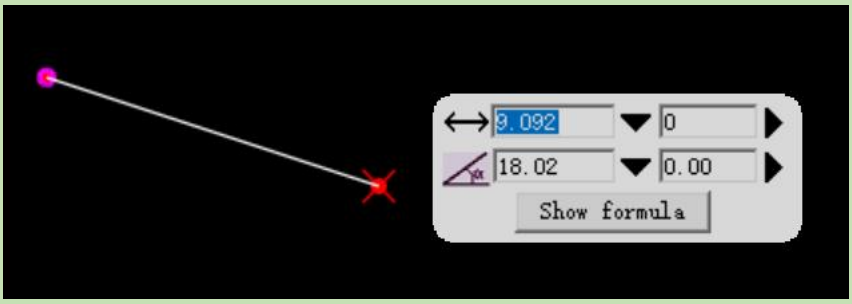
(1). It is used to modify the parameters of existing points, lines, etc.

Operation Methods:

1) Select this tool and click the left mouse button on the object that needs to be modified. The parameters of the object will be displayed in the parameter bar.

2) Simply re-enter the new parameters.

Note: Graphics such as rectangles and straight lines only have parameters when the end points are selected.



(2). Adjust the position of points.

Operation Methods:

1) Right-click on the point that needs to be adjusted.

2) Enter the horizontal and vertical adjustment amounts respectively.

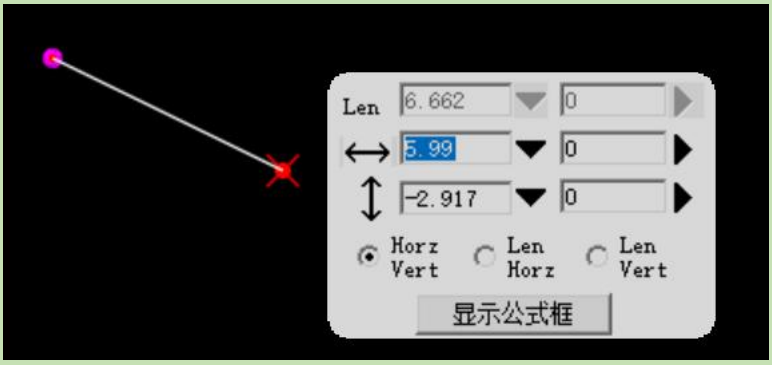
Note: Only the following points can be modified:

a. The empty starting points of straight lines or rectangles, and the points generated by pressing Shift + left mouse button when drawing curves.

b. The points generated when pulling out pattern, and the points input by the digitizer.

c. The ending points generated when drawing straight lines randomly.

d. The points outside the line, the offset points, and the points of the double compass.



(3). Modify the Line Length

Operation Methods:

1) Right-click on the line that needs to be adjusted.

2) Enter the line length that needs to be modified respectively and select the movement mode.

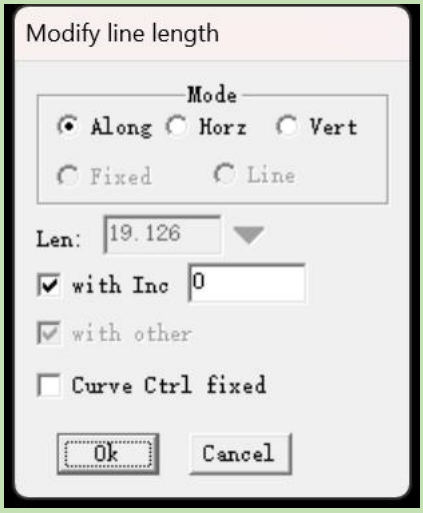
3) Confirm.

Notes:

a. If "Along the Line" is selected, the endpoints will move in the direction of the line after the line length is changed.

b. If "Horizontal" is selected, the endpoints will move in the horizontal direction after the line length is changed.

c. If "Vertical" is selected, the endpoints will move in the vertical direction after the line length is changed.



(4). Automatic Parallelism and Perpendicularity between Two Points

Operation Method:

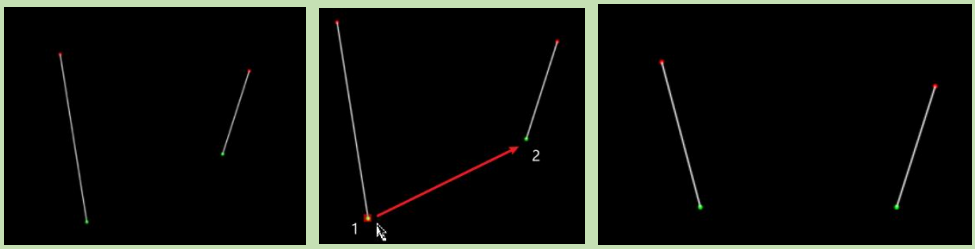
1) Press Ctrl + left mouse button to select the point Point 1 to be modified.

2) Click on the reference point Point 2, and the two points will automatically align horizontally or vertically (the point selected first will move).

Notes:

a. When the point to be modified is a point on a line (including straight lines and curves), you can choose the option of referring to the other end.

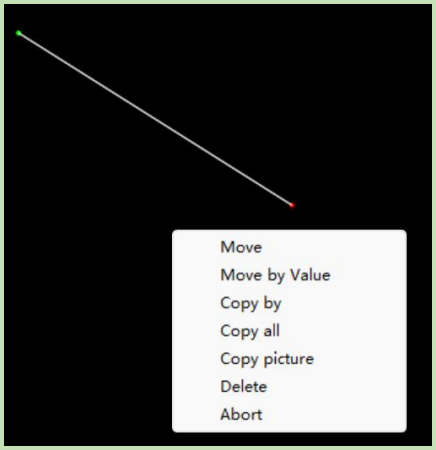
b. When the curve is a yellow line or the original reference point is not an endpoint of the curve, no processing will be carried out.



Before adjustment 1、2 Adjustment results

5. Edit and process after framing-selected objects (including points).

Operation Method: After framing-selecting objects (including points), options such as translation, copying, saving to the material library, and deletion can be selected respectively.



10、  Element Modification: Used to adjust the shape of curves and the position of points.

(1). Select this tool, click the left mouse button on the curve that needs to be modified, and drag the mouse at the position marked with red adjustment points to adjust the shape of the curve. Click the right mouse button to confirm. When adjusting the shape of the curve, you can press the S key to view the length of the curve and the perpendicular distance from this point to the straight line connecting the two endpoints.

(2). For positions without adjustment points, you can click and drag with the mouse to create new adjustment points. You can also hold down the Ctrl key and click the left mouse button to add adjustment points (without dragging the mouse).

(3). Changing the Type of Adjustment Points: Double-click on an adjustment point to turn it into a turning point; double-click again to restore it to a curve point.

(4). Right-click on an adjustment point to delete it.

(5). Points of types such as offset points, points on the line, and points outside the line can also be modified by dragging with this tool. Note that when dragging, you can see the changes in the size of the point coordinates.

(6). A straight line can be selected and adjusted to become a curve.

(7). When adjusting a curve, the curve is pasted onto the point.

Operation: When adjusting a curve, when the cursor moves to a point (this point cannot be a sub-object of the curve), press the Enter key to add this point as a control point to the curve. When the cursor moves to a line (curve or straight line), press the Enter key to take a point on the line and then add this point as a control point of the curve.

(8). When adjusting a point, the point is pasted onto the line.

Operation: When adjusting a point, when the cursor moves to a line (curve or straight line), press the Enter key to take a point on the line and modify the adjusted point to a point on the line.

(9). When adjusting a point, the point is pasted onto another point.

Operation: When adjusting a point, when the cursor moves to a point (this point cannot be a sub-object of the adjusted point), press the Enter key to change the adjusted point to this point.

11、  Measure tool: Used to measure the lengths of straight lines and curves as well as the distance between two points, and it can be set whether to display the curve length or not.

(1). Measurement of Straight Lines or Curves: Simply click on the line segment directly. Continuous measurement can display multiple data and the summation result simultaneously. The plus sign can be changed to a minus sign by clicking with the mouse. Select "Add to Variable Table", and this length can be saved to the variable table for invocation by other parts.

(2). Measurement Method of the Curve Length between Two Points on a Curve: Click on one endpoint, then click the left mouse button at any position on the curve, and finally click the other endpoint. Then the length of the curve can be displayed.

(3). Measurement Method of the Distance between Two Points: Click on the two points respectively. The distance between the two points as well as the horizontal and vertical distances between them can be displayed respectively.

(4). Setting the Display of Line Length: After measuring the line length, select "Display Line Length" in the popped-up setting box to display the line length data. Resetting can cancel this data.

(5). Measuring the Distance from a Point to a Straight Line (Curve): Click on the point and the straight line (curve) respectively to measure the perpendicular distance from the point to the straight line (curve), which will be displayed in the parameter bar.

(6). Measuring the Distance from Any Position to a Straight Line (Curve): Click on any position and then click on the straight line (curve) to measure the perpendicular distance from any position to the straight line (curve), which will be displayed in the parameter bar.

(7). Measuring the Distance from Any Position to a Point: Click on any position and then click on the point to measure the distance from any position to the point, which will be displayed in the parameter bar.

(8). Measuring the Distance between Two Arbitrary Positions: Continuously click on two arbitrary positions to measure the distance between them, which will be displayed in the parameter bar.

Note: If the arbitrary position is on the line, hold down the Ctrl key.

(9). Measuring Angles, the operation steps are as follows:

1) Select the measurement tool.

2) Press the Shift key and click on the center point.

3) Sequentially click on the two endpoints.

Note: Measure the angle of the basic size at the center of the paper pattern, and measure the angles of all sizes at the center of the pattern piece.

12、  Text: Used for text labeling.

(1). Operating Steps:

1) Click the left mouse button to determine the position of the text.

2) Drag the cursor to determine the direction of the text.

3) Click the left mouse button to pop up the text input dialog box. (The text can be graded, and the text grading input box allows for scroll input.)

4) Enter the text content, select the font size and angle (the angle is relative to the rightward direction of the horizontal), and then confirm.

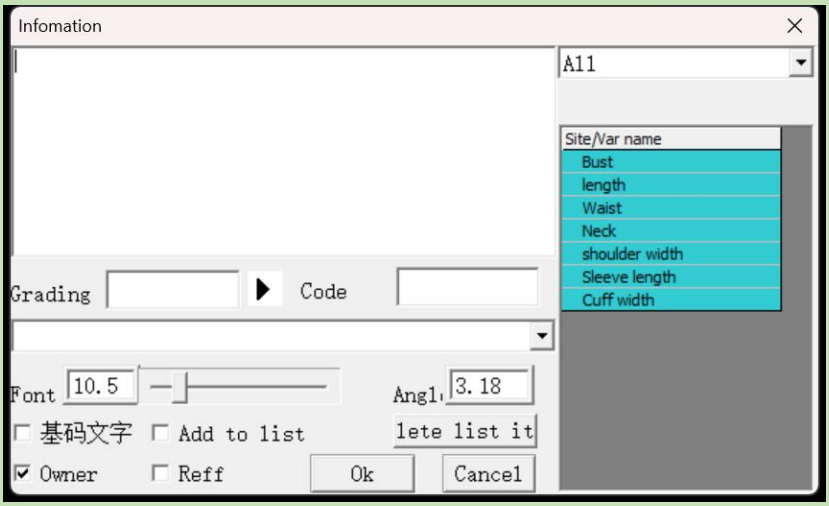
5) You can also edit or delete the list of commonly used texts.

(2). Modifying Text: Click the left mouse button at the starting position of the text to pop up the modification dialog box. Ctrl + left mouse button: Drag the cursor to modify the direction. If you want to modify the position, select the Figure element modification tool and move the position point.

(3). When the cursor is on the annotation (at this time, the cursor shows the text cursor): Modify with the left mouse button, and delete with the right mouse button (or the Delete key).

Note: Try not to include "spaces" when entering various "text information", "names" and file names.

(4).The text information dialog box with the function of automatically retrieving part names and data is shown in the following figure.



When a certain part name is checked, the text information will automatically display the name of this part and the data of the corresponding specifications.

(5) .Press the "H" key on the text: This text annotation will not be displayed

Press the "S" key on the text: Restore the display of this text annotation.

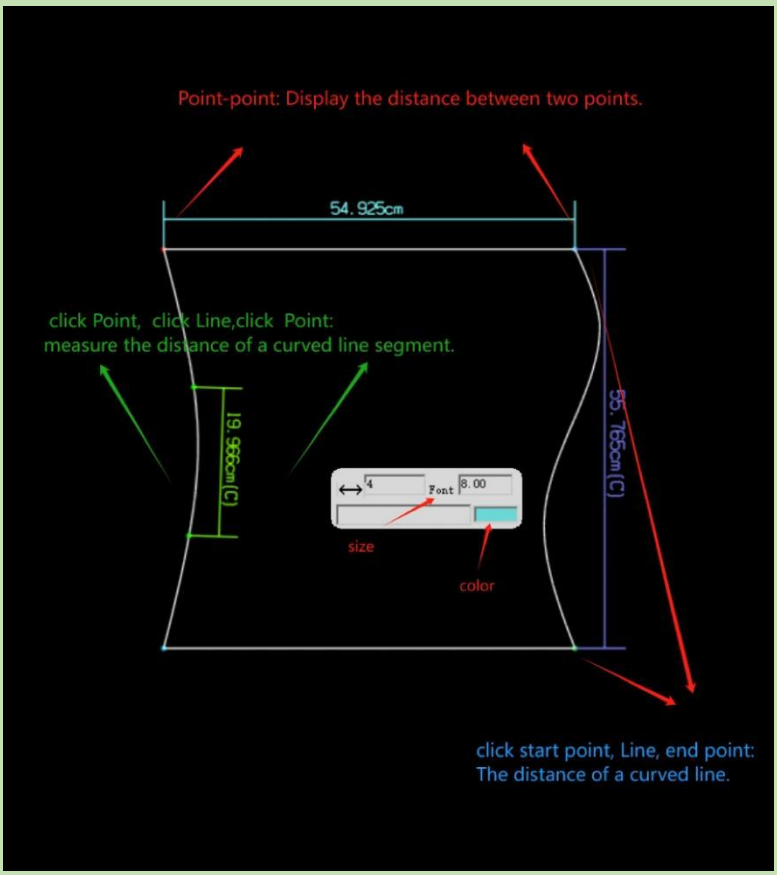
Press the "H" key on the pattern piece: Hide all text annotations of this pattern piece.

Press the "S" key on the pattern piece: Restore the display of all text annotations of this pattern piece.

Press the "H" key in the blank area: Hide all text annotations.

Press the "S" key in the blank area: Restore the display of all text annotations.

(6). Click two points with the Text Tool to display the distance between the two points. Click on a curve to display the length of the whole line.



With the Text Tool, click on one point. Then hold down the CTRL key and left-click on the second point. The text will be displayed at the angle of the line connecting the two points.

13、  Show/Hide Construction Lines: Display or hide the construction lines.

14、  Function Replay: Replay the operation process.

15、  Tool Help: Operational guidance will appear when you click on the corresponding tool.

16、  Hidden pattern pieces: Display or hide the pattern pieces.

II. Special Tools for Pattern design Center

1. Line Drawing Tools

（1）  **Rectangle**

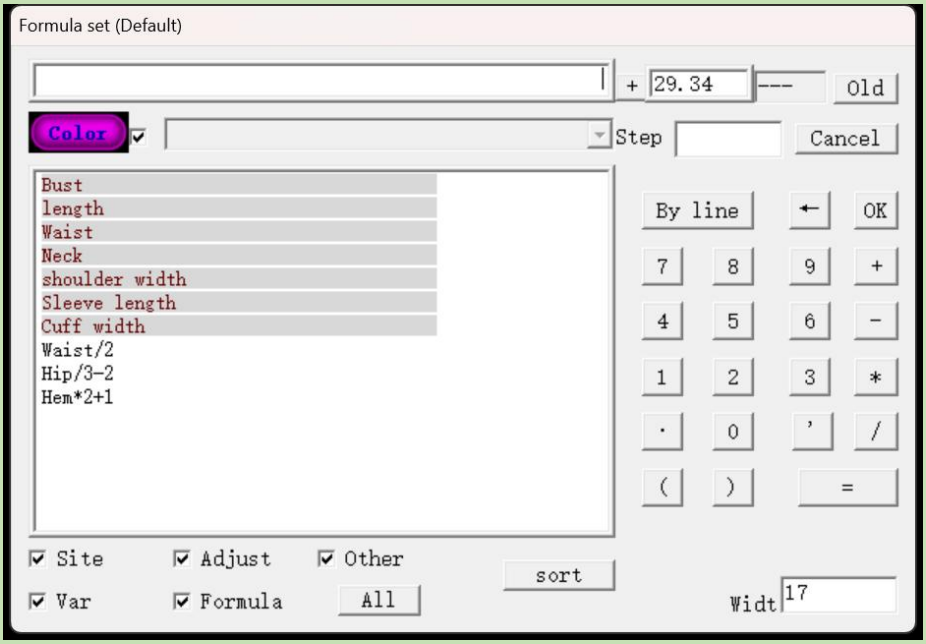
1. Used to draw squares.

Operation Steps:

(1) Drag the mouse with the left button at the required position (it can be a known point or an empty space) to draw a square.

(2) Call or enter the relevant parameters in the parameter bar.

Note: The parameter setting method in the parameter column is as follows: If it is necessary to call formulas from the size chart, then select.▼， This will appear



Just select the necessary formulas. You can also directly enter any numbers in the parameter column, and then enter the grading difference in the box that follows (Note:

There is no need to enter the grading difference when calling formulas). You can choose to modify the unequal differences. For the automatically captured points on the line, you can also select the reference ratio, and you can add or subtract the mantissa after the ratio.

(2) Parallel

1. Used to draw a straight line that is parallel to a known straight line and at a certain distance from it.

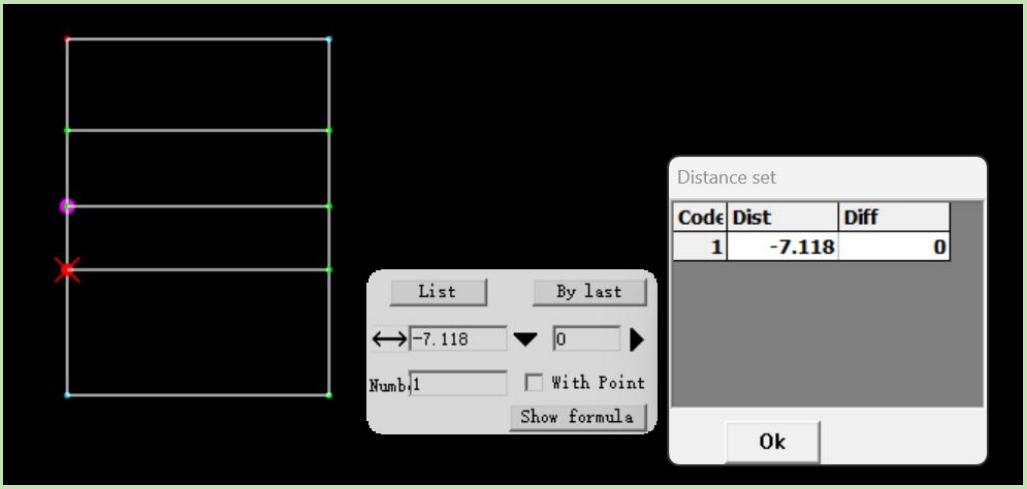
Operation Steps:

(1) Move the mouse to the target straight line.

(2) Hold down the left mouse button without releasing it, move the cursor to the target side and then release the left mouse button.

(3) Enter the relevant parameters.

Note: The usage of parameter setting in the property bar is the same as that for a straight line. If multiple parallel lines are needed, enter the number of parallel lines in the quantity bar, and the spacing between each parallel line can be modified by modifying the spacing list.



2. It can also be used to draw parallel lines of a certain curve.

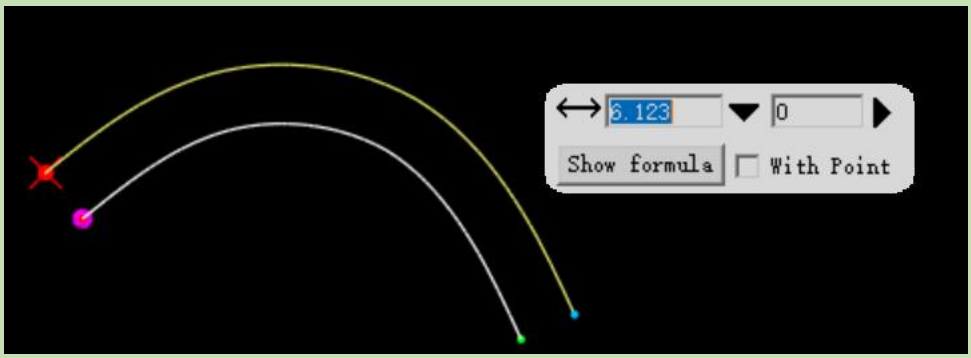
Operation Steps:

(1) Move the mouse to the target curve.

(2) Hold down the left mouse button without releasing it, move the cursor to the target side and then release the left mouse button.

(3) Enter the relevant parameters and confirm.

Note: The grade difference cannot be entered for the curve.



3. The curves are parallel and both ends are connected to the specified lines: First, right-click on the line to be tangent (it can be a straight line or a curve, and either one or two lines are acceptable), and then draw the parallel lines.

（3） **Cross line**

1. Draw horizontal and vertical intersecting straight lines through two known endpoints. (If you want to draw vertically first and then horizontally, hold down the Alt key before clicking on the points.)

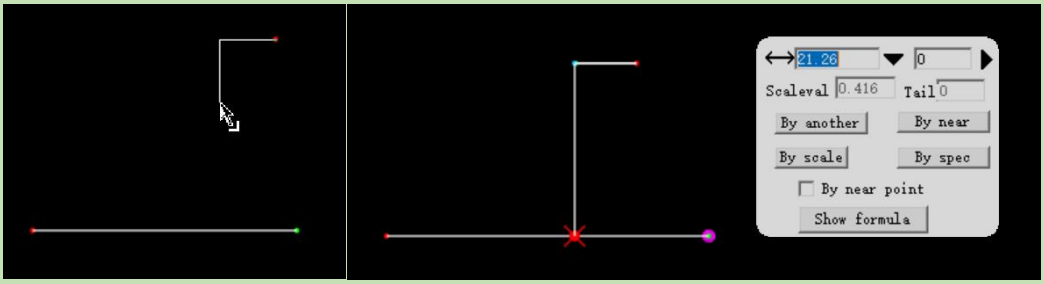
Operation Steps:

(1) Click on a known point.

(2) Move the mouse horizontally first and then vertically to another point.

(3) Click the left mouse button at the ending point.

Note: When using this tool, points can be directly taken on the line, and offset points can also be directly generated with a certain point as the center (it is required to press the Ctrl key to obtain the offset points). When taking points on the line, the measurement automatically starts from the closer end. You can also choose to "refer to the other end" or "refer to the nearby points".



(4) Line

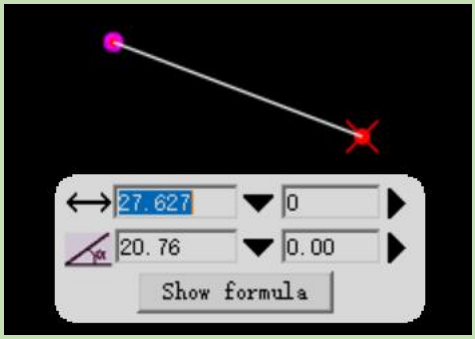
1. Used to draw straight lines.

Operation Steps:

Select this tool and click on two points respectively (they can be either two known points, or two points taken from an empty space or on a line), and then a straight line can be

drawn. The relevant parameters can be called or entered in the property bar (if the two points are known, it is not necessary to enter the parameters).

Note: When using this tool, points can be directly taken on the line, and offset points can also be directly generated with a certain point as the center (it is required to press the Ctrl key to obtain the offset points). When taking points on the line, the measurement automatically starts from the closer end. You can also choose to "refer to the other end" or "refer to the nearby points".



（5）  **Curve**

1. Used to draw curves.

Operation Steps:

(1) Click the left mouse button at any point or in an empty space to start drawing the curve.

(2) Continuously click on multiple curve points (either in an empty space or on known fixed points) to shape the curve.

(3) Determine the last point and end by clicking the right mouse button.

Note: When using this tool, points can be directly taken on the line, and offset points can also be directly generated with a certain point as the center (press the Ctrl key to obtain the offset points). When taking points on the line, the measurement automatically starts from the closer end. You can also choose to "refer to the other end" or "refer to the nearby points".

（6）  **Rounded angle**

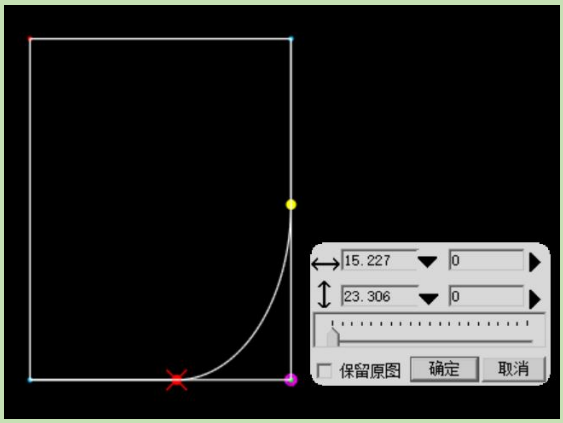
1. Used to draw rounded corners.

Operation Steps:

(1) Select two intersecting line segments respectively (either straight lines or curves are acceptable).

(2) Drag the mouse and click the left mouse button.

(3) Enter the relevant parameters.

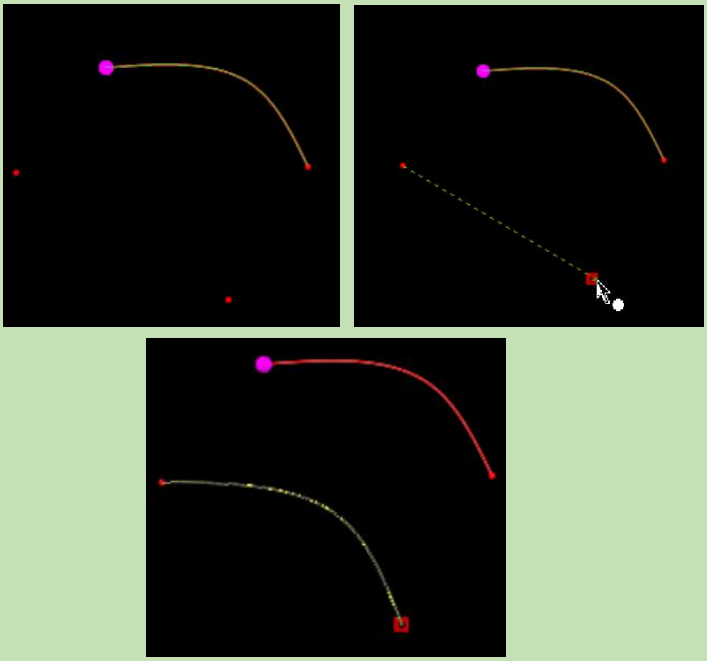


(7)  Conform curves

1. Used to draw curves with similar shapes.

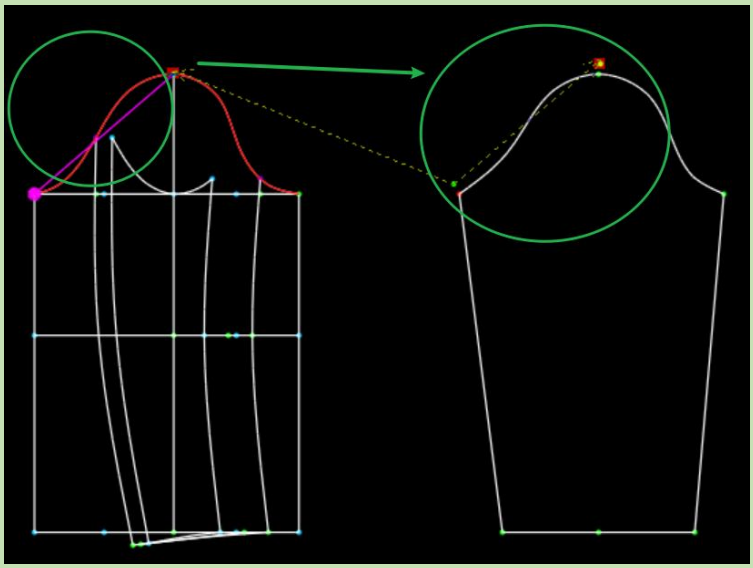
Operation Steps:
(1) Click on the reference line.
(2) Click on the corresponding starting end.
(3) Click on the corresponding ending end.

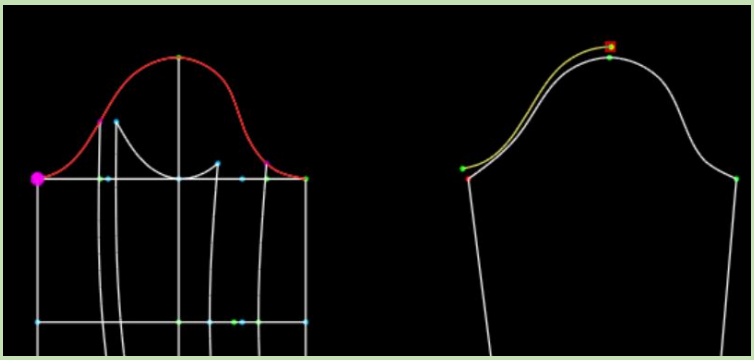
Note: The point marked in red on the reference line is the starting end. (The similar curve can also be applied to other curves.)



1 2 3

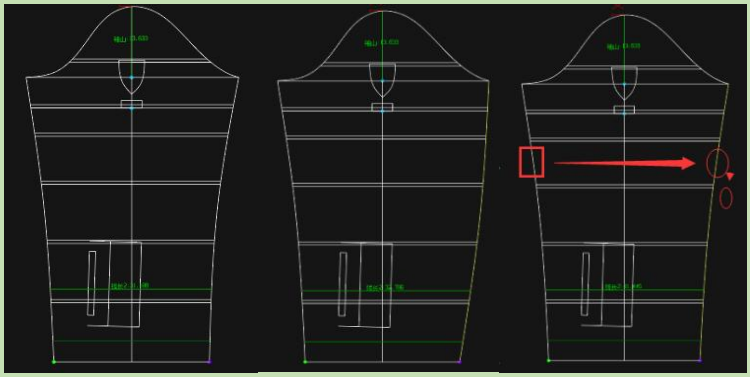
2. Similarity of the specified part on the line: Click on the reference line, select the part of the curve ------ click on the starting point, click on the line, click on the ending point, and then click on the starting point and ending point of the line to be made similar.



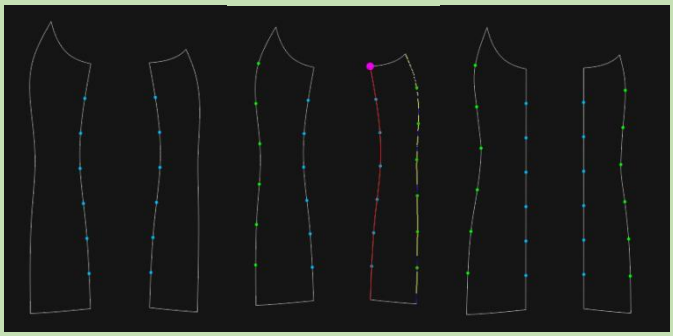


Note: After clicking the Similar Curves tool or pressing the shortcut **key E** for similar curves, press the space bar on the curve after similarity transformation, and the curve will undergo a symmetrical transformation.

3. Re-establishing the Association of Similar Curves: Click on the reference line with the Similar Curves tool, then hold down the CTRL key and click on the closer end of the curve. For this similar curve of the original curve, when the cursor is on the similar curve after transformation and you press the space bar, the curve will be symmetrically similar. Hold down the SHIFT key and click on the closer end of the curve, and the points on this similar curve of the original curve will be used as control points.



The symmetrical effects of CTRL and the space bar.



SHIFT The effect after adjustment

(8)  Polygon

1. Used to draw equilateral polygons.

Operation Steps:

(1) When this tool is selected, there is an input box in the parameter bar. Enter the number of sides (the minimum is 3) in it.

(2) Hold down the left mouse button on a point or in an empty space and drag the cursor (the same as drawing a rectangle) until reaching the desired side length, and then release it.

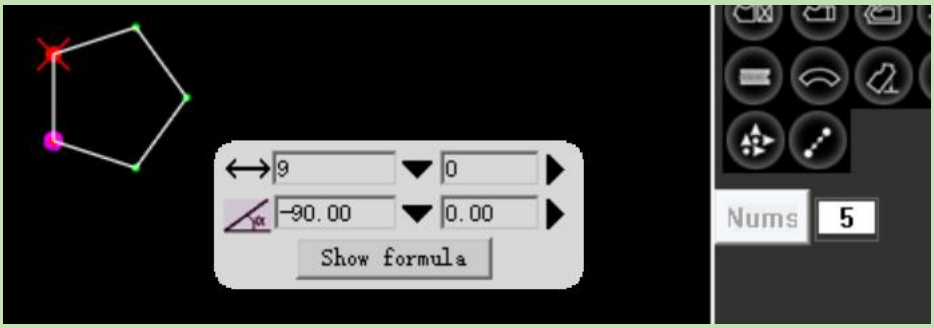
(3) Enter the relevant parameters in the parameter bar (the line length is the length of a single side, and the angle is the angle of the first side).

Notes:

Modification: Only the side length and angle can be modified, and the number of sides cannot be changed.

Parameter Modification: Regardless of which point is selected, it is always the parameters of the first side that are being modified.

Primitive Adjustment: Regardless of which point is selected, it is always the position of the first side that is being modified.



(9)  Extension line

1. Used to draw the extension line of a straight line or a curve.

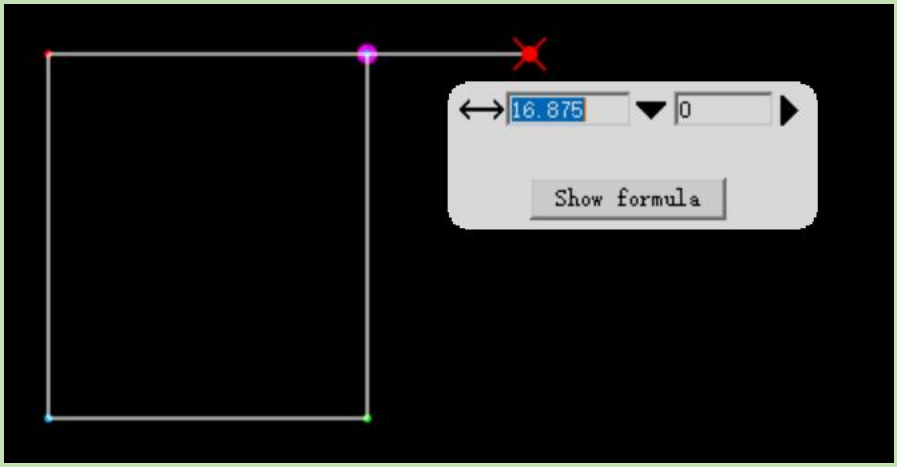
Operation Steps:

(1) Click on the straight line that needs to be extended.

(2) Click the left mouse button at the end where the extension is needed, move the mouse, and then click the left mouse button again to draw the extension line of this line.

(3) Enter the relevant data.

Note: It is also possible to draw a parallel line to this line through any point outside the line.



III. Point-finding Tool Set

(1)  Skewing point

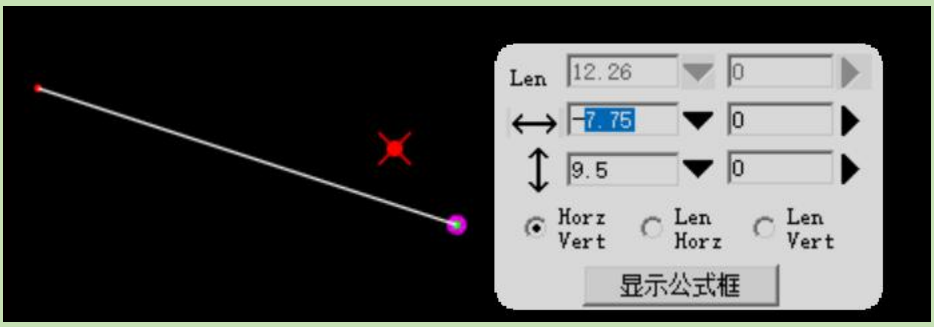
1. Used to find a point that is at a certain distance from a given point.

Operation Steps:

(1) Hold down the left mouse button on a certain fixed point and drag the mouse to the target direction.

(2) Enter the relevant parameters in the property bar.

Note: The system defaults to setting the horizontal and vertical offsets. You can also set different types of offsets by selecting and setting "Horizontal Point Distance" and "Vertical Point Distance".



(2)  Outline point

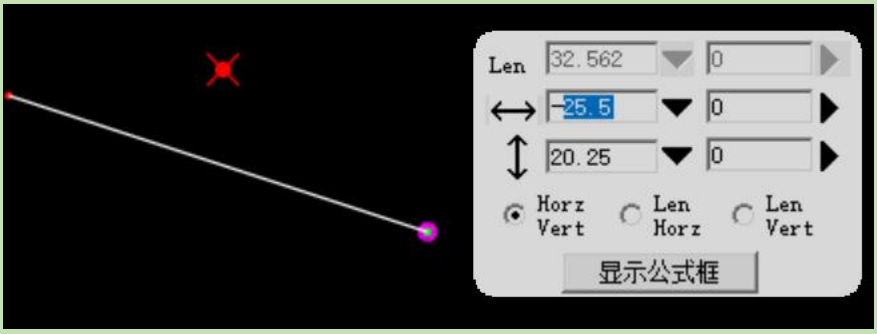
1. To find a point outside the straight line that has a certain distance from the straight line and also a certain distance from one of its endpoints.

Operation Steps:

(1) Click on one endpoint of the straight line or the straight line itself.

(2) Click on the other endpoint of the straight line.

(3) Move the cursor to the desired position and click to confirm.

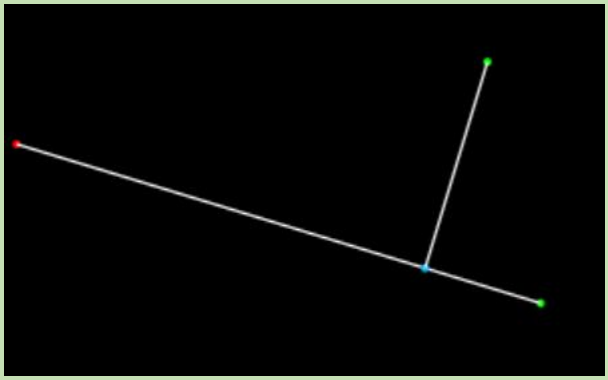


（3）  **PLT point**

Used to find the foot of the perpendicular from a point to a straight line. Operation Steps:

Click on the known point.

(2) Click on the known line.



(4)  Get point on line/curve

1. Used to select a point on any straight line or curve.

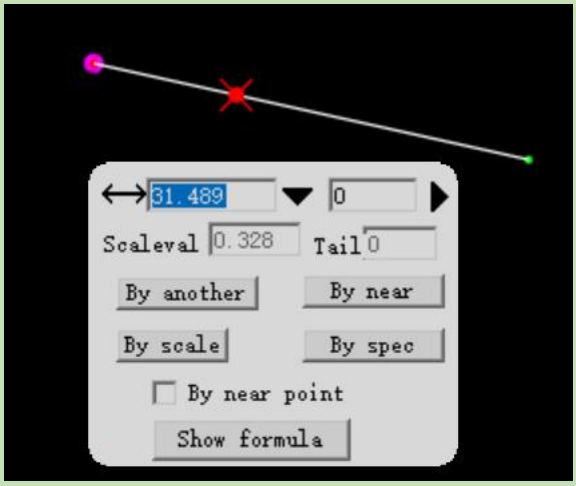
Operation Steps:

(1) Click the left mouse button at the target position on the line segment.

(2) Enter the length parameter of the distance from the starting point to this point in the property bar.

Note: The system automatically measures from the closer end (with a red square mark).

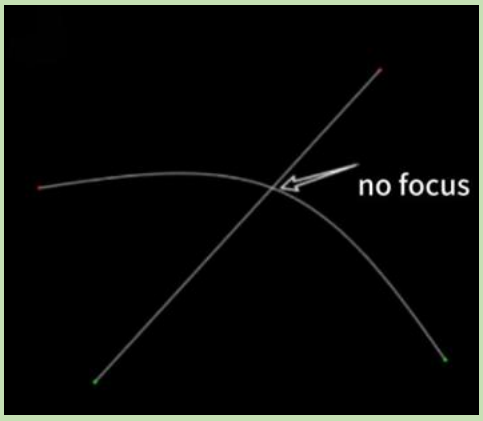
By selecting "Refer to the other end", the measurement can start from the other end. You can also choose "Refer to the nearby point" or "Refer to the proportion".



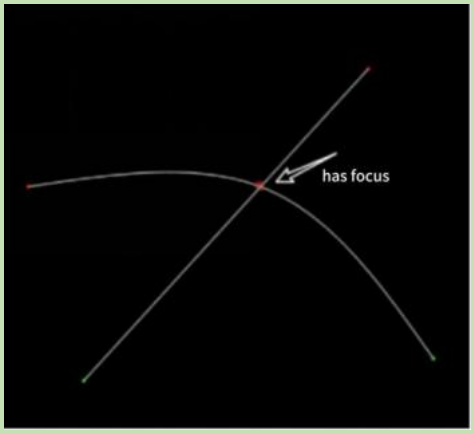
(5)  Cross point

1. Used to obtain the intersection point of the extensions of two lines.

Operation Steps:
(1) Click the left mouse button to select one of the line segments that need to intersect.
(2) Click the left mouse button to select the other line segment that needs to intersect.



Before intersection



After intersection

Note: Double-click the left mouse button at the intersection point of the lines. All the lines passing through this point will be divided at this location.

(6)  Divided

1. Used for dividing a straight line or a curve into equal parts.

Operation Steps:

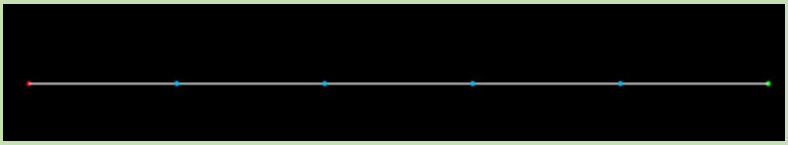
(1) Enter the number of equal divisions in the property bar.

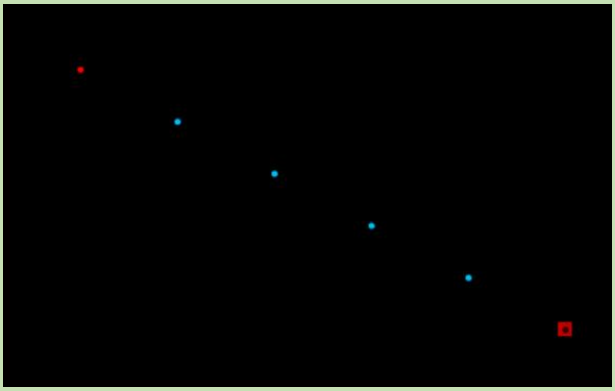
(2) There are the following situations for dividing line segments:

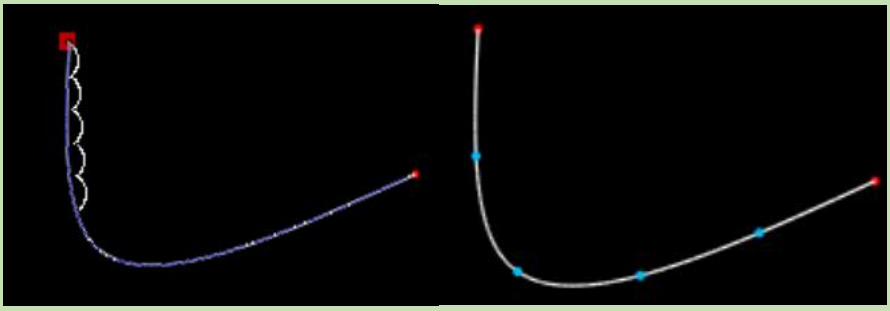
a. Directly click on the straight line or the curve to divide the line segment into equal parts.

b. Click on two points respectively, and then equal division points will be evenly added between the two points.

c. Click on one point on the curve, the curve itself, and another point on the curve respectively, and the curve segment between the two points on the curve can be divided into equal parts.







(7)  Symmetric points

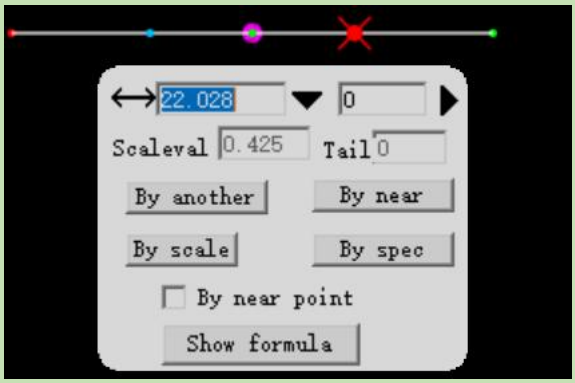
1. It is used to generate two symmetrical points centered at a certain point simultaneously.

Operation Steps:

(1) Select the symmetrical center point on the line.

(2) Then click the left mouse button on one side of the symmetrical center point to determine a point.

(3) Enter the distance on the line from this point to the symmetrical center point, and the system can automatically generate two symmetrical points with the same spacing.



IV. Special Tool Set

(1)  Circle / Arc

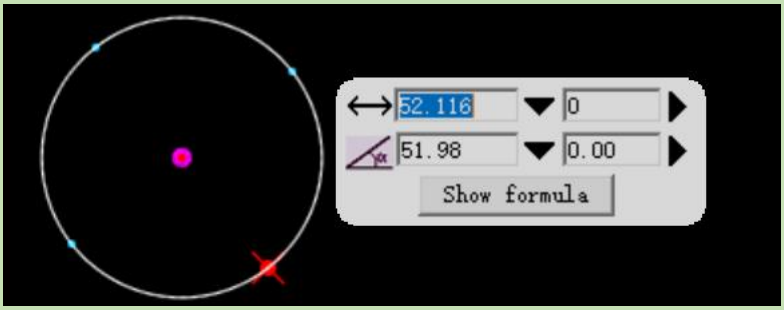
1. Drawing Circles, Arcs and Ellipses.

(1) Operation Steps for Drawing a Circle:

a. Start dragging the mouse from any point or in the blank area.

b. End at any position.

c. Enter the radius size in the settings bar on the right side.



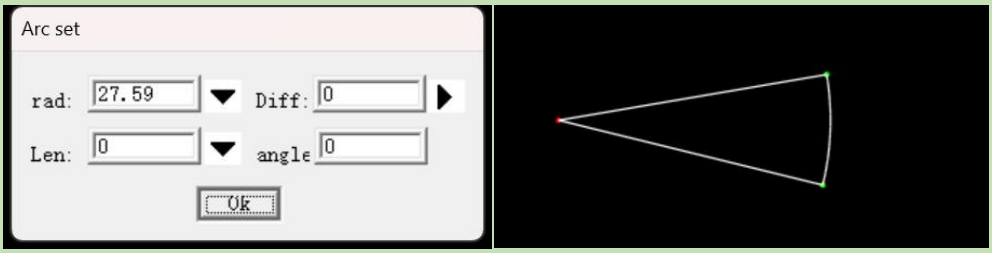
(2) Operation steps for drawing an arc:

a. While holding down the Ctrl key, click the left mouse button to start at any point or in the blank area.

b. Move the mouse to any other point or the blank area and click the left mouse button.

c. Move the mouse to draw the arc until it reaches any desired point or the blank area, and then click the left mouse button.

d. Enter the radius, angle, and arc length in the pop-up dialog box and click OK to confirm.



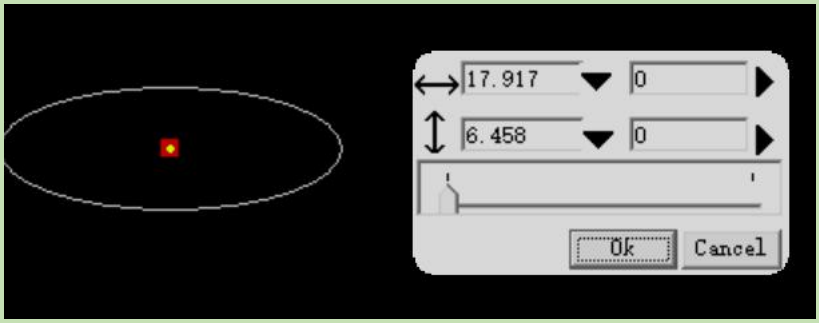
Note: The parameters for drawing arcs can be retrieved from formulas, but automatic grading is not available (the arc length is only for reference).

(3) Operation steps for drawing an ellipse:

a. Hold down the Shift key and drag the mouse.

b. Enter the relevant radius sizes.

c. Confirm.



(2)  Circinus

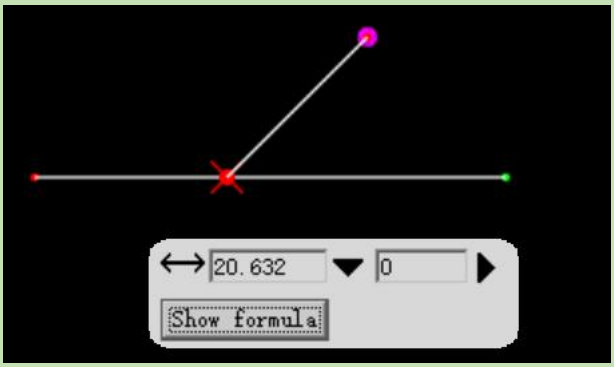
1. Single Compass (To find a point on a line from a point outside the line with a fixed length)

Operation Steps:

(1) Click on a certain fixed point.

(2) Move the mouse onto a certain line segment and click the mouse.

(3) Enter the relevant line length parameters in the property bar.



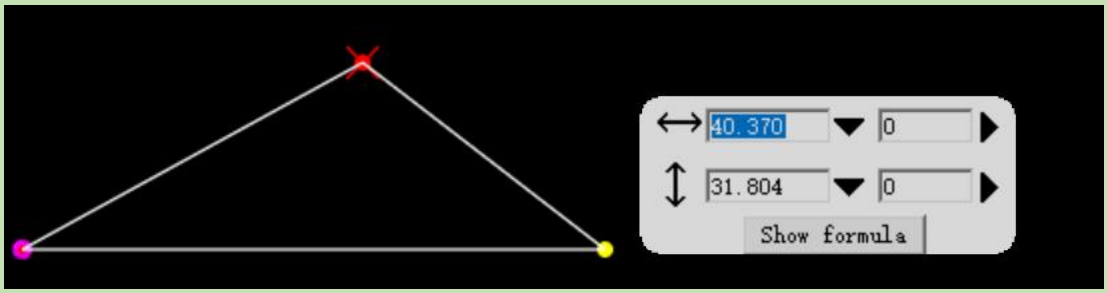
2. Double Compass (Used to draw circles with two given points as centers and find the intersecting points of the circles).

Operation Steps:

(1) Click on the two known fixed points respectively.

(2) Move the mouse to draw two intersecting line segments.

(3) Enter the relevant parameters of the lengths of the two line segments in the property bar.



Note:

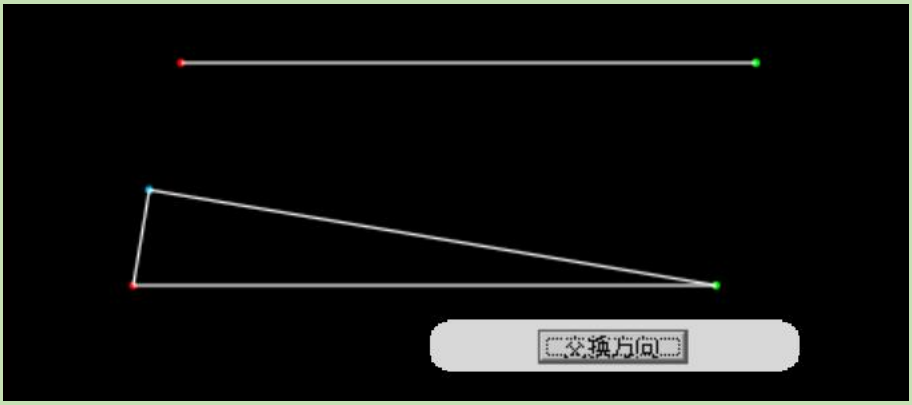
a. When the double compass points move onto a point and the left mouse button is pressed, then this point will be taken as the target point.

b. When the double compass points move onto a line and the left mouse button is pressed, then the point on this line will be taken as the target point (Note: At this time, the attribute of the point is no longer that of the double compass).

3. Special Usage

(1) Click on points A and B respectively with the left mouse button, and then click on the line segment BC.

(2) Switch the direction by clicking on the swap direction button.



(3)  Perpendicular

1. Draw a line segment perpendicular to a straight line or a curve.

Operation Steps:

(1) Draw a perpendicular line to a straight line through the end point of the straight line (or a point on the line):

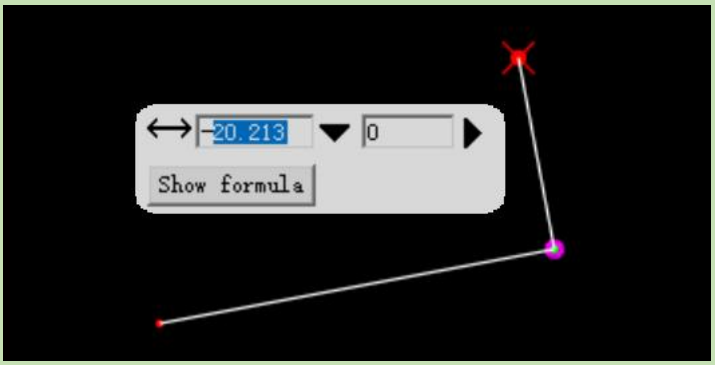
a. Click on one end point of the straight line (or a point on the line).

b. Move the mouse to the other end point (or a point on the line), and click the left

mouse button to confirm the foot of the perpendicular.

c. Move the mouse to draw the perpendicular line.

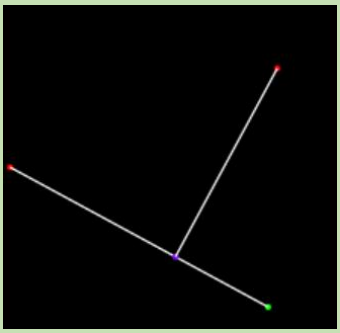
d. Enter the relevant parameters in the property bar.



(2) Draw a perpendicular line to a certain line (either a straight line or a curve) through a point outside the line:

a. Click to select the point outside the line.

b. Click to select the line.



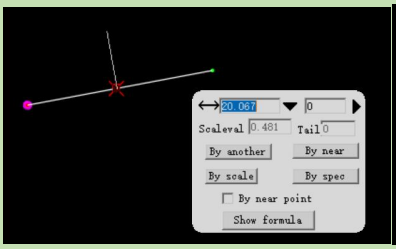
(3) Draw a perpendicular line to the given line at any point on the line:

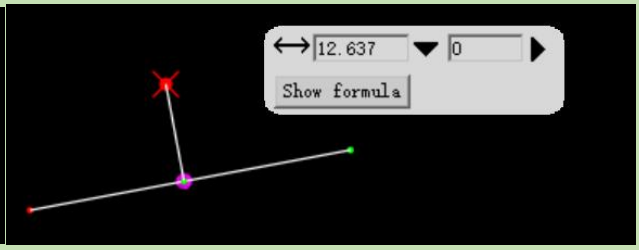
a. Click the left mouse button at any point on the line.

b. Enter the data of the position on the line.

c. Move the mouse to draw the perpendicular line.

d. Enter the length of the perpendicular line in the property bar.





(四)  Protractor:

1. Used for drawing a straight line with a certain included angle to a given straight line.

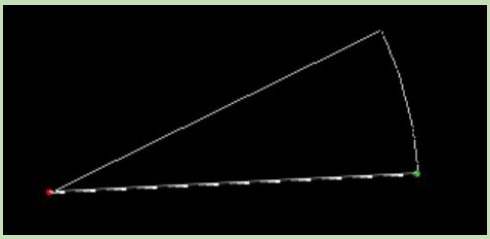
Operation Steps:

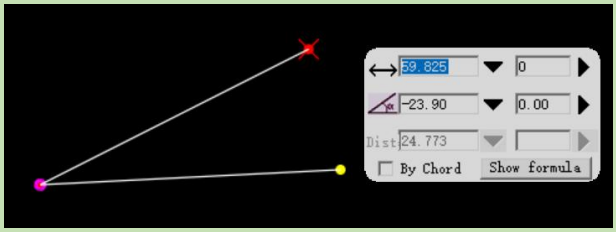
(1) Click to select one end point of the straight line.

(2) Click to select the other end point of the straight line.

(3) Move the mouse to draw a line segment with a certain included angle to the straight line, and click the left mouse button to confirm.

(4) Enter the parameters of line length, included angle or chord length in the property bar; the angle can be entered for grading.





2. Used for drawing the angular bisector.

Operation steps:

(1) Click to select the corner point.

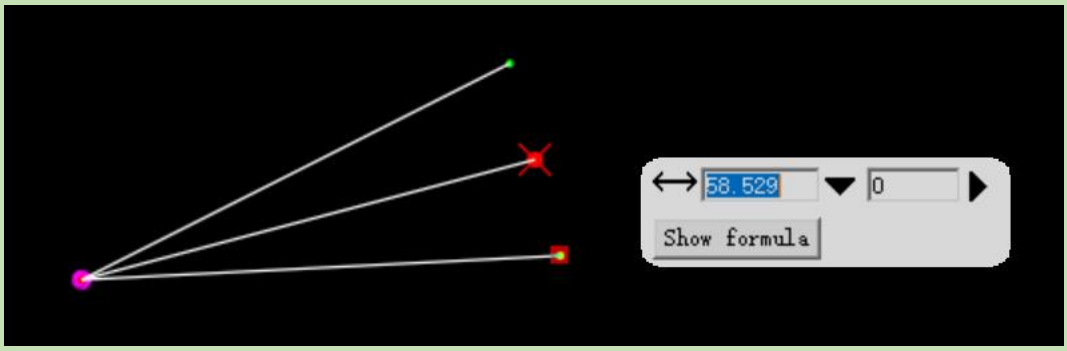
(2) Click to select the other end point of one of the straight lines.

(3) Click to select the other end point of the other straight line.

Note:

a. The order should be in the clockwise direction.

b. When using a protractor, points can be directly taken on the line and then the intersecting straight line of this line can be drawn.



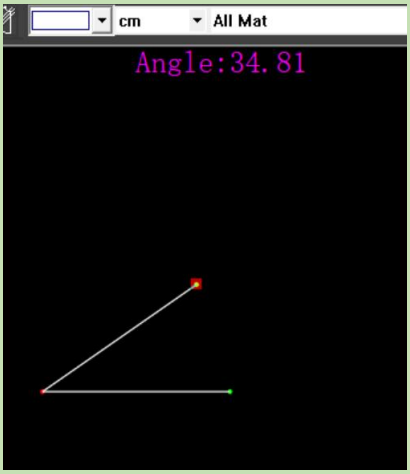
3. It is used to measure angles.

Operation steps:

(1) press Ctrl key，click to select the corner point.

(2) Click to select the other end point of one of the straight lines.

(3) Click to select the other end point of the other straight line or any point on it.



4.Point and line editing.

(1)  Symmetrical Copy

1.For symmetrical copying of a point or a line.

Operation Method One:

(1) Select the axis of symmetry.

(2) Continuously click on or frame-select the lines or points that need to be symmetrical. The selected lines and points will be automatically mirrored symmetrically.

Note: The line segments after symmetry will change along with the changes of the original line segments.

Note:

When selecting the axis of symmetry:

CTRL + point: Symmetric with the point as the origin.

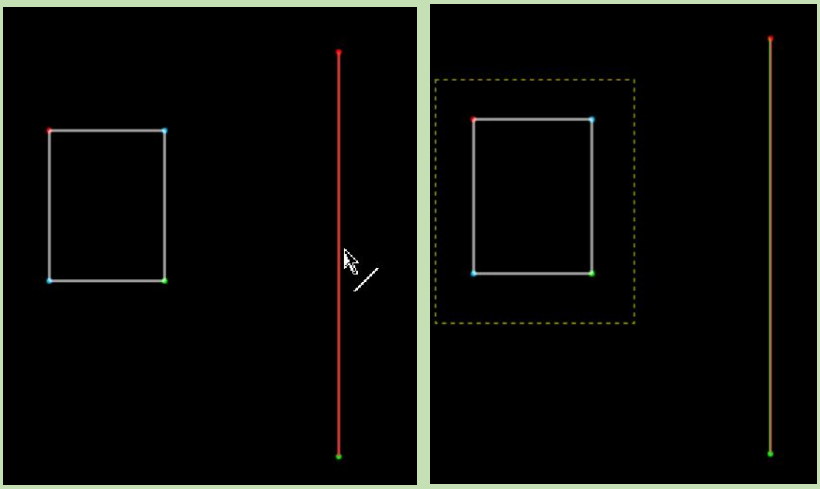
Point + point: Symmetric with the line connecting the two points as the axis of symmetry.

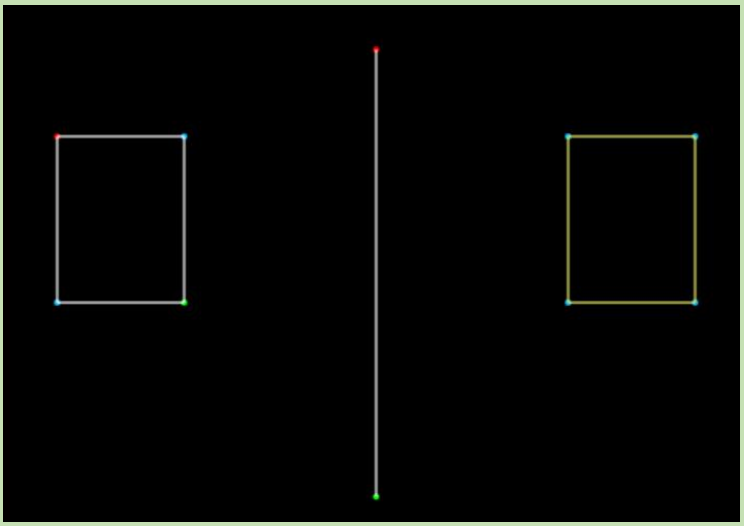
Straight line: Symmetric with this line as the axis of symmetry.

Operation Method Two:

(1) select/click-select the symmetric elements, and end by right-clicking.

(2) Select the axis of symmetry.





(2)  Transto copy

1.For simulating suture replication.

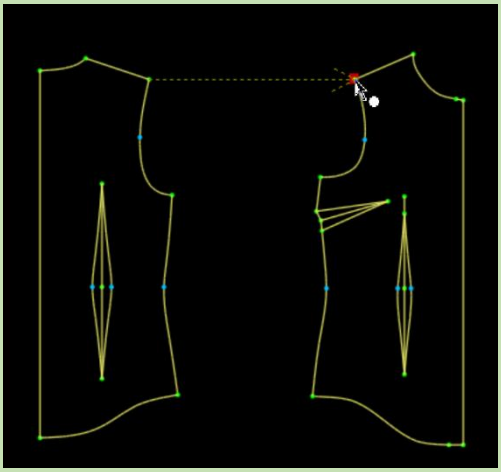
Operating Steps：

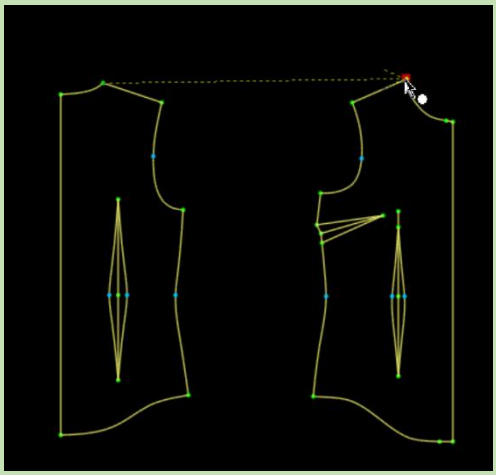
(1) Select one endpoint of the straight line at the merging end and the corresponding endpoint of the straight line at the merged end respectively.

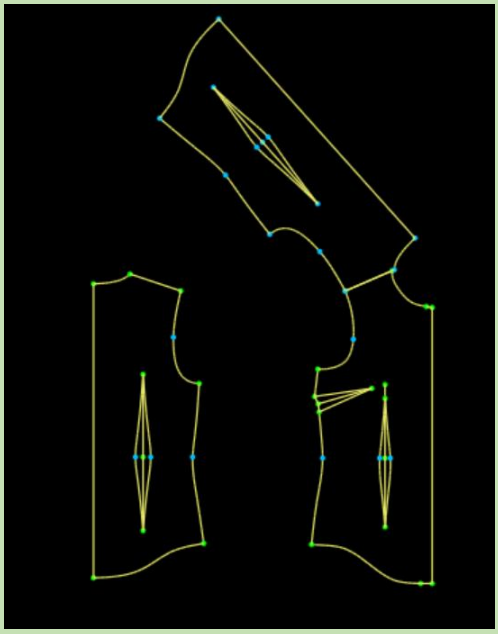
(2) Select the other endpoint of the straight line at the merging end and the other corresponding endpoint of the straight line at the merged end.

(3) Continuously click or frame-select the line segments to be basted, and these line segments can be basted over.

Note: If the shape of the relevant curve is modified with the curve adjustment tool, the corresponding shape changes can be seen.







(3)  Rotation Copy

1.For the rotation and copying of graphics.

Operating Steps：

(1) Continuously click on or frame-select the points and lines that need to be rotated.

(2) Press Enter to confirm or right-click to confirm.

(3) Click on the center of rotation.

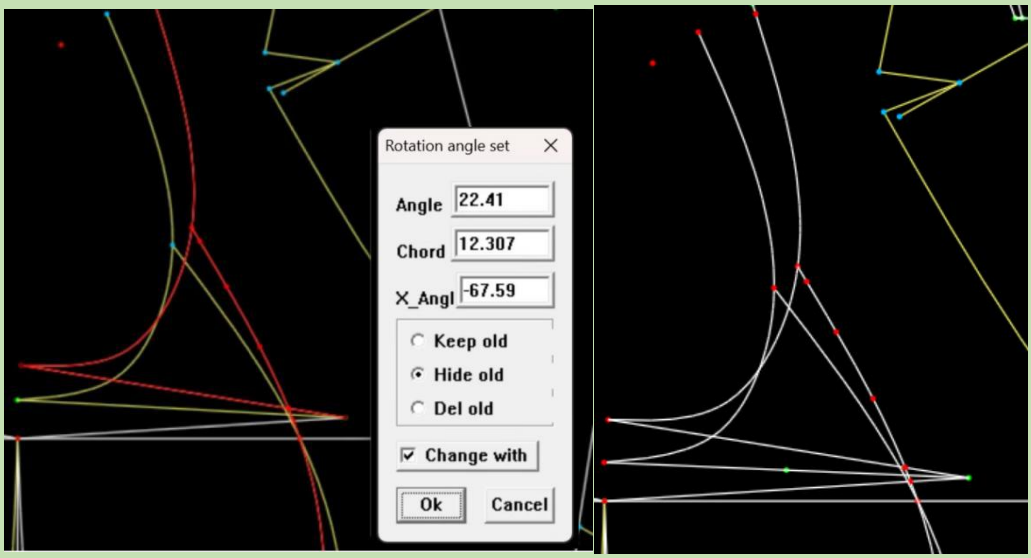
(4) Drag a certain point to rotate.

(5) Enter the relevant angle or length.

Note:

a. If moved to a known point, the setting box will not appear.

b. You can choose to retain the original line segment, or you can choose not to retain it.



(4) Offset Copy

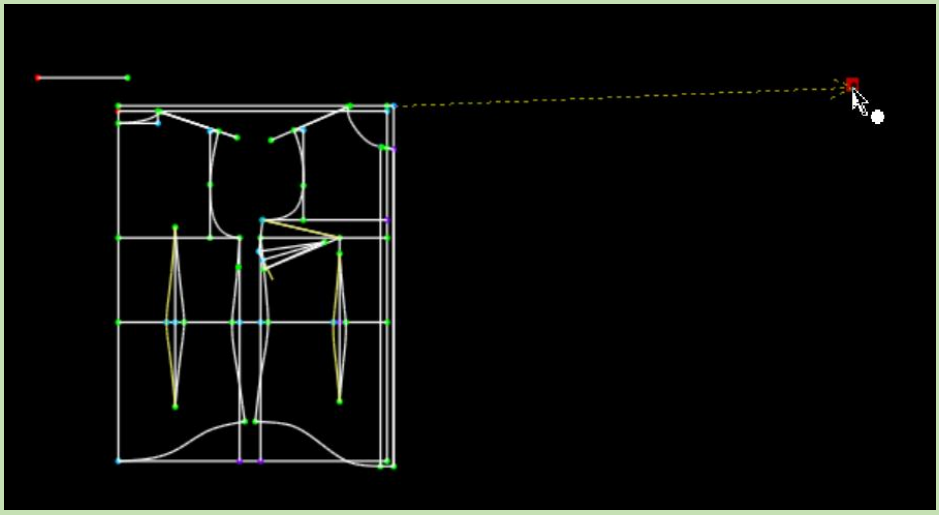
1.To move and copy relevant points and lines.

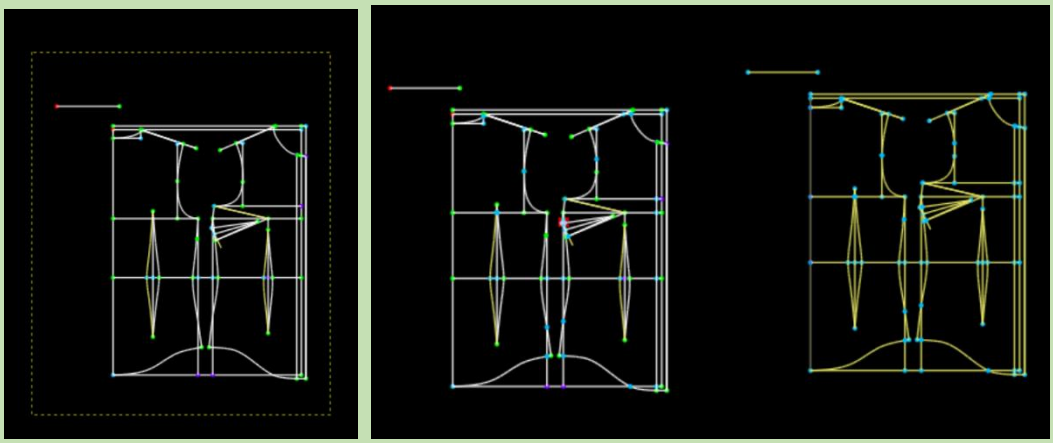
Operating Steps：

(1) Click on any point on the graphic to be moved as the base point.

(2) Move the mouse to another corresponding point.

(3) Continuously click on or frame-select the points and lines to be copied.





(5)  Merge tool

1.for splicing and combining graphics (mostly for graphics input by digitizer).

Operating Steps：

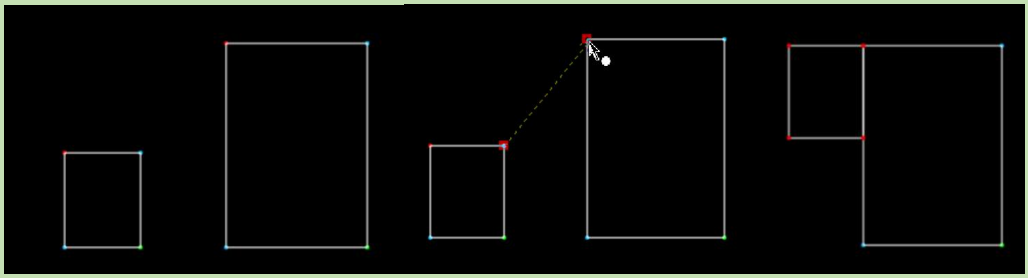
(1) Click on a point of the moving part.

(2) Click on the corresponding endpoint of the fixed graphic.

(3) Click on another point of the moving part.

(4) Click on the other corresponding endpoint of the fixed graphic.

(5) Frame-select or click-select the graph that needs to be moved, and right-click to merge.



(6)  Split line

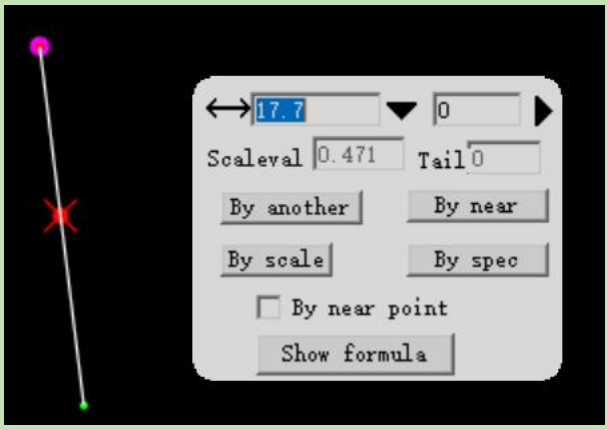
1.Cut a certain line segment into two line segments.

Operating Steps：

(1) Click on the line that needs to be disconnected.

(2) Enter the length of the disconnection.

Note: The system will default to measure from the closer end automatically. By selecting "Reference the other end", the starting end can be changed. When two lines intersect, after clicking on the intersection point, then click on the line that needs to be cut.



2. Area Cut/Copy

(1) Frame-select the objects to be cut open and right-click.
(2) Frame-select the cutting lines in sequence and right-click.
(3) Left-click to select the cutting area (+Ctrl: for copying).

(7)  Cut by line

1.Make the intersecting line segments cut off one end of the required line segment at the intersection point.

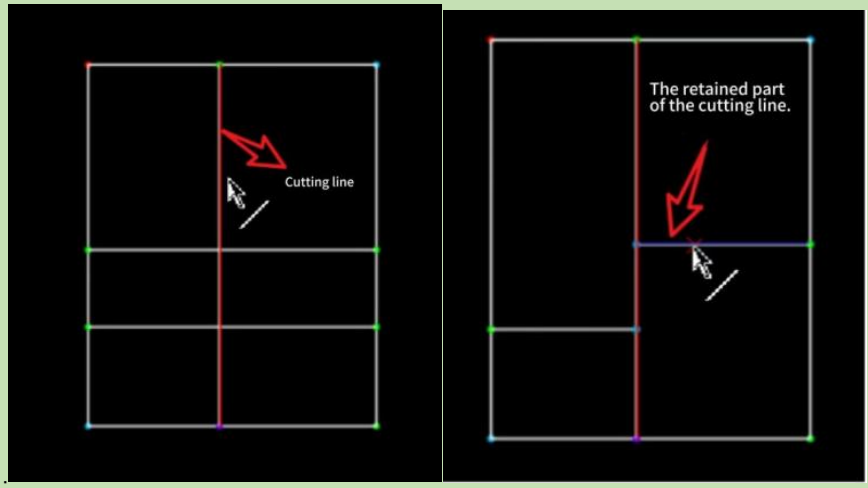
Operating Steps：

(1) Click on the cutting line.
(2) Continuously click on or frame-select the retained end of the line to be cut.

2.Extend the straight line or curve to intersect with a certain line.

Operating Steps：

(1) Click on the reference line.
(2) Continuously click on or frame-select the line segments that need to be extended to intersect



(8)  Line joint

1.It is used to splice two line segments with a common endpoint together.

Operating Steps

(1) Click on one or two line segments that need to be spliced.

(2) Click on the other line segment that needs to be spliced.

Note:

There are the following situations for splicing:

a. Straight line + straight line: If the two lines are on the same straight line, they will be spliced into a straight line; otherwise, they will be spliced into a broken line (curve).

b. Straight line + curve: It will be spliced into a curve.

c. Curve + curve: It will be spliced into a curve.

（9）  Modify to smooth：

1.It is used to adjust two or more curves to make their connections smooth.

Operating Steps：

（1）Select the curves and reference lines to be adjusted in sequence and right-click .

（2）Adjust the curves.

（3）Right-click to finish.

5. Darts and Pleats

(1)  Dart

1.Add V darts on the line.

Operating Steps:

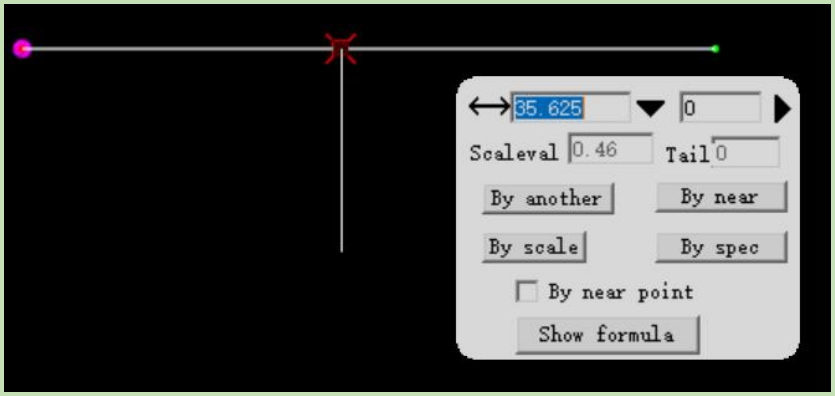
（(1) Left-click on the line where the dart needs to be added.

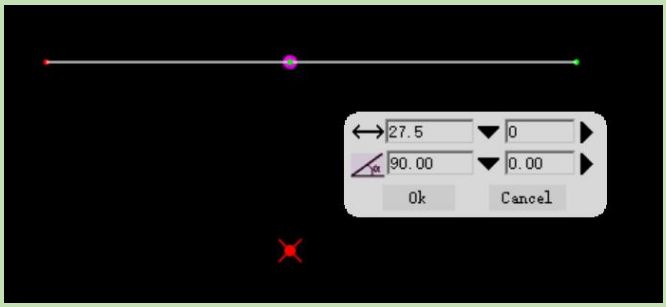
(2) Enter the length of the dart position from the starting end and confirm.

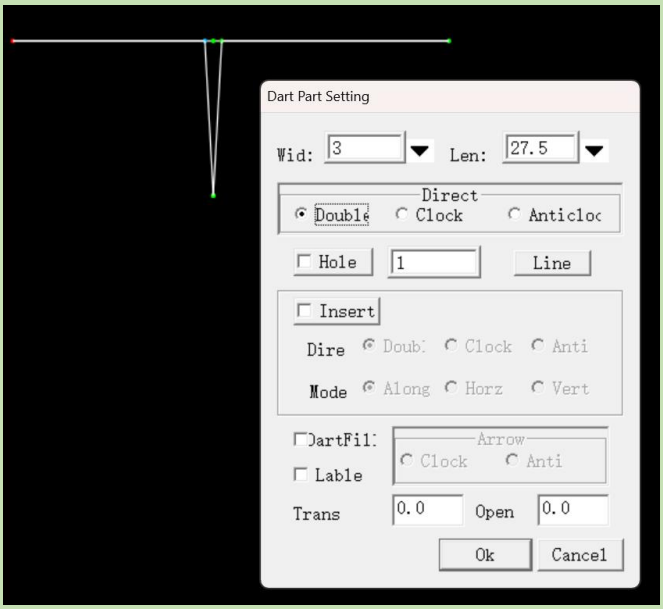
(3) Drag the mouse to draw the dart length line. You can left-click at any position or left-click on a known point.

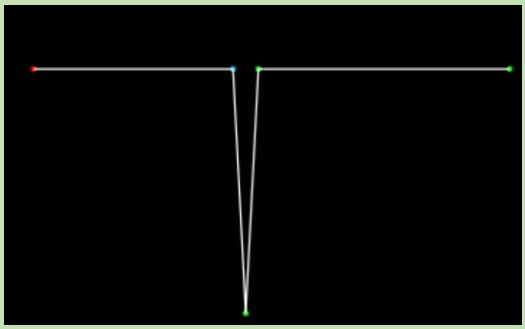
(4) Set the opening direction of the dart, the dart amount, the dart length, the dart peak, whether it is a straight line or a curve, etc., and then confirm.

Note: For the darts that have been made, the method of smoothing the corners can be used to merge and smooth the darts. When smoothing, only the point at the end in the clockwise direction can be dragged. In addition, for the darts on the curve, the curvature of the curve can be adjusted (only one side can be adjusted, and the other side will be adjusted automatically).









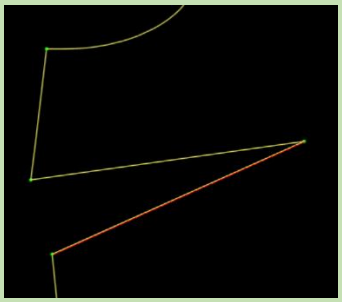
(2)  Dart cap/transto

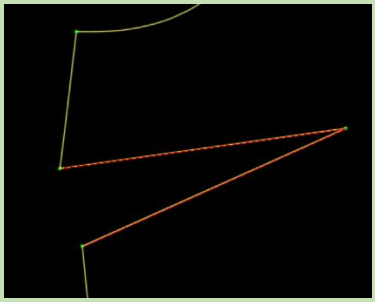
1. Used for adding dart folds.

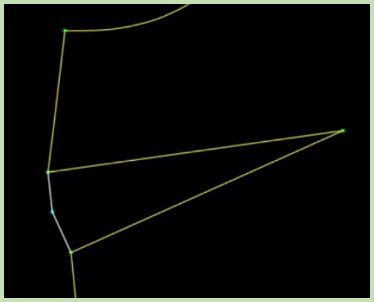
(1) Click on the dart line on the non-reversed side.

(2) Click on the dart line on the reversed side.

(3) Click on the dart opening line on the reversed side.







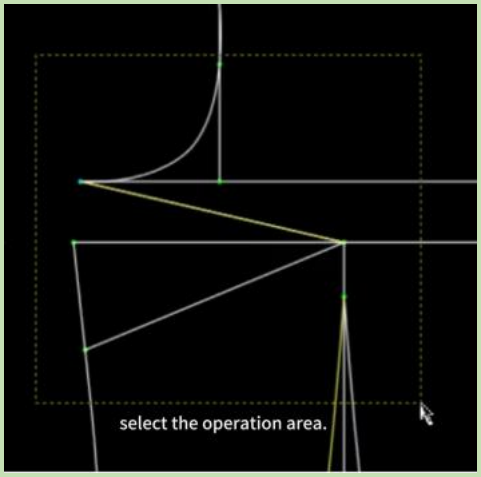
2. Dart Transfer

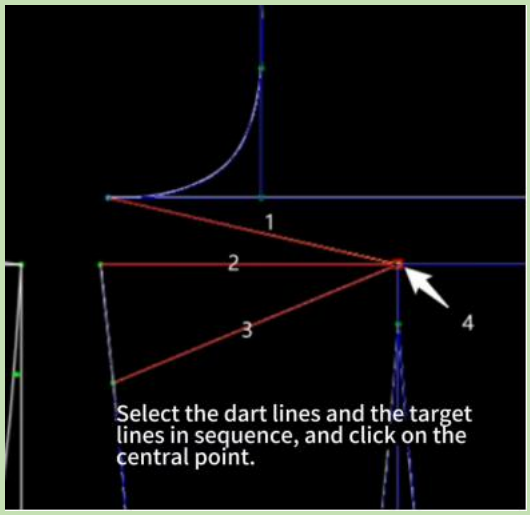
(1) Frame-select the operation area.

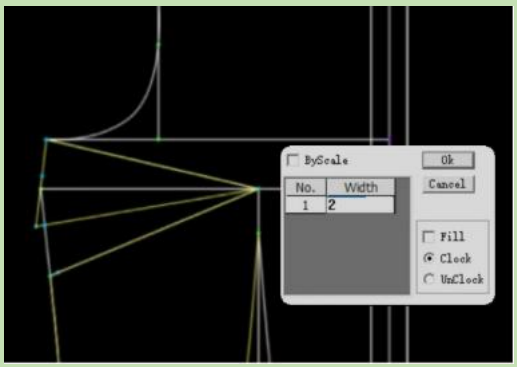
(2) Select the dart lines and target lines (multiple lines are allowed) in sequence.

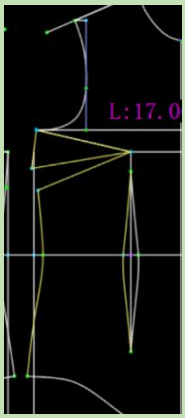
(3) Click on the central point.

(4) Enter the transfer amount and confirm.









(3)  Diamond dart

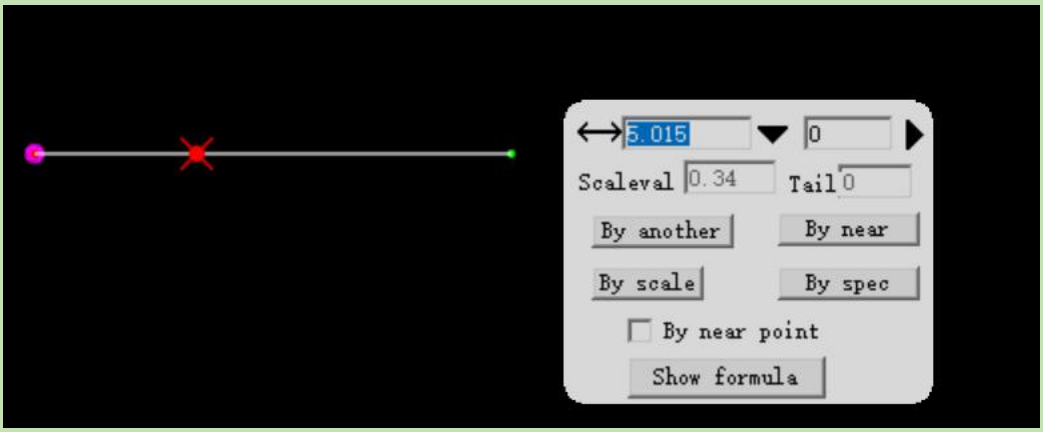
1. Used for making rhombus darts.

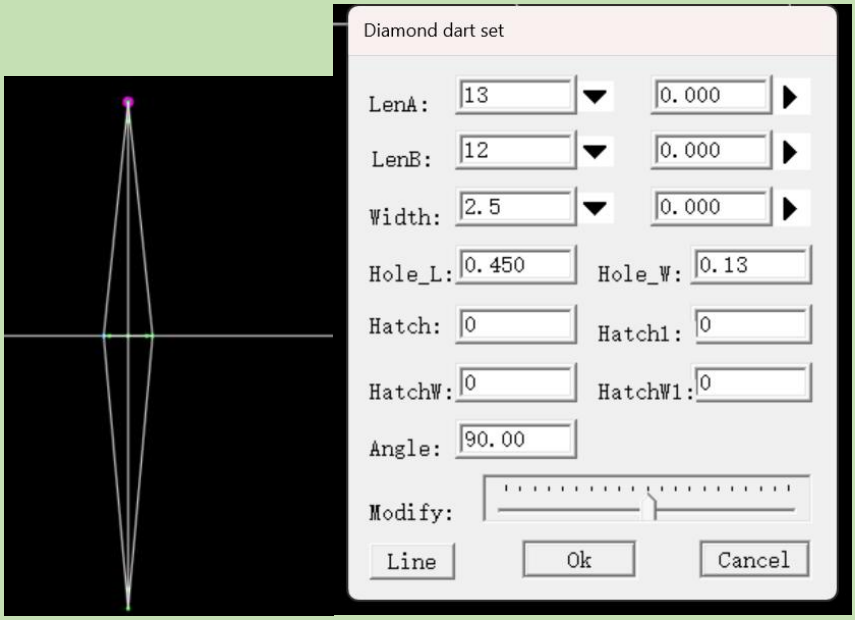
Operation Steps:

(1) Click the left mouse button on the center point of the dart to be made.

(2) Set the relevant dart length, grading amount, punching position, angle, etc. respectively in the setting dialog box.

Note: The generated dart is automatically a straight line. It becomes a curve after clicking on the straight line. At this time, the curve can be adjusted by dragging the slider on the right side.





(4)  Spread

1. Used for making single or multiple equal pleats or equal expansions.

Operation Method One:

(1) Select the upper line AB (close to the fixed end A).

(2) Select the lower line BD (close to the fixed end B).

(3) Select the related line CD, and then right-click.

(4) Enter the relevant parameters in the dialog box and confirm.

Notes:

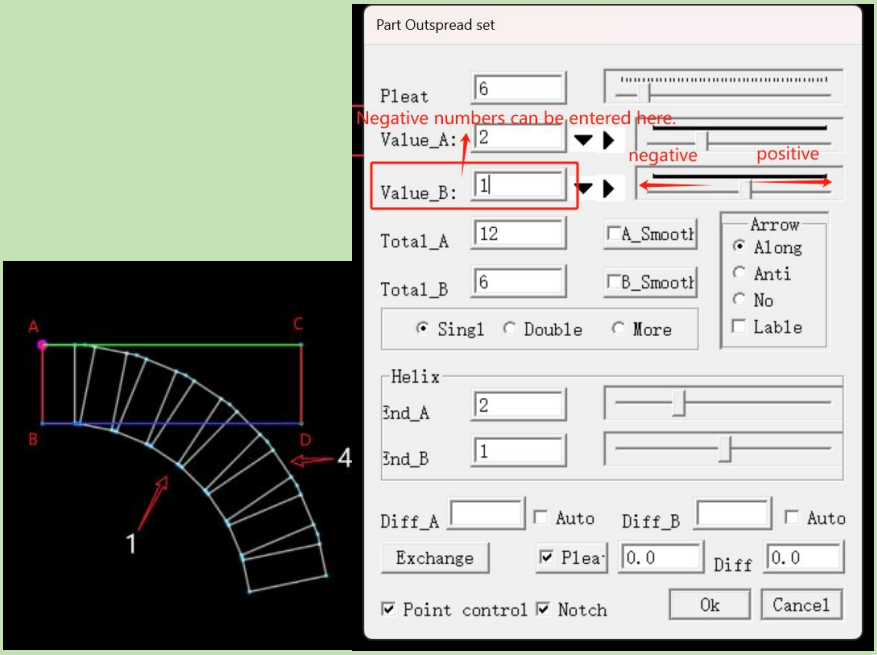
a. The system defaults to the pleat function (the direction of the pleat needs to be selected). It becomes the expansion function after selecting "Smooth".

b. After selecting "Smooth", the structural diagram can display the curve length.

c. The spiral shape can be adjusted by adjusting the slider through spiral expansion.

d. When expanding, automatic grading is required. The number of pleats should be as

large as possible, and "Automatic (Size Difference)" should be selected.



Operation Method Two:

1. Frame-select all the operation objects and end by right-clicking.
2. Select Line A in sequence and end by right-clicking.
2. Select Line B in sequence and end by right-clicking.

(5)  Spread by line

1. Used for expanding the structural diagram in the selected way.

Operation Method One:

(1) Select the upper line AC (close to the fixed end A).

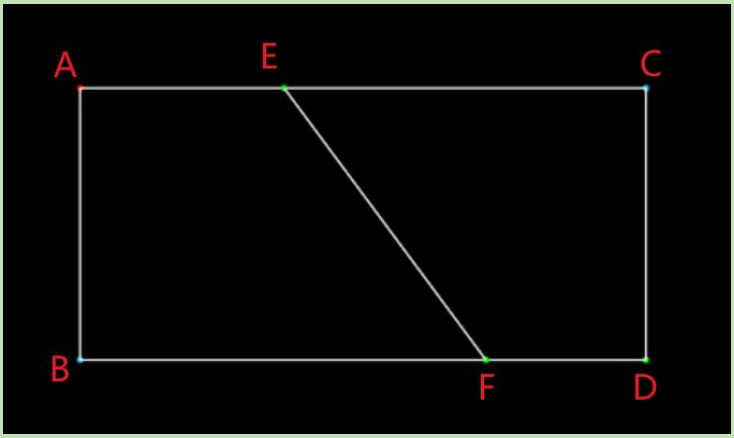
(2) Select the lower line BD (close to the fixed end B).

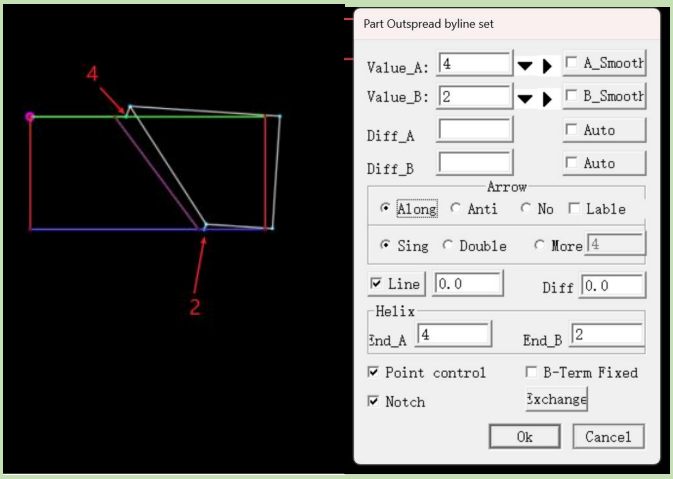
(3) Select the expansion line EF, and then click the right mouse button once after selection.

(4) Select the line segment CD that moves along after expansion, and end by right-clicking.

(5) Enter the relevant parameters in the dialog box.

Note: The system defaults to the pleat function (the direction of the pleat needs to be selected). It becomes the expansion function after selecting "Smooth".





Operation Method Two:

(1) Frame-select all the operation objects and end by right-clicking.

(2) Select Line A in sequence and end by right-clicking.

(3) Select Line B in sequence and end by right-clicking.

(4) Select the expansion lines one by one in sequence and end by right-clicking.

(VI) Puffed sleeve

1.Used to insert pleat amounts on the arc.

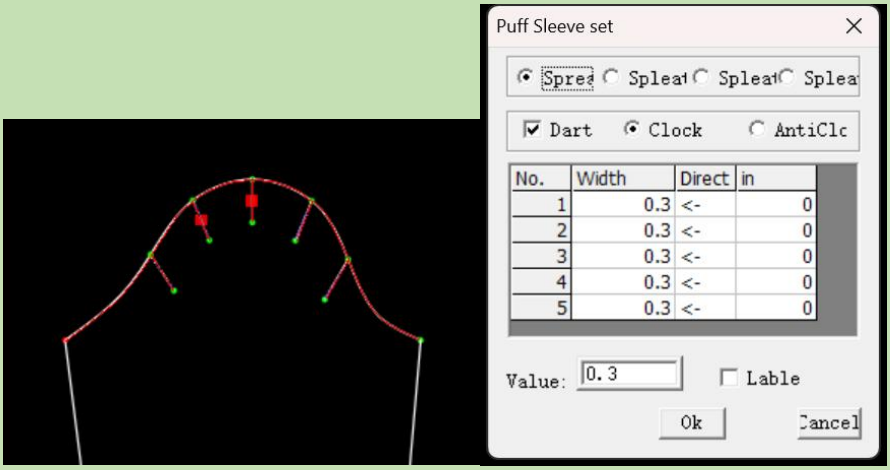
Operating steps：

(1) Draw the expansion lines at the positions where the pleat amounts need to be inserted.

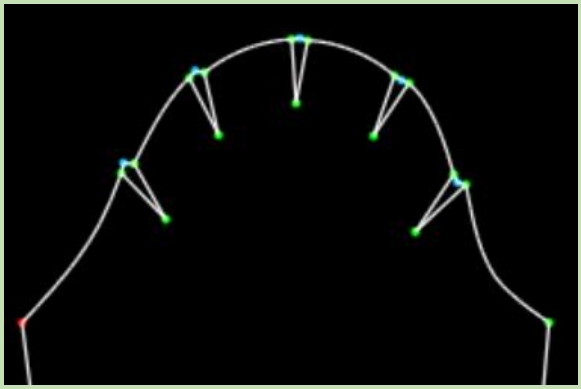
(2) Click on the dart lines.

(3) Click on the expansion lines one by one.

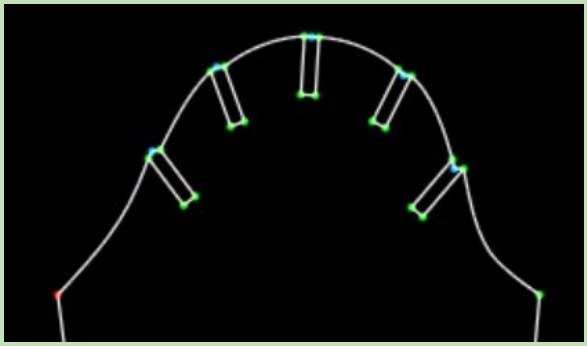
(4) Right-click to confirm, input the expansion amount, select the process type, and then confirm.



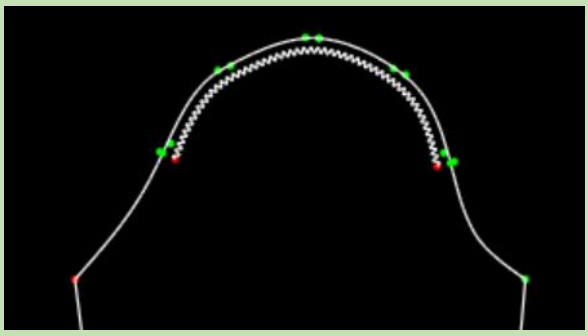
1 2



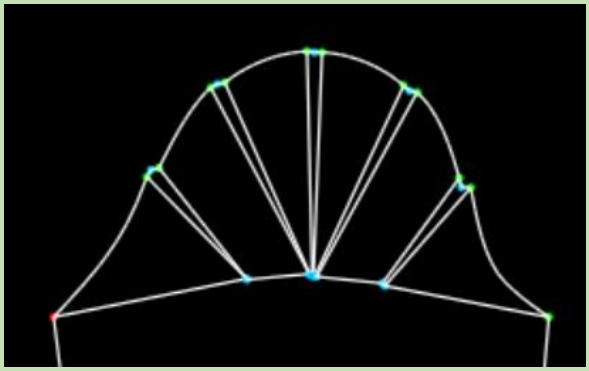
pointed dart



Box pleat



Gathered pleats



Open pleat

6. Pattern make

1.  Used to generate pattern

Operating methods：

(1) Sequentially click on the points and curves on the contour of the pre-generated pattern until it is closed to generate the pattern.

(2) Sequentially click on the lines on the contour of the pre-generated pattern until it is closed, and then right-click to generate the pattern.

(3) Frame-select the area of the pre-generated pattern. If there is a closed area, right-click to generate the pattern.

Section 10: Pattern editing Tools

I. Commonly Used Tools in the Center of Pattern Pieces

(1) New Creation

 Used to create new files.

(2) Open

 Used to open existing files.

(3) Save

 Used to open existing files.

(4) Save As

 Used to save as a new file.

(5) Undo

 Used to reverse the previous step.

(6) Redo

 After undoing, this tool can be used to redo the step.

(7) Zoomfactor

 Used to change the local or overall display ratio.

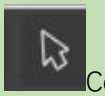
Operation Method: Select a part by framing or click on a part to enlarge it, and right-click to reduce it back to full-screen display. Under any tool, scrolling the mouse wheel can enlarge or reduce the overall display ratio.

(8) Delete

 Used to change the local or overall display scale.

Operation method: Frame-select a part or click on a part to enlarge it, and right-click to reduce it to full-screen display. Under any tool, scrolling the wheel key can enlarge or reduce the overall display scale.

II.Modify Parameters

 Conduct relevant operations.

1. It is used to perform relevant operations after selecting the pattern pieces. Right-click on the required pattern pieces and select the desired menu as shown in Figure 10-1.

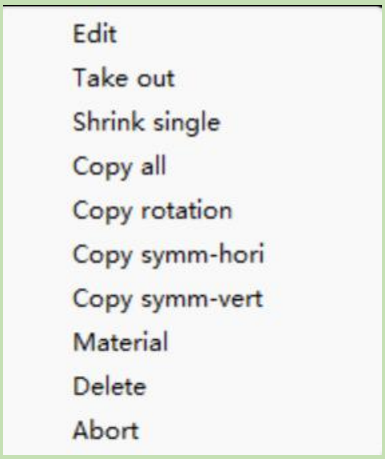


Figure10-1

(1) Edit: Open the pattern piece setting window to modify the information of the pattern pieces as shown in Figure 10-2.

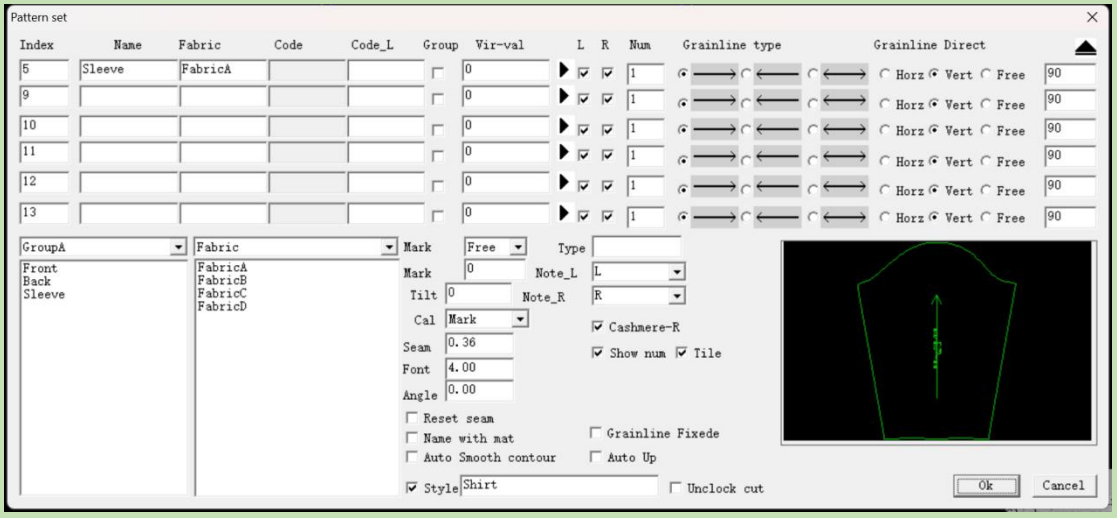


Figure10-2

(2) Take out: Remove the pattern pieces from the original structural drawing. As shown in Figure 10-3, when extracting, if the option to associate with the original pattern pieces is selected, the extracted pattern pieces will maintain the original grading; if the option to associate with the original pattern pieces is not selected, the extracted pattern pieces will not maintain the original grading.

Figure10-3

(1) Shrink single: Set the shrinkage rate for this pattern piece as shown in Figure 10-4. If the option to apply to all pattern pieces is selected, all pattern pieces will be set to the same shrinkage rate.

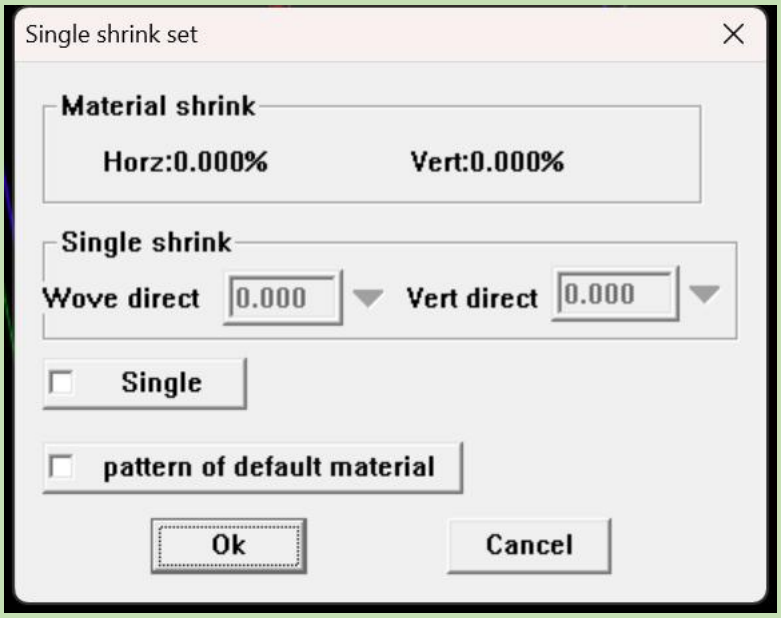


Figure10-4

(3)Copy all: Copy an identical pattern piece.

(4)Copy rotation: Copy a pattern piece that is rotated by 180 degrees.

(5)Copy symm-hori: Copy a pattern piece with horizontal symmetry.

(6)Copy symm-vert: Copy a pattern piece with vertical symmetry.

(7)Delete: Delete the current pattern piece.

2.Used for moving pattern pieces. Operation method: Hold down the left mouse button on the pattern piece and drag it.

3. Used for selecting the darts and pleats added to the center of the pattern piece and modifying them. Left-click on the darts and pleats that need to be modified, and then enter the new parameters in the parameter columns that need to be modified.

III. Modification of Mesh Diagram

 Modify line perform relevant operations.

1. It is used to adjust the shapes of pattern pieces of various sizes after grading (i.e., the mesh diagram). Select the outline of the base size, and then select the outline of any size other than the base size. Adjust the shape of the line by dragging the adjustment points and end the operation with a right-click. After adjusting one size, you can continue to select the line of another size for adjustment. After all adjustments are completed, click the right mouse button to end the operation (Note: a. Adjusting the base size is prohibited in the mesh diagram adjustment; b. The mesh diagram of the internal lines can be adjusted).

2. Adjust the direction of the endpoints of the curve and fix it.

(1) Left-click + Ctrl on the target end of the curve (at this time, the direction arrow will be displayed and the direction is already fixed).

(2) Drag the arrow to adjust the direction.

(3) Right-click + Ctrl to cancel this setting.

(4) Right-click to exit the operation.

IV. Measurement

 It is used to measure the dimensions of the mesh diagram of pattern pieces.

1. Measurement of straight lines or curves: Simply click on the line segment directly. Continuous measurement can display multiple data as well as the summation result simultaneously. The plus sign can be changed to a minus sign by clicking with the mouse. Select "Add to Variable Table", and the length can be saved to the variable table for being called by other parts.

2. Measurement method of the curve length between two points on a curve: Click on one endpoint, then click the left mouse button at any position on the curve, and finally select the other endpoint. Then the length of the curve will be displayed.

3. Measurement method of the distance between two points: Click on the two points respectively. The distance between the two points as well as the horizontal and vertical distances between them can be displayed respectively.

4. Measurement of the distance from a point to a straight line (curve): Click on the point

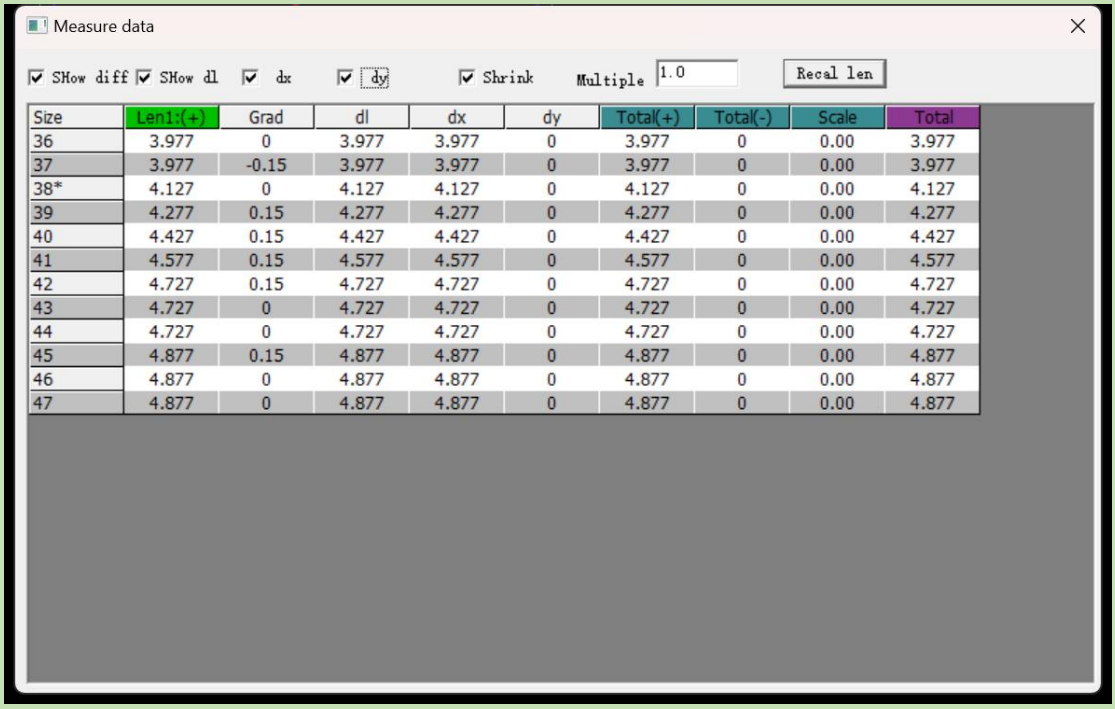
and the straight line (curve) respectively, and the perpendicular distance from the measurement point to the straight line (curve) will be measured and displayed in the parameter column.

5. Measurement of the distance from any position to a straight line (curve): Click on any position and then click on the straight line (curve). The perpendicular distance from any position to the straight line (curve) will be measured and displayed in the parameter column.

6. Measurement of the distance from any position to a point: Click on any position and then click on the point. The distance from any position to the point will be measured and displayed in the parameter column.

7. Measurement of the distance between two arbitrary positions: Continuously click on two arbitrary positions to measure the distance between them, which will be displayed in the parameter column. Note: If the arbitrary position is on a line, hold down the Ctrl key.

8. In the "Grade Difference" of the "Measurement of Line Length" dialog box, after selecting this item, the line length can be modified according to the input grade difference as shown in Figure 10-5 (Note: If the data after grading does not meet the requirements, click on the data, enter new data in the line length data column on the right side, and then click on "Modify Line Length". There are three ways to modify the line length, namely along the line, horizontally, and vertically).



Size	Len1:(+)	Grad	dl	dx	dy	Total(+)	Total(-)	Scale	Total
36	3.977	0	3.977	3.977	0	3.977	0	0.00	3.977
37	3.977	-0.15	3.977	3.977	0	3.977	0	0.00	3.977
38*	4.127	0	4.127	4.127	0	4.127	0	0.00	4.127
39	4.277	0.15	4.277	4.277	0	4.277	0	0.00	4.277
40	4.427	0.15	4.427	4.427	0	4.427	0	0.00	4.427
41	4.577	0.15	4.577	4.577	0	4.577	0	0.00	4.577
42	4.727	0.15	4.727	4.727	0	4.727	0	0.00	4.727
43	4.727	0	4.727	4.727	0	4.727	0	0.00	4.727
44	4.727	0	4.727	4.727	0	4.727	0	0.00	4.727
45	4.877	0.15	4.877	4.877	0	4.877	0	0.00	4.877
46	4.877	0	4.877	4.877	0	4.877	0	0.00	4.877
47	4.877	0	4.877	4.877	0	4.877	0	0.00	4.877

Figure10-5

V. Text


Used for inputting text.

1. Click the left mouse button to determine the position of the text.

2. Drag the cursor to determine the direction of the text.

3. Click the left mouse button to pop up the text input dialog box.

4. Input the text content, select the font size and angle (the angle is relative to the horizontal rightward direction), and then click OK.

5. To modify the text: Click the left mouse button at the starting position of the text to pop up the modification dialog box.

6. To modify the text direction: Press Ctrl + left mouse button and drag the cursor.

7. To modify the text position: Select the graphic element modification tool and move the position point.

8. To copy the text: Press C in uppercase mode at the starting point of the text.

VI. Show and Hide Structural Lines

 It is used to set the display or hiding of structural lines.

VII. Function Playback

 Play back the operation process.

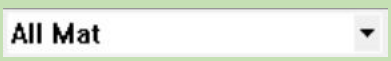
VIII.Tool Help

 The operation help will appear when you click on the corresponding tools.

IX. Hide Pattern Pieces

 Hide the pattern pieces and display the base drawing of the pattern pieces.

Fabric Selection

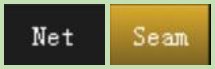


Select to display the pattern pieces according to the fabric type.

X.Display the Base Size / Mesh Diagram

Switch the base size and the mesh diagram by clicking.

XI. Display of Net and Gross Patterns



Switch the display between the net pattern mesh diagram and the gross pattern mesh diagram by clicking.

XII.Select to Display Sizes

Set to display the required specifications.

XIII. Show/Hide Grading Amounts

Set to show or hide the grading amounts.

XIV.Pattern Piece Identification

(1) Seam Allowance Setting

 Perform relevant operations using the seam allowance setting tool.

1. Set the seam allowance width, handle local shrinkage treatment, and generate facings as shown in Figure 10 - 6.

1) Select the seam lines that need to be set. Enter the seam allowance size and make other settings (Note: The system defaults to equal seam allowances on both sides. You can set the seam allowance to "unequal at both ends" or "folded in half" through. When the seam allowance is unequal at both ends, you can set the widths of the starting end and the ending end separately.)

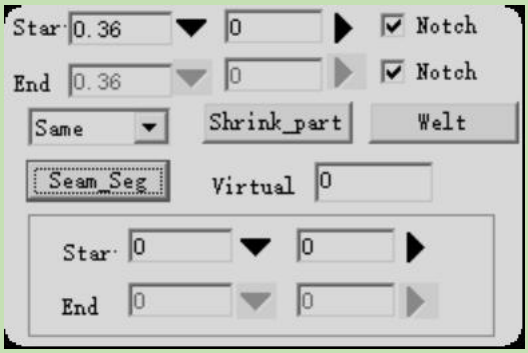


Figure10-6

2) Step Difference: As shown in Figure 10 - 7, when the two ends are unequal, the step difference can be set. The starting end and the ending end are determined according to the clockwise direction of the pattern piece contour. Figure 10 - 8 shows the comparison diagram of the effects before and after the step difference setting.

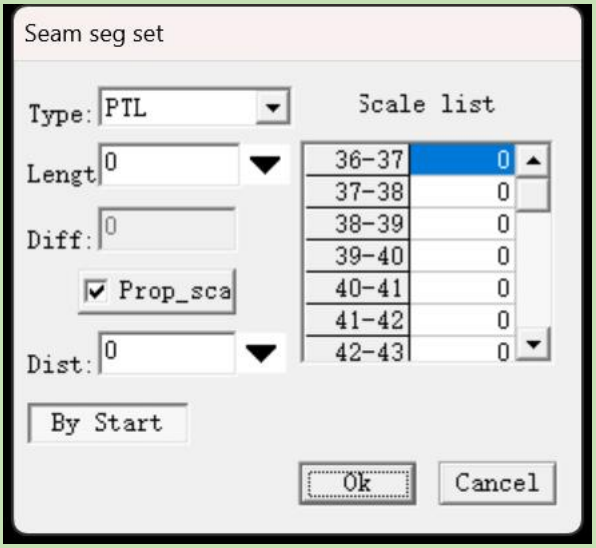


Figure10-7

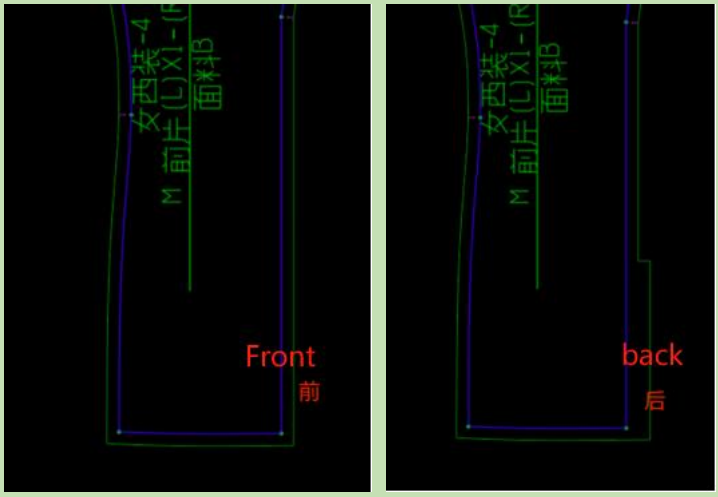


Figure10-8

3) Folded in half: The pattern piece is folded in half along the selected edge and can be set as required, as shown in Figure 10 - 9.

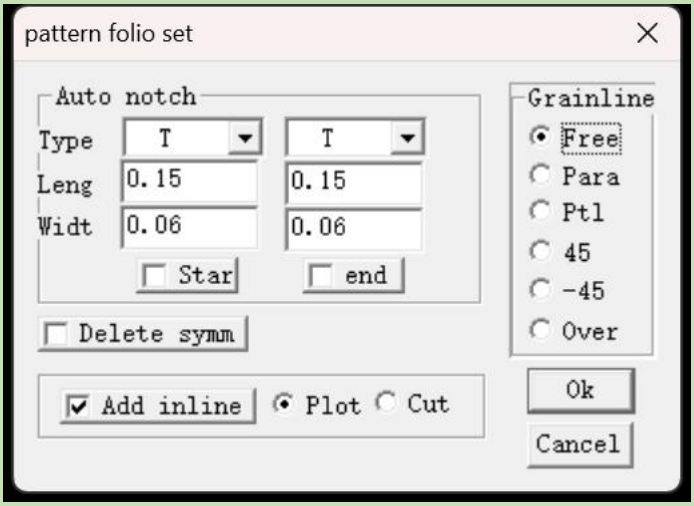


Figure10-9

4) Local Shrinkage: After selecting a certain seam allowance, click on "Shrink part". As shown in Figure 10 - 10, enter the required data in the pop-up setting box and then confirm it. (Note: The "fabric shrinkage rate" refers to the unified shrinkage rate within the fabric layout system.)

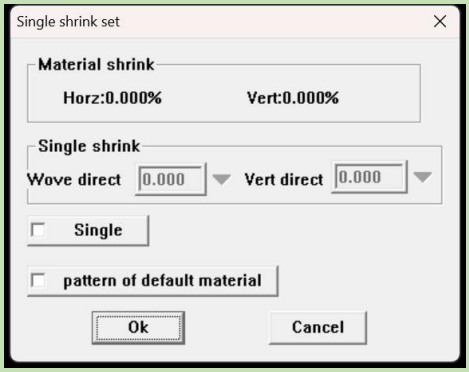


Figure10-10

5) Welt: After selecting a certain seam allowance, click on "Welt" as shown in Figure 10 - 11. Enter the facing width and the indentation size and then confirm. (Note: The facing

width refers to the additional width added on the basis of the seam allowance of this fabric.)

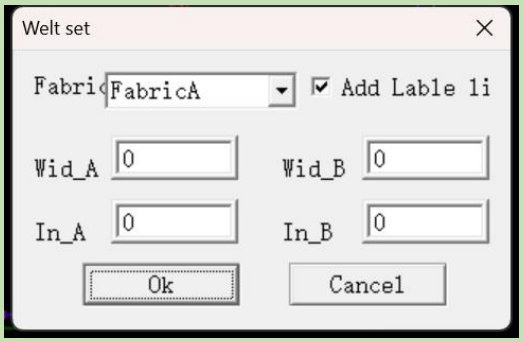


Figure10-11

2.Set the direction and position of the grain line.

1).Setting the direction: Click on the end of the grain line that needs to be set; move it to the required position and click the left mouse button to confirm. (Note: If you need to set the grain line to be parallel to a certain line, click on the endpoint of that line when moving the direction. Hold down the Shift key to set the grain line to 0, 45, or 90 degrees.)

2). Setting the position: Click on the starting end of the grain line that needs to be set; move it to the required position and click the left mouse button to confirm.

(2) Seam Corner Settings

 Set the type of seam allowance corner (refer to the intelligent mode for the operation).

1. Extended corner: Left-click to select the vertex, and right-click to confirm.

2. Folded corner: Left-click to select the vertex and the folding edge, and right-click to confirm. Enter the length of the axis of symmetry and confirm.

3. Cut corner: Select the vertex twice in succession. Set the cutting method, enter the cutting length, and confirm.

4. Folded-over corner: Select the vertex, an edge, and another edge in sequence, and right-click to confirm.

5. Right angle: For the main pattern piece: vertex, edge; for the following pattern piece: vertex, edge.

6. Single right angle: Click on the right-angled side close to the vertex, and right-click to confirm.

7. Reverse-folded corner: For the main pattern piece: vertex, edge; for the following pattern piece: edge, vertex.。

(3) notches

 Set notches on the outline of the pattern pieces.

1. Click on a point: Add a notch. + ctrl: Add double notches.
2. Click on an edge: Add a notch on the edge. + ctrl: Add double notches.
3. Click on an existing notch: Cancel the notch.
4. Press ctrl + left click on a notch point: Adjust the direction of the notch.
5. Right click on a notch point: Modify the notch data.
6. Toggle for symmetrical notches: Shift + left click on a notch point.
7. Add notches on the internal lines: All internal notches are of Type I (can only be operated in this notch tool).
8. The methods for notch setting are as follows:

1) As shown in Figure 10-12, in the setting menu - Notch Type, select the type and width, and then confirm.

2) The width and length of the notches can also be set individually.

3) Set the curve accuracy, which is used to set the smoothness of the curve.

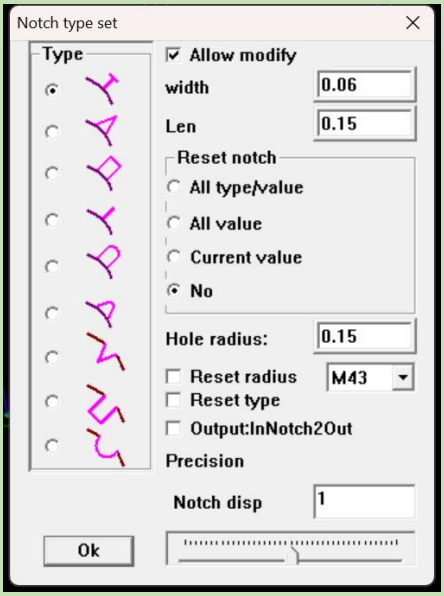


Figure10-12

（4） Alig Notches

 Tools for alig Notches.

1. Left-click to select the starting end of the seam allowance in Group A, and right-click to end; if it's not the whole line, then select in sequence: the starting point, the seam allowance, and the ending point.

2. Left-click to select the starting end of the seam allowance in Group B, and right-click to end; if it's not the whole line, then select in sequence: the starting point, the seam allowance, and the ending point.

3. Set the corresponding parameters in the dialog box as shown in Figure 10-13; Press Enter: The notches of Group A's line will be copied to Group B's line.

4. Press the Esc key: Cancel the operation.

5. Press the Tab/Back key: Undo.

Figure10-13

(5) Punching Hole

 Add marking hole positions on the pattern pieces.

Simply left-click on the required points to add the hole positions. Click again to cancel the hole positions.

(6) Button Settings

 Add button positions on the pattern pieces.

Select the button position by clicking on a line or continuously clicking on two points,

etc. Enter the necessary button position information as shown in Figure 10-14, and then confirm.

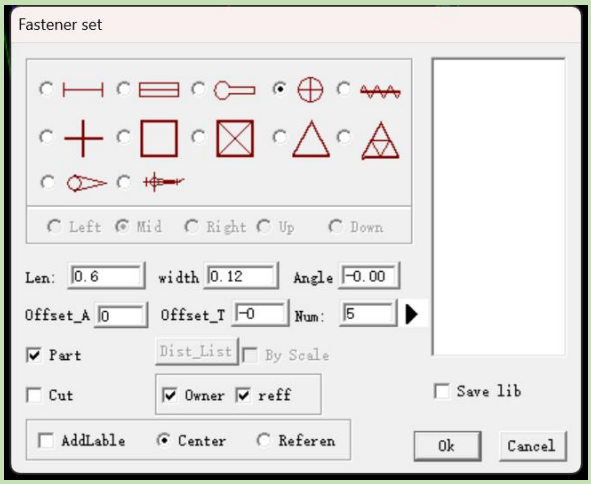


Figure10-14

1. Click the same point twice to add a button position at this point.
2. Click on the line to add a button position on the line.
3. Click on two points to add a button position between the two points.
4. Select the line + ctrl, and the selected point on the line will be the endpoint.
5. Click on the starting point, the curve, and the ending point to add a button position between the two points on the curve.
6. Click on the button position to modify it. +shift to switch the folding.
7. Select the point + ctrl. If it exists, delete it; if not, copy it.
8. Click on the pattern piece + ctrl to delete all button positions.
9. Click on the pattern piece +shift to switch the folding of all button positions.
10. Frame-select the button positions: Select the straight line: Symmetrically copy the button positions.
11. Frame-select the button positions: From the starting point to the ending point: Translate and copy the button positions.
12. Alt + left click: Repeatedly add button positions on the point.

2.Process Lines

(1) Select the Internal Line

 Set a certain construction line as an internal line.

1. Simply left-click on the required construction line. If the Ctrl key is pressed simultaneously, the automatic cutting process will not be carried out.
2. Frame-select the enclosed area to add hollowing out (Note: Hollowing out can only be operated in the internal line tool. Use Ctrl + left-click for internal line cutting).

(2) Sewline

 Set stitches on the outline of the pattern pieces.

1. Continuously select the required outline lines.
2. Right-click to end.
3. In Figure 10-15, select the stitch type and set the stitch spacing, and then confirm (Note: You can also directly click on the pattern piece to set stitches around the entire piece. When setting the stitches, if the displayed position of the stitches is incorrect, you can change the stitch position to the opposite side by clicking on "Change Direction". Clicking on the existing stitches allows you to modify the stitch type and size).

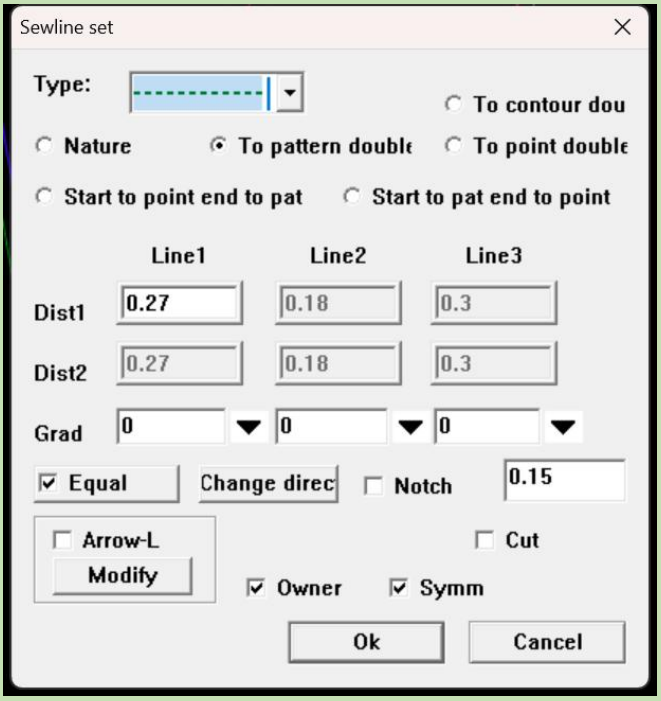


Figure10-15

(3) Quilting Lines

 Add quilting lines on the pattern pieces.

1. While holding down the Ctrl key, left-click to select the starting reference point of the quilting line.
2. Click on the points and lines on the pattern piece one by one to form a closed area;

alternatively, you can directly click on the pattern piece to set quilting lines for the entire piece.

3. Set the type and size of the quilting lines as shown in Figure 10-16, and then confirm (Note: You can reset the quilting lines by clicking on them again). Figure 10-17 is the comparison figure before and after setting the quilting lines.

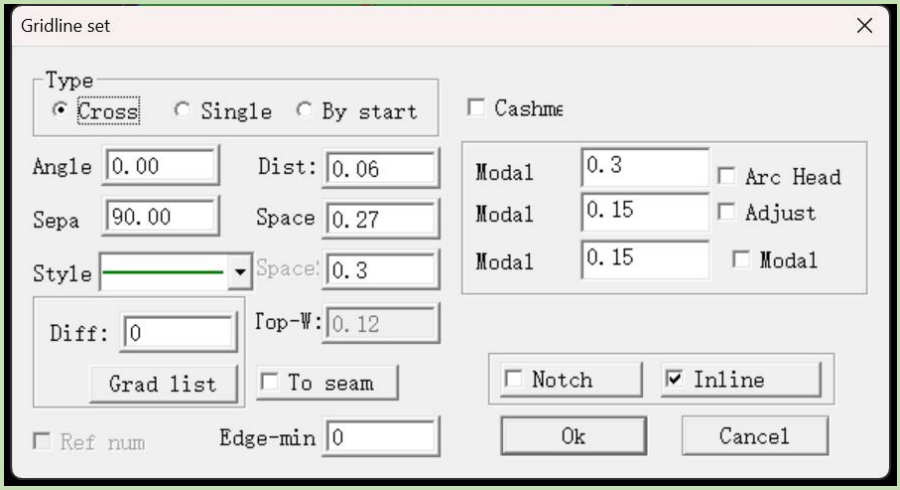


Figure10-16

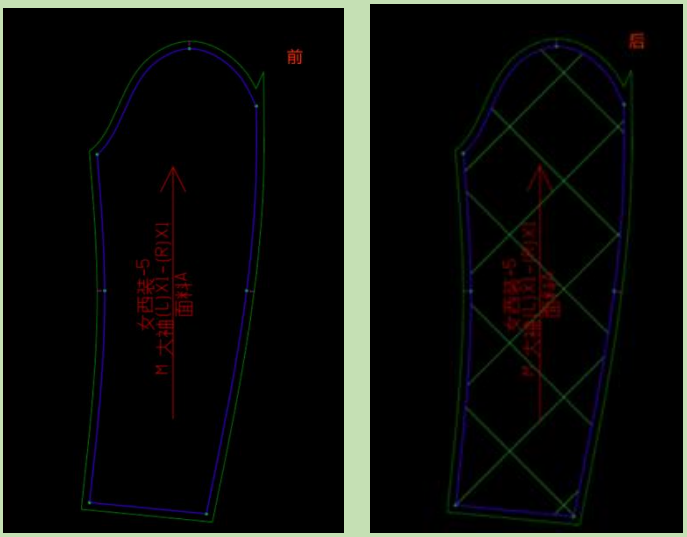


Figure10-17

4. The Function of Quilting Line Template as shown in Figure 10-18.

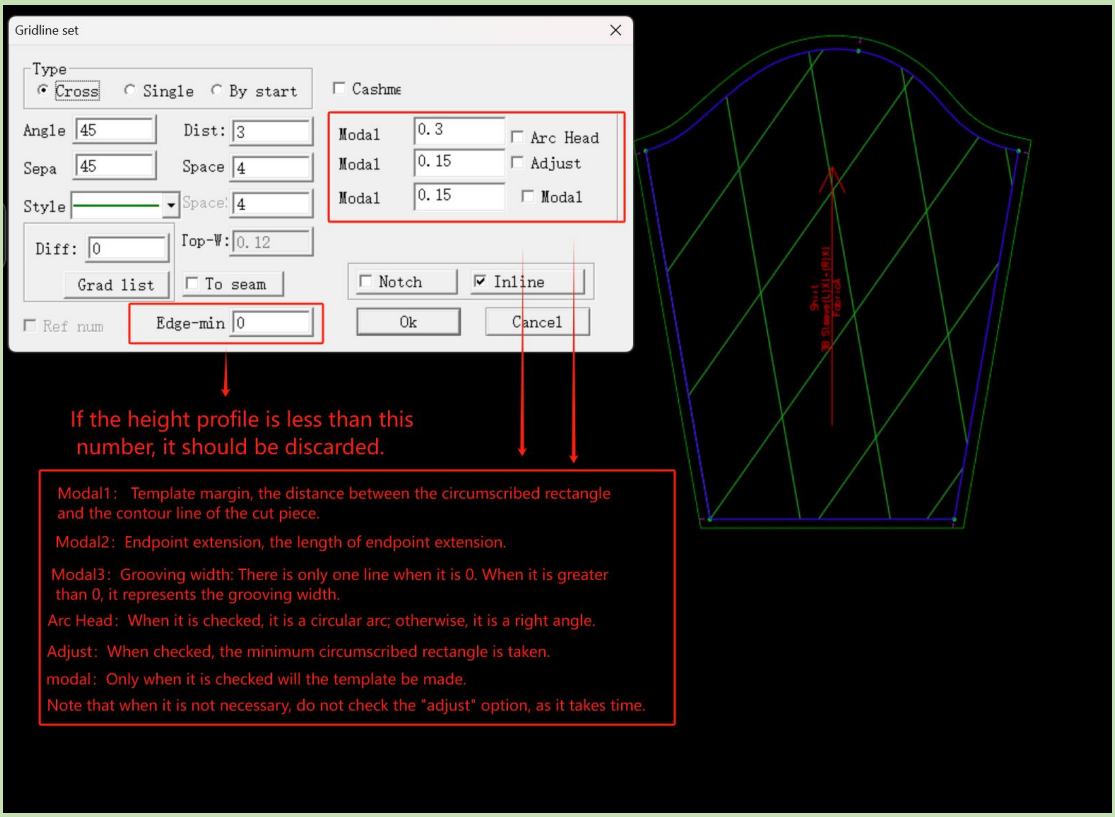


Figure10-18

(1) Edge-min: If the distance between the quilting line and the edge is less than this value, the quilting line will be cancelled.

(2) Modal1: The distance between the circumscribed rectangle and the outline of the pattern piece.

(3) Modal2: The length of the endpoint extension.

(4) Modal3: When it is 0, there is only one line; when it is greater than 0, it represents the slotting width.

(5) Arc Head: When checked, it is an arc; otherwise, it is a right angle.

(6) Adjust: When checked, the minimum circumscribed rectangle will be taken (as shown in the above figure). Note that do not check "Angle Correction" when it is not necessary, as it is time-consuming.

(7) Modal: The template will be generated only after it is checked.

3.Pattern Piece Division

(1) Pattern split

 Cut one pattern piece into two pieces.

Operation method: Click on the lines of the parts that need to be cut open in sequence, and then double-click. It is shown in Figure 10-19.

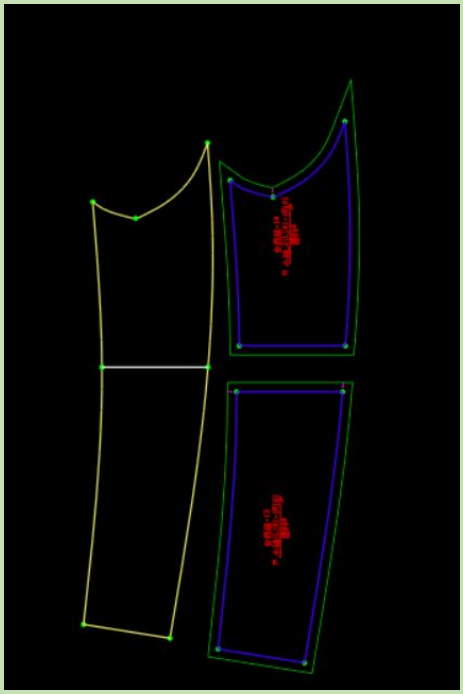


Figure10-19

(2) Take out part

 Take out a certain part from the existing pattern pieces as a new pattern piece.

Operation Steps: Click on the cutting lines of the pattern pieces in sequence, and double-click on the area that needs to be taken out as shown in Figure 10-20.

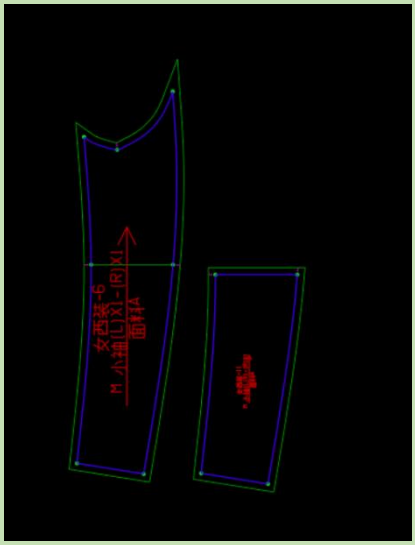


Figure10-20

(3) Modify-P

 Cut off a certain part of the pattern piece.

Operation Steps: Click on the cutting line, and then click on the pattern piece on the side that needs to be cut off as shown in Figure 10-21.

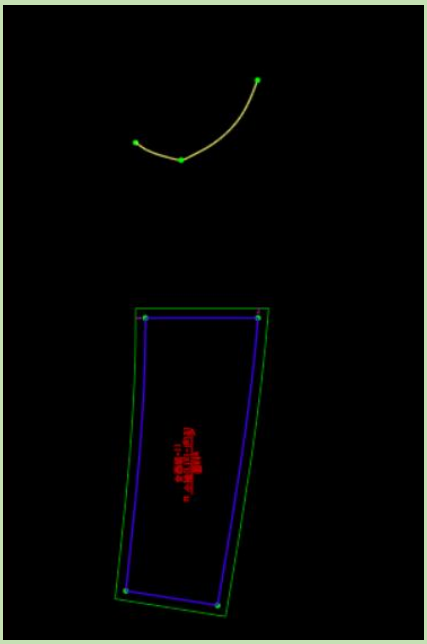


Figure10-21

(4) Welt

 Perform the relevant operations. The comparison pictures of the facing before and after are shown in Figure 10-22.

1. Click on the starting edge of the facing. +Ctrl: Direct facing (single edge).
2. Click on the ending edge of the facing. +Ctrl: Direct facing (multiple edges).
3. Right-click to cancel the operation.
4. Frame-select one edge of the pattern piece: Facing.
5. Frame-select multiple edges of the pattern piece: Facing.
6. When frame-selecting +Ctrl: There will be a parameter box.

1.

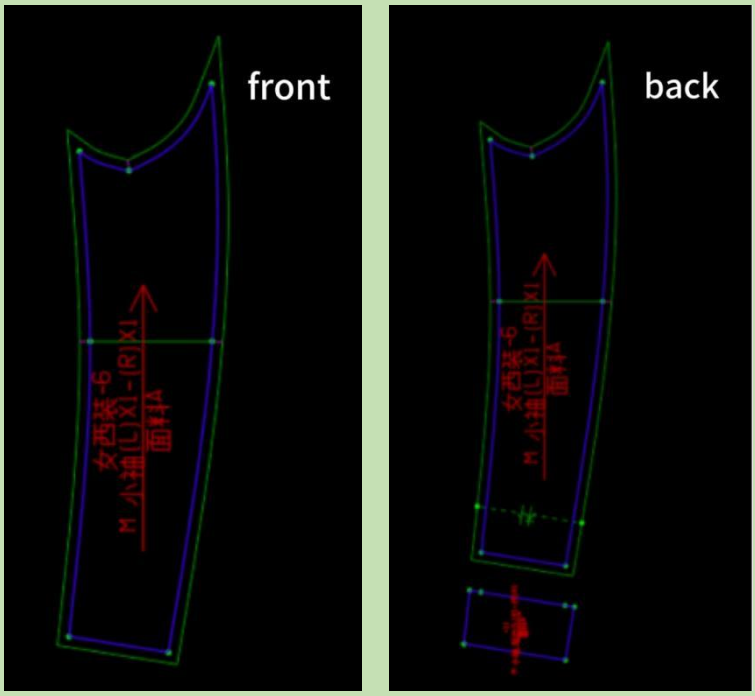
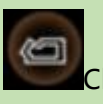


Figure10-22

(5) To inner

 Change the current fabric of the pattern piece to the lining fabric as shown in Figure 10-23.

1. Select the tool for changing to lining fabric.

2. Click the left mouse button on the pattern piece to be modified.

3. Modify the allowance amount of each edge (similar to modifying the seam allowance).

4. Double-click the left mouse button to make the modification.

5. If you don't want to modify the selected pattern piece, press the TAB key.

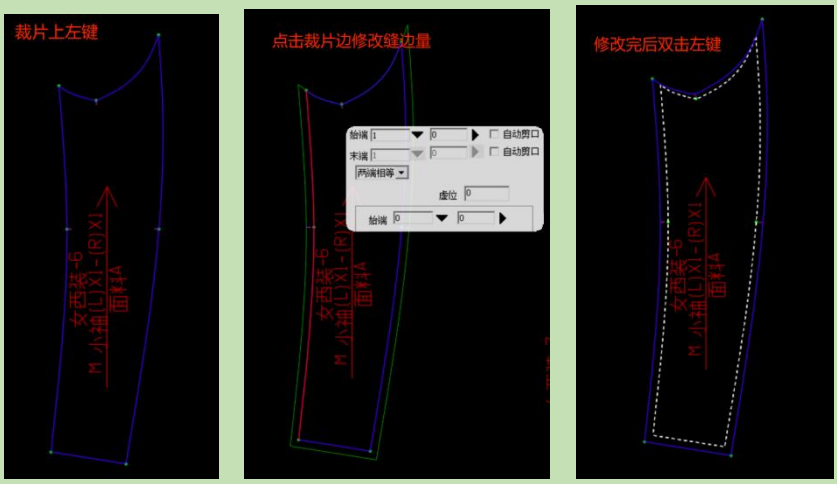


Figure10-23

4.Pleats

(1) Single Pleat

 Add single pleats to the required parts of the pattern pieces as shown in Figure 10-24.

1. Click on the starting point of adding pleats.

2. Click on the ending point of adding pleats.

3. Enter the amount of pleats (Note: The first pleat amount represents the overall pleat amount from the starting end to the ending end, and the second pleat amount represents the additional pleat amount at the ending end)

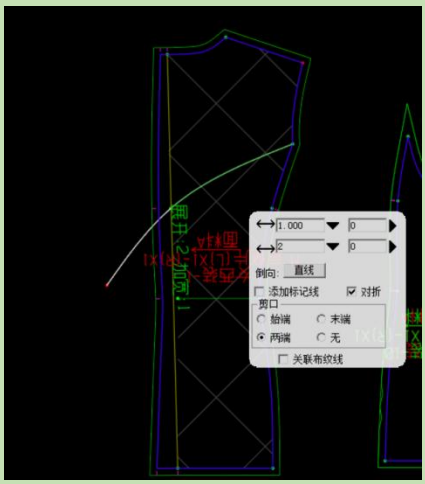


Figure10-24

(2) More Pleats

 Add multiple pleats to the required parts of the pattern pieces as shown in Figure 10-25.

1. Click on the starting point of adding pleats.
2. Click on the ending point of adding pleats.
3. Enter the amount of pleats and the number of pleats.

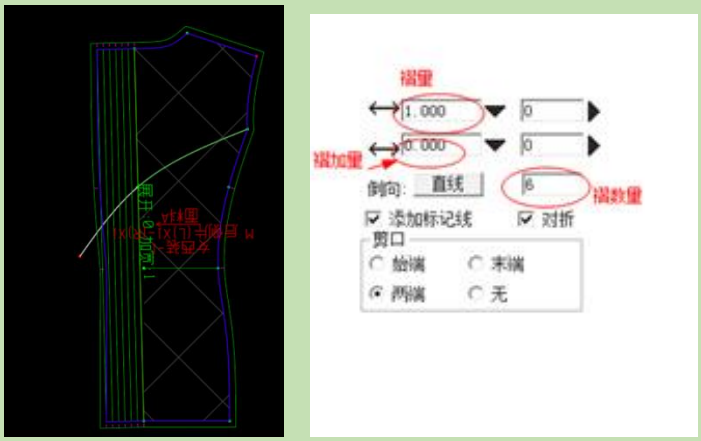


Figure10-25

(3) Single Pleat

 Add single pleats at the required parts of the pattern pieces as shown in Figure 10-26.

1. Click on the starting point of the pleat.
2. Click on the ending point of the pleat.
3. Move the mouse to draw the pleat.
4. Enter the length of the pleat (Note: If "Add Marking Line" is selected, the pleat will be printed out during printing).

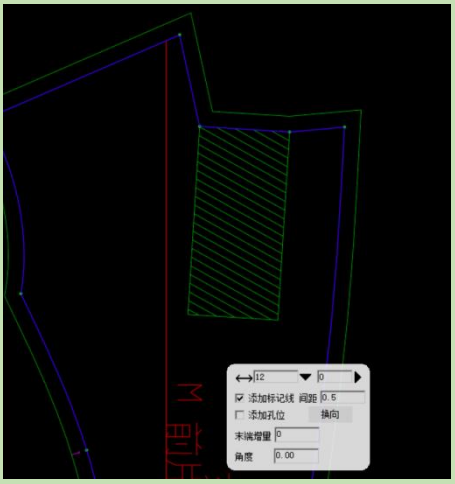


Figure10-26

(4)double pleats

 Add double pleats at the required parts of the pattern pieces.

1. Click on the starting point of the pleat.
2. Click on the ending point of the pleat.
3. Move the mouse to draw the pleat.
4. Enter the length of the pleat.

(5) Spread

 Perform a special expansion on the pattern pieces.

Operation method: Sequentially click on the four key points of the pattern piece, and enter the expansion amount in the parameter column. Line length A: Enter the expansion amount. Line length B: Enter the widening amount. In the bottommost edit box: Enter the segmentation density, which should be less than or equal to 300.

5.Rotation and Trimming

(1) Pattern Rotation

 Rotate the pattern pieces (Note: Only the unassociated pattern pieces can be rotated).

1. Operation Method One

(1) Click on the pattern piece to rotate it with the center as the origin.
(2) Select the rotation method in the dialog box and confirm it.

2. Operation Method Two

(1) Click to select the fixed point for rotating the pattern piece.
(2) Click to select the moving point for rotating the pattern piece.
(3) Click the left mouse button.
(4) Enter the rotation angle and confirm it.

3. Operation Method Three

(1) Press the X key on the line: Horizontal along the line.
(2) Press the Y key on the line: Vertical along the line.
(3) Select two points and press the X key: Horizontal along the line.
(4) Select two points and press the X key: Horizontal along the line.

(2) Dynamic Inspection of Pattern Pieces

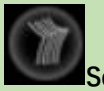
 Jion for check perform the relevant operations (Note: a. When checking, use Ctrl + right-click when adding notches. b. For dynamic splicing inspection, if the direction automatically identified is incorrect, undo one step and redo the operation. Press Ctrl for the same direction and Shift for the opposite direction when moving for the first time).

1. Click on the points on the moving pattern piece.
2. Move the mouse to the corresponding position on another pattern piece and click the left mouse button.
3. Press the left mouse button and move the mouse.

4. Right-click to end the inspection.

6.Grading

(1) Grid align

 **Set the pattern piece net diagram to align with a certain point; meanwhile, modify the grading amount function during the alignment process (reset the grading amount to zero).**

1. Just click on the points that need to be aligned.
2. Right-click on a point: Align horizontally with reference to this point.
3. Right-click on a point + Ctrl: Align vertically with reference to this point.
4. While holding down the Ctrl key, click on the grading point that needs to be aligned, and the grading amount of this point will be reset to zero. (For point-graded pattern pieces)
5. Shift + click on a pattern piece: Align with the center of the pattern piece.
6. Click on the middle part of a line: Align with the angle and midpoint of the line.
7. Click near an endpoint: Align with the angle of the line and this point.

(2) Point Grading Tools

 Scale point

1. Click or frame-select grading points (one or more).
2. Select the grading type as shown in Figure 10-27.

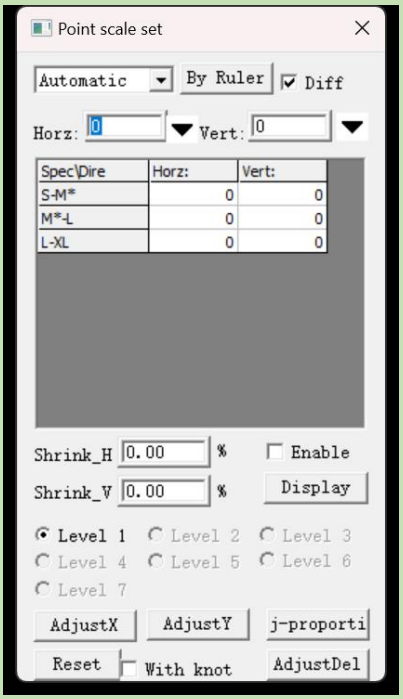


Figure10-27

(1) Grading Types: (Refer to the operation methods in the intelligent mode).

(2) Invoking Rules: Directly invoke the existing grading rules; Operation Method: Simply click on by ruler in the name column. As shown in Figure 10-28.

(3) Open: Open the previously saved rule table.

(4) Save : Save the modified rule table for future use.

(5) Del: Delete a certain rule.

(6) Modify: Modify the existing grading rules.

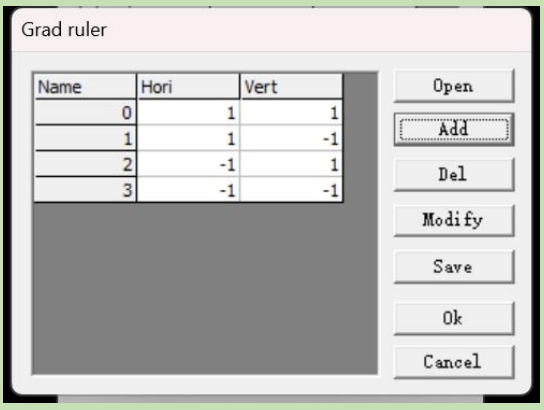


Figure10-28

3. Just enter the grading amounts (Note: a. You can hold down the Shift key to continuously select grading points. b. The grading amounts can be entered manually, or you can use the drop-down arrow behind the input box to select relevant formulas. c. After selecting "Enable", you can enter the shrinkage rate. For fabrics with a large shrinkage rate, this ensures accurate grading).

(3) Copy Grading Points

 Copy the grading amounts to other grading points.

1. Select the copying method as shown in Figure 10-29.
2. Click or frame-select the grading points to be copied.
3. Click or frame-select the grading points where the copying is to be done.
4. Right-click to cancel the copying (Note: At this time, other grading rules can be reselected for copying).

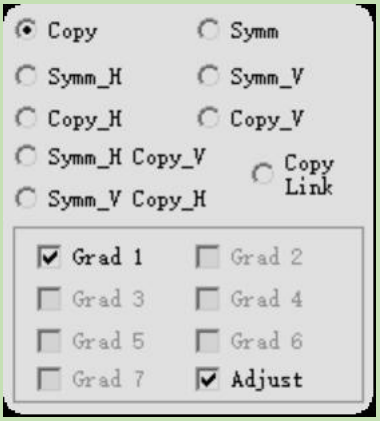


Figure10-29

(4) Establishing Associations

 Establish associations for objects that are not associated.

1. Click on the target point/line.
2. Click on the reference point/line + Ctrl: Associate two points.
3. Adding a line between two points: Single compass.
4. Right-click to cancel the operation.

Section 11: Settings

System settings mainly involve setting parameters and various functions within the system. The specific contents are as follows:

(1).Language Settings:

English, Simplified Chinese, Traditional Chinese (Taiwan), Traditional Chinese (Mainland), and Portuguese can be set.

(2).Unit Settings:

After selecting this menu, centimeters, inches (with both decimal and fraction forms), Chinese inches, and millimeters, etc. can be selected respectively.

(3).Color Settings:

The colors of mesh diagrams, nesting diagrams, fabric display, parts (the colors of the names of various parts in the size chart), and system color settings (the colors of structural lines, the background color of the work area, the filling color of the current pattern piece, etc.) can be set (Figure 11-1).

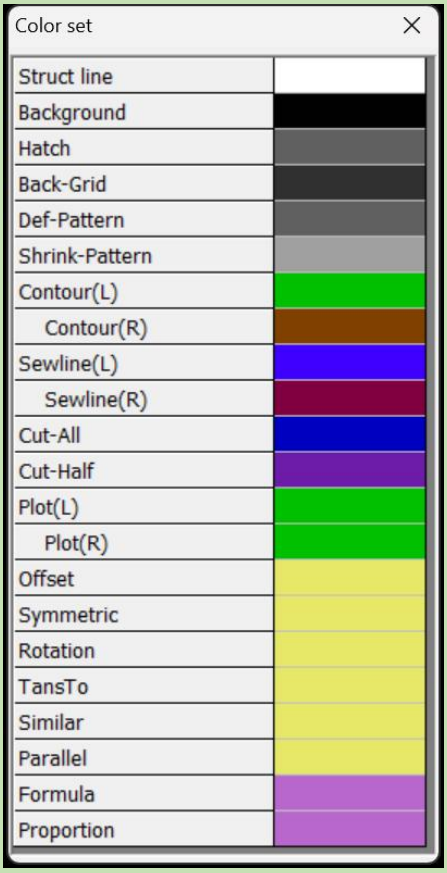
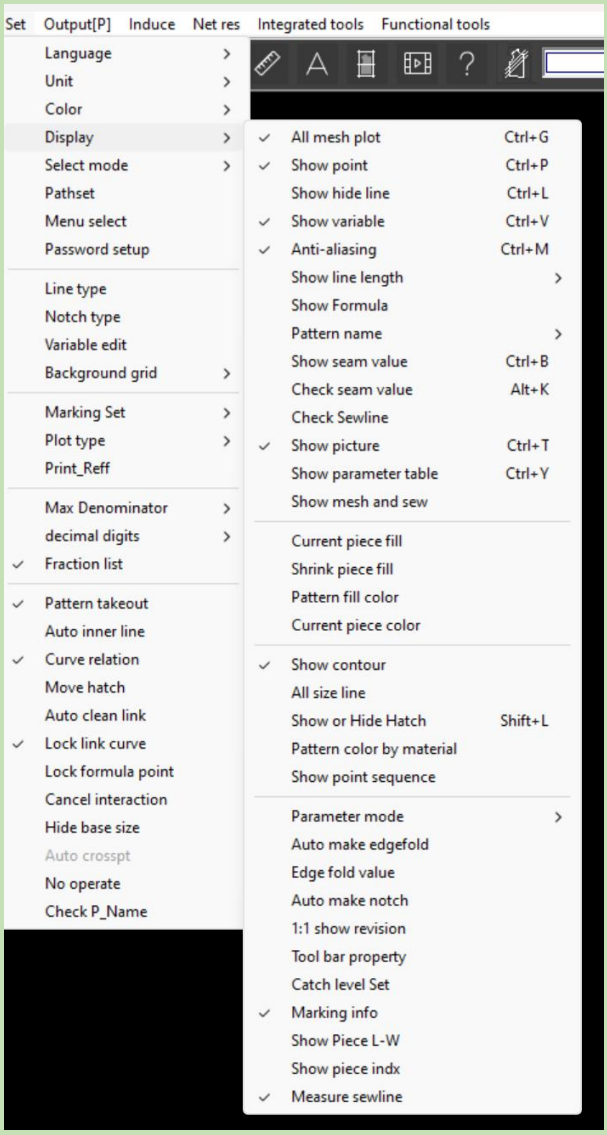

Color set
Struct line
Background
Hatch
Back-Grid
Def-Pattern
Shrink-Pattern
Contour(L)
Contour(R)
Sewline(L)
Sewline(R)
Cut-All
Cut-Half
Plot(L)
Plot(R)
Offset
Symmetric
Rotation
TansTo
Similar
Parallel
Formula
Proportion

Figure11-1

(4).Display Settings:



Set various display items. The specific contents are as follows:

1. All mesh plot： When selected, all mesh diagrams will be displayed. If not selected, only the mesh diagram of the currently selected pattern piece will be displayed.

2. show point: When selected, the endpoints of all line segments will be displayed. If not selected, the endpoints of line segments will not be displayed.

3. Show Hide Line: Hidden lines can be redisplayed or hidden again.

4. Anti-aliasing: It can make the lines appear smoother.

5. Show Line Length: After being selected, the line length data can be displayed.

1) Display All: After being selected, all line lengths will be displayed.

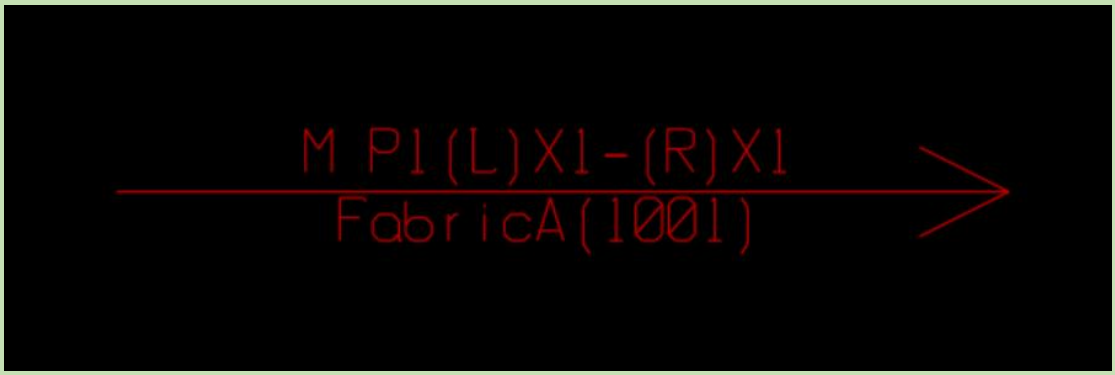
2) with Cursor: After being selected, only the line length data recognized by the cursor will be displayed.

3) Notch Segment Length: After being selected, when the cursor is placed on a line with notches, the lengths of the line segments divided by the notches can be displayed.

6. Pattern Name:

After being selected, the names of each pattern piece can be displayed.

1) Saparating L/R: Once selected, the names of the pattern pieces will be displayed to distinguish between the left (L) and right (R) pieces.



2) Jion L/R: Once selected, the names of the pattern pieces will be displayed without distinguishing between the left and right pieces, and the quantities of the left and right pieces will be merged.

7.show seam value:After being selected, the seam allowance of the current pattern piece can be displayed.

8. Check Seam value: After being selected, a list of seam allowances can be displayed, and the lines where the seam allowance is set will be marked in red.

9. Check sewline: After being selected, a list of process lines can be displayed, and the lines where the process lines are set will be marked in red.

10. show Pictures: After being selected, the pictures input into the system can be

displayed; if not selected, they will not be displayed.

11. show Parameter Table: After being selected, the part size table of the base code will be displayed.

12.Current Piece fill: The currently selected pattern piece will be filled.

13. shink piece fill: The shrinkage pattern pieces will be filled.

14. Pattern fill Color: All pattern pieces will be filled with colors.

Setting Methods: 1) Using the pattern piece intelligent tool, press the "F" key on the pattern piece;

2) Frame-select the pattern pieces for which you want to set the colors together, and then select "Set Fill Color" from the right-click menu.

15. Current Piece color: After being selected, the current pattern piece will display different colors.

16. show contour: All outline lines will be displayed.

17.All size line: The grading mesh lines of the structural lines will be displayed.

18. Show/Hide hatch: Display or hide shadows.

19. pattern color by material: Each type of fabric will be displayed in a different color for easy distinction.

20. show Point Sequence: Display the order of points, which is basically not used.

23. Parameter Mode: There are two modes: following the cursor and displaying on the right side.

24. Automatic make adgefold: Automatically add a hem on the corresponding seam allowance.

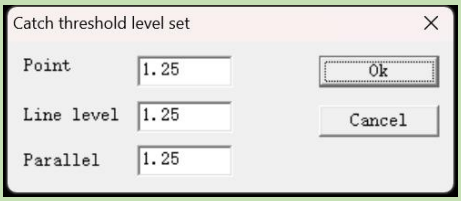
25. Automatic fold value: After being selected, a setting box will pop up to set the difference for automatic hemming.

26. Automatic make Notch: Automatically add notches on the seam allowance.

27. 1:1 Display Calibration: Calibrate the values displayed on the monitor with the measured values on the monitor.

28. tool bar property: Set the attributes when in full screen mode.

29.catch lever set:Adjust the sensitivity of finding points or lines.



30. Marking Information: When there is overlap or rotation during nesting, there will be overlap or rotation prompts when saving and outputting files.

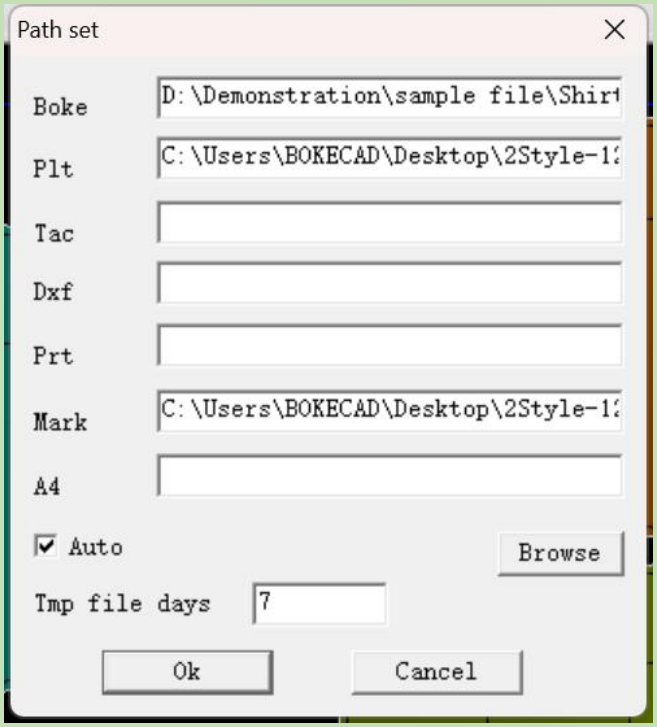
(5).Selection Modes:

Settings for the way of selecting objects with the mouse. Two different selection modes, "Full Frame Selection" and "Press Frame Selection", can be set.

(6).Path Settings:

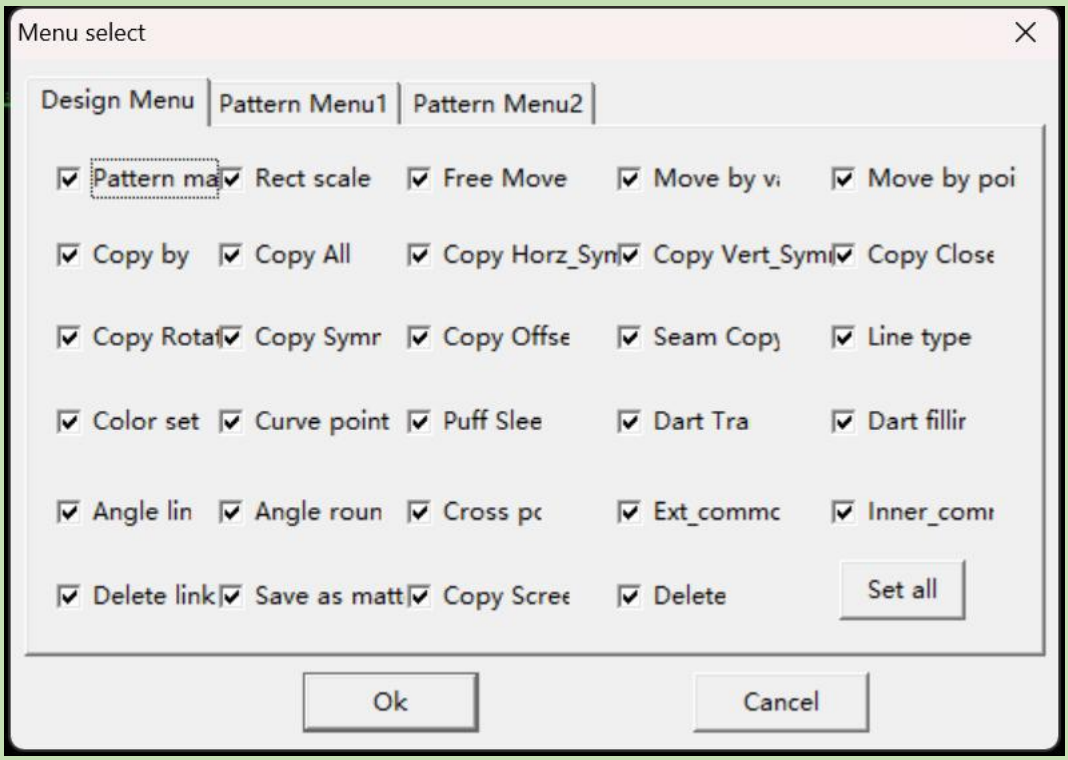
When saving boke files, plt, dxf, tac, prt, etc. in the future, the path set here will be automatically indicated.

(Note: Automatic Update. If it is in the selected state, when saving currently, it will still save to the first default path; if it is in the unselected state, the current path will be the default path for the future.)



(7).Menu Selection:

Select the options you want to display for personalized operations.



(8).Password Settings:

The file password is used by pattern makers to encrypt their own files so that others cannot read them. The editing password only allows for nesting the file but not modifying it.

Operation Methods:

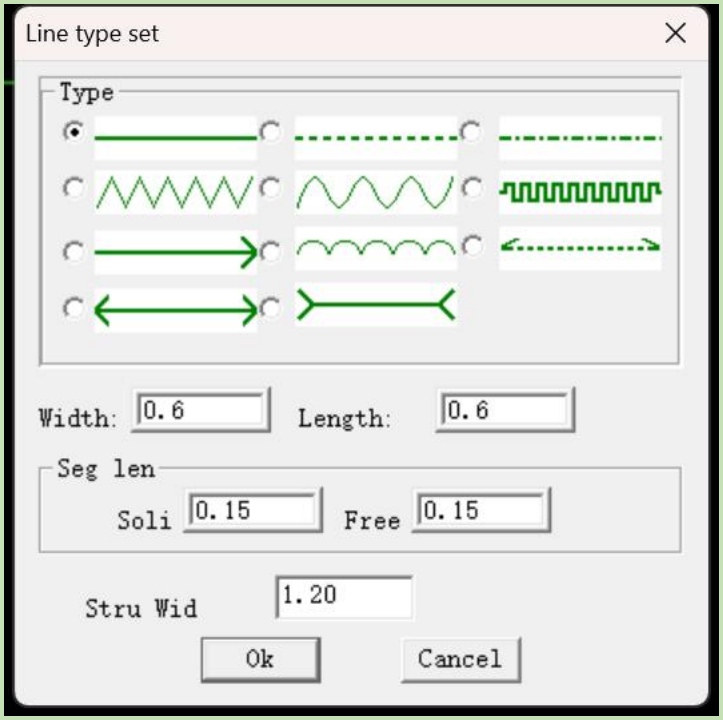
1. The system default file password is "12345678", and the editing password is "11111111". If no encryption is required, do not modify them.

2. If you want to change the passwords, select the menu "Settings → Password Settings" and set the new passwords in the dialog box.

(Note: Passwords can only be in numbers.)

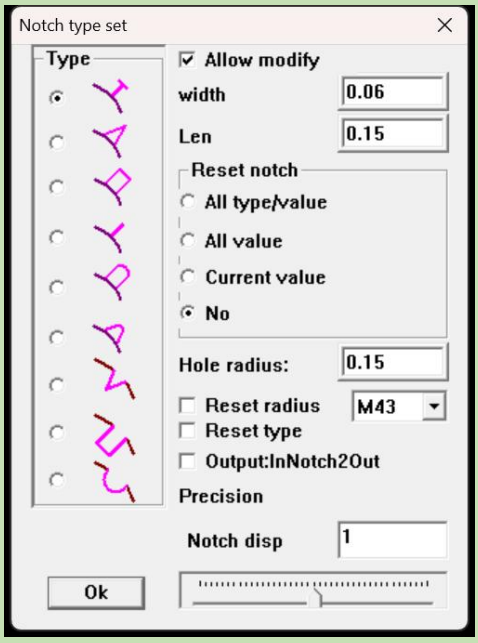
(9).Line Type Settings:

Different line types can be set.



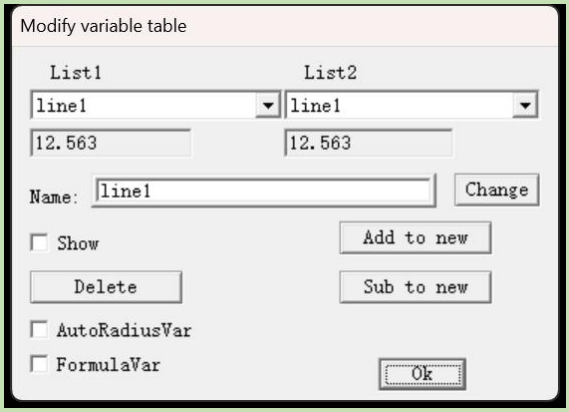
(10).Notch Types:

Different notch types can be set.

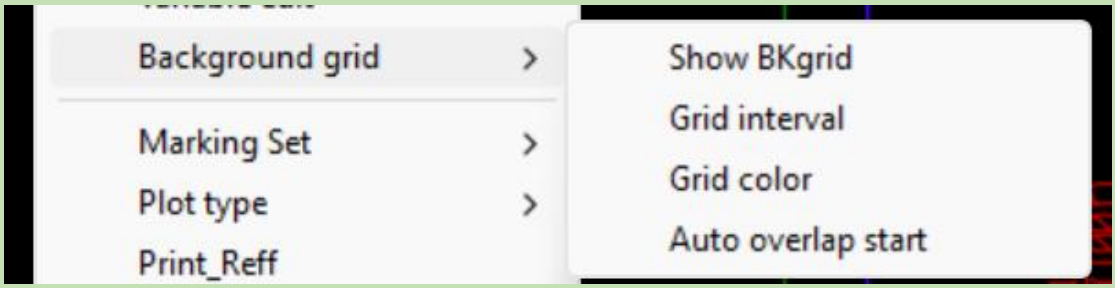


(11).Variable edit:

Renaming, deletion, addition, subtraction and other calculations can be performed on the recorded variables.

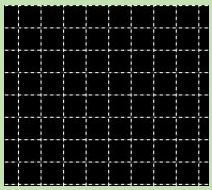


(12).Background Grid:



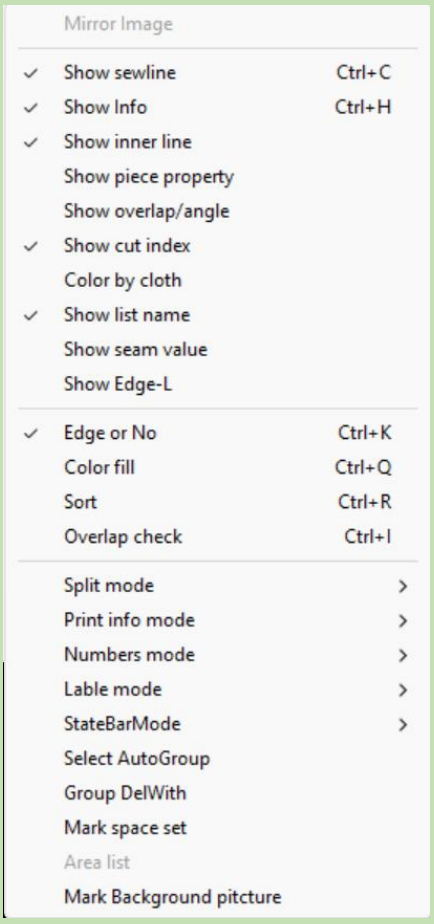
You can set to display or hide the background grid, as well as the interval and color of the grid lines.

Background grid not displayed.



Background grid displayed.

(13).Marking Settings:



Set various items within the markinging system.

1. Show sewline: After being selected, the nesting diagram will display the net sample lines; otherwise, they will not be displayed.

2. Show info: You can choose whether to display the text information within the nesting diagram.

3. Show inner line: After being selected, the internal lines of the pattern pieces will be displayed during nesting; otherwise, they will not be displayed.

4. Show piece property: Display the relevant information of the pattern pieces.

5. Show overlap/angle: After being selected, when the mouse is placed on a certain pattern piece within the nesting diagram, the overlap amount and rotation angle of that pattern piece can be displayed.

6. Show cut index: Display the order of cutting on the cutting table.

7. Color by cloth: Each single piece is displayed in a single color for easy inspection.

8. Show list name: Used to set the display of all pattern piece names in the sample area.

9. Show seam value: The size of the seam allowance of the pattern pieces is displayed on the pattern pieces in the nesting. At this time, if "Pattern Piece Text" is checked for output, the seam allowance of the pattern pieces will be output.

10. Show Edge-L: After being selected, the side lengths of the pattern pieces will be displayed during nesting.

11. Edge or No: Set net sample nesting or gross sample nesting respectively.

12. Color fill: Set whether to display the colors of the pattern pieces in the nesting diagram.

13. Sort: After selecting this option, the pattern pieces in the waiting-to-be-nested area will be sorted in descending order according to the selected sorting scheme.

14. Overlap Check: After selecting this option, all overlapping pattern pieces in the nesting diagram can be displayed in a list. After closing the list, all overlapping pattern pieces will be shown without color.

15. Split mode: There are two types, namely the parameter method and the mouse method (refer to the splitting tools in the nesting center for specific differences).

16. Print info mode: When printing the nesting information, you can choose to place it at the end, the beginning, or both ends of the nesting diagram.

17. Numbers mode: There are "Single Bed Setting" and "Overall Setting" inside. Selecting "Single Bed Setting" is the same as before; selecting "Overall Setting" will uniformly set the number of pieces.

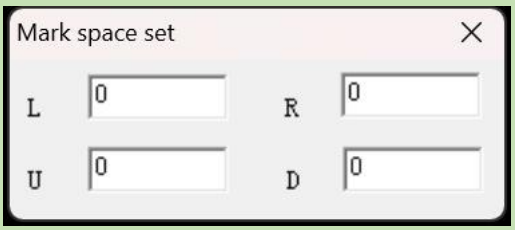
18. Lable mode: You can choose between two types, letters and numbers. Its function is to sort the pattern pieces to distinguish each one.

19. StateBarMode: When the unit is inches, it is used to select the format of the nesting length. Option 1: yards + inches; Option 2: yards; Option 3: inches.

20. Select AutoGroup: Pattern pieces will be automatically grouped by frame selection.

21. Group DelWith: If one pattern piece in a group is deleted, all pattern pieces in the group will be deleted.

22.Mark space set: Used to display the dialog box for setting the nesting interval.

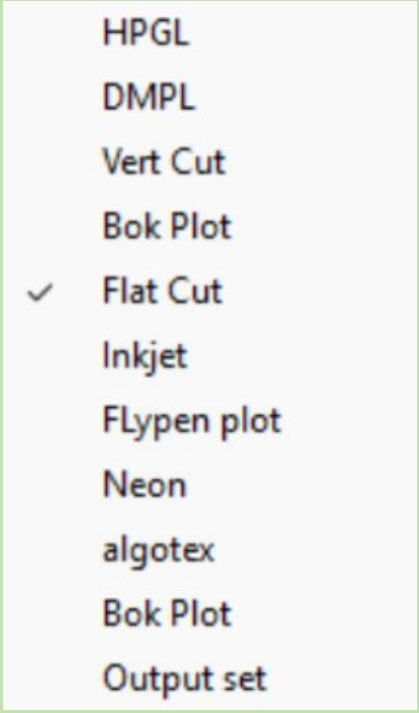


23. Pattern Piece Area List: Display the area of the pattern pieces.

24. Mark Background pitcture: Used as a reference for the pattern of manual nesting.

(14).Plotter type:

The plotting language and different types of plotters can be set.



(15).Max Denominator:

Set the largest denominator of fractions. (Selected when dealing with inch fractions)

(16). Decimal digits:

Set the number of digits after the decimal point.

(17).Fraction List:

When inputting inch fractions, a list of fractions will appear when the space bar is pressed.

(18). Pattern takeout:

Set whether to extract the pattern pieces from the structural drawing after generating them.

(19).Auto inner line:

Once selected, the internal lines will be automatically added as internal lines when generating pattern pieces.

(20).Curve relation:

After generating pattern pieces, set the association between the pattern piece curves and the structural line curves so that they move in tandem with the structural lines.

(21).Auto clean link:

Automatically cancel the set associations.

(22).Lock link curve:

The associated curves are locked and cannot be modified to prevent accidental operations.

(23).Lock formula point:

The parameter points determined by formulas are locked and cannot be modified.

(24). Cancel interaction:

Once selected, the graphics drawn using the system will have no associations and cannot be automatically graded (the same as those input by the digitizer).

(Note that the system does not select this option by default.)

(25). Hide base size:

Once selected, the base code will be hidden.

(26). Auto crosspt:

Once selected, the intersecting lines drawn will automatically generate intersections

(27).No operate:

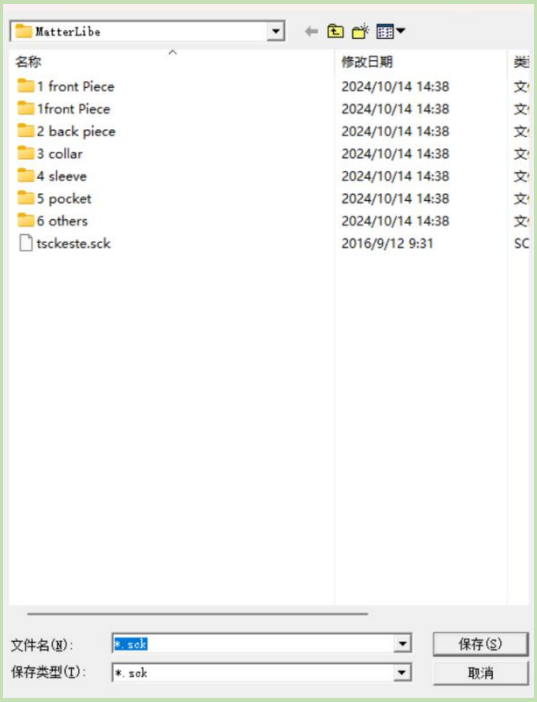
If selected, no operations can be carried out.

Section 12: Component Library

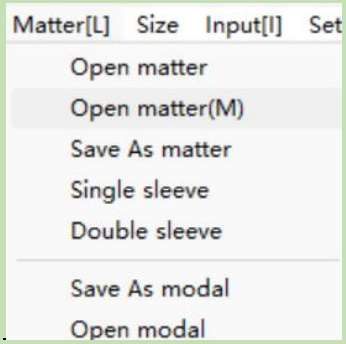
I. Save the Component Library

The designed graphics can be saved to the component library for future calls. There are two ways to save the component library: partial saving and overall saving.

(1) Partial Saving: In the intelligent mode, frame-select the required part of the graphics, right-click, select "Save as matter", enter the file name, and then click "OK" to confirm.



(2) Overall Saving: Select the menu "Component Library" - "Save as matter", enter the relevant name, and then click "OK" to confirm.

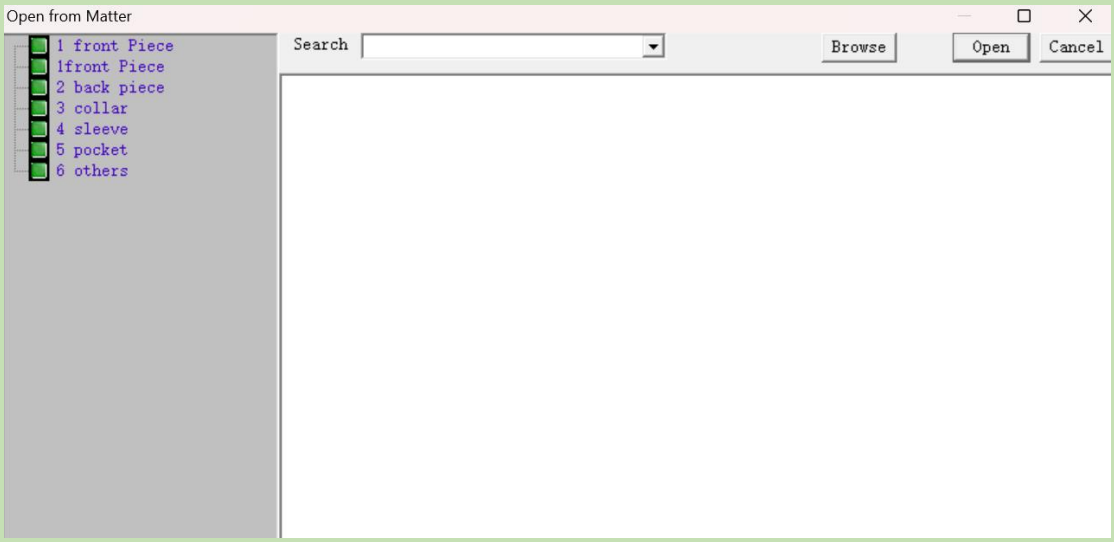


II. Open the Component Library

By loading components, the previously saved graphics can be directly loaded into the

required files, and necessary dimension modifications can also be made. There are also two ways to open the component library: opening via the menu and opening in the intelligent mode.

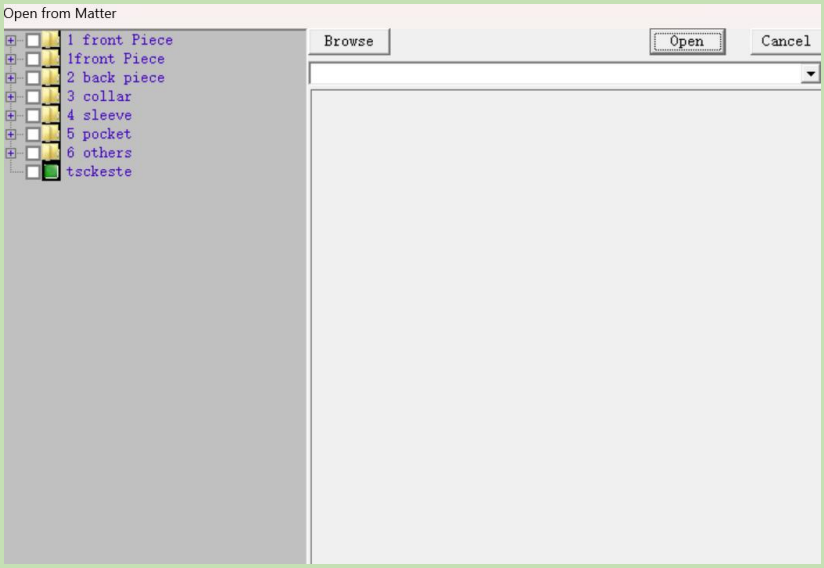
Opening via the menu: Select the menu "matter" - "Open matter", choose the relevant components, and then click "OK" to confirm.



Open the intelligent mode: Right-click in the intelligent mode, select "read matter", choose the relevant components, and then click "OK" to confirm.

III. Reading of Multiple Components

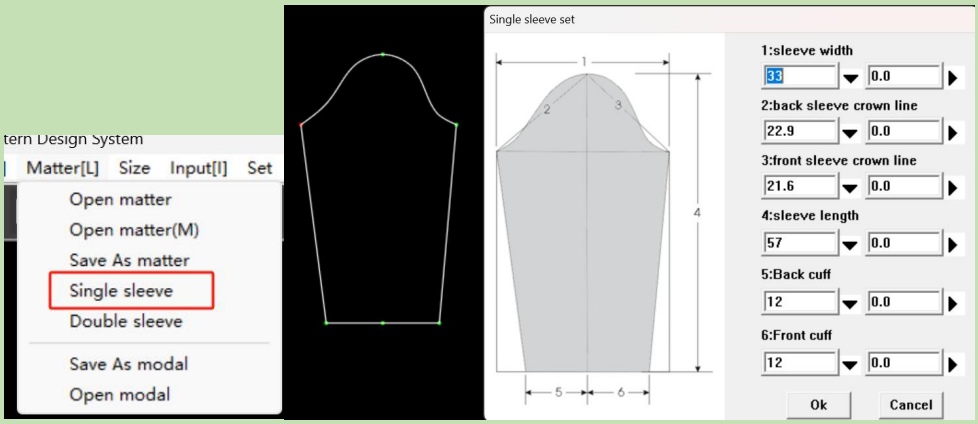
Multiple components can be read at one time.



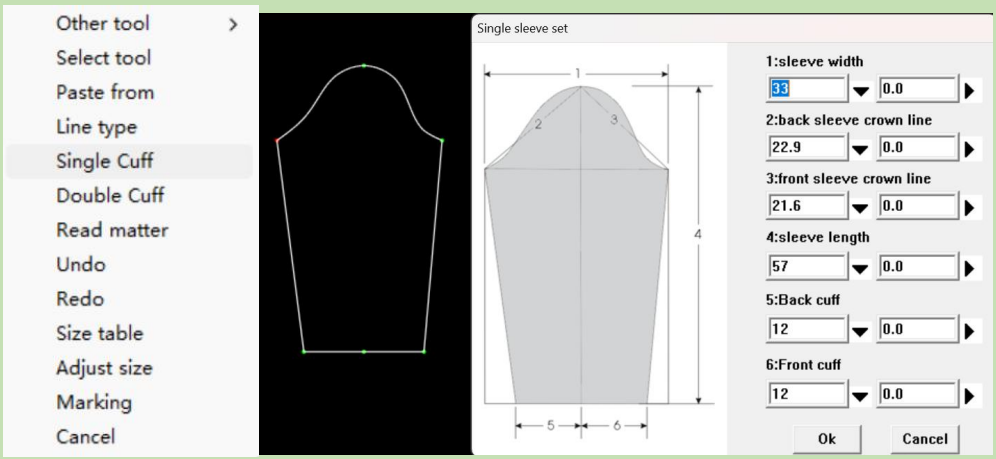
IV. Commonly Used Components

(1) One-piece Sleeve: The system automatically creates a one-piece sleeve.

Method 1: Select the menu "Component Library" - "One-piece Sleeve", input the relevant data, and then click "OK" to confirm.

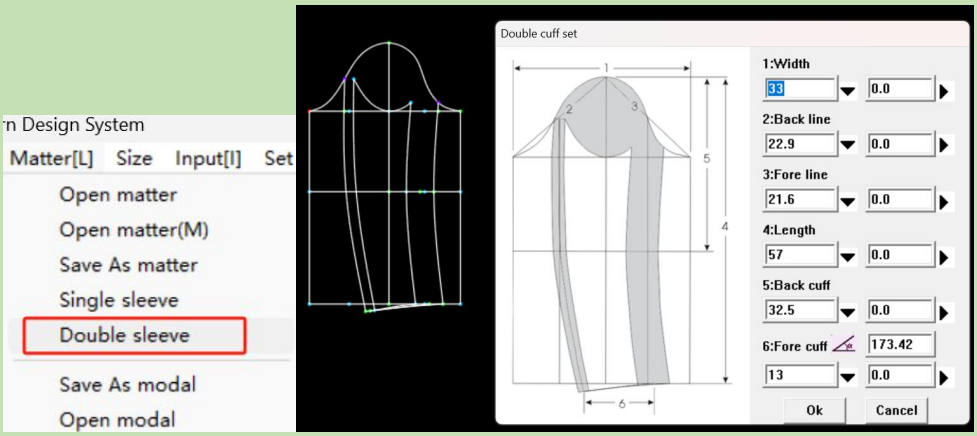


Method 2: Right-click in the intelligent mode, select "One-piece Sleeve", input the relevant data, and then click "OK" to confirm.



(2) Two-piece Sleeve: The system automatically creates two-piece sleeves.

Method 1: Select the menu "Component Library" - "Two-piece Sleeve", input the relevant data, and then click "OK" to confirm.



Method 2: Right-click in the intelligent mode, select "Two-piece Sleeves", input the relevant data, and then click "OK" to confirm.