



Version No: E1S20170601B

Elfin Series (Elfin 1 /Elfin 1H/Elfin1D/Elfin1S) High Resolution Inkjet Printer



Operating instructions

Sojet Electronics (Xiamen) Co.,Ltd

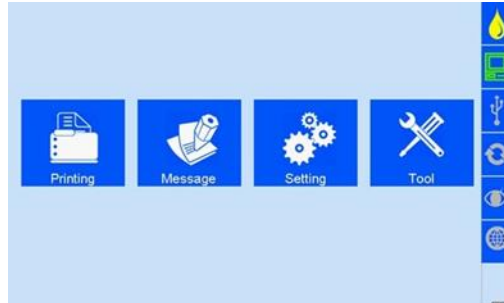
Content

1 Main Interface	1
2 Printing Management	1
2.1 Find/Preview Data.....	1
2.2 Start Printing / Printing Report	2
2.3 Printing Delay.....	2
2.4 Print Initial Value	3
2.5 Stop Printing	4
3 Data Management.....	4
3.1 New/Edit Data	4
3.2 Add Text Object.....	5
3.3 Add Production Date	7
3.4 Add Expiry Date	7
3.5 Add Image.....	8
3.6 Add Counter	8
3.7 Add Shift	9
3.8 Add Barcode	10
3.9 Add dynamic text.....	12
3.10 Add dynamic image.....	13
3.11 Add Device Information	13
3.12 Add String	14
3.13 Add CSV File.....	14
3.14 Delete Object or Delete/Import /Data copy	15
4 System Management	16
4.1 System Setting.....	16
4.2 Edit Options	17
4.3 Printing Options	19
4.4 User Management	22
4.5 Special Features	22
4.6 Screen Calibration	24
5 Tool Management.....	25
5.1 Image Management	25
5.2 System Upgrade	25
5.3 System Backup	26
5.4 System Logs	27
5.5 About Device.....	28
5.6 System Reset.....	28
6 Input Methods Introduction.....	29
7 Status Bar	31

Elfin-1S User Manual


Part Number: Elfin-1SA/Elfin-1SB

1 Main Interface



- **Printing Management:** Find/preview data, start printing/printing report, printing delay, print initial value, stop printing
- **Data Management:** Find, preview, create, edit, delete dataetc
- **System Management:** System setting, edit options, printing options, user management, special features, Screen calibration
- **Tool Management:** Logo management, software update, backup, system logs, about device, system reset
- **Status bar:** Ink information, USB, Encoder, External photocell, Ethernet status and Clean Printhead.

2 Printing Management

Click  on main interface to enter printing management.

2.1 Find/Preview Data

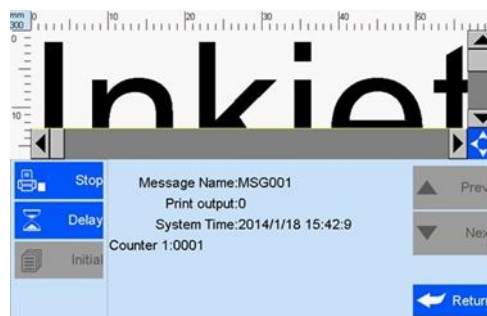


- **Find data:** Find by Page up/Page down/keywords.

- **Preview data:** Preview data by locating or selecting a file or data to display preview interface; data located/selected will be displayed on preview interface, and you can view them which beyond the page by dragging the slider.

Note: Drag the scroll bar horizontally to view the data when it exceeds the screen horizontally.

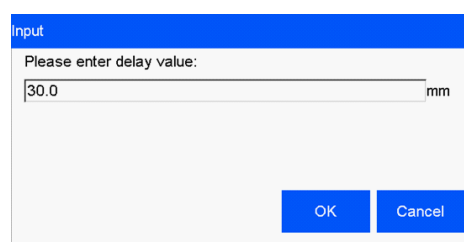
2.2 Start Printing / Printing Report



Click  button to start printing. When printing starts, a printing report appears.

- **Printing report:** It is the timely record of printing in process, including file name in process, print output, counter value, shift code, dynamic text ,system time. The printing report exit when printing stop.

2.3 Printing Delay



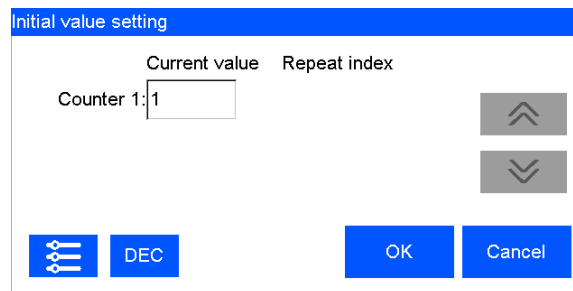
Click  printing delay interface .


- **Printing delay default value:** 30mm;
- **Printing delay value range:** 0.0-999.9mm;


It is allowed to set printing delay value during printing process, the newly set value take effect from the next printing.

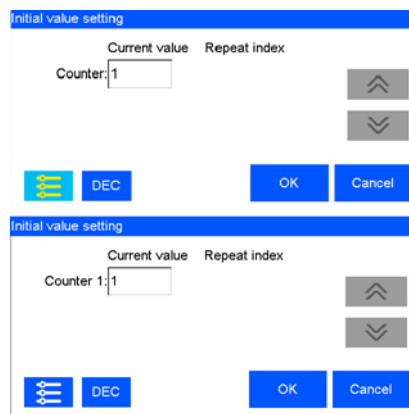
Printing delay value for each message are separate, the delay setting for current data file will not affect another data file.

2.4 Print Initial Value




Click  to enter the initial value setting and repeated index value interface.

Hex switch: Click  The value of the current counter can be decimal switched, but the set value can't be changed during printing
DEC-10 decimal (0-9);
H36-36 hexadecimal (0-Z);
The Hex is editable.



Counter Synchronized:


when multi counters included in the same file, click  then all counters' current value will be default value 1 synchronously.

Click “confirm”, Interface will indicate the counter setting interface, you can set counters minimum, maximum, repeated values, step values, and hexadecimal rules.

String: all the same strings that exist in the data are modified synchronously after a string modified.

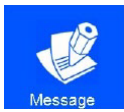
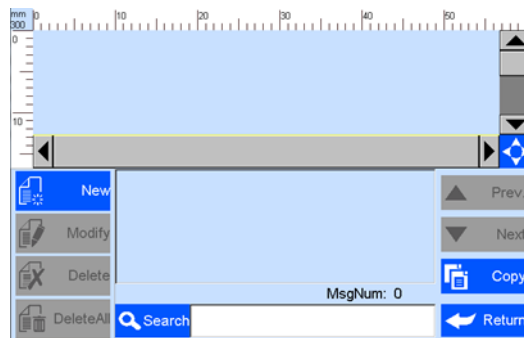
CSV: If the document contains the CSV file, you can modify initial printing message at the home page.

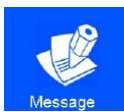
2.5 Stop Printing

Click  to stop and exit printing report, return to Start Printing status.

Note: Printer automatically stops printing when power off, cartridge empty, counter alarming etc.



3 Data Management



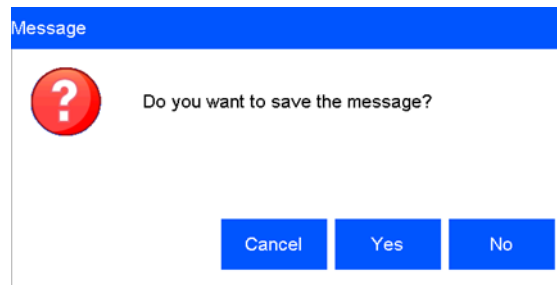
Click  on main interface to enter data management interface.


3.1 New/Edit Data



Click  or  on data management interface to enter data edit Interface.

- **New data:** text, counter, shifts, production date, expiration date, image logo, barcode, dynamic text(**this function excluded for E1D**), dynamic logo(**this function excluded for E1D**), device information(**this function excluded for E1D**), string(**this function excluded for E1D**), CSV(**this function excluded for E1D**);
- **Edit:** data in printing process can't be edited;
- **File name:** maximum 15 characters, empty file name or duplicate file name are not allowed.

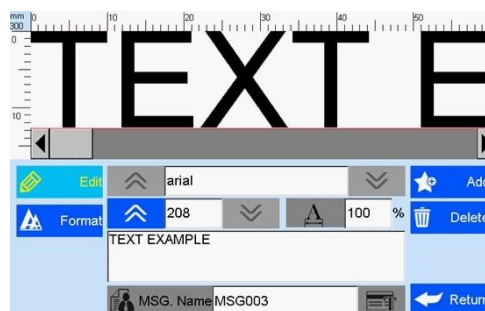



Click  to save data when finish edit, “Cancel, Yes, No”

Note: If you click  the machine will remain on editing interface.

Note: “MSG001” is default data in system. The system allows maximum 500 files or data (including default “MSG001”); The system don't save empty or error messages.

3.2 Add Text Object



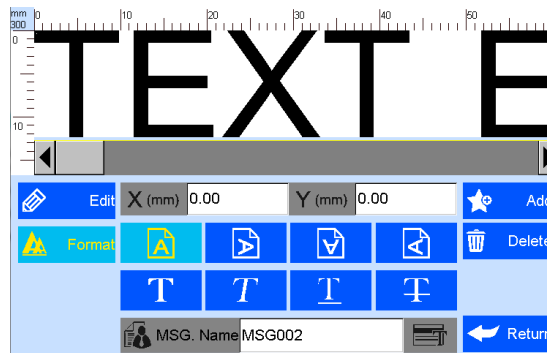
Click  to add text object.


Click  to enter text edit interface.

- **Font:** including the default one, support 2 fonts, (the default one and another alternative font).

Font Size: 16-1252 (Default)


- **Font height** (adjust freely within the scope of 1-12.7mm).
- **Text horizontal scale:** 1-300%.
- **Text content:** not exceed 78 words.



Click  to enter text adjustment interface.


- **Coordinate position:** adjustable range for X axis 0-3000mm; for Y axis, 0-12.7mm.
- **Text orientation:** 0°, 90°, 180°, 270°. Four orientations adjustable.
- **Font effects:** bold, italic, underline, strikethrough available to be adjusted.


Note: Please refer to this section (3.2) regarding how to add objects as “production date”, “expiry date”, “counter”, “shift code”, “dynamic text” “dynamical logo” can’t be revised or adjusted directly when you add, and the font, height, content and font effect of “image”

“dynamical logo” cannot be revised directly. No  options for horizontal scale for “image”, “barcode”, “dynamical logo”.

3.3 Add Production Date





Click  to add “production date”.

Click  to enter date format setting, choose calendar format by page up and down. Gregorian and Hijri calendar available.

3.4 Add Expiry Date




Click  to add expiry date.

Click  to enter date format setting and expiry date (scope: 0~9999), Gregorian and Hijri available.

3.5 Add Image

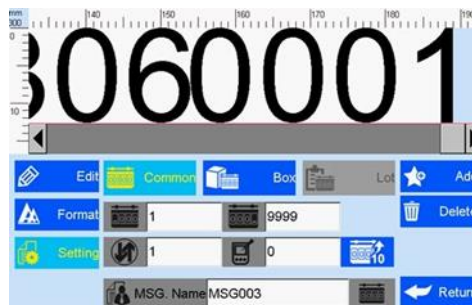


Click  to add image. Select an image logo by page up and down.




Note: When no image file found, a window remind to import image

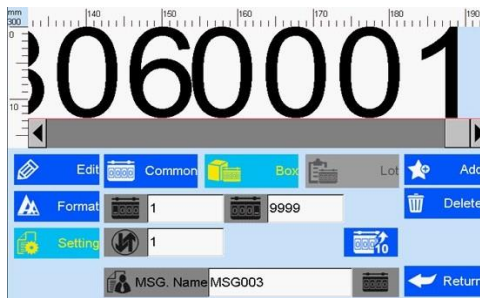
3.6 Add Counter



Click  to add counter.

Click  for options of common counter, box number, lot number.

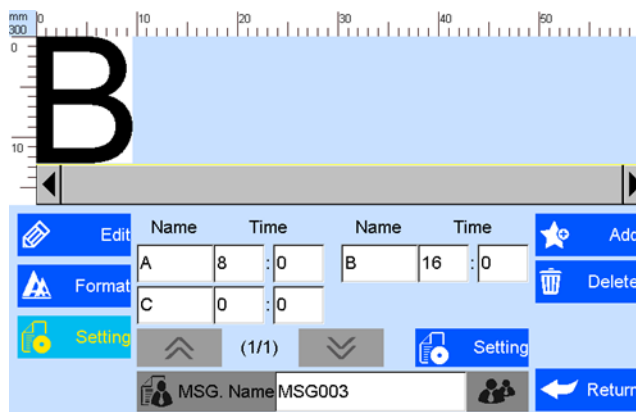
Click  for common counter setting: minimum value, maximum value, step value, duplicate number.





Note:

1. Please set up carton number at first, then set up pallet number.
2. No duplicate value setting options for carton and pallet number.

3.7 Add Shift



Click  to add “shifts code”.

Click  enter the setting interface: set shifts interval, start time and shifts numbers.

- **Shift interval:** 9 options: 0, 0.5H, 1H, 2H, 3H, 4H, 6H, 8H, 12H, each option makes a day to the responding shifts number.
Such as: interval value 8H, means 3 shifts per day.

- **Start time:** set the time for the first shift.

Note: 24-hour time system.


- **Shifts number:** set shifts numbers.
While interval value is 0, shifts can be inputted freely from 2-48.


Click  to view the detailed information.

- **Shift:** set the shift name, time.
- **Shift name:** maximum 5 characters.
- **Shift time:** can set different time, shifts will be changed according to time.

3.8 Add Barcode

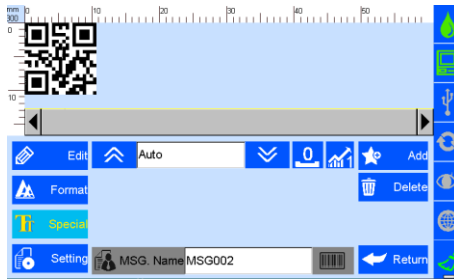


Click  to add “barcode”.

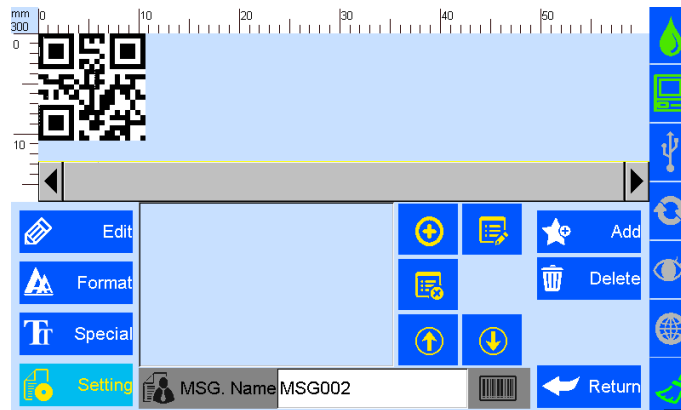
- Click  to enter barcode edit: Barcode type, horizontal scale level, barcode height, barcode text.




- Click  to enter barcode adjustment: coordinate location, text orientation.



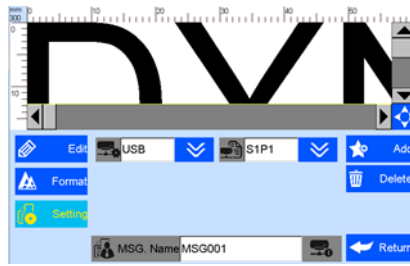
- Click Special, set bar code text hidden/ display, font switch, font size, error correction level, blank grade, 2D barcode specification.





- Click , enter barcodes setting interface (this function excluded for E1D): User can create, edit and delete data sources in the barcode content. The data sources including 10 objects: text, production date, expiry date, counter shifts, dynamic text, device info, CSV, string and carriage return.

After creating a new object, its name will show up in the list, user can sort the objects by up and down arrows.

3.9 Add dynamic text(this function excluded for E1D)



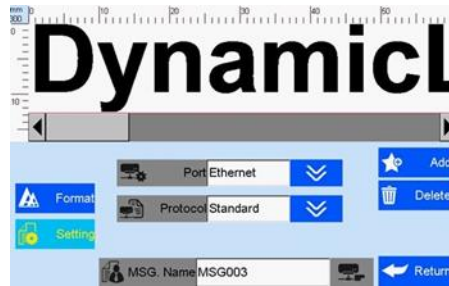
Click  to add dynamic text.

- Click  to enter the interface of dynamic text setting ,you can choose dynamic transmission path and communication protocol.



- Scan printing: Port is USB, optional modes as below:
 - S1P1**: scan one while printing one.
 - S1PN**: scan one while printing multiples until next scan data.
 - SNPN**: scan multiples while printing multiples, repeated print times also available.
 - SGPN**: Fix scan numbers and print numbers, repeated print times and scan numbers available.

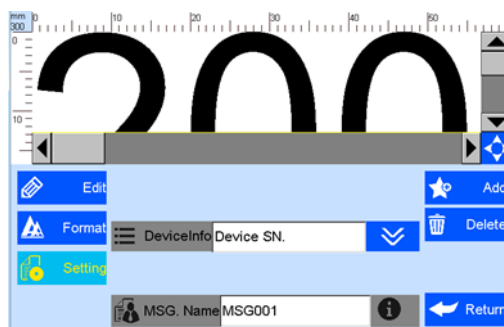
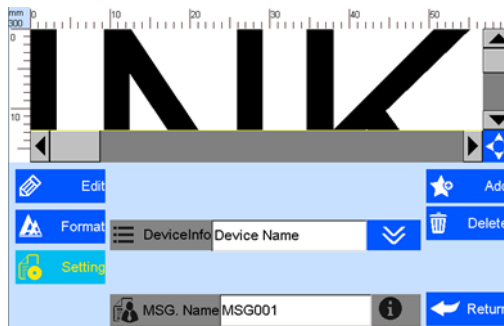
3.10 Add dynamic image (this function excluded for E1D)



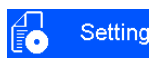
Click **Dyn. Logo** to add dynamic image.

Note: Please refer to step 3.9 to add dynamic text, set the data transmission path and communication protocol.

3.11 Add Device Information (this function excluded for E1D)



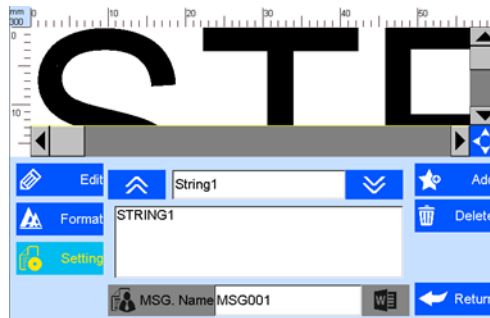
Click **DeviceInfo** add device information;




Click **Setting** enter device information setting interface, choose device name and device SN No available.

Device name can be defined by entering 5.4.5 user management to define and device SN can't be changed.

3.12 Add String(this function excluded for E1D)

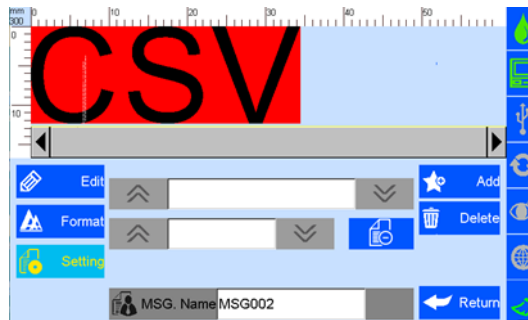


Click  to add string.


Click  to enter the string setting interface. The system default can add 5 different strings. single data allows maximum 20 string objects, each string with maximum 75 characters.

Note: when add the same string, other same strings will be modified automatically once one of strings modified.

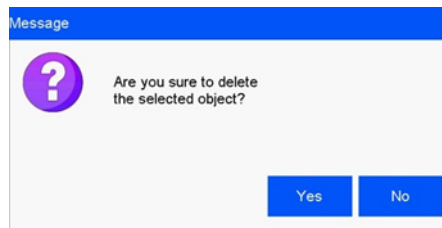
3.13 Add CSV File(this function excluded for E1D)



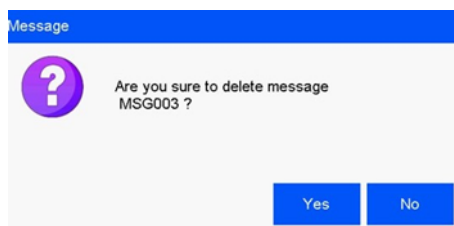
Click CSV to add the CSV file.


- Put the CSV file under the U disk (Inkjet/CSV/) path.
- Inserts the U disk into the device. The device automatically identify the CSV file and switch options.
- Select the file, Switch and choose the required content.
- Click on  , no print for the first line, click again to switch to the first line to print.

3.14 Delete Object or Delete/Import /Data copy




Select an object on data edit interface, click  **Delete** to delete the object, and a dialog box appears, please refer.

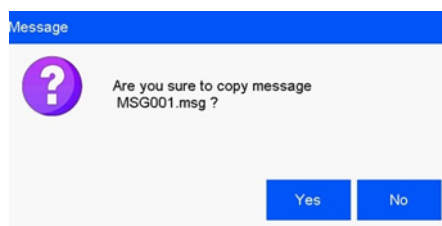



Select the file on the file list of data management interface, click  **Delete** to delete the file, a dialog box appears.

Note: All data in printing cannot be deleted.



Click  **Import** on File Management interface, it will import all files saved in U disk under defined route. A dialog box reminds you to cover or not.




Select an object on data editing interface, click  **Copy** to copy data, “C1” be added on the original data name after data copied. E.g. the files name of MSG001 will changed to

MSG001C1.


4 System Management



Click  to enter System Management interface.

4.1 System Setting

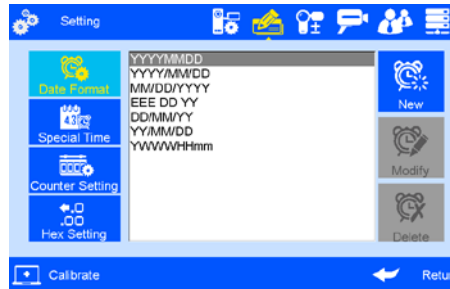



Click  on system management interface to enter system setting.

- **System language:** The language of Shipping country is standard language as default.
- **System time:** Manufacture time as default time, user also can set the time.
- **Screensaver time:**
 - 1 System default 4 hours,4 cycle switching: 0.5H,2H,4H, off(8H).
 - 2 If screensaver is optioned OFF, screen enters standby status.
 - 3 Screen becomes active when there's alarm or error.
- **Unit:** Switch between mm and inch.
- **Daylight saving time:** Three setting modes: OFF, European summer time, US summer time.
- **Calendar Type:** Two modes available: Gregorian& Moslem calendar.
Gregorian is default calendar; The system time will be updated according to the calendar setting.

4.2 Edit Options

Click  on system management interface to enter edit options setting interface.




- Click  to enter production date and expiry date format setting.

Note: Seven common date formats default, 43 self-edit formats for user. 7 default date formats can't be deleted.



Click  to modify date format.



Click  to delete the existing date format.

Note: Year/Month/Hour/week have 2 hex options: decimal/36 hex, before operating first need to select hex and then the date format.

1.  Year, options are: ---4-Digit

---Last 2 digit

---Last 1 digit

2.  Month, options are: ---Full digit

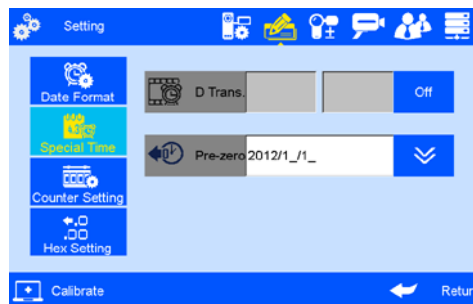
1-9-En --- Jan to Sep is 1-9, Oct to Dec is O/N/D


M --- Abbreviations

M --- Full English


3. HH Hour, options are: 24H --- 24H system

12H --- 12H system

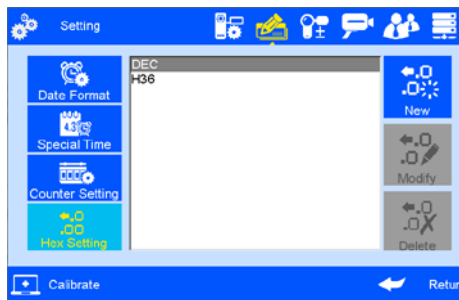



- Click  to enter special time setting.
 1. Date transition time setting: Off is system default, zero point is normal date transition, users can set different time as date transition.
 2. Pre-zero in date/time: four options: OFF, empty preposition, empty post-position, content centered without blank.
(e.g. 2012/05/09, 2012/_5/2_, 2012/5/2).



- Click  to enter counter setting.
 1. Capacity counter: setting range: 0~99999999.
 2. Pre-zero: Click the down button to switch the four options
(e.g. : 0001, __1, 1__, 1).
 3. Counter alarm: ON or OFF option. When counter alarm is turned ON, the machine will stop printing when print number reaches maximum value.
 4. Counter reset: ON or OFF option. All counters will start from initial values if the counter reset is turned ON. The printing value will continue from the last printing if the counter

reset is turned OFF.



- Click  enter the system setting interface. (this function excluded for E1D)

The system can be new-create, modified and deleted.

system default: DEC-10 decimal (0-9), H36-36 hexadecimal(0-Z).


The default hex can't be modified or deleted.




New-build and edit the system

1. Input the system name with three characters and Images only allowed.
2. System content: Input Arabic number from 0-9, 26 capital letters (A-Z) or lowercase letters (a-z), no duplicate input.








4.3 Printing Options

Click  on system management interface to enter printing option setting.




- Click  to enter nozzle maintenance setting.

Note:

1. Pre-purge Mode: 2 modes:  both right & left nozzles;  the working nozzles only.
2. Pre-purge:5 shifts: OFF, low, medium, high. see the following Images:
 ---Off  ---Low  ---Medium  ---High
 --- Custom Setting: User can set the interval from 1-3600 sec.
3. Object Width: After inputting the object width, the printer will not pre-purge while the object passing to avoid potential pollution.
4. One key clean: spit 300 ink dots one time; the function fails if the button is on during printing.



- Click  to enter print head setting.
- Cache number: Printing numbers in memory.
- Clear Buff: Clear the cache. This function defaults to shut down. When set to open, the clear cache button is displayed in the printing report, and the cached data is cleared by clicking the button.
- Pre-Print: The pre-print displayed when pre-purge is open. (Induction once, spray once).

Note: printing direction: system default from left to right.

1. Four directions optional: left-to-right, right-to-left, mirror sides of left-to-right and right-to-left, see image as follow:

 --Left-to-right;  --Right-to-left;

 --Mirror side of left-to-right;  --Mirror side of right-to-left.

2. Channel switch: Left channel is default, left channel, Right channel, Dual channel, see the image as follow:

 --Left channel;  --Right channel;  --Dual channel.

3. Printing Recovery: when the set is **On**. The system automatically restores the printing status before the power cut and automatically starts printing, the default setting is **Off**.

Note: When the printing contains counter, operator need to check on, the counter value and do needful adjustment before the Printing Recovery is “ON”.



• Click **Line Speed** to enter production line setting.





Line speed: system default 30m/min. Adjustable scope 1~150m/min;

DPI: system default 300DPI. Adjustable scope 50~600DPI.



Click **Test Speed** on line speed setting interface to run speed test.

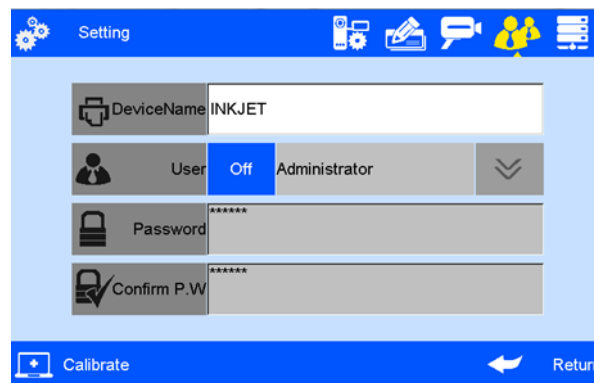
Line speed test: input test object length 0~3000mm, click **Test Speed** to enter speed test startup interface, then start production line, put test object onto production line, the photocell will be sensing the object, and the machine will calculate line speed automatically. Click **OK** to

save current speed test result. Click  , current speed test value will not be saved. If test repeated, system will take average value of multiple results. Click  to stop speed test, and click  or  to save or give up test result.

Note: if external encoder is connected, system would detect encoder automatically, and change line speed interface to encoder DPI setting interface. User will not be able to set the line speed

4.4 User Management

Click  on system management interface to enter user management.



- **Device name:** user-defined available, the maximum is 15 characters.
- **User permission management :** system default OFF. a dialogue box requests user name and password to log in.
- **User name:** Create user name according to different permission, managers as the highest authority, can set up and modify the password; engineers can edit the data and turn off printing; the operator only open and close the print data available.
- **Password and confirmation:** administrator creates user name and password. Maximum 15 characters for password. 888888 is default password for administrator

Note: Please contact local dealer or Sojet for printer unlocking when you forget administrator password.

4.5 Special Features

Click  on system management interface to enter Special Features Setting.



- Click  to enter Special printing setting.

Continuous printing:

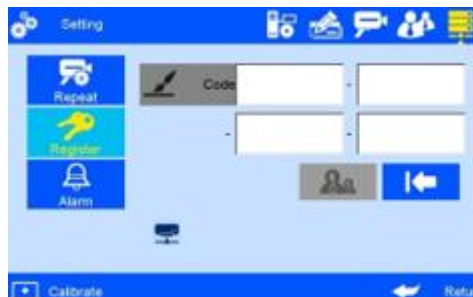
1. Continuous output times: system default (OFF). Adjustable scope 0~9999. Note: 0 means OFF; 9999 means infinite times
2. Continuous Output interval: "off" is default system default OFF, adjustable scope 0~999mm.



Round printing: Two-way printing, from left to right (forward print) or from right to left (reverse print).

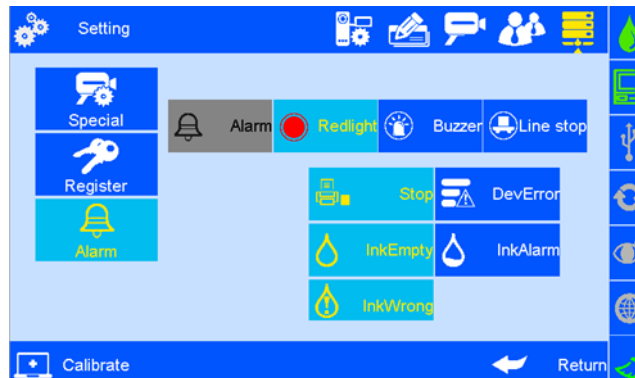
1. Reverse frequency: printing direction can be reversed automatically when the system. Reach the set printing times. For example, the set printing times is 3, when printing finished from right to left, the printing direction will be changed automatically from left to right system default: 0 (off) adjustable range: 0 -9999.
2. Reverse delay: printing delay according to the set direction system default: 0 (off) adjustable range: 0 -9999. It should be set before printing not during printing process

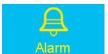
Note: Normal delay (from right to left) set in the printing interface.



- Click  enable Value-added function.

Note: Enable special features by registration code like (1/2 ink saving, 1/4 ink saving, probation period).



- Click  and enter Alarm settings. Three options as below: Red Light, Buzzer or Line Control.

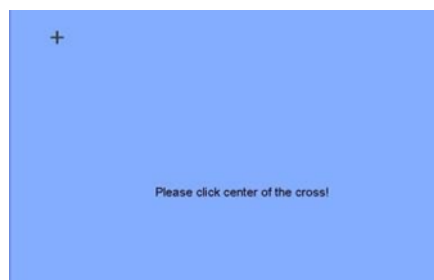
Red Light: When the device is in the following selected state, the tricolor light for warning

Buzzer: The tricolor light will issue a buzzer alarm.

Line Control: The tricolor light will turn to yellow for warning and stop operation.

When the above situation happen, printer will transfer the error signal to the production line via DB15 ports, user can set up the production operation like stop or etc.


4.6 Screen Calibration



- Click  on system management interface to enter screen Calibration.

Note: Please calibrate screen when inaccurate screen position occur, click Icon “+” as screen hint, it will exits automatically after screen calibration finished, a verification message indicates success or failure operation.

5 Tool Management

Click  on main interface to enter Tool Management interface.

5.1 Image Management



Click  to enter image Logo management interface.

Image import: importing image with USB or Ethernet.

Image format: Solid color BMP(bit depth is "1")

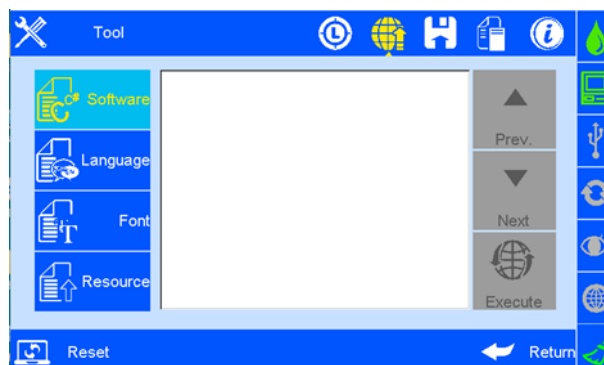
Image height: 0-150 pixel point.


Image length: 0-1000000 pixel point.

Note:

1. System indicate and cut the excess part if image exceeds borders.
2. Image import cannot be executed when images exceed 100 pcs.
3. Image Logo restore route at U Disk: \InkJet\Logo\

5.2 System Upgrade



Click  to enter upgrade management interface.

User can use USB to upgrade the software, add or change language and fonts.

- **Software upgrade:** System automatically search software upgrade documents in designated folder and displays the upgrade documents by list. User can select and upgrade any file in the list.

Document route under U disk: \\InkJet\Upgrade\Application.

- **Language upgrade:** The machine is with multi- languages . Special extra language can be added if request.

Document route under U disk: \\InkJet\Upgrade\Language.

- **Resource upgrade:** Custom resource packs, Select the resource pack in the list and perform the upgrade.

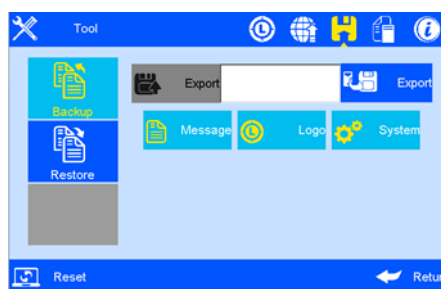
Document route under U disk: \\InkJet\Upgrade\Res.


- **Font upgrade:** System supports two fonts; user can add another font besides the default.

Document route under U disk: \\InkJet\Upgrade\Font.

Note: Software upgrade documents, language documents, font documents can only be identified by using the conversion tools provided by our company. The default language, font can't be replaced and deleted.

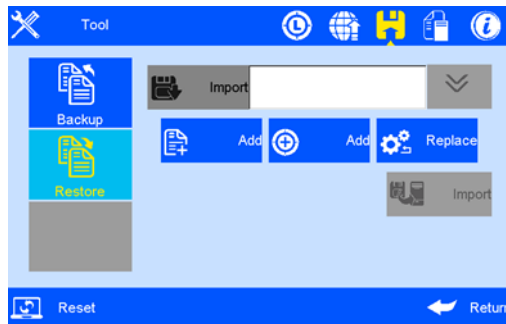
5.3 System Backup




Click  to enter backup management.

Click  to enter backup operation interface;

Export backup: including backup documents, Image and Parameter setting.



Click  to enter the backup restore interface, can restore the message, image and parameter which in U disk to the device.

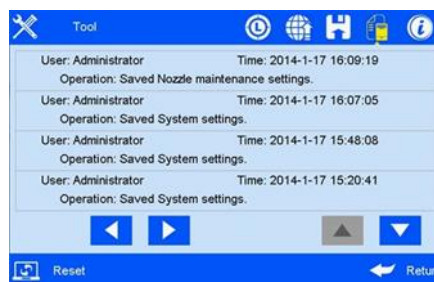
Date optional ;


1. **New:** copy the data of U disk to the device.
2. **Replace:** replace the same name data.
3. **Delete:** delete existing data of device.
4. **Cancel:** Not choose data
5. **Options for image:** new, replace, delete and cancel.
6. **Options for parameter:** replace and cancel.

Note: Please check U disk connection status and U disk space when execute backup import and export.

Backup document route under U Disk: /InkJet/Backup.

5.4 System Logs



Click  to enter system logs interface. All operation content including operator, operation and operating time.

System logs include:


1. Printing function: Set up Log from initial value.
2. New data management, modify, delete logs, import data.
3. All logs in system management (including screen calibration logs).

4. Image importing and delete logs, system upgrade, system backup logs, and system reset logs.

Note: Enquiries, reading, and other logs are not included.

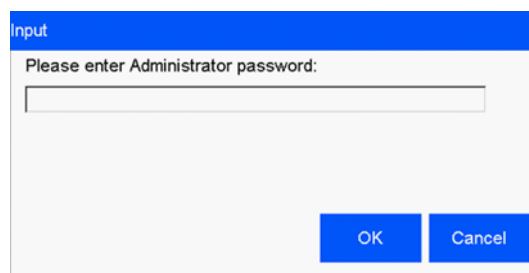
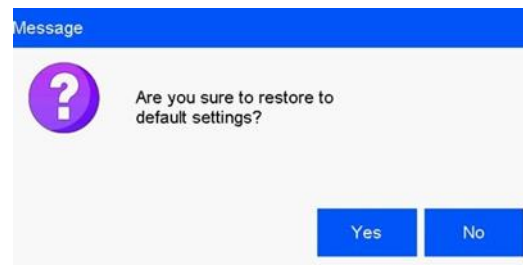
5.5 About Device





Click  to enter device equipment information interface.

Information displays current hardware version, software version, machine serial number, dealer code, company Logo, company name and website.

System Reset



Click  from tool management interface to enter the system reset operation management interface.

Click  to execute system reset. You need administrator password for permission to

reset.

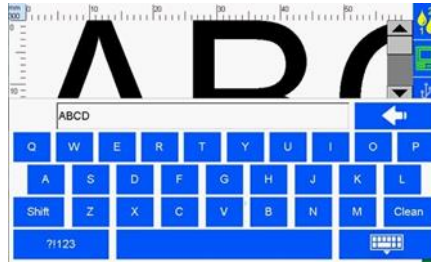
Note: System reset is to restore all defaults.

1. Restore all to defaults, all data and images are deleted.
2. All software version maintain current version; restore all languages and font to default.

After system be reset, relative parameters are as follows:		
Item #	Items	Parameters
1	Language	English
2	System time	Manufacture time
3	Screen saver time	4 hours
4	Unit	Metric/mm
5	Daylight saving time	OFF
6	Date change	OFF
7	Pre-zero in date/time	OFF
8	Pre-zero in counter	OFF
9	Counter alarm	OFF
10	Counter reset	OFF
11	Pre-purge	OFF
12	One key cleaning	Standby
13	Printing direction	Left-to-right
14	Channel switch	Left channel
15	Print Recovery	OFF
16	Buffers number	5
17	Line speed	30m/min
18	DPI	300DPI
19	User permission management	OFF
20	Repeated output times	0 OFF
21	Data management	Only system default data Msc001
22	Printing delay	30mm
23	Printing initial value	Counter initial value and data source current value.

6 Input Methods Introduction

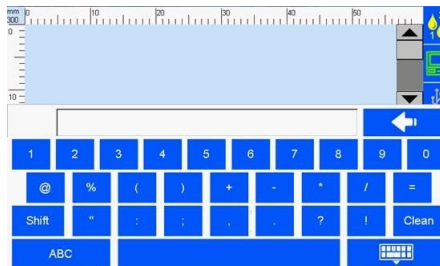
When click the input value in the input bar, the system interface automatically pops up the keyboard input method. You can enter uppercase English, lowercase English, Chinese, numbers, and common symbols.



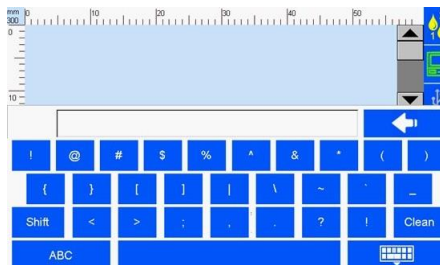
- **Uppercase:** the system default uppercase English input when keyboard pops up.







- **Lowercase:** click Shift to change between uppercase and lowercase.



- **Numeric and common symbols:** Click ?123 to change between numeric or common symbols input.



- **More symbols:** click Shift on numeric/common symbols keypad for more symbols.
- Shift : Input method change.

-  : Numeric/common symbols and alphabetic input change.
-  : Reset (clear all input).
-  : Delete (delete one character).
-  : Hide keyboard.

NOTE: English for Arial fonts, characters in uppercase letters and numbers as the benchmark, lowercase letters and symbols are not at same height.

7 Status Bar

-  ink information:




Ink information including dynamic and static information.


Static information including cartridge serial number, client code, cartridge type.

Dynamic information:

1. Ink original volume, output volume for current printing data.
2. Ink used in percent, the remaining ink available for current data.

Ink status icons include:

1. Normal (): Normal ink status.
2. warning (): ink volume lower than 10%.
3. Error (): use wrong cartridge, cartridge uninstall, or ink use out.

-  Equipment status: Hardware and software status of printer.



• USB information:


Automatically displays the corresponding icons based on the type and status of the device that the USB is connected.

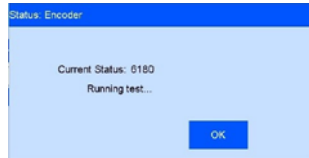
Support three connection: USB, mouse, and keyboard.

Status: disconnection (gray), normal connection (green), warning (yellow) These icons




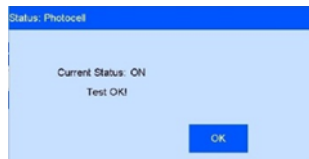
USB  mouse  keyboard will display once device connected successfully

-  Encoder information: Displays encoder or photocell connection status like disconnection (gray) and normally connection (green).



When encoder is connected, click  to enter encoder signal testing interface.

-  Photocell information: Displays encoder or photocell connection status like disconnection (gray) and normally connection (green).



When photocell is connected, click  to enter photocell signal testing interface.

-  Ethernet information (this function excluded for E1D):



The printer connection to computer is realized by Ethernet port, therefore realizes device operation and upgrade transmission on PC end. Information including IP, mask code, gateway, MAC; IP, mask code and gateway can be gained automatically or manual input.

Status including: disconnection (gray color);

Normally connection (green color, interaction with PC software normal); Warning (yellow color, abnormal interaction with PC software, connection failure, the PC software not open, computer not turn on etc.)



- One key cleaning:

Status including: Failure status (gray) and one key cleaning invalid while printing going on. Valid status (green) one key cleaning available

Electrical Requirements: 100-240 VAC, 50/60 Hz, Power Supply 30V 1.5A 45W
(specified AC adapter) Part Number: 2000-V01-0030