Table of Contents

Chapter 1 — Introduction
  Unicorn II Printer .............................................. 1-1
  About the Manual ............................................ 1-1
  Standard Product Features .................................. 1-2

Chapter 2 — Product Safety
  Introduction ..................................................... 2-1

Chapter 3 — Fast Installation
  Printer Overview ............................................... 3-1
    Standard Components .................................... 3-1
    Printer ..................................................... 3-2
  Fast Installation ............................................ 3-3
    Installation Procedure .................................. 3-3

Chapter 4 — Operation and Setup
  Overview ....................................................... 4-1
  Keyboard Description ....................................... 4-2
    Print On/Off .............................................. 4-3
    Dot Size .................................................. 4-4
    Purge ..................................................... 4-4
    Print Delay ............................................... 4-5
    Character Width ........................................... 4-5
    Date ....................................................... 4-6
    Time ....................................................... 4-6
    Count Display ............................................. 4-7
    Number/Special Character Key Lock .................... 4-7
    Backspace/Delete ........................................ 4-7
    Exit ....................................................... 4-7
    Input Method Switch ..................................... 4-8
    Capital Lock ............................................... 4-8
  User Interface ............................................... 4-9
    Start Screen .............................................. 4-9
    Main Menu Structure .................................... 4-9

Chapter 5 — Maintenance
  Frequently Used Printer .................................... 5-1
    Maintenance of the Keyboard and the External Shell
of the Printer .................................................. 5–1
Maintenance of the Nozzle and the Internal Sensor ........ 5–2
Startup Procedure ............................................. 5–3
Shutdown Procedure ......................................... 5–4
Porous .......................................................... 5–4
Non-porous ......................................................... 5–4
Introduction

Unicorn II Printer

Thank you for purchasing Videojet’s next generation large character ink-jet printer — Unicorn II.

The Unicorn II large character ink-jet printer is a contactless ink-jet printer. It is used to spray-print large character messages on product outer cases by using porous inks.

About the Manual

This manual is intended for operator use and offers relevant information on how to operate the printer. Unless otherwise stated, printer operators can execute all the tasks described in this manual.

All occurrences of the word ‘printer’ are references to the Unicorn II printer.

⚠️ Warning

If you wish to perform your own service and maintenance on the printer, make sure that only qualified personnel execute the operating programs pertaining to printer maintenance.

⚠️ Warning

The term Qualified Personnel refers to individuals who are technically trained (have completed relevant training courses on printer operations), have relevant printer operating experience, and are aware of the potential hazards.

Note: This Operator Manual is intended to be a supplement to (and not a replacement for) customer training.
Keep this manual in a safe place for easy reference. Even if you choose Videojet (or one of its dealers) to provide maintenance for your printer, retain a copy of this Operator manual for future reference.

Videojet reserves the rights to update the contents of the manual and printer performance.

## Standard Product Features

The product features are listed below:

- Simple system composition
- Character size includes 1 line of 16 dots or 2 lines of 7 dots
- Self-defined time and date format
- Automatic date rollover time
- Automatic valid date printing
- Automatic shift setup (a maximum of four shifts)
- Automatic count setup (a maximum of ten digits)
- Print delay distance setup (maximum delay of 50 cm)
- Adjustable character width
- Integrated internal product sensor (external sensor can be connected)
- Standard printing character height (20 mm)
- Automatic detection and manual setup of production line speed
- Production line speed range: 6 meter/minute to 60 meter/minute
- Each message may contain up to 40 characters of 16 dot font or 160 characters of 7 dot font (up to 80 characters per line).
- Message storage capability (maximum 40 messages)
- Work temperature is 4°C to 49°C
- Global universal power supply capability
- Self-adjusted-pressure ink system
- Bulk ink supply available with ADS ink system
Product Safety

Introduction

Videojet is committed to producing contactless spray coding/coding systems and ink consumables, that meet high performance and reliability standards. We adopt rigid quality control technology to eliminate possibilities of product defects and hazards.

The Unicorn II large character printers are used to print messages on the outer casing of packing packages. Any other usage of the printer may result in injury to the operator.

Caution

Read through this chapter before using the printer.

Warning

PERSONAL INJURY. While installing, operating, servicing or performing maintenance activities on the printer or relevant devices, you must obey the safety rules listed in this chapter.

Warning

PERSONAL INJURY. All electrical wiring and connections must comply with applicable local codes. Consult the appropriate regulatory agency for further information.

Caution

EQUIPMENT DAMAGE. Use only the attached AC power supply adapter for Unicorn II.
**Warning**

PERSONAL INJURY. The non-porous solvent is volatile and flammable and should not be exposed to explosive environments. It must be stored and handled in accordance with local regulations.

Do not smoke or use a naked flame in the vicinity of the non-porous solvents.

Immediately after use, remove any tissue or cloth that is saturated with the solvent. Dispose all such items in accordance with local regulations.

---

**Caution**

EQUIPMENT DAMAGE. Do not use the printer in a wet or dusty environment.

---

**Warning**

PERSONAL INJURY. To remove power in case of emergency, disconnect the power supply from the AC Main.

---

**Warning**

PERSONAL INJURY. The inks and solvents are irritating to the eyes and the respiratory system. To prevent personal injury while handling these substances:

Always wear protective rubber gloves and clothing.

Always wear goggles with side-shields or a face mask. It is also advisable to wear safety glasses when carrying out maintenance.

If solvent contaminates the skin, rinse off with running water for at least 15 minutes.
**Warning**

PERSONAL INJURY. While operating with inks or solvents, wear butyl rubber gloves to avoid contact with skin and mucosa (nasal canal and throat). If skin contact occurs, immediately take off the contaminated clothes and use soap and water to rinse the affected area. If the burning sensation persists, go to the nearest hospital.

---

**Caution**

EQUIPMENT DAMAGE. Only use the approved ink and solvent produced by Videojet.
Printer Overview

Standard Components

The standard Unicorn II product package contains the following components.

1. Unicorn II printer
2. Ink (230ml)
3. Stainless steel tube (outer diameter 1 inch and length 15 inches)
4. Stainless steel tube (outer diameter 1 inch and length 9 inches)
5. Fastening and fixing components
6. Power supply adapter and cable

Figure 3-1: Standard Unicorn II Packing Components
Printer

Figure 3-2: Standard Unicorn II Printer

1. Controller
2. Printhead
3. Ink Inlet
4. Bracket
5. Keyboard
6. Screen
7. Externally-connected sensor cover
8. External cable
9. Internal sensor
10. Nozzle block
11. DC 12V input
Fast Installation

Installation Procedure

Prepare for Installation
Select a mounting location where there are guide bars on the conveyor. If necessary, install the guide bars. This will keep the product at a correct distance from the printhead (no further away than 6 mm) and prevent any damage to the unit. Refer to Figure 3-4 on page 3-4.
Warning

PERSONAL INJURY. Avoid any contact between Unicorn II and the product as this will result in poor print quality.

Procedure

Note: For pictorial guidance on the installation steps, refer to Figure 3-3 on page 3-3.

1. Attach the aluminium clamp to the printer controller mounting frame using the two screws and two nuts. Refer to Figure 3-5 on page 3-5.

Note: Make sure the mounting clamp hole faces the floor.
2 Attach another aluminium clamp to the production line.

For floor mounting, secure the aluminium clamp to the floor using concrete anchors. Use standard stainless steel tubes with an outer diameter of 2.5 cm (1 inch).

**Note:** The conveyor side rails channel should be a 0.32 cm x 6.3 cm (1/8 inches x 2.5 inches) or greater steel.

**Note:** Make sure the Unicorn II mounting bracketry is mounted securely. Avoid any sway or vibration of the printhead. If not, this will affect the print quality.
3 Attach a stainless steel tube to the aluminium clamp installed in Step 2.

4 Attach the combined aluminium clamp to the stainless steel tube installed in Step 3.

5 Attach the vertical stainless steel tube to the combined aluminium clamp (refer to Figure 3-6).

6 Attach the printer (with the controller) to the vertical stainless steel tube installed in Step 5.

   **Note:** Adjust the printhead by loosening the cross clamp with the ratchet handles.

   **Note:** The Unicorn II printhead should be perpendicular to the product. If some nozzles are further away from the product than the others, the print quality will suffer.

7 Install the plastic end-cap on the surface of the stainless steel tube to protect the production line operator from being hurt.

The installed printer and assembled bracketry are shown in Figure 3-7 on page 3-7.

   **Note:** After the Unicorn II is in position, tighten the bracketry.
Note: To achieve optimal print quality, position the printhead nozzles to a maximum throw distance of 6mm from the substrate. (refer Figure 3-8). Prevent any strong wind (like that from a fan) from blowing onto the nozzle.

Note: There are two methods of installing the printer brace. This enables the printer to move forward and backward by 55.7 mm distance. Refer to Figure 3-9 on page 3-8.
Controller Screen Setup

Adjust the angle of the controller to monitor the screen and operate the keyboard as shown in Figure 3-10 on page 3-9.

a. Follow direction 1 (in the following figure) to push the controller to release it from the rotation restriction.

b. Follow direction 2 (in the following figure) to rotate the controller to the angle convenient for operation and monitoring.
Externally-connected Sensor

If the customer orders an externally-connected sensor, perform the installation according to the following steps:

1. Peel off 80 mm length of the protection cover from the sensor-connecting end wire.
2. Peel off 5 mm length of the external cover of the core wire.
3. Open the cover of the externally-connected sensor.
4. Insert the wire of the externally-connected sensor through the orifice on the cover. The total length of the wire should be around 140 mm (Figure 3-9 on page 3-8).
**Note:** Install tie-wrap to act as strain relief for the wire.

5 Refer to Figure 3-12 while performing the wiring. Also, refer to the sensor description provided in Table 3-1.

![Figure 3-12: Wiring Details](image)

The wiring description for the sensor (PN: 35464) is as listed in the following table:

<table>
<thead>
<tr>
<th>Sensor Wire Color</th>
<th>Controller Wiring Base</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>12V</td>
<td>Short connected 12V and SIG+ by using wire</td>
</tr>
<tr>
<td>White</td>
<td>SIG -</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>GND</td>
<td></td>
</tr>
</tbody>
</table>

*Table 3-1: Wiring Description*

6 Replace the cover of the externally-connected sensor and fasten the bolt.

7 Fix the sensor onto the production line. Make sure that the distance from the sensor to the nozzle is not greater than 500 mm.

**Note:** You must set the printer software properly while using the external photocell. With an external photocell, ‘Auto Detect’ is not used to set speed or direction. Use the 'Set Line' option in the main menu (“Set Production Line” on page 4-21) to manually set the speed, the direction and to set the 'Select Sensor' setting to 'External'.

8 Power supply installation:

**Warning**

PERSONAL INJURY. Make sure that the mains socket outlet is installed in the vicinity of the equipment so that it is easily accessible.
a. Connect the power supply cable to the power supply adapter, as shown in Figure 3-13.

![Power Supply Cable Connection](image)

*Figure 3-13: Power Supply Cable Connection*

b. Connect the male plug from the power supply adapter to the printer controller (refer Figure 3-14).

c. Connect the power supply to an appropriate voltage power source.

![Adapter Connection](image)

*Figure 3-14: Adapter Connection*

**Note:** Before printing, fix the power supply adapter with the cable tie provided by Videojet, or the customized brace, as shown in Figure 3-15 on page 3-12. This holds the cord in position and reduces the strain on the power cord connector.
9 Ink bottle installation:
   a. Insert the ink bottle through the orifice and position the mouth of the ink bottle towards the printhead.

b. Push the ink bottle forward and twist it clock-wise until it is tightly connected to the printer.
Note: You must remove the air in the system by purging the unit with ink.

After performing Steps 1 through 9, connect the power supply cable to a 100 V ~ 240 V DC power supply socket.

You can use the printer once the power is switched ON.

**Warning**

PERSONAL INJURY. Make sure that the mains socket outlet is installed in the vicinity of the equipment so that it is easily accessible.

Note: Make sure that the power source for the Unicorn II is free from surges and spikes. The Unicorn II, like other computer equipment, is sensitive to surges and spikes. For best results, use a dedicated receptacle on a direct line from the power panel.

Note: To guarantee regular operation of the internal sensor, make sure that the product spacing on the production line is greater than 35 mm as shown in Figure 3-18 on page 3-14.
Figure 3-18: Product Spacing

Product spacing bigger than 35mm
Operation and Setup

Overview

Some of the important features of the user interface and keyboard are as follows:

1 **User interface**: Use the interface to create, edit, and print messages, as well as for the other functionalities.

2 **Function area**: Use to set up the special function and hot keys for inserting special functionalities into messages.

3 **Guide key area**: Use to move the cursor’s position in the menu and while creating the message.

4 Letter and number/special character key area.

Figure 4-1: Controller Features
Keyboard Description

Keyboard contains following main functionalities:

1. Print on/off
2. Dot size—hot key
3. Purge—hot key
4. Print delay—hot key
5. Character width—hot key
6. Date setup/insert—hot key
7. Time setup/insert—hot key
8. Count setup/insert—hot key
9. ESC (Exit)
10. Backspace/delete
11. Left Shift
12. Input method switch
13. Capital lock
14. Right Shift
15. Language Dependent Character Keys

Figure 4-2: Keyboard
Print On/Off

Press □□□□ to switch ON or OFF the print.

Green light ON - Print mode ON
Red light ON - Print mode OFF

**Note:** In order to prevent on-site misoperations, dot size, print delay, and character width can only be set via hot keys (on the printer) while printing is in process (green light is ON). For other operations (like edit, select message etc.), if the customer needs to enter the main menu, stop the printing (press □□□□ till the red indication light turns ON).
Dot Size

Press \( \text{Æ} \) to enter the following user interface.

![Set Dot Size](image)

Figure 4-4: Set Dot Size

Press \( \text{Ä} \) to change the dot size value and then press \( \text{Æ} \) to confirm the edit.

Purge

Press \( \text{Å} \). The printer starts to purge the ink circuit system. Press \( \text{Å} \) again to stop purge.

**Note:** During purge, ink is sprayed out from the nozzle. Therefore, before pressing \( \text{Å} \), make sure that the proper collection devices are placed in front of the nozzle to prevent ink from spraying on other products.

**Note:** If you have not used the printer for a while (for example, 3 days), Videojet recommends that you use a special cleaner to purge the printer completely (run more than five purge cycles), before switching off the printer. This action makes sure that the nozzle is ready for the next use of the printer.
Print Delay

Press \[ \text{ } \] to enter the following user interface.

![Print Delay interface]

**Figure 4-5: Print Delay**

Press \[ \text{ } \] to move the cursor to the correct position to enter data and press \[ \text{ } \] to change the print delay value. Press \[ \text{ } \] to confirm the change.

*Note:* When the printer is connected to an external sensor, the distance from the sensor to the nozzle is added to the print delay.

*Note:* Changing the print delay value affects only the message that is currently selected for print and that delay value is stored with the message.

*Note:* Printing on the leading edge of the product, requires an external photocell.

Character Width

Press \[ \text{ } \] to enter the following user interface.

![Character Width interface]

**Figure 4-6: Set Character Width**

Press \[ \text{ } \] to change the character width value and press \[ \text{ } \] to confirm the change.
Date

Press \( \text{ } \) to enter the following user interface.

![Set Date]

2009 09 14 13:44 Mon

*Figure 4-7: Set Date*

Press \( \text{ } \) to move the cursor to the correct position to enter data and press \( \text{ } \) to change the value. Press \( \text{ } \) to confirm the change.

Time

Press \( \text{ } \) to enter the following user interface.

![Set Time]

2009 09 14 10:05 Mon

*Figure 4-8: Set Time*

Press \( \text{ } \) to move the cursor to the correct position to enter data and press \( \text{ } \) to change the value. Press \( \text{ } \) to confirm the change.
Count Display

Press \[ \text{[Shift]} \] to enter the following user interface.

<table>
<thead>
<tr>
<th>Current Count Value</th>
<th>09:09:56</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13/03/05</td>
</tr>
<tr>
<td></td>
<td>00002</td>
</tr>
<tr>
<td>Total Count</td>
<td>0000000284</td>
</tr>
</tbody>
</table>

Figure 4-9: Count Display

Note: ‘Total Count’ value is the total number of prints the Unicorn II has printed. This value is for view only and cannot be inserted into a message.

Number/Special Character Key Lock

To input the upper characters/numbers on the keypad, press \[ \text{[Shift]} \] or \[ \text{[Shift]} \] to lock the input. To select the upper-left characters, press \[ \text{[Shift]} \] and for the upper-right characters, press \[ \text{[Shift]} \].

Note: Unicorn II displays the ‘lock’ status of the keys in the status display area on the right, at the bottom of the screen. The display of ‘SHIFT’ indicates that the Number/Special Character input keys are locked.

Backspace/Delete

Press \[ \text{[Backspace]} \] to delete a character or variant in the message, immediately before the position of the cursor.

Exit

Press \[ \text{[Exit]} \] to exit the current user interface to an upper level interface.
Input Method Switch

Press \( \text{alt} \) to input the lower characters on the keypad. Also, use \( \text{alt} \) to change between the available language input characters and to switch between the font sizes (16 dot and 7 dot).

![Image](Figure 4-10: Input Method Status)

**Note:** Pay attention to the status display at the right-bottom corner of the user interface. This indicates the language input currently selected.

Capital Lock

In the “Edit Message” interface, if the current character input style is lowercase, press \( \text{caps} \) to switch to the uppercase. To switch back to the lowercase, press \( \text{caps} \) again.

**Note:** Unicorn II displays the character input style in the status display area on the right, at the bottom of the screen. ‘a’ indicates lowercase character input while ‘A’ indicates uppercase character input.
User Interface

Start Screen

![Start Screen](image)

The start screen displays details such as the device name, language and software version number.

Main Menu Structure

<table>
<thead>
<tr>
<th>Main Menu</th>
<th>07: 48: 29</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Select Message</td>
<td>09/ 09/ 14</td>
</tr>
<tr>
<td>2. Create Message</td>
<td></td>
</tr>
<tr>
<td>3. Edit Message</td>
<td></td>
</tr>
</tbody>
</table>

![Main Menu Screen 1](image)

<table>
<thead>
<tr>
<th>Main Menu</th>
<th>07: 52: 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Set Rollover Time</td>
<td></td>
</tr>
<tr>
<td>5. Set Count</td>
<td></td>
</tr>
<tr>
<td>6. Set Shifts</td>
<td></td>
</tr>
</tbody>
</table>

![Main Menu Screen 2](image)
Select Message

In the main menu, when “Select Message” is highlighted, press \( ightarrow \) to enter the following interface.

Select Message

<table>
<thead>
<tr>
<th>alphabet</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \checkmark ) TEST</td>
</tr>
<tr>
<td>count</td>
</tr>
</tbody>
</table>

Figure 4-15: Select Message Screen

A list of all the saved messages is displayed in the interface. Press \( \uparrow \downarrow \) to select a message for printing. If there are more than three saved messages, press \( \downarrow \) to go to the next page. If you wish to select a
message with the name ‘add’, press to enter the following interface while the message is selected ("√" before the message name).

![Select Message Interface](image)

Figure 4-17: Confirm Print

To confirm the printing of a message, press to select “Yes” and then press to select the message and return to the main menu. After selection, to switch ON the printing function, press till the green light turns ON. Automatic spray printing starts once the sensor is triggered.

**Create New Message**

In the main menu, once “Create New Message” is highlighted, press to enter the following interface.

![New Message Interface](image)

Figure 4-18: Create New Message

Enter a name for the new message. The name can be a single line character, or number, or a special character. It can also be a combination of various inputs.
Once you enter the name, press \[\text{button}\] to enter the following interface.

![New Message Name](image)

*Figure 4-19: New Message Name*

Taking \(2009\) Sep 14 as an example to introduce the process of message editing:

1. Press \[\text{button}\] to enter the following interface.

![Edit Message](image)

*Figure 4-20: Edit Message*

‘YYYY’, the Current Year insert, is highlighted. Press \[\text{button}\] to insert ‘2009’. The interface displays the following information.

![Insert Date/Shift](image)

*Figure 4-21: Insert Year*
2 Press \( \text{ } \) to input a space, as shown in the Figure 4-23.

3 Press \( \text{ } \) to enter the following interface.
Press \( \text{ obtains} \) to insert the current month, for example ‘Sep’.

4  Press \( \) to enter the following interface.

Press \( \) till DD (Current) is highlighted.

Press \( \) to insert the current day. For example, 14.
5 Press \[ \text{Alt} \] to move the cursor to the second line. Press \[ \text{Backspace} \] to move the cursor to position (refer Figure 4-29).

6 Press \[ \text{Insert} \] to insert the letter ‘C’ to the current position. Press \[ \text{Caps Lock} \] to switch between the lowercase and uppercase input styles. Press \[ \text{U}, \text{N}, \text{T} \] and \[ \text{Alt} \] to insert ‘o’, ‘u’, ‘n’, and ‘t’ into the message, as shown in the Figure 4-30.
Press to enter the following interface.

Press the following buttons in sequence to set the initial count value as 0003313.

Press to insert the count value into the message.
After completion of the above steps, the new message is created. Press \( \text{\textbullet} \) to confirm the completion of message creation. Press \( \text{\textbullet} \) again to save the message and return to the main menu.

**Edit Message**

In the main menu, while “Edit Message” is highlighted, press \( \text{\textbullet} \) to enter the following interface.

The list of all saved messages is displayed. Press \( \text{\textbullet} \) to select the message you wish to edit. If there are more than three saved messages, press \( \text{\textbullet} \) to go to the next page.
1. For example, if you wish to edit a message, select the message and press \( \text{ } \rightarrow \) to enter the following interface.

Press \( \text{ } \rightarrow \) \( \text{ } \rightarrow \) to move the cursor through the message. Press \( \text{ } \leftarrow \) to delete a character or string with a fixed format, placed directly before the cursor. After editing the message, press \( \rightarrow \) to confirm the edit.

To save the edited message, press \( \text{ } \leftarrow \) \( \text{ } \leftarrow \) till ‘Yes’ is highlighted and then press \( \rightarrow \) to save the message and return to the main menu.
cancel the edits, press \[ \text{.undo} \] till ‘No’ is highlighted and then press \[ \text{ok} \] to return to the main menu. The changes to the message are not saved.

2. To delete a message, select the message and press \[ \text{delete} \] to enter the following interface.

```
Delete Message
abcd
Delete ?  No  Yes
```

*Figure 4-39: Confirm Delete*

Press \[ \text{ok} \] till ‘Yes’ is highlighted and then press \[ \text{ok} \] to delete the message and return to the main menu. If you do not wish to delete the message, press \[ \text{ok} \] till ‘No’ is highlighted. Then press \[ \text{ok} \] to return to the main menu without deleting the selected message.

**Date Rollover Time**

In the main menu, while “Date Rollover Time” is highlighted, press \[ \text{ok} \] to enter the following interface.

```
Set Rollover Time
00: 00
```

*Figure 4-40: Set Rollover Time*

You can set the date rollover time in this option. For instance, if the current date is ‘14 Sep’, and if the rollover time is set to ‘23:59’, the date will turn to ‘15 Sep’ when the system reaches the rollover time.

Press \[ \text{ok} \] to save the rollover time and return to the main menu.
Set Counter

In the main menu, while “Set Counter” is highlighted, press \( \text{\textarrow{}} \) to enter the following interface.

Figure 4-41: Set Count

You can set the initial count value in this option. For instance, the initial count value is ‘0003133’. Press the following buttons \( \text{\textarrow{}} \) in sequence to set the initial count value as ‘0003313’.

Figure 4-42: Set Initial Count Value

After the value is set, the end count value is the default value ‘999,999’.

Set Shift

In the main menu, while “Set Shift” is highlighted, press \( \text{\textarrow{}} \) to enter the following interface.
You can set four shifts and edit the shift codes according to the user’s requirements using this option. Press ▶ ▾ to move the cursor to the shift time and press ▼ ▶ to alter the time. Then press ◀ to save the settings and return to the main menu.

**Set Production Line**

In the main menu, while “Set Line” is highlighted, press ◀ to enter the following interface.

<table>
<thead>
<tr>
<th>Set   Line</th>
<th>08: 02: 29</th>
</tr>
</thead>
<tbody>
<tr>
<td>09/ 09/ 14</td>
<td></td>
</tr>
</tbody>
</table>

1. **Set Speed**

2. **Set Direction**

3. **Select Sensor**

![Figure 4-44: Set Production Line]

**Note:** ‘Auto Detect’ option for speed and direction cannot be used while using an external photocell.

1. Select “Set Speed” and press ◀ to enter the following interface.
If you require automatic detection of speed, press  till ‘Yes’ is highlighted and press  to save the settings and return to the main menu. If you wish to select manual speed detection, press  till ‘No’ is highlighted and then press  to change the speed value (range: 6-60 m/minute). Press  to save the speed settings and return to the main menu.

**Note:** If the production line speed is stable (if frequency-change control is adopted), Videojet recommends that you set the production line speed settings to the fixed speed mode. This improves the working stability of the printer.

2. Select “Set Direction” and press  to enter the following interface.

There are three production line direction options:

- **Auto** - Automatic detection of production line direction (internal sensors only. Cannot be used with an external photocell)
- **L -> R** - The direction of the production line is from left to right
- **R -> L** - The direction of the production line is from right to left
After selecting the production line direction, press → to save the direction settings and return to the main menu.

**Note:** If you have fixed the speed of the production line, Videojet recommends that you set the production line direction to the Fixed Direction mode. This will optimize the working stability of the printer.

3 Choose “Select Sensor” and press → to enter the following interface.

3. Choose “Select Sensor” and press → to enter the following interface.

![Select Sensor Interface](image)

**Figure 4-47: Select Sensor**

Press ← → to select the sensor. If there are no externally-connected sensors, select “Internal” and press ← to return to the main menu. If there are external sensors, select “External” and press ← to return to the main menu.

**Note:** If the interference of the field environment is substantial (for example, the interference caused by the presence of a large electrical device), Videojet recommends that you use an external sensor and fix the metallic shell of the sensor to a metallic bracket with a reliable grounding device. This will improve the working stability of the printer.

**Software Version Number**

In the main menu, while “Software Version” is highlighted, press ← to enter the following interface.
This interface displays the current software version number of the printer.

**Select Language**

In main menu, while “Select Language” is highlighted, press to enter the following interface.

There are various language options. Press to select the required language and press to return to the main menu.
Frequently Used Printer

If the customer uses the printer frequently, perform the following procedure for printer maintenance. Printer maintenance extends the life of the printer and improves the print quality.

Maintenance of the Keyboard and the External Shell of the Printer

Keep the surface of the printer free of dust and other impurities. Dip a clean, soft cloth into some water. Remove the excess water from the cloth and use it to clean the surface of the keyboard and the external shell of the printer.

⚠️ Warning

PERSONAL INJURY. Do not use alcoholic or organic solvents to clean the external shell of the printer and the LCD screen.
**Maintenance of the Nozzle and the Internal Sensor**

Keep the nozzle and the internal sensor free of dust and other impurities. Dip a clean, cotton swab into some water and use it to clean the surface around the nozzle and sensor.

*Note:* Make sure the nozzle surface is free of impurities from the cotton swab. Impurities on the sensor can cause bad print quality.

*Figure 5-1: Keyboard and Printer External Shell*
If you frequently use the printer, Videojet recommends that you purge the system every 30 days. During purge, the solvent flushes the circuits of the system for two minutes. After purge, use the ink to wash away the solvent in the circuit. Flush the ink into the printer for two minutes to make sure that the circuit is full with the ink.

**Note:** During purge, keep an ink catch reservoir before the printer nozzle to prevent the ink from splashing on the products or the production line.

**Warning**

PERSONNEL INJURY. Do not point the nozzle at the operator or other persons present near the printer.

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**Startup Procedure**

At the beginning of each shift, perform the following tasks:

1. With the spray cap on the solvent bottle, spray the nozzles with solvent. Be sure you are using the correct type of solvent (porous or non-porous). In harsh environments, you may need to spray the nozzles more often than once per shift.

2. Purge the printhead.
3 Check the ink level in the bottle; install a new bottle if necessary. In harsh environments, or if print quality declines, replace the ink bottle with solvent and purge solvent through the unit.

Shutdown Procedure

**Caution**

EQUIPMENT DAMAGE. Be sure you are using the correct type of solvent. Porous and non-porous inks and solvents cannot be used interchangeably in a printhead.

**Porous**

If you are shutting down a porous unit for less than two weeks, simply turn off the controller. You do not need to purge the printheads with ink or solvent. Also, do not remove any ink that may have caked on the nozzle block. This will keep contaminants from entering the nozzles.

When you restart the unit, follow the daily maintenance procedures on “Startup Procedure” on page 5-3.

If you are shutting down a porous unit for more than two weeks purge the printheads with porous solvent. Leave the solvent in the ink lines until you restart the unit.

**Non-porous**

If you are shutting down a non-porous unit for more than three days, the printhead should be purged with non-porous solvent to prevent nozzle clogs. Leave the solvent in the ink lines until you restart the unit. For shutdown periods of less than three days, perform routine maintenance as described on “Startup Procedure” on page 5-3.