KH-323 SERIES – V2

OPERATION MANUAL
DEAR CUSTOMER:

Welcome to be an owner of KH-323 series-V2 computerized flat knitting machine as Kauo Heng endeavors to maintain a high standard of this machine, we also pleased for your cooperation to make the machine serve longer by reading this operator manual carefully before commencing your production.

Yours sincerely,
Kauo Heng Precision Machinery Industrial Co., LTD.

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Model: KH-323 SERIES-V2
Gauge: G
Knitting Width: Inch
Serial No.:
Date:
Power: ø V
OVERVIEW OF KH-323 SERIES-V2

1. Yarn carrier selection
2. Carriage
3. Operation bar
4. Main cover
5. Fabric take-down roller
6. Controller
7. Main motor
8. Side tension
9. Top tension
10. Side cover
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1. Points to observe

Installation Environmental Conditions

Please install the machine as below instructions in order to use this machine in the best condition for a long period of time.

- Do not install the machine at a place subject to direct sunshine and/or adjacent to a heat generation source such as a furnace/oven.

- Do not install the machine at a place subject to rapid temperature changes. The temperature should be $0^\circ C \sim 35^\circ C$ inside the controller.

- Do not install the machine at a place where there is a lot of dust and dirt, or a location affected by chemical gases, sea breeze etc.

- Do not install the machine at a place subject to excessive moisture. The humidity should be $30\% \sim 80\%$

- Do not install the machine on a slope or unstable place.

- Please connect the electric power and make sure the ground wire is connected correctly.
Fig. 1.1 illustrates the correct position of jacking while moving the machine. It is very important when moving the machine. The yarn carrier rail shall never be used to push the machine since it will distort the rail.

![Correct position of jacking the machine](image)

When connecting the electric power, attention must be paid to the correct voltage. And make sure the ground-wire connected.
2. Installation

After unpacking and locating the machine in the factory, it must be leveled carefully with a spirit-level to avoid machine distortion in running. We recommend the machine to be leveled with rubber padding for best result. Remove grease from the polished parts before starting to operate the machine. About the moving parts must be lubricated and cleaning according to the following instruction.

Maintenance of machine :

※ Cleaning

<table>
<thead>
<tr>
<th>Where to clean</th>
<th>Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top tension equipment</td>
<td>Every 8-12 hours</td>
</tr>
<tr>
<td>Side tension equipment</td>
<td>Every 8-12 hours</td>
</tr>
<tr>
<td>Needle beds (front &amp; back)</td>
<td>Every 8-12 hours</td>
</tr>
<tr>
<td>Yarn feeders</td>
<td>Every 8-12 hours</td>
</tr>
<tr>
<td>Where to clean</td>
<td>Interval</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Cams inside carriage</td>
<td>Every 3 months</td>
</tr>
<tr>
<td>Filter in front cover of main motor</td>
<td>Every 8-12 hours</td>
</tr>
<tr>
<td>Filter in front cover of controller</td>
<td>Every 8-12 hours</td>
</tr>
<tr>
<td>Internal controller</td>
<td>Once a month</td>
</tr>
</tbody>
</table>
### Oil Lubrication

<table>
<thead>
<tr>
<th>Where to oil</th>
<th>Oil type</th>
<th>Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carriage rail</td>
<td>SAE 10W-10 oil</td>
<td>Every 8-12 hours</td>
</tr>
<tr>
<td>Carrier rail &amp; Stopper</td>
<td>SAE 10W-10 oil</td>
<td>Every 8-12 hours</td>
</tr>
<tr>
<td>Where to oil</td>
<td>Oil type</td>
<td>Interval</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Needle beds (front &amp; back)</td>
<td>Kauo Heng oil 1</td>
<td>Every 8-12 hours</td>
</tr>
<tr>
<td>Driven pulley bracket</td>
<td>SAE 10W-10 oil</td>
<td>Every 3 months</td>
</tr>
<tr>
<td>Chain (Take-down)</td>
<td>High-Temp Grease</td>
<td>Once a year</td>
</tr>
</tbody>
</table>

②Raise the yarn stand till the end of the tubes is leveled with the base plate, tighten the screws and connect the plug of stop motion situated at the left rear end.
3. Operation

3.1 Power switch

As Fig.3.1 front side of controller, easily find two switches. Flip upward is “ON” and downward is “OFF”.

3.2 Operation bar

3.2.1 Inching : When turning forward of the operation bar, machine operates slowly and stops when you loosen.

3.2.2 Starting : When turning backward of the operation bar, machine starts. Machine starts from slow speed and runs in preset speed when reaching the first terminal sign.

3.2.3 Stop : When the machine is running, you can turn operation bar in any direction to stop machine.

3.2.4 Machine executes protection mode automatically when machine stops over 3 seconds. You must turn twice backward of the operation bar to start.
3.3 Yarn feeder

The position of carrier is adjusted according to the desired knitting width, correctly make yarn feeder beside the end working needle by 10 mm. The yarn feeder must be in the central position between front and rear needles, also check its height refer to Fig.3.3. When work several yarn feeder in knitting, the position of carrier should be adjusted to make each yarn feeder not be overlapped, it avoids damage of the parts. The yarn carrier on rail must be adjusted in easy moving, adjustment refers to Fig.3.4.
3.4 Top tension

Top tension springs should have the correct tension, the opening of the knot-catcher must be set according to the yarn count that is being knitted.

![Fig.3.5 Top tension](image-url)
3.5 The latch brush

Latch brush is important to prohibit the needle latch to close in knitting, the correct brush setting is illustrated in Fig.3.6.

![Fig.3.6 Correct position of brush](image)

4. Clear filter

Filters are equipped in the controller and in the parts of main motor, it prohibits dust to come inside. Please take out the filter and dust it often refer to Fig.4.1.

![Filter](image)

![Fig.4.1 Cleaning filter](image)
5. Needle bed

5.1 KH-323D-V2 needle bed

KH-323D-V2 the structure of front and rear needle bed is the same with regular needle high butt and low butt.

For the knitting needles in unused you don’t need to dismantle them. All you have to do is to push them in the unactive position. In Fig.5.2 take out the steel wire firstly, and push to the shown area and replace the steel wire.

---

*Fig.5.1 The structure of front & rear needle bed*

*Fig.5.2 Unworked position*
5.2 KH-323DJ&DTJ&N-V2 needle bed

The structure of the front and rear needle bed is the same. KH-323DJ&N-V2 is with regular needles high butt and low butt. KH-323DTJ-V2 is with transfer needles high butt and low butt. They all have one more step of jacks on front and rear needle beds to do more function.

![Diagram of needle bed structure](image1)

Fig. 5.3 The structure of front & rear needle bed

The unused butt needles and jacks you just push them down to the unworked position. Of course you must pull out and back the steel wire A & B for procedure.

![Diagram of unworked position](image2)

Fig. 5.4 Unworked position
6. Cam plate distance

The distance between cam plate and needle bed is maximum 0.1 ㎜, Fig.6.1 shows how to check and adjust. Please check it by every 3 months, loosen the stepped screw and turn the bearing pin to adjust the distance, make sure to tighten the stepped screw after adjustment.

![Fig.6.1 Adjust cam plate distance](image)

7. Remove carriage

When it becomes necessary to remove the carriage, it can be remove from the left hand side or the right hand side. The procedures are as following:

1. Turn off the power firstly.
2. Remove the side cover.
3. Disconnect the two plugs on back of carriage.
4. Remove the fitting screw and cap bolt on connecting plates as shown in Fig.7.1. Then pay attention to remove the carriage.
5. After replacing the carriage, it must be confirmed that the plugs, fitting screws and cap bolts are all completely connected, then start machine.

![Fig.7.1 Remove the carriage](image)
8. Fabric take-down system

In principle of the take-down tension strength must be small and average. The take-down system is controlled by torque motor. There are two important things to adjust the take-down tension strength. Each roller can be adjusted individually. The pressure of roller gets larger and the speed of fabric take-down gets faster.

☉ To detect fabric falling or wraparound, there is equipped with a press-off detector in the front of roller and a fabric roll-up detector in the back of roller. The machine will stop automatically when the fabric happens fall or wraparound.

Fig.8.2 Fabric take-down system
9. Racking mechanism

1. The rear bed can be racked five (5) pitches, the initial position "0". See the left selvedge of needle bed, the corresponding position that the first needle of rear is on the left hand side of the first needle of front. As shown in Fig.9.1.

2. In editing instruction you can choose the left racking or the right racking by one pitch.

3. In each racking position the rear bed and the front bed must be kept in correct corresponding relation. You check it with pushing one front needle to tuck position, the hook of front needle and the knock-bit of rear bed should be at the same position.

4. If there has racking instruction in programming, you must enter the test mode to rack the needle bed in the set position before you execute run, and make sure the racking mechanism is matched your programming.

   - Needle position of transfer must be at the left −2 and at the right +3 of needle bed.

Fig.9.1 Initial position of needle bed
If the corresponding position of needle bed is not proper, loosen the stepped screws and adjust the rear bed to correct position, then tighten the stepped screws after adjustment. Refer to Fig.9.2.
10. Carriage combination and separation

KH-323 SERIES-V2 is equipped with two carriages, you can choose in use of combination or separation by yourself for different knitting production. Please operate combination or separation as follows:

1. Turn off power.
2. Loosen the four screws unconnected plate of driving belt, push the connecting-block to the direction of carriage to pass, then take off the connecting-block.
3. In separate situation, the interval of two knitting piece must be minimum 8 inch. (Each 4 inch inactive area to left and right from the central needle.)
4. Move carriage to the marked position on belt, and replace the belt fixed connecting-block.
0. START 26
1. EDIT 26
2. RUN 31
3. FILE 40
4. FUNCTION 43
5. TEST 45
KH-323D-V2  INSTRUCTION EXPLANATION

| Yarn carrier | 0. None yarn carrier  
Yarn carrier-1: 1~6;  Yarn carrier-2: 1~6 |
|--------------|-------------------------------------------------|
| Cam          | 0. Miss  
1. Knit  
2. Tuck  
3. High butt knit |
|              | 4. High butt knit  
Low butt tuck  
5. High butt tuck |
| Knitting speed | 0. Same as previous line  
1 (Slow) ~ 9 (Fast) |
|              | Line No.1 is not allowed “0” |
| Take-down speed | 0. Same as previous line  
1 ~ 8  
9. Short needle width |
|              | Line No.1 is not allowed “0”  
Setting from 0 ~ 99 |
| Racking      | +1 Rack right 1 pitch  
−1 Rack left 1 pitch |
|              | In racking, the maximum  
of knitting speed is No.6  
Face to the front of machine,  
you see the direction of  
movement of the rear bed. |
| Stitch       | Setting from 0 ~ 99 (14G)  
00 is zero (Tightest)  
Larger numeric gets longer loop. |
## KH-323DJ-V2 INSTRUCTION EXPLANATION

### Yarn carrier
- 0. None yarn carrier
- Yarn carrier-1: 1~6
- Yarn carrier-2: 1~6

### Cam
- 0. Miss
- 1. Knit
- 2. Tuck
- 3. High butt knit
- 4. High butt knit
- 5. High butt tuck
- 6. Jack knit
- 7. Jack tuck

### Knitting speed
- 0. Same as previous line
- 1 (Slow) ~ 9 (Fast)
- Line No.1 is not allowed “0”

### Take-down speed
- 0. Same as previous line
- 1~8
- 9. Short needle width
- Line No.1 is not allowed “0”
- Setting from 0~99

### Racking
- +1 Rack right 1 pitch
- -1 Rack left 1 pitch
- In racking, the maximum of knitting speed is No.6
- Face to the front of machine, you see the direction of movement of the rear bed.

### Stitch
- Setting from 0~99 (14G)
- 00 is zero (Tightest)
- Larger numeric gets longer loop.
**KH-323DTJ-V2 INSTRUCTION EXPLANATION**

<table>
<thead>
<tr>
<th>Yarn carrier</th>
<th>0. None yarn carrier</th>
<th>Yarn carrier-1: 1~6</th>
<th>Yarn carrier-2: 1~6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cam</td>
<td>0. Miss</td>
<td>1. Knit</td>
<td>5. High butt tuck</td>
</tr>
<tr>
<td></td>
<td>4. High butt knit</td>
<td>Low butt tuck</td>
<td>7. Jack tuck</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8. Transfer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>※ ← →</td>
</tr>
<tr>
<td>Knitting speed</td>
<td>0. Same as previous line 1 (Slow) ~ 9 (Fast)</td>
<td>Line No.1 is not allowed “0”</td>
<td></td>
</tr>
<tr>
<td>Take-down speed</td>
<td>0. Same as previous line 1~8</td>
<td>Line No.1 is not allowed “0”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9. Short needle width</td>
<td>Setting from 0~99</td>
<td></td>
</tr>
<tr>
<td>Racking</td>
<td>+1 Rack right 1 pitch</td>
<td>Face to the front of machine, you see the direction of movement of the rear bed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-1 Rack left 1 pitch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stitch</td>
<td>Setting from 0~99 (14G)</td>
<td>00 is zero (Tightest)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Larger numeric gets longer loop.</td>
<td></td>
</tr>
</tbody>
</table>
KH-323N-V2 INSTRUCTION EXPLANATION

<table>
<thead>
<tr>
<th>Yarn carrier</th>
<th>0. None yarn carrier</th>
<th>Yarn carrier-1 : 1~6 :</th>
<th>Yarn carrier-2 : 1~6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cam</td>
<td>0. Miss</td>
<td>1. Knit</td>
<td>2. Tuck</td>
</tr>
<tr>
<td></td>
<td>3. High butt knit</td>
<td>4. High butt knit</td>
<td>Low butt tuck</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knitting speed</td>
<td>0. Same as previous line</td>
<td>1 (Slow) ~ 9 (Fast)</td>
<td>Line No.1 is not allowed “0”</td>
</tr>
<tr>
<td>Take-down speed</td>
<td>0. Same as previous line</td>
<td>1~8</td>
<td>Line No.1 is not allowed “0”</td>
</tr>
<tr>
<td></td>
<td>9. Short needle width</td>
<td></td>
<td>Setting from 0~99</td>
</tr>
<tr>
<td>Racking</td>
<td>+ 1 Rack right 1 pitch</td>
<td>− 1 Rack left 1 pitch</td>
<td>Face to the front of machine, you see the direction of movement of the rear bed.</td>
</tr>
<tr>
<td>Stitch</td>
<td>Setting from 0~99 (14G)</td>
<td>00 is zero (Tightest)</td>
<td>Larger numeric gets longer loop.</td>
</tr>
</tbody>
</table>
0. START

When turning on the machine, it will appear this screen and display main menu after you press any key.

When you switch on the machine, then it displays 【MEMORY ERROR】 or 【FILE ERROR】 , you must switch off the machine and contact our agent or our service department.

There are five selections in main menu as Fig.0-2 illustrates and numeric corresponds to selection. Please directly press numeric key on keyboard then enter it.

1. EDIT  
2. RUN  
3. FILE  
4. FUNC  
5. TEST

1. EDIT

Press 1 in main menu, then display edit menu. There are five selections in edit menu as Fig.1-1 illustrates.

1. Open file  
2. New file  
3. Yarn carrier  
4. Stitch  
5. Take down speed

1. OPEN  
2. NEW  
3. YARN FEED  
4. STITCH  
5. TAKE DOWN
1.1 OPEN: Open file

Press 1 in edit menu, and then the screen displays as Fig.1-2.

![Fig.1-2](image)

Remark: In screen there are five small squares, each one corresponds to F1 ~ F5 on keyboard, blank means out of function. For example, in Fig.1-2, F1 is SURE, F2 ~ F4 are blank in no function, F5 is EXIT. In other screen menu the operation will be the same.

In Fig.1-2, input the file name with numeric, and press F1: SURE; then enter program to edit. When opening the file, input file name which is not existent. And the screen will appear Fig.1-3 warning screen, and then press F1 to enter file or press F5 to exit.

![Fig.1-3](image)

Edit screen appears two lines of instructions, cursor stops on the racking position, directly use numeric key and left, RIGHT key to edit instruction, or press UP, DOWN key change to other line. [+/-] key is for change of rack to left or right. Edit instruction, and please refer the instruction explanation.

![Fig.1-4](image)
INSTRUCTION EXPLANATION

**F1** FILE : Insert a file.

![File Insert](image1)

**F2** LINE : After current editing line inset a “ blank line ”, and the following lines are backward.

**F3** JUMP : This function is allowed jump to any line. If the input line No. is over total line, it will jump to the last line.

![Jump Function](image2)
**F4**  DEL : Delete indicated lines.

```
FROM: ___
TO: (DEL)
SURE EXIT
```

Fig.1-7

**F5**  EXIT : Press EXIT then the system will ask you to save this file, if it is not a new file, directly press **F1** SURE to use the same file name to save. The screen displays as Fig.1-9: then press **F1** .
If you don’t want to save, press **F5** twice to exit.

```
SAVE--FILE:
FILE NAME: ___
SURE EXIT
```

Fig.1-8

```
FILE ALREADY EXIST!
RENAME OR SURE TO SAVE!
SURE EXIT
```

Fig.1-9

Save file

```
FILE ISN’T TO SAVE
RESAVE THIS FILE?
SURE EXIT
```

Fig.1-10

Not save
1.2 NEW: Open file
After you edit the first line, press \[ \text{F2} \] to insert blank line and go on editing.

\[
\begin{array}{cccccccccccc}
001 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
+0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0
\end{array}
\]

Fig.1-11

1.3 YARN FEED: Quickly edit the working yarn carriers of any file.

YARN FEEDER
LEFT: 020400 RIGHT: 103000
SET YARN FEEDER OF COLOR
SURE EXIT

Fig.1-12

1.4 STITCH: Quickly edit the working stitch value of any file.

\[
\begin{array}{cccccccccccc}
00 & 30 & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ \\\n11 & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ \\
12 & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ \\
20 & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ & \_\_\_\_\_\_\_ \\
\end{array}
\]

SURE EXIT

Fig.1-13

1.5 TAKE DOWN: Quickly edit the working take down value of any file.

\[
\begin{array}{cccc}
1:00 & / & 00 & 5:00 & / & 00 & 00 \rightarrow 99 \\
2:00 & / & 00 & 6:00 & / & 00 \\
3:00 & / & 00 & 7:00 & / & 00 \\
4:00 & / & 00 & 8:00 & / & 00 \\
\end{array}
\]

SURE EXIT

Fig.1-14
2. RUN

Press 2

○ Enter RUN mode, if any of cam or stitch is error, it displays as Fig.2-1.

You should go to the TEST mode, correct it then come back to RUN mode.

---

FILE: 912  
SYSTEM: TWIN  
START: 001  
END: 0360  
SET: 9999  
PIECES: 0025

---

Enter Fig.2-2, display will show the file name, system (carriages)
TWIN for separation or COMB for combination, START (start needle), END
(end needle), SET (total pieces), PIECES (finished pieces), after setting
press F1 to enter Fig.2-3.
### ERROR MESSAGE

After you finish inputting the instruction for the program that occurs incorrect action or wrong instruction to the function of machine, it will automatically appear ERROR message on RUN mode.

<table>
<thead>
<tr>
<th>Message</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line not even</td>
<td>To edit a program, the total lines of program must be an even number. Otherwise the carriage does not return to the left side to proceed the next knitting piece.</td>
</tr>
<tr>
<td>Carrying feeder</td>
<td>It is an error that the carriage carries a yarn feeder when you set carriage in an empty action without yarn feeder.</td>
</tr>
<tr>
<td>None feeder (L)</td>
<td>When you set the action of knit, the carriage has to carry a yarn feeder.</td>
</tr>
<tr>
<td>None feeder (R)</td>
<td></td>
</tr>
<tr>
<td>Rack error</td>
<td>Before ending the program, the needle bed must be racked back to the home position. In case the program racks one level to the right, it needs rack one level to the left back to the home position before ending.</td>
</tr>
<tr>
<td>Feeder 1 error</td>
<td>Before ending the program, the yarn feeder must return to home position, Otherwise it is impossible to proceed the next knitting piece.</td>
</tr>
<tr>
<td>Feeder 2 error</td>
<td></td>
</tr>
<tr>
<td>Feeder 3 error</td>
<td></td>
</tr>
<tr>
<td>Feeder 4 error</td>
<td></td>
</tr>
<tr>
<td>Feeder 5 error</td>
<td></td>
</tr>
<tr>
<td>Feeder 6 error</td>
<td></td>
</tr>
<tr>
<td>Repeat error</td>
<td>Repeat must be set in even lines of amount, for example the start line is an odd and the end line must be an even, or from an even to an odd. (From odd line to odd line or from even line to even line are unacceptable.)</td>
</tr>
<tr>
<td>Rack over speed</td>
<td>In racking, the maximum of knitting speed is No.4.</td>
</tr>
<tr>
<td>Start-ndl error</td>
<td>The number of start-needle must be smaller than the number of end-needle.</td>
</tr>
<tr>
<td>End-ndl error</td>
<td>The number of end-needle must be larger than the number of start-needle, or smaller than the number of total-needle.</td>
</tr>
</tbody>
</table>

Tab.2-1 Error message table
## Error message table

<table>
<thead>
<tr>
<th>Message</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPEED OVER WITH RACKING</td>
<td>In racking, the maximum of knitting speed is No.6</td>
</tr>
<tr>
<td>START NEEDLE ERROR</td>
<td>The number of start-needle must be smaller than the number of end-needle.</td>
</tr>
<tr>
<td>END NEEDLE ERROR</td>
<td>The number of end-needle must be larger than the number of start-needle, or smaller than the number of total-needle.</td>
</tr>
<tr>
<td>START SPEED = 0</td>
<td>The first line Speed must be setting. don't setting “0”.</td>
</tr>
<tr>
<td>TRANSFER ERROR</td>
<td>Without transfer function.</td>
</tr>
<tr>
<td>END COURSE ERROR</td>
<td>Over 998 courses.</td>
</tr>
</tbody>
</table>

※ Please correct the error of edited program according to the error message of LCD display.
After finishing checking the system and confirming the program executive then the screen displays as Fig.2-3.

| TOTAL: 0404 | COURSE: 024 |
| LEFT: 103000 | RIGHT: 020400 |
| LEFT: ENABLT | RIGHT: ENABLT |

Fig.2-3

In Fig.2-3, Column 1 displays TOTAL (total executive lines), COURSE (total file lines), Column 2 displays LEFT (yarn carrier of left system), RIGHT (yarn carrier of right system). Column 3 displays LEFT (the left carriage), RIGHT (the right carriage).

Finish setting and press [F1] to enter Fig.2-4.

<table>
<thead>
<tr>
<th>001</th>
<th>6</th>
<th>30</th>
<th>4</th>
<th>1</th>
<th>1</th>
<th>3</th>
<th>30</th>
<th>000</th>
<th>000</th>
<th>(912)</th>
</tr>
</thead>
<tbody>
<tr>
<td>+0</td>
<td>1</td>
<td>30</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>30</td>
<td>000</td>
<td>(9999)</td>
<td></td>
</tr>
</tbody>
</table>

Fig.2-4

Right side of screen display

| File name | (912) |
| Set pcs   | (9999) |
| Finished pcs | (0055) |

F1 RUN: Turn the operation bar for knitting.

F2 EDIT: Edit stitch value and knitting speed. See Fig.2-5, Fig.2-6, Fig.2-7, Fig.2-8, Fig.2-9, Fig2-10, Fig.2-11.

F3 1 PC: Knit 1 piece and stop machine.

F4 ORG: Give up the fabric on knitting. The method you turn the operation bar to stop machine, and press [F4] to make cam and stitch to home position, and then start the operation bar to make the carriage return to left beginning position.

F5 EXIT: To exit
F2 EDIT:

Fig.2-5 Edit

Press in STITCH

Fig.2-6 Stitch

Fig.2-6 displays all the used stitch value of file. Directly move the cursor to the area of being changed, and press the numeric key to correct it. For example, in Fig.2-6 the 12 is replaced by 15, then all the stitch value 12 is/are changed with 15 in this file.

Press in SPEED

Fig.2-7 Speed

Fig.2-7 displays the exchange of knitting speed. Directly press the numeric key to change knitting speed, or press UP/DOWN key to the changed line and correct it.
Press **3** in **TAKE DOWN**

![Fig.2-8 Take down](image)

Fig.2-8 Take down

Fig.2-8 displays the entire used take down value of file. Directly move the cursor to the area of being changed, and press the numeric key to correct it.

Press **4** in **REPEAT**

![Fig.2-9 Repeat](image)

Fig.2-9 Repeat

Fig.2-9 displays the repeat count. Directly move the cursor to the area of being changed, and press the numeric key to correct it.

Press **5** in **WIDTH**

![Fig.2-10 Width](image)

Fig.2-10 Width

Fig.2-10 displays the short needle width. Please press numeric key to fill in the needles directly.
Press 6 in SHOCK

![Fig.2-11 SHOCK: 7 (1-9)](image_url)

Fig.2-11 displays the shock. Directly move the cursor to the area of being changed, and press the numeric key to correct it.

![Fig.2-12 Production times](image_url)

Fig.2-12 Production times

Machine stop: If the fault signal (auto-stop equipment) is operated, it will display the fault signal as Fig.2-13, and corrective action refer to Table 2-3, 2-4.

![Fig.2-13](image_url)
### Tab.2-3 Machine stop signal & Corrective action

<table>
<thead>
<tr>
<th>Signal</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEN TOP</td>
<td>Check if yarn breakage, tension loose or yarn knot is occurred with top tension. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td>STEN L</td>
<td>Check if yarn breakage or yarn knot is occurred with left side tension. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td>STEN R</td>
<td>Check if yarn breakage or yarn knot is occurred with right side tension. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td>NEDL L-F</td>
<td>Check if needle breakage or fabric rise is occurred. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td>NEDL L-B</td>
<td>Check if needle breakage or fabric rise is occurred. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td>NEDL R-F</td>
<td>Check if needle breakage or fabric rise is occurred. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td>NEDL R-B</td>
<td>Check if needle breakage or fabric rise is occurred. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td>DROP</td>
<td>Check if fabric fall or take-down speed slow is occurred. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td>ENTANGLE</td>
<td>Check if fabric roll-up is occurred. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td>ROLLPUSH</td>
<td>Check if roller grip is open. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td>COVR</td>
<td>Check if safety cover is not closed. If yes, please do the action to correct it. (Option)</td>
</tr>
<tr>
<td>SHCK</td>
<td>Check if needle or shock sensor is too sensitive. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td>24V</td>
<td>Signal input.</td>
</tr>
<tr>
<td>OVER</td>
<td>Check if needle tight or timing belt breakage is occurred. If yes, please do the action to correct it.</td>
</tr>
</tbody>
</table>
## Tab.2-4 Machine stop signal & Corrective action

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LMT L</strong></td>
<td>Check if left limit sensor (KCE2201), encoder or plastic in blue on connecting ring is damaged. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td><strong>LMT R</strong></td>
<td>Check if right limit sensor (KCE2201), encoder or plastic in blue on connecting ring is damaged. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td><strong>RACK</strong></td>
<td>Check if racking sensor bracket (KCF9401B) is in correct position or racking sensor 9KCF9407) is damaged. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td><strong>ENCODER</strong></td>
<td>Check if encoder is damaged.</td>
</tr>
<tr>
<td><strong>CAM LF</strong></td>
<td>Check if left front side pc board (KCF3054) is damaged or cams cannot run smoothly without any obstruction. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td><strong>CAM LB</strong></td>
<td>Check if left back side pc board (KCF3054) is damaged or cams cannot run smoothly without any obstruction. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td><strong>CAM RF</strong></td>
<td>Check if right front side pc board (KCF3054) is damaged or cams cannot run smoothly without any obstruction. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td><strong>CAM RB</strong></td>
<td>Check if right back side pc board (KCF3054) is damaged or cams cannot run smoothly without any obstruction. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td><strong>MAINMOT</strong></td>
<td>Check inverter, motor and timing belt.</td>
</tr>
<tr>
<td><strong>STI LF</strong></td>
<td>Check if left front side pc board (KCE1002) or stepping motor is damaged. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td><strong>STI LB</strong></td>
<td>Check if left back side pc board (KCE1002) or stepping motor is damaged. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td><strong>STI RF</strong></td>
<td>Check if right front side pc board (KCE1002) or stepping motor is damaged. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td><strong>STI RB</strong></td>
<td>Check if right front side pc board (KCE1002) or stepping motor is damaged. If yes, please do the action to correct it.</td>
</tr>
<tr>
<td><strong>POWR DOWN</strong></td>
<td>Signal input.</td>
</tr>
<tr>
<td><strong>STOP</strong></td>
<td>Signal input.</td>
</tr>
</tbody>
</table>
3. FILE

3.1 DISP : Display
Select file location from RAM or USB.

Fig. 3-1

<table>
<thead>
<tr>
<th>1.DISP</th>
<th>3. DEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.COPY</td>
<td>4. TRANS</td>
</tr>
<tr>
<td>5.READ</td>
<td>6. CLEAR</td>
</tr>
</tbody>
</table>

Fig. 3-2

Fig. 3-3 Move cursor to select the displayed file name, and press \( F_1 \) SURE the system will execute program once simultaneously, and display screen as Fig. 3-4.

Fig. 3-3

912 913 914 915

04 FILE 00483 BYTES
24349 BYTES FREE

SURE EXIT

Fig. 3-4

RUN EDIT 1PCS ORG EXIT
3.2 DEL : Delete the input file name, and press \[ F1 \] for sure.

![Fig.3-5](image_url)

3.3 COPY : Input source file name and target file name, and press \[ F1 \] for sure.

![Fig.3-6](image_url)

3.4 TRANS : Save file to USB floppy.

![Fig.3-7](image_url)

3.5 READ : Load file from USB floppy.

![Fig.3-8](image_url)
3.6 CLEAR : Clear all files.

Fig.3-9

Fig.3-10

Fig.3-11

Enter code No : 555
4. FUNCTION

Fig.4-1

4.1 STITC: Stitch parameters, directly adjust with numeric. (Machine has two sets of stitch parameters; one is for separation system and the other is for combination system.)

Fig.4-2

Fig.4-3
4.2 BUZZ : Setting buzzer function in action or not.

![Fig.4-4]

4.3 MODE : Setting display mode 2 in English and 1 in Chinese.

![Fig.4.5]

4.4 SYSTEM : Setting left and right carriage system is open or not.

![Fig.4.6]
5. TEST

<table>
<thead>
<tr>
<th>1. RACKING</th>
<th>2. MAIN MOTOR</th>
<th>3. IN/OUT</th>
<th>4. CAM</th>
<th>5. TAKE DOWN</th>
<th>6. STITCH</th>
</tr>
</thead>
</table>

Fig. 5-1

5.1 RACKING:

- ▲ RACKING TO LEFT
- ▶ RACKING TO RIGHT

Please test racking

SURE EXIT

Fig. 5-2

5.2 MAIN MOTOR:

BAR ▼ LOW SPEED
000000 BAR ▲ INCHING
MAIN SERVO TEST

SURE EXIT

Fig. 5-3
5.3 IN/OUT : Signal. Test when they are switched on. There should be with a small dot appeared in the front.

<table>
<thead>
<tr>
<th>STITCH ORG:</th>
<th>L.SYS</th>
<th>R.SYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>F:B</td>
<td>F:B</td>
<td>F:B</td>
</tr>
<tr>
<td>CAM ORG:</td>
<td>F:B</td>
<td>F:B</td>
</tr>
<tr>
<td>CAM POS:</td>
<td>F:B</td>
<td>F:B</td>
</tr>
<tr>
<td>NEEDLE BREAK:</td>
<td>F:B</td>
<td>F:B</td>
</tr>
</tbody>
</table>

Fig.5-4

<table>
<thead>
<tr>
<th>7-SHOCK-DROP</th>
<th>LIMLT:-L-R</th>
</tr>
</thead>
<tbody>
<tr>
<td>-OVER-RACK</td>
<td>T-TEN:-1-2</td>
</tr>
<tr>
<td>-24V-ROLLPUSH</td>
<td>S-TEN:-L-R</td>
</tr>
<tr>
<td>-ORG-ENTANGLE</td>
<td>RUN:-SL</td>
</tr>
<tr>
<td>-COVER-ORGR</td>
<td>STOP:-UP</td>
</tr>
</tbody>
</table>

Fig.5-5

L.SYS : Left system
STITCH ORG : Stitch Origin
CAM ORG : Cam Origin
NEEDLE BREAK : Probe needle
SHOCK : Collision sensitivity
DROP : Fabric fall detector
OVER : Main motor overload
RACK : Racking
24V : 24V
ROLLPUSH : Take down open
ORG : Left Origin sensor
ENTANGLE : Fabric roll up
COVER : Safety cover
ORGR : Right Origin sensor

LIMLT-L : L-Limit sensor
LIMLT-R : R-Limit sensor
T-TEN-1 : Top tension error
T-TEN-2 : T-ten slow speed
S-TEN-L : L-Side tension
S-TEN-R : R-Side tension
RUN : High speed
SL : Slow speed
STOP : STOP
UP : UPS
5.4 CAM: Move cursor to make the cam or the yarn feeder solenoid in action.

![Diagram](Fig.5-6)

5.5 TAKE DOWN: Setting the speed of fabric take-down then turning the operation bar to test.

![Diagram](Fig.5-7)

5.6 STITCH: Stitch. Setting the value. Press F1 ~ F4 to test.

![Diagram](Fig.5-8)
6. Operating procedures

1. EDIT
   1. OPEN
   2. NEW
   3. YARN FEED
   4. STITCH
   5. TAKE DOWN

2. RUN
3. FILE
4. FUNC
5. TEST

WELCOME TO KAUOHENG SYSTEM

1. EDIT

FILE NOT FOUND!
OPEN NEW FILE!

MISS-FILE NAME,
RE-KEYIN FILE NAME?

FILE ALREADY EXIST!
RENAME OR SURE TO SAVE!

FILE ISN'T TO SAVE
RESAVE THIS FILE?

FILE ISN'T TO SAVE
RESAVE THIS FILE?

NOT SAVE

YEARN FEEDER
LEFT:020400
RIGHT:103000
SET YEARN FEEDER OF COLOR

SAVE FILE

SAVE FILE

PLS-IN FILE-NAME:_
SURE
EXIT

PLS-IN FILE-NAME:
SURE
EXIT

PLS-IN FILE-NAME:
SURE
EXIT
Operating procedures

1. EDIT
2. RUN
3. FILE
4. FUNC
5. TEST

WELCOME TO KAUOHENG SYSTEM

FILE NAME: ___ (FILE)
COURSE: ___
SURE  EXIT

SURE  EXIT
_FILE  LINE  JUMP  DEL  EXIT

FILE: ___  SYSTEM: TWIN
START: ___  END: ___
SET: ___  PIECES: ___
SURE  EXIT

TOTAL: ___  COURSES: ___
LEFT: ___  RIGHT: ___
LEFT: ___  RIGHT: ___
SURE  EXIT

FILE: ___
SURE  EXIT

PLEASE ORIGIN RETURN
SURE  EXIT

PLEASE PULL DOWN BAR
SURE  EXIT

FILE: ___
SURE  EXIT

SURE  EXIT

DEL

FROM: ___ (DEL)
TO: ___
SURE  EXIT

SURE  EXIT

JUMP

TO: ___ (JUMP)
SURE  EXIT

SURE  EXIT

RUN  EDIT  IPS  ORG  EXIT
Operating procedures

2. RUN

1. STITCH
2. SPEED 02:15
3. TAKE DOWN
4. REPEAT
5. WIDTH
6. SHOCK

1. STITCH
00 30
11
12
20
SURE | | EXIT

2. SPEED
CHANG SPEED DATA
COURSE SPEED
001 8
SURE | | EXIT

3. TAKE DOWN
1:00 / 00
2:00 / 00
3:00 / 00
4:00 / 00
SURE | | EXIT

4. REPEAT
COURSE / REPEAT COUNT
004 002
SURE | | EXIT

5. WIDTH
SHORT NEEDLE WIDTH:9
005NDSL 005NDSL
SURE | | EXIT

6. SHOCK
SHOCK:7 (1-9)
SURE | | EXIT
Operating procedures

- Select file location: RAM, USB, EXIT
- 1. Disp: View file
- 2. Del: Delete file
- 3. Copy: Copy file
- 4. Trans: Transfer file
- 5. Read: Load file
- 6. Clear: Clear RAM

- Choose file operations: View, Delete, Copy, Transfer, Load, Clear

- Confirm actions: ARE YOU SURE?

- Input password: PLEASE INPUT PASSWORD: 555

- File not found: RE-KEYIN FILE NAME?

- Welcome to KAUOHENG system

- Run edit, test, file, clear
Operating procedures

1. STITCH
2. BUZZ
3. MODE
4. SYSTEM

1. STITCH
- LT 23, 29, 19 RT
- LT 31, 24, 29 RT

2. BUZZ
- KEYBOARD: ENABLE
- ALARM: ENABLE

3. MODE
- 1. 中文
- 2. ENGLISH
- 3.

4. SYSTEM
- LEFT: ENABLE
- RIGHT: ENABLE

5. TAKE DOWN

6. STITCH
- STITCH: L:SYS: R:SYS: (1-9)
- B:00
- F:00
<table>
<thead>
<tr>
<th>Line No.</th>
<th>Knitting Speed</th>
<th>Left Rear Stitch</th>
<th>Total Yarn Carrier</th>
<th>Repeat Start-Line</th>
<th>Repeat End-line</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Take down Speed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Line No. 001 is not allowed &quot;0&quot; for knitting speed and take-down speed</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Rack:**
- 1 Right 1 pitch
- 1 Left 1 pitch

**Knitting Speed:**
- 0. Same as previous line 1(Slow)-9(Fast)

**Take-down Speed:**
- 0. Same as previous line 1-8
- 9. Short needle width

**Yarn carrier:**
- 0. None yarn carrier
- 1. No.1 yarn carrier
- 2. No.2 yarn carrier
- 3. No.3 yarn carrier
- 4. No.4 yarn carrier
- 5. No.5 yarn carrier
- 6. No.6 yarn carrier

**Cam:**
- 0. Miss
- 1. Knit
- 2. Tuck
- 3. High butt knit
- 4. High butt knit, low butt tuck
- 5. High butt tuck
- 6. Jack knit
- 7. Jack tuck
- 8. Knit, Half cam Tuck
- 9. Half cam Tuck

**Stitch:**
- 00-99

Carriage must be on left side for starting.
高 亨 精 機 工 業 有 限 公 司
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