SEQUIN DEVICE
INSTALLATION MANUAL

For qualified personal only

HCD2

Happy Industrial Co.
Ver. 1.1
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1. List of required parts

- Sequin Unit (left)
- Sequin Unit (right)
- Feeder unit
- Needle bar push down
- Slider lock screw
- Wave washer
- Washer (M6)
- RS232C cable
- Power (24V) cable
- Bracket for control board set
- Control board set
- Nut (M6)
- Pan head screw (M3x5)
- Needle clamp
- Guide collar
- Reel cap
- Felt
- Pressure foot
Hex socket head cap screw
(M4x10) x3

Pressure foot height gauge (4mm)

Spacer (Plastic washer):
For clip type thread holder: 1.0mm thickness

Needles (for sequin)
DB X K5 KK Nm 75/11

Cord clamp (L)

Mm5>A039DBC<4=Cn

Cord clamp (S)

Mirror
(for adjustment)

Wrench

Hex key
2. Machine program version

For using sequin device, the following version of machine program or later version should be installed on machine:

"Main program version : A 1.24"
“Machine program version : B 1.5”

Machine and language version can be checked with the following steps;

※In case program is not corresponding to above condition, please contact your service agent and ask to update program.
3. Machine setting

• Setting items of machine setting

<table>
<thead>
<tr>
<th>Item</th>
<th>Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequin Dev. Left</td>
<td>YES/NO</td>
</tr>
<tr>
<td>Sequin Dev. Right</td>
<td>YES/NO</td>
</tr>
<tr>
<td>Sequin Dev. Type</td>
<td>Other/Happy</td>
</tr>
</tbody>
</table>

• Setting item of sequin setting

<table>
<thead>
<tr>
<th>Item</th>
<th>Selection</th>
<th>Default</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Empty Sequin detection(L)</td>
<td>YES/NO</td>
<td>YES</td>
<td>Sequin detection(Left) Yes/No</td>
</tr>
<tr>
<td>2. SequinA size/color(L)</td>
<td>Size:3~9</td>
<td>Size:4</td>
<td>Sequin feed size (left) Sequin color</td>
</tr>
<tr>
<td></td>
<td>Color: 256 colors</td>
<td>Color:Red</td>
<td></td>
</tr>
<tr>
<td>3. Empty Sequin detection(R)</td>
<td>YES/NO</td>
<td>YES</td>
<td>Sequin detection(Right) Yes/No</td>
</tr>
<tr>
<td>4. SequinA size/color(R)</td>
<td>Size:3~9</td>
<td>Size:4</td>
<td>Sequin feed size (right) Sequin color</td>
</tr>
<tr>
<td></td>
<td>Color:256 colors</td>
<td>Color:Yellow</td>
<td></td>
</tr>
</tbody>
</table>
3-1. Machine setting

1. Enter to maintenance mode with the following steps;
   Keep pressing [STRAT/STOP] button and Power ON until HAPPY logo screen appears.
   Then touch [NEXT] icon

2. Touch [Machine Setting] icon
3. Select 「Sequin Dev. Left」、「Sequin Dev. Right」、「Sequin Dev. Type」and set items according to below chart:

<table>
<thead>
<tr>
<th></th>
<th>Left side only</th>
<th>Right side only</th>
<th>Both side</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequin Dev. Left</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Sequin Dev. Right</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Sequin Dev. Type</td>
<td>Happy</td>
<td>Happy</td>
<td>Happy</td>
</tr>
</tbody>
</table>

Above sample is for sequin device both side

4. After finishing above setting, touch [ESC] icon and finish setting

※ Before start installing sequin device, please finish above setting
※ Please reboot machine after finish above setting operation
3-2. Sequin setting

Default setting is sequin size 4mm. In case required sequin size is not 4mm, setting should be changed with the following steps;

1. Select [OPTION] from Menu and select (machine setting)

2. Select 「SequinA Size/color」 and touch for changing size

   Touch and return to Munu

3-3. Format of pattern to read

   Use the format for “.tap” (Happy format) or “.dst” (Tajima format) only to read a sequin pattern data for this device.
4. **Installation**

※Please note that this steps are for installing sequin device (left)

4-1. **Exchange of Pressure foot, Needle clamp and Needle**

1. Move moving head to need #8.

2. Take lower front panel out
   (Loosen 2 screws and slide to left to take panel out)

3. Unscrew for pressure foot fixing
   (Unscrew on 15th needle)
4. Loosen screw of needle holder and take needle, needle holder and cushion out.

5. Take pressure foot out

6. Set Pressure foot(for sequin), Cushion(original), Needle holder(for sequin) and Needle(for sequin).

Please confirm needle clamp does not touch to pressure foot.
In case it touches, turn needle bar to keep space.
Please control needle height after setting parts.
4-2. Pressure foot height adjustment

1. Move moving head to needle # 15 and press needle bar down, then set main shaft angle to 0 degree

2. Loosen screw for pressure foot and set pressure foot on needle plate, then fix screw
   (Space between pressure foot and needle plate is 0 mm)

3. After adjustment of pressure foot height, set main shaft angle to 270 degrees(C point),
   then return lower front panel back
4-3. Installation of Sequin unit

1. Unscrew upper screw for thread holder

2. Temporary fix sequin unit to moving head by hex socket head cap screw (2pcs)
   Please insert spacer (plastic washer) between sequin unit and moving head (the lowest screw position only)

※ please note there are 2 different spacers. (1mm thickness: for clip type thread holder/1.5mm thickness for standard thread holder) Please select according to type of thread holder on machine

Hex socket head cap screw  M4x10  3pcs

Moving Head

Sequin unit fixing screw
(Hex socket head cap screw M4x10)

Spacer (Plastic washer)
1mm thickness: for clip type thread holder
1.5mm thickness for standard thread holder
3. Set Feeder unit on Sequin unit by Slider lock screw

Set this position to Sequin unit
4. Set pressure foot height gauge (4mm) on needle plate

5. Press down sequin unit up to the lock position (the lowest position)
6. Loosen screw for fixing sequin unit and adjust the height of sequin unit
   Standard height is the position that sole of sequin unit touches to the height gauge (4mm)
7. Press sequin unit to arrow direction as below drawing and fix screws, then take height gauge out.

8. Insert the height gauge again and confirm height of sequin unit.
   If the height gauge does not fit to the space, please repeat height adjustment.
9. Pull sequin unit up
4-4. Wiring and installation of control box

<Caution> please shut power off for this operation

1. Clamp cables

2. Open cover for RS232C

3. Open cover A for power supply
4. Connect cables to control board set
5. Set bracket for control board set under thread stand, then set Control board set
   - Nut M5 2pcs
   - Pan head screw M3x5 2pcs

6. Clamp cables
5. How to set sequin reel

5-1. How to set sequin reel

1. Set sequin reel bar to free position

View from other side.
Pull sequin reel bar up and turn 90 degree and insert screw into L cut

2. Set sequin reel to reel shaft as below order

※some sequin reel does not match size with guide collar.
※Please refer below table for suitable number of felt

<table>
<thead>
<tr>
<th>Sequin size</th>
<th>3 - 5mm</th>
<th>7 - 9mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of felt</td>
<td>7pcs</td>
<td>4pcs</td>
</tr>
</tbody>
</table>
3. Set lock as below and return reel bar to original position

![Diagram showing lock position and reel bar movement.](image-url)
5-2. How to set sequin to sequin unit

Set sequin according to below order

※Sequin reel can be set any direction as above, but surface of sequin should be controlled.
5-3. How to set sequin to feeder unit

1. Pull and turn reel bar to make reel free

2. Insert sequin between Feeder unit and guide
3. Push feeder pin several times until sequin getting out from guide.

Press moving knife by hand and cut sequin.

<Caution>In case feeder pin is not moving smoothly, sequin jam can be happened. Please stop pushing feeder pin and take guide off and control jam.

How to take guide off:

Unscrew 4 screws

Control jam and return guide
6. Adjustment of sequin device

- **Explanation of switch**

<table>
<thead>
<tr>
<th>Condition (screen)</th>
<th>Active switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive mode screen</td>
<td>FEED</td>
</tr>
<tr>
<td>User maintenance screen</td>
<td>FEED, UP/DOWN</td>
</tr>
</tbody>
</table>

**LED flashing**: Sequin reel is empty
**LED lighting**: Device is down position

**FEED**: Feed sequin

**UP/DOWN**: Device UP/DOWN

- **Open user maintenance screen**

In order to start adjustment of sequin device, please open user maintenance screen with the following steps:

```
[MENU] → [Other] → [Maintenance]
```
6-1 Unit UP/DOWN

Push UP/DOWN button and move unit down

(When button is pushed again, unit goes up.)

1. Please confirm there is no backlash.
   Please push and pull unit and check backlash.
**In case there is backlash**

1. Shut power off and press unit down by hand

2. Loosen 2 screws (red circle in photo) and set Unit to the position where there is no backlash.
   Then fix screws

3. After fixing unit, turn power ON.
   (Unit goes up automatically)
   Push UP/DOWN button and move unit down and
   Confirm again that there is no backlash.
6-2 Pitch block

Pitch block is controlling feed length of sequin. According to sequin size, Pitch block should be adjusted.

![Diagram of pitch block](image)

Enter pitch block to ditch
Fix pitch block by screw
Front view of feeder pin

Table of direction of pitch block and screw position

Feed length is limited by setting direction of pitch block and selection of fixing screw hole as below table. Please set pitch block according to this table.

<table>
<thead>
<tr>
<th>Sequin size</th>
<th>3mm</th>
<th>4mm</th>
<th>5mm</th>
<th>7mm</th>
<th>9mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direction of Pitch block</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixing screw position on feeder unit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Setting of pitch block

Set pitch block parallel to feeder pin

![Diagram of setting pitch block](image)
For 3mm/4mm/5mm sequin
Use upper screw position on feeder unit

<table>
<thead>
<tr>
<th>3mm</th>
<th>4mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeding by movement of feed pin</td>
<td></td>
</tr>
</tbody>
</table>

Fixing screw hole
Pitch block fixing screw

Set “C”
5mm

Fixing screw hole

Feed 5mm by movement of feed pin

Set “D”

Pitch block fixing screw

<table>
<thead>
<tr>
<th></th>
<th>3mm</th>
<th>4mm</th>
<th>5mm</th>
<th>7mm</th>
<th>9mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
For 7mm/9mm sequin

Use lower screw position on feeder unit

**7mm**

- **Fixing screw hole**
- **Pitch block fixing screw**

Feed 7mm by movement of feed pin

Set “C”

**9mm**

- **Fixing screw hole**
- **Pitch block fixing screw**

Feed 9mm by movement of feed pin

Set “D”

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6-3 Sequin trim position

Sequin trim position is red line in below photo which is position between sole of guide and moving knife.
1. Before starting trim position adjustment, position of feeder block (Red color block inside of feeder unit) should be adjusted according to start position label on feeder unit.

For sequin size 3mm/4mm/5mm

For sequin size 7mm/9mm

Turn feeder pin and adjust upper position of feeder block to top of mark.

Turn feeder pin and adjust upper position of feeder block to top of mark.
2. Insert sequin into feeder
   Push feeder pin several times and press moving knife for trimming sequin, then check shape of sequin.
   In case sequin is not the shape like below drawing [1], trimming position should be adjusted by feeder pin.
   Trimming position can be changed by turning feeder pin clockwise or anti-clockwise.
   Turning clockwise  : Trimming position become earlier
   Turning anti-clockwise : Trimming position become later
   Keep pushing feeder pin and turning anti-clockwise: Trimming position become later and movement of trimming position change can be seen during turning feed pin
For case [2]

Keep pushing feeder pin, turn anti-clockwise.

After adjustment, push feeder pin and feed sequin

Press moving knife and cut sequin

Control trim position and repeat until trim position become proper

For case [3]

Turn clockwise

Push feeder pin for feed sequin

Press moving knife and cut sequin

Control trim position and repeat until trim position become proper

※Please control top of feeder block position is located within adjustment area.
6-4 Moving knife

1. Push UP/DOWN button and move device down.

2. Press needle bar down and set main shaft at 0 degree

3. Control position of bottom parts of moving knife
   Correct position is 0-0.5mm from sole of feed unit

   Moving knife moves pressing by needle holder.
   Control position at main shaft angle 0 degree

   0 ~ 0.5mm
In case more than 0.5mm

Press needle bar down and turn main shaft up to around 280 degrees where needle clamp and pressure foot has some space

Keep holding needle, loosen screw for needle clamp and move up needle clamp then tighten screw for fixing

Control position of moving knife again (at main shaft angle 0 degree)

After adjustment, turn main shaft angle 270 degrees (C point)
6-5 Needle position

Before starting adjustment
Needle position adjustment against sequin hole is not easy since devices are located near to the needle and it is not easy to see needle position.
For supporting needle position adjustment, needle bar push down gauge and mirror are supplied as accessories. Please utilize them and make adjustment easy.

Setting of Needle bar push down gauge
1. Press needle bar down and push pressure foot up

2. Insert needle bar push down gauge between pressure foot and cushion on needle clamp.

3. Needle is staying under pressure foot and easier to see needle position

CAUTION: When gauge is inserted, main shaft cannot be turned 360 degrees.
Adjustment of Feeder Unit (right and left)

1. Push UP/DOWN button to move device down, and push FEED button to feed sequin

2. Turn main shaft up to the position that needle tip reaches near to sequin hole (around 278 degrees)
   
   **Caution :** When turning main shaft, please watch needle. As needle bar push down gauge is set on needle bar, needle or needle clamp might hit to other parts.

3. Loosen slider base fixing screws slightly (please use Hex Key in accessory)

4. Move position of feeder unit right and left, and set needle position to the center of sequin hole
5. Fix base fixing screw and confirm needle position again

6. After adjustment, set main shaft angle to 270 degrees (C point) and move device up by UP/DOWN button
Adjustment of Feeder Unit (front and back)

1. Loosen fixing nut of slider screw and slider lock screw, and set adjustment face to the number of label which is same as sequin size. Then temporally fix fixing nut. (please use wrench in accessory)
2. Push UP/DOWN button to move unit down and push FEED button to feed sequin

3. Turn main shaft up to the position that needle tip reaches near to sequin hole (around 278 degrees)
   
   **Caution**: When turning main shaft, please watch needle. As needle bar push down gauge is set on needle bar, needle or needle clamp might hit to other parts.

4. Turn slider screw and set needle position as below drawing

   ※Please set needle position to front side from sequin hole center
5. After adjustment, fix slider lock screw and fixing nut

![Diagram showing fixing nut and slider lock screw]

6. Trim sequin by pressing moving knife, and feed new sequin by pushing FEED button. Then confirm needle position again

7. After adjustment, set main shaft angle to 270 degrees (C point) and move unit up by UP/DOWN button

![Diagram showing push to move UP button]
6-6 Reel holder

When unit is up position, reel bar should press reel and prevent free reel turning.
(If reel is not free, adjustment is not required.)

1. Move unit down

2. Loosen fixing screw of reel bar support plate and for reel collar

3. Set sequin reel to reel shaft

4. Move reel bar support plate and keep space 15mm between reel and reel bar, then fix fixing screw of reel bar support plate

5. Keep reel bar and move reel collar at the position as photo and fix screw
7. Modification to other sequin size

1. Change machine setting for required sequin size

※Please refer to [3-2. Sequin setting]

2. Set pitch block according to sequin size

※Please refer to [6-2 Pitch block]

For sequin size 5mm
3. Unscrew guide fixing screw and take guide out, then set new guide and fix screws

4. Set sequin reel and pass sequin to feeder unit
   (Please refer to [5. How to set sequin reel])

5. Adjust trimming position  （Please refer to [6-3 Sequin trim position]）

6. Adjust Feeder Unit (front and back)
   (Please refer [5-3.How to set sequin to feeder unit])
8. How to make sequin punching

1. Please use punching software which supports sequin device.
   Software creates signal for sequin embroidery automatically.
   example of software : i-Cliqq (http://www.i-cliqq.com)

2. Please use the following stitch data for controlling sequin device, and save with .tap
   (HAPPY format) or .dst (Tajima format).

<table>
<thead>
<tr>
<th>Function code</th>
<th>Meaning</th>
<th>Machine Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequin ON</td>
<td>Device Up/Down</td>
<td>The sequin device moves down and gets ready to feed the sequin.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The sequin device moves up.</td>
</tr>
<tr>
<td>Data jump</td>
<td>Sequin</td>
<td>The Device feeds Sequin.</td>
</tr>
</tbody>
</table>

Data jump: jump with movement

Caution

When sequin device is installed, embroidery area will be smaller than regular mode because feed part or up down motion is needed. Please special care when punching pattern or setting the start point.
NOTE

1. In case you have failure of electricity during sequin operation, please power ON after returning needle bar to up position.