

# KD110、 KD210 Series Inkjet Printer

## OPERATION AND MAINTENANCE MANUAL

# CONTENTS

<b>PART 1:</b>	<b>HEALTH AND SAFETY</b>
<b>PART 2:</b>	<b>DESCRIPTION</b>
<b>PART 3:</b>	<b>SCREEN DESCRIPTION</b>
	<b>SCREEN LOCK</b>
	<b>INFORMATION EDITING MENU (1)</b>
	<b>INFORMATION EDITING MENU (2)</b>
	<b>FILE STORAGE</b>
	<b>PRINT PARAMETERS</b>
	<b>MECHANICAL PARAMETER (1)</b>
	<b>MECHANICAL PARAMETER (2)</b>
	<b>SERVICE MENU</b>
<b>PART 4:</b>	<b>OPERATION</b>
<b>PART 5:</b>	<b>DISPLAY MESSAGES AND FAULT FINDING</b>
<b>PART 6:</b>	<b>REPAIR</b>
<b>PART 7:</b>	<b>SPARES AND ACCESSORIES</b>
<b>PART 8:</b>	<b>OPTIONS</b>

## **PART 1: HEALTH AND SAFETY**

### **CONTENTS**

Basic Requirements.....	2
Storage.....	3
Fire Risk.....	3
Spillages and Disposal.....	4
SYMBOLS.....	5

## Basic Requirements

When used correctly, printing inks do not cause problems. However, everybody using them should be familiar with the appropriate safety standards and be aware of the precautions that should be taken. The following are basic requirements.

- Proper standards of industrial practice relating to cleanliness and tidiness must be maintained.
- Inks and their containers must be stored and handled with care.
- All who come into contact with inks must be properly instructed in their use.

Directions for safe working practices vary according to the environment. The following are broad principles so that necessary precautions may be taken.

- Contact with the mouth must be avoided. Therefore eating, drinking or smoking, or any personal habits or actions which may transfer ink to the mouth, must be avoided.
- Contact with the eyes must be avoided. Suitable eye protection must always be worn whenever there is any risk of splashing or misting. If ink does get into the eyes, first aid treatment is to flood the affected eye for 15 minutes with saline solution, (or clean water if saline solution is not available), taking care not to allow the water to run into an unaffected eye. Medical aid must be obtained immediately.
- Most inks contain solvents which may injure the skin. Warning of this is given on the SDSs. Barrier creams should be used and protective clothing worn.
- Many inks contain materials which vaporise easily and can be inhaled. Good ventilation is necessary.
- Any used cleaning materials, e.g. rags, paper wipes, are a potential fire hazard. They must be collected for safe disposal after use.
- After exposure to ink, all possible traces must be washed off as soon as possible at the nearest washing facility.

Certain inks are allowed for use where they can be in indirect contact with food. In these cases, the following precautions must be observed in addition to those appropriate to hygiene:

- The inks must only be used in printers supplied from new for use with these inks. Any repairs and replacements must use genuine, new and unused spare parts.
- The inks must not be used in printers which have previously been used, at any time, for any other purpose.

In other words, a printer using "FoodGrade" ink can be converted for use with other inks, but a printer which has used other inks must not be converted for use with food grade ink.

## Storage

Printing inks must be stored in well-ventilated buildings, or in areas set aside for the purpose, chosen for safety in case of fire. Materials based on volatile, flammable solvents must be stored in accordance with local regulations.

## Fire Risk

For an electrical fire, do not use water. If water must be used, such as in the case of a Nitro-cellulose ink fire (see below) the power **MUST BE REMOVED** first.

Many inks used in ink jet printing contain Nitro-cellulose as the binder and remain highly flammable when dry. Observe all warnings given on the machine and the following safety instructions:

- If there has been an accumulation of dried ink, do not use ferrous metal (iron or steel) scrapers to remove it, as they can produce sparks
- If dry Nitro-cellulose based ink ignites, it will generate its own oxygen and can only be extinguished by lowering the temperature with water
- If a Nitro-cellulose fire occurs, **ENSURE THAT THE ELECTRICAL POWER IS IMMEDIATELY REMOVED FROM THE PRINTER BEFORE** water is used to extinguish the fire.

Fire risk is a most important consideration where printing inks are stored and used. The degree of fire hazard will vary considerably from one type of ink or wash to another.

Water-based inks will not burn, although inks based on water-alcohol mixtures may burn if there is sufficient alcohol present. Prolonged exposure of water-based systems to high temperatures may evaporate the water to give a flammable residue.

Solvent-based inks offer a greater degree of hazard depending on the particular solvent or solvent combination. When there is a particular hazard the appropriate information is given on the SDS.

Ink jet printers place small electrostatic charges on the ink drops used for printing. In most circumstances, such as when they arrive at the print surface, these electrostatic charges are either conducted away or cannot accumulate.

However, during maintenance, print drops may be collected in a container, such as a beaker. It is essential that this container is made of conducting material and is securely connected to ground/earth. The electrostatic charges will then be safely conducted to ground/earth.

If there is a fire, there is a likelihood that dangerous fumes will arise from printing inks. For this reason ink must be stored where it can be reached quickly by the fire fighting service, and where it will not spread beyond the store.

## Spillages and Disposal

**WARNING:** Some dried inks are highly flammable. Clean up all ink spillages immediately. Do not allow the ink to dry or allow any build-up of dried ink spills.

Spillages must be cleaned up as soon as possible with the appropriate solvent materials and with regard to the safety of personnel. Care must be taken to prevent spillages or residue from cleaning up entering drains or sewage systems.

Inks and associated fluids are materials which conduct electricity. Therefore, power to the printer must be switched off while spillages inside the printer cabinet are being cleaned up.

Printing inks and associated fluids must not be treated as ordinary waste.

They must be disposed of using approved methods according to local regulations.

## SYMBOLS

The following symbols are used in this manual. Where they appear next to a procedure or instruction, they have the significance and importance of written warnings and cautions.



Eye protection must be worn.



Protective clothing must be worn.



The equipment must be switched off and power removed.



Only trained personnel should carry out this procedure.



Beware of Electrostatic Discharge (ESD). Electrostatic precautions must be used.

- Switch off machine first
- Wear a wristband connected to the ESD connector provided
- Avoid wearing clothing which can build up electrostatic voltages
- Use ESD protective bags to transport PCBs
- Only place PCBs on a mat made from a material which will dissipate electrostatic voltages and which is connected to ground.

## **PART 2:DESCRIPTION**

### **CONTENTS**

INTRODUCTION.....	2
PRINTER SPECIFICATION.....	9
KD110/KD210 BASIC PRINCIPLE OF PRINTING.....	12

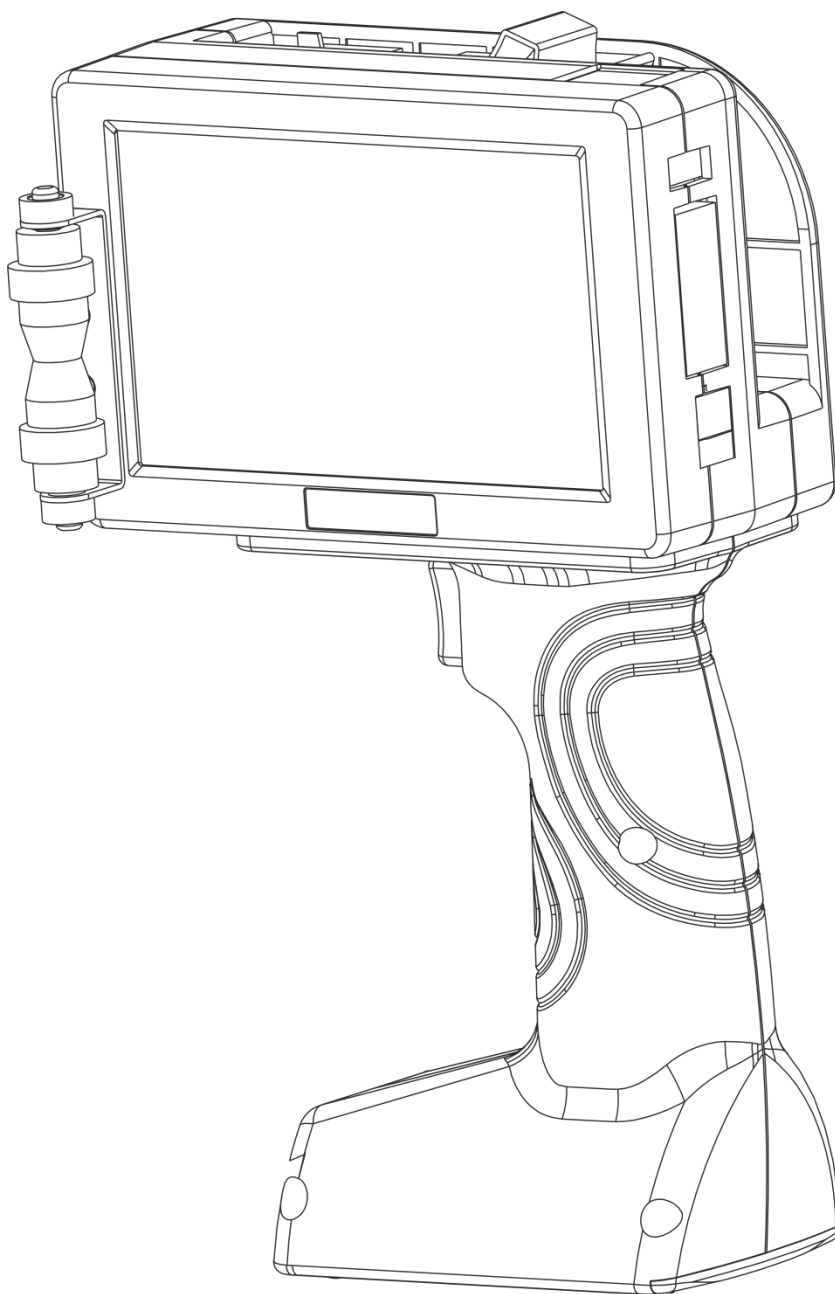


## **INTRODUCTION**

This manual provides:

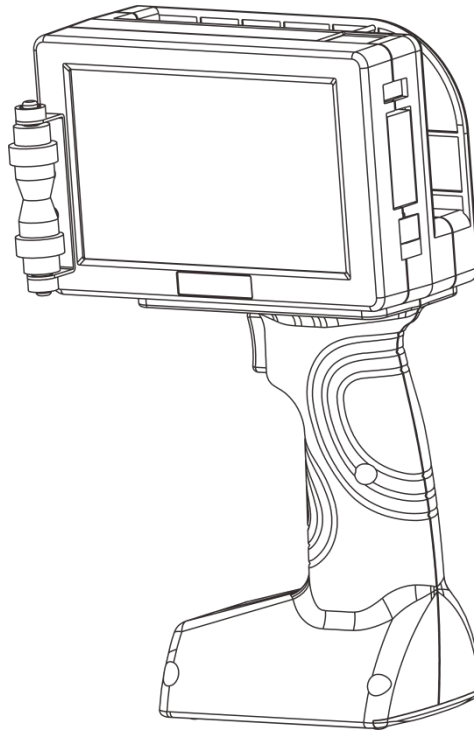
- A basic introduction to the printer and how to use the touch screen, with procedures that demonstrate how to manage the printer.
- Reference sections describing the functions and messages presented through the touch screen.
- Maintenance and repair procedures.

## DESCRIPTION

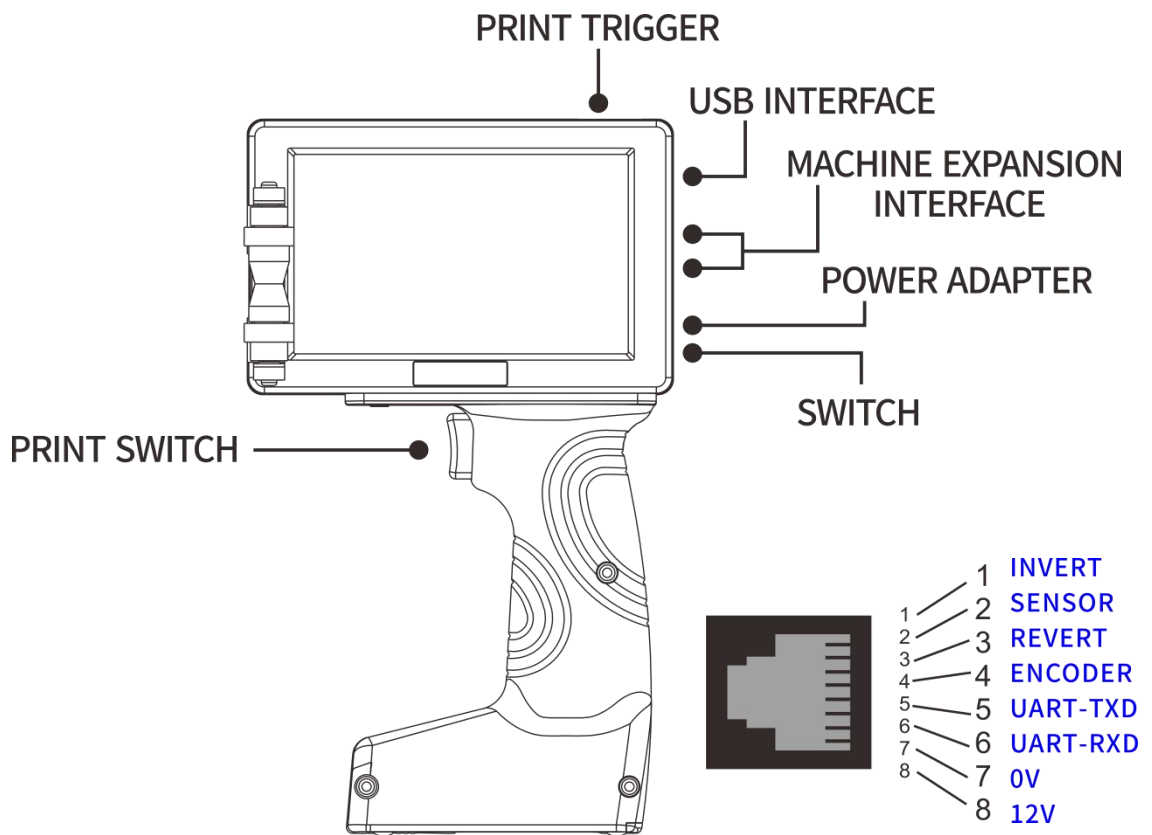


**KD110-H Hand-held Inkjet Printer(with 1pc Ink Cartridge)**

DESCRIPTION

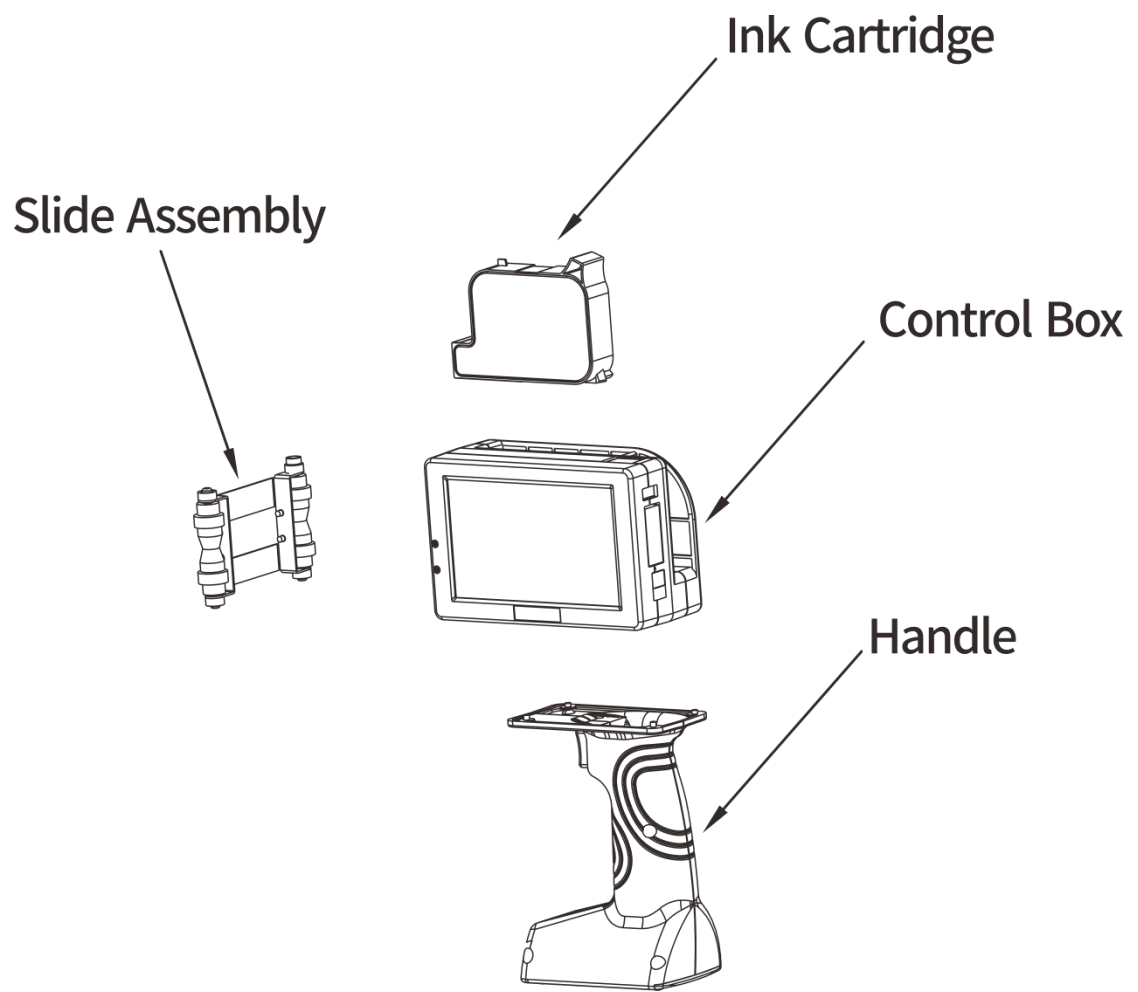


KD110-H Hand-held Inkjet Printer



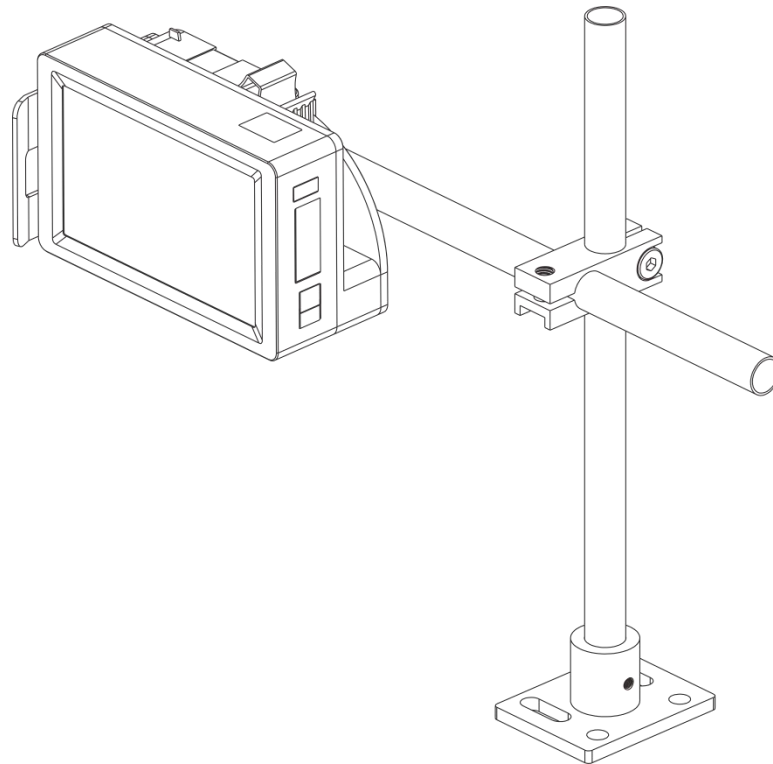
KD110-H Hand-held Inkjet Printer  
Switch and Interface Indicator

DESCRIPTION

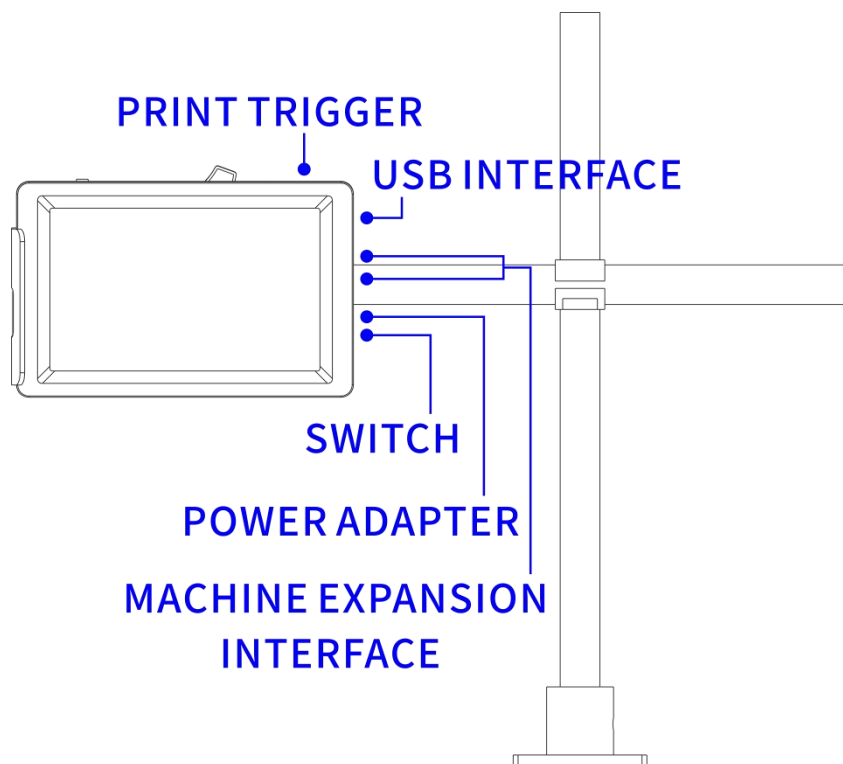


KD110-H Hand-held Inkjet Printer Composition Schematic

DESCRIPTION

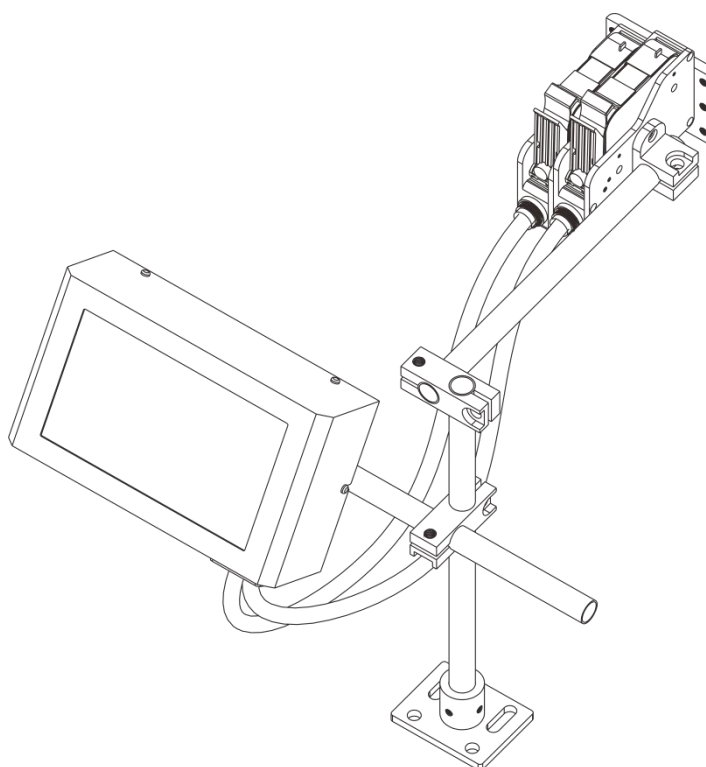


KD110 For Production Line(with 1pc Ink Cartridge)

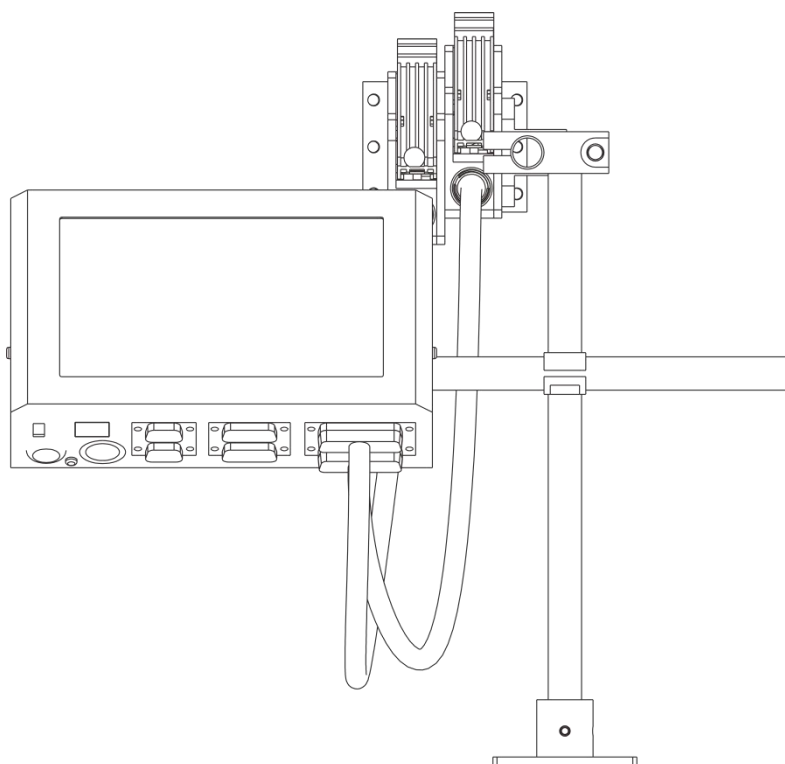


KD110 For Production Line(with 1pc Ink Cartridge) and Interface Schematic

## DESCRIPTION

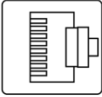
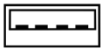


KD210 For Production Line(with 2pc Ink Cartridge)

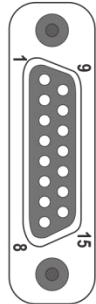
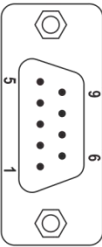


KD210 For Production Line(with 2pc Ink Cartridge)

DESCRIPTION

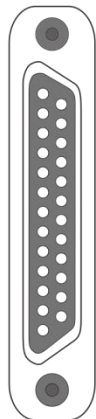


- 1: 24V
- 2: UART\_RXD
- 3: UART\_TXD
- 4: 0V
- 5: 0V
- 6: 24V
- 7: 0V
- 8: ENCODER
- 9: LEN

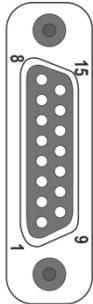
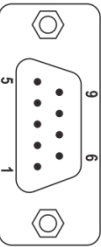


- 1: 24V
- 2: GREEN\_LED\_P
- 3: YELLOW\_LED\_P
- 4: RED\_LED\_P
- 5: 0V
- 6: SN1\_OUTPUT
- 7: SN2\_OUTPUT
- 8: 0V
- 9: 24V
- 10: GREEN\_LED\_N
- 11: YELLOW\_LED\_N
- 12: RED\_LED\_N
- 13: 24V
- 14: 0V
- 15: 0V

PRINTHEAD CONNECTOR 2

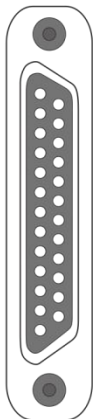


- 1: 24V
- 2: UART\_RXD
- 3: UART\_TXD
- 4: 0V
- 5: 0V
- 6: 24V
- 7: 0V
- 8: ENCODER
- 9: LEN



- 1: 0V
- 2: REVERT
- 3: RESET\_SN1
- 4: 0V
- 5: UPDATE\_SN2
- 6: SELECT1
- 7: SELECT3
- 8: 0V
- 9: INVERT
- 10: 0V
- 11: RESET\_SN2
- 12: UPDATE\_SN1
- 13: 0V
- 14: SELECT2
- 15: SELECT4

PRINTHEAD CONNECTOR 1



KD210 For Production Line(with 2pc Ink Cartridge)  
and Interface Schematic

## PRINTER SPECIFICATION

### KD110-H Hand-held Inkjet Printer

Nozzle Parameters	Nozzle Type	Thermal foamable head TIJ2.5
	Printing Accuracy	150DPI / 300DPI / 600DPI
	Print Height	The minimum print 1mm / maximum print height 12.7mm
	Printing From	Best print from 2-5mm
	Print Content	Multi-language character / dynamic two-dimensional code / barcode / images / serial number / date / counter / variable dynamic database / RS232 receive real-time data printing
	Printing Material	Cardboard / plastic / metal / plate / pipe / stone / cable / electronic components / auto parts / industrial chemical packaging / pharmaceutical food gift boxes
	Ink Type	Aqueous / solvent and 42ml cartridge CISS
	Ink Color	Black / white / red / yellow / blue / green / stealth / UV
	Cartridge Chip	Contactless chip RFID tags, automatic identification and recording ink of the ink remaining parameters
	Operating System	Embedded Linux operating system
Machine Parameters	The Main Hardware	American TI AM3358 industrial-grade CPU / USA Xilinx Spant6 industrial-grade FPGA / TIJ dedicated ASIC chip
	Communication Interface	USB / RS232
	External Interface	Photocell / encoder / reverse inverting control
	Supported Languages	Multi-language (Chinese / English / Arabic / Danish / German / Russian / French / Finnish / Korean / Norwegian / Portuguese / Japanese / Spanish / Italian etc ...)
	Battery Parameters	12.6V / 3350mAh lithium batteries (lithium batteries detachably supporting a single)
	Power Parameters	100-240V AC input / 12.6V 3A DC output
	Machine Materials	ABS + PC + Metal
	Machine Specifications	230mm*137mm*97mm
	Working Environment	Temperature of 0-45 ° C / humidity of 30-70% Rh



## DESCRIPTION

### KD110 For Production Line

Nozzle Parameters	Nozzle Type	Thermal foamable head TIJ2.5
	Printing Accuracy	150DPI / 300DPI / 600DPI
	Print Height	The minimum print 1mm / maximum print height 12.7mm
	Printing From	Best print from 2-5mm
	Print Content	Multi-language character / dynamic two-dimensional code / barcode / images / serial number / date / counter / variable dynamic database / RS232 receive real-time data printing
	Printing Material	Cardboard / plastic / metal / plate / pipe / stone / cable / electronic components / auto parts / industrial chemical packaging / pharmaceutical food gift boxes
	Ink Type	Aqueous / solvent and 42ml cartridge CISS
	Ink Color	Black / white / red / yellow / blue / green / stealth / UV
	Cartridge Chip	Contactless chip RFID tags, automatic identification and recording ink of the ink remaining parameters
	Operating System	Embedded Linux operating system
	The Main Hardware	American TI AM3358 industrial-grade CPU / USA Xilinx Spant6 industrial-grade FPGA / TIJ dedicated ASIC chip
	Communication Interface	USB / RS232
	External Interface	Photocell / encoder / reverse inverting control
	Supported Languages	Multi-language (Chinese / English / Arabic / Danish / German / Russian / French / Finnish / Korean / Norwegian / Portuguese / Japanese / Spanish / Italian etc ...)
Machine Parameters	Power Parameters	100-240V AC input / 12.6V 3A DC output
	Machine Materials	Aerospace aluminum
	Machine Specifications	138mm*87mm*60mm
	Working Environment	Temperature of 0-45 ° C / humidity of 30-70% Rh

### KD210 For Production Line

		DESCRIPTION
Nozzle Parameters	Nozzle Type	Thermally foamable head TIJ2.5
	Printing Accuracy	150DPI / 300DPI / 600DPI
	Print Height	The minimum print 1mm / single-nozzle print height 12.7mm / 25.4mm maximum print height
	Printing From	Best print from 2-5mm
	Print Content	Multi-language character / dynamic two-dimensional code / barcode / images / serial number / date / counter / variable dynamic database / RS232 receive real-time data printing
	Printing Material	Cardboard / plastic / metal / plate / pipe / stone / cable / electronic components / auto parts / industrial chemical packaging / pharmaceutical food gift boxes
	Ink Type	Aqueous / solvent and 42ml cartridge CISS
	Ink Color	Black / white / red / yellow / blue / green / stealth / UV
	Cartridge Chip	Contactless chip RFID tags, automatic identification and recording ink of the ink remaining parameters
	operating System	Embedded Linux operating system
Machine Parameters	The Main Hardware	American TI AM3358 industrial-grade CPU / USA Xilinx Spant6 industrial-grade FPGA / TIJ dedicated ASIC chip
	Communication Interface	The network interface / USB / RS232
	External Interface	Photocell / encoder / reverse inverting control / alarm output / output serial number / serial number External Reset / Update Serial No. outer / external print information selecting / nozzle head attachment connected to 1-2 / install separate nozzle / nozzles may be spliced bis / double nozzle may be individually isolated (1.8 m cable links)
	Supported languages	Multi-language (Chinese / English / Arabic / Danish / German / Russian / French / Finnish / Korean / Norwegian / Portuguese / Japanese / Spanish / Italian etc ...)
	Power Parameters	Input 100-240V AC / 30V 4A DC output
	Machine Materials	Industry standard stainless steel
	Machine Specifications	Host 202mm * 119mm * 61.2mm / nozzle set 112mm * 79mm * 103mm
	Working Environment	Temperature of 0-45 ° C / humidity of 30-70% Rh

## KD110/KD210 BASIC PRINCIPLE OF PRINTING

The KD110/KD210 adopts the thermal foaming nozzle inkjet principle (TIJ), and the thermal foaming nozzle adopts a heating resistor component and is mounted on the nozzle side wall. By applying a very short electrical pulse (1-10  $\mu$ s) to the heating resistor, a very high heat flux can be produced. The heating temperature is about 270 degrees, and the ink quickly overheats and reaches the thermal limit to form evaporating bubbles. The high pressure inside the bubble causes the bubble to grow rapidly and squeeze the ink. Due to the influence of the surface tension of the nozzle to form an ink droplet, as the temperature inside the bubble decreases, the pressure decreases, and the bubble begins to rupture. The ink droplet is ejected from the nozzle due to inertia. After the heating resistor is cooled, the bubble disappears, and the attraction force generated when the bubble is broken attracts the new ink from the storage ink cartridge to the nozzle to prepare for the next ink absorption.

The inkjet process of a nozzle is roughly divided into five parts:

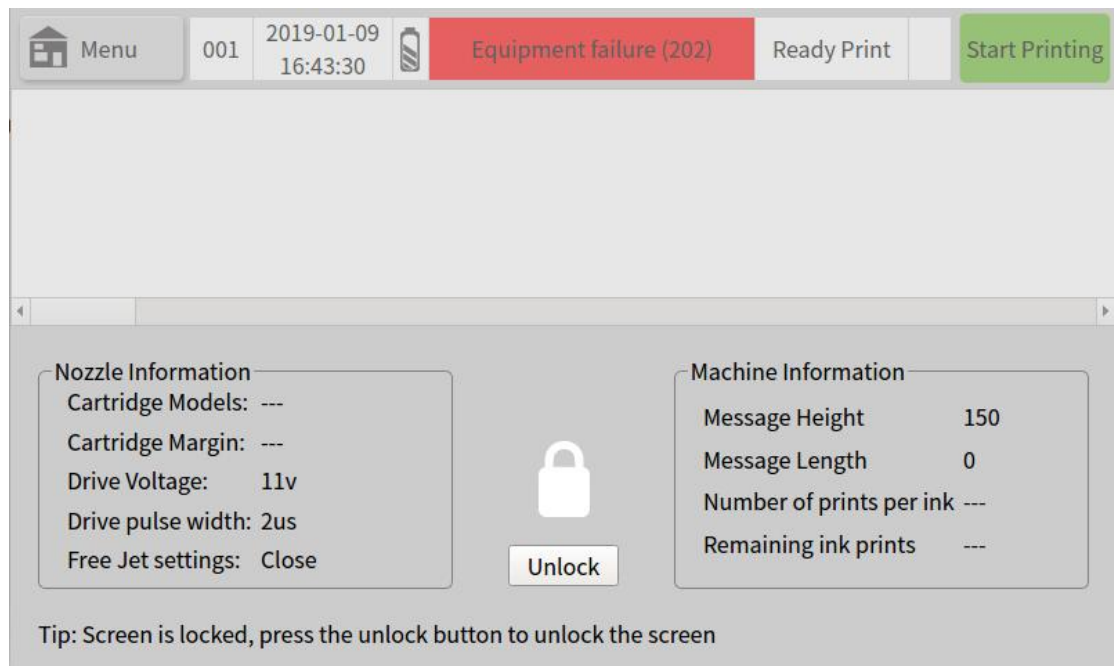
- (1) Heating: The side of the nozzle is provided with a heating resistor element. Under non-operating conditions, the tension in the nozzle is balanced with the external atmospheric pressure. When an electric pulse is applied to the heating resistor, the temperature of the nearby ink rises rapidly to form a superheated layer.
- (2) Bubble Growth: Continuous heating, vaporization of the superheated layer causes bubbles to form near the heating resistor. As the ink rapidly vaporizes, the microbubbles become larger to form a vapor film, and the film has a heat insulating effect to prevent heating of all the ink in the nozzle.
- (3) Drop Ejection: At this time, the electric pulse disappears, and the surface temperature of the heating resistor starts to decrease, but the residual heat causes the bubble to further expand, expands to the maximum, and the ink is extruded.
- (4) Bubble Collapse: As the surface temperature of the heating resistor continues to decrease, the bubble begins to shrink, causing the pressure of the nozzle to decrease, sucking the ink into the nozzle, and separating the ink droplets.
- (5) Refill: The bubble is further shrunk, the pressure outside the nozzle is greater than the internal pressure, the bubble completely disappears, and the ink in the nozzle is replenished.

## PART 3:SCREEN DESCRIPTION

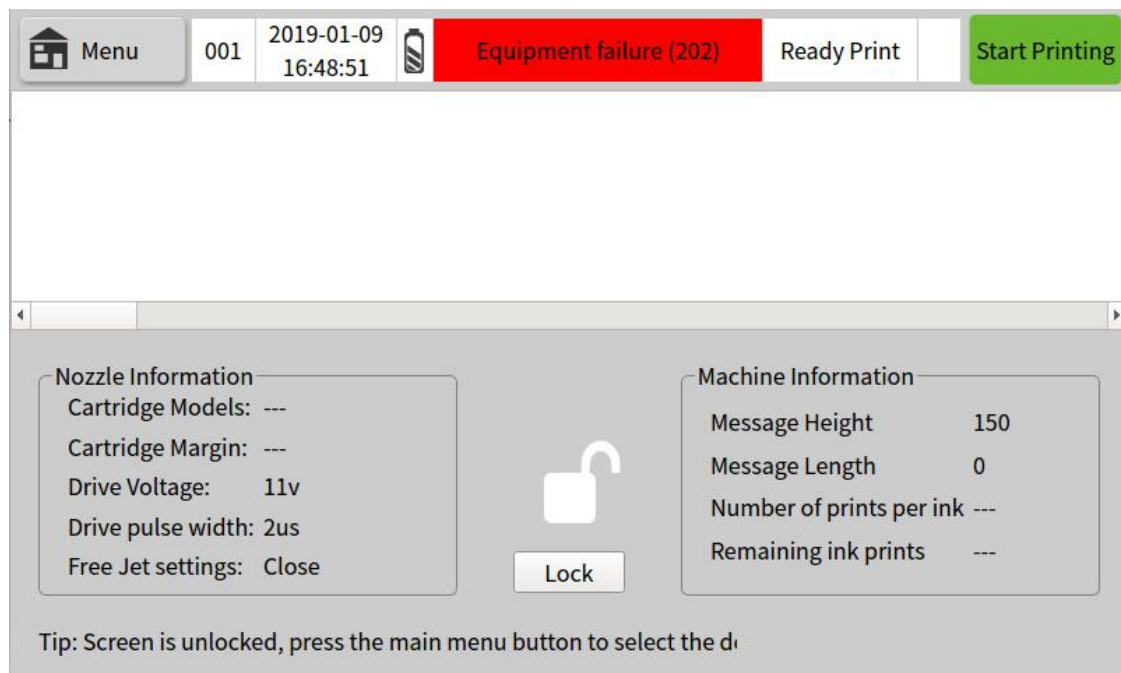
### CONTENTS

SCREEN LOCK.....	2
INFORMATION EDITING MENU (1).....	3
INFORMATION EDITING MENU (2).....	3
INSERT TEXT.....	4
OTHER PROPERTIES.....	5
INSERT CLOCK.....	6
SERIAL NUMBER.....	7
INSERT 2D CODE.....	8
INSERT BARCODE.....	9
INSERT LOGO.....	10
INSERT SHIFT.....	11
INSERT VARIABLE.....	12
SERIAL DATA.....	13
FILE STORAGE.....	14
MESSAGE SAVE.....	15
PRINT PARAMETERS.....	16
Delay Word Width.....	16
Invert Reverse.....	19
DYNAMIC SETTING.....	20
Repeat Print.....	21
SERIAL NUMBER CONTROL.....	22
CARTRIDGE PARAMETERS.....	23
MECHANICAL PARAMETER (1).....	24
MECHANICAL PARAMETER (2).....	24
DATE FORMAT.....	25
TIME FORMAT.....	26
MONTH CODE.....	27
WEEK CODE.....	28
HOUR CODE.....	29
PRODUCT COUNT.....	30
SYSTEM SETTING.....	31
Screen Adjust.....	32
SERVICE MENU.....	33
SYSTEM SETTING.....	34
CREATE USER.....	35
Event Record.....	36

## SCREEN LOCK






After pressing the printer power button for about three seconds, the green light will illuminate and release, and a screen similar to the one shown in the figure will appear. Enter the password by pressing the unlock button directly below the screen to enter the main menu area.





Entering the specified password screen below the small lock will be unlocked. Click on the main menu button at the top left of the screen to enter the main menu area.

## INFORMATION EDITING MENU (1)




 Menu	101	2019-01-09 16:55:21		Equipment failure (202)	Ready Print	
--	-----	------------------------	---	-------------------------	-------------	---

Editing Area Zoom:		<input type="text" value="100"/>	%	Message Name:		new.msg
Total number of columns:	0	Row	Cartridge Capacity:	<input type="text" value="42"/>	ml	
Number of Message ink points:	0	Point	Cartridge Price:	<input type="text" value="400"/>	Dollar	
Single cartridge prints:	--	article	Printing Costs:	--	Dollar/Pcs	



	Send Print	New Message	Save Message	Insert Text	Insert Clock	Serial number	
---	------------	-------------	--------------	-------------	--------------	---------------	---

## INFORMATION EDITING MENU (2)

 Menu	102	2019-01-09 16:57:45		Equipment failure (202)	Ready Print	
--	-----	------------------------	---	-------------------------	-------------	---

Editing Area Zoom:		<input type="text" value="100"/>	%	Message Name:		new.msg
Total number of columns:	0	Row	Cartridge Capacity:	<input type="text" value="42"/>	ml	
Number of Message ink points:	0	Point	Cartridge Price:	<input type="text" value="400"/>	Dollar	
Single cartridge prints:	--	article	Printing Costs:	--	Dollar/Pcs	

	Insert 2D code	Insert Barcode	Insert Logo	Insert Shift	Insert Variable	Serial Data	
---	----------------	----------------	-------------	--------------	-----------------	-------------	---

Create modify and save information, press new information to create a new message. Be sure to save the edited information before creating a new message. The edit area view can be reduced in percentage. Cartridge capacity and unit price can be adjusted according to the actual conditions of the ink cartridge.

## INSERT TEXT

The screenshot shows a user interface for inserting text. At the top, there is a status bar with a 'Menu' button, a page number '111', a date and time '2019-01-09 17:49:19', a battery icon, a red status bar with 'Equipment failure (202)', a 'Ready Print' button, and a green 'Start Printing' button. Below this, the text 'new text' is displayed in a large, black, serif font. Underneath the text, there is a configuration menu with the following options:

- Text: new text
- Font: Abyssinica S
- Direction: 0
- Space: 0
- Font Size: 200
- X-axis: -2
- Y-axis: -45

At the bottom of the menu, there are four buttons: 'Return', 'OK', 'Delete', and 'Other Properties'.

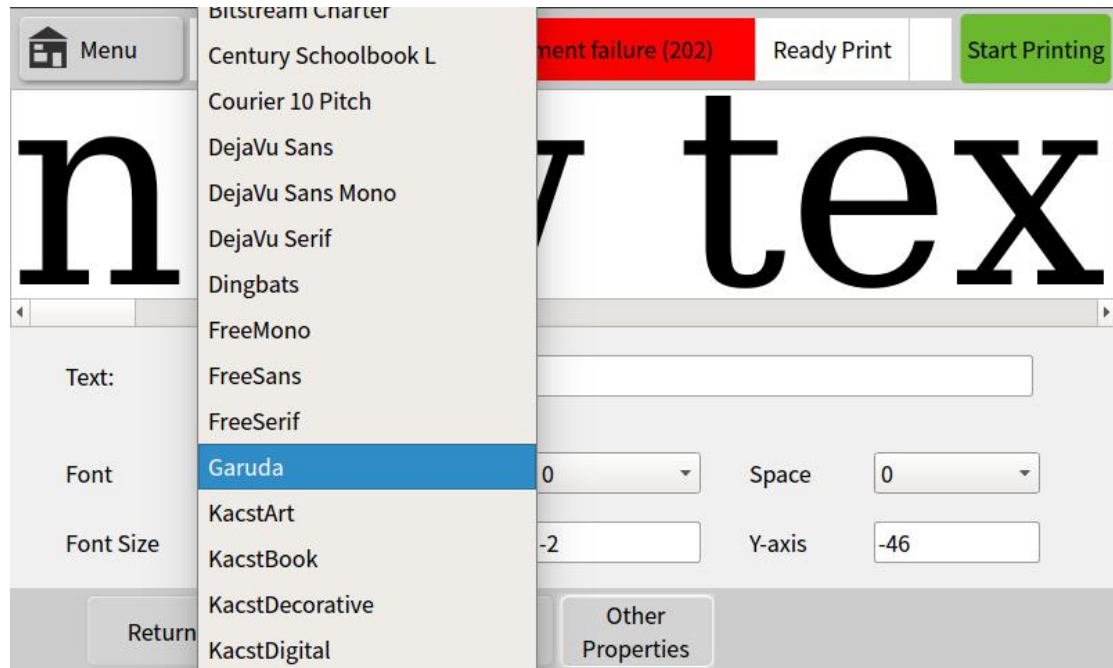
Insert information the user needs to print, and user can adjust the font size required. The font size range is controlled within the maximum print range. Note that the printed information will be incompletely displayed beyond the editing area. You can move the position of the text through the touch screen or precisely position it through the X-axis and Y-axis positions. Clicking on any information in the editing area can be traced back to the corresponding information editing menu.

This screenshot shows the same 'INSERT TEXT' screen as the previous one, but with a virtual keyboard displayed at the bottom. The keyboard is a standard QWERTY layout with a dark background and light-colored keys. The text 'new text' is still visible at the top. The status bar at the top is identical to the previous screenshot.

After clicking "text", a small keyboard will pop up. The "&123" button in the lower

left corner of the keypad can insert numbers and symbols, and the small arrow switches between upper and lower case. The KD110 printer keyboard input method is common.

## OTHER PROPERTIES



- The other property settings for information editing in the main menu are similar. Other properties will appear in the Edit menu area. Other properties can be selected according to user needs.

Font: Select different fonts according to your needs, File Storage → Font

Save to manage the fonts in the printer.

Direction: Set the direction of the font (90°, 180°, 270° rotation).

Space: Adjust the spacing between fonts within the text (1, 2, 3, 4, 5).

Font Size: Adjust the size of the added text font.

X, Y-axis: The position of the text can be moved by the touch screen or accurately positioned by the X-axis and Y-axis positions.

Function key options:

Return The set options are not saved.

OK Save the set options.



## INSERT CLOCK

The screenshot shows the 'INSERT CLOCK' configuration screen. At the top, a status bar displays 'Menu', '112', '2019-01-09 19:05:04', a battery icon, a red 'Equipment failure (202)' message, 'Ready Print', and a green 'Start Printing' button. The main display area shows the text 'xt' and a date '20190109' in a red box. Below this, the configuration options are: 'Clock Content' set to 'Date', 'Date Form' with a dropdown menu open showing options 'yyyyMMdd' (selected), 'yyMMdd', 'ddMMyyyy', 'ddMMyy', and '8/2'; 'Date Offset' set to '0' day; 'Font' set to 'Noto Sans M'; 'Direction' set to 'X-axis'; 'Space' set to '0'; and 'Y-axis' set to '0'. At the bottom are buttons for 'Return', 'OK', 'Delete', and 'Other Properties'.

The screenshot shows the 'INSERT CLOCK' configuration screen with time settings. The status bar is identical to the previous screenshot. The main display area shows the text 'xt' and a time '00:55:11' in a red box. Below this, the configuration options are: 'Clock Content' set to 'Time', 'Time Form' with a dropdown menu open showing options 'hh:mm:ss' (selected), 'hh:mm', 'hhmmss', 'mmss', and 'ss'; 'Time Offset' set to '0' Hour; 'Font' set to 'Noto Sans M'; 'Direction' set to 'X-axis'; 'Space' set to '0'; and 'Y-axis' set to '0'. At the bottom are buttons for 'Return', 'OK', 'Delete', and 'Other Properties'.

Date or Time can be inserted in the message. Time or Date format and offset values can be set from options, The date/time format can be edited and added as needed. (see page 23/24).

Clock content: The small triangle slide menu has two options to choose from, including date and Time.

Date format: Can be set in yyyyMMdd, yyMMdd, ddMMyyyy, ddMMyy format.

Time format: Can be set in hh:mm:ss, hh:mm, hhmmss, mmss, ss format.

Date Offset: A clock (date) that can be derived from the main clock (date) content.

Font Size: Adjust the date/time font size that has been added.

X, Y-axis position: The position of the text can be moved by the touch screen or accurately positioned by the X-axis and Y-axis positions.

Function key options:

Return Does not enter the Insert Clock Contents menu to return to the previous menu.

OK Enter the clock information in the message.

Delete Delete the Data/Time information.

Other properties Insert clock font, orientation, spacing formatting. (see page 5)

## SERIAL NUMBER

The screenshot shows the printer's control interface. At the top, there is a status bar with a 'Menu' button, the number '113', the date and time '2019-01-10 01:16:06', a red bar indicating 'Equipment failure (202)', 'Ready Print', and a green 'Start Printing' button. Below this, the main display area shows 'xt 01:16:06 0000'. The '0000' is highlighted with a red box. Below the display is a settings menu with the following fields:

Serial Number	1	Limit 1	0000	Limit 2	9999
Setting Step	1	Repeat Times	0	Leading Zeros	Yes
Font	Noto Sans M	Direction	0	Space	0
Font Size	32	X-axis	1146	Y-axis	1

At the bottom of the settings menu are four buttons: 'Return', 'OK', 'Delete', and 'Other Properties'.

You can create a serial numbering system and insert the system into the information. The sequence number whose limit value 1 is greater than the limit value 2 will be incremented sequentially, contrary that decreases. The serial number can be updated after resetting within the Print Parameter → Serial Number Control or by specifying a value. (see page 20)

Serial Number: The created serial number is numbered. The KD110 printer can have 4 serial numbers.

Limit 1: The starting value of the serial number.

Limit 2: The end value of the serial number.

Step Size: Step size between successive numbers.

Repeat Count: Number of times serial number is to be repeated before stepping to the next value.

Leading Zeros: Select Yes/No for leading number positions to be zeros or blank

Font size: Adjust the serial number font size as needed.

X, Y-axis position: The position of the text can be moved by the touch screen or accurately positioned by the X-axis and Y-axis positions.

Function key options:

Returns Return the previous menu without inserting a sequence number.

OK Insert a sequence number into the message.

Delete Delete the serial number information.

Other properties Insert the serial number font, orientation, and spacing formatting.  
(see page 5)

## INSERT 2D CODE

The screenshot displays the 'INSERT 2D CODE' configuration screen. The top status bar includes a 'Menu' button, the number '114', the date and time '2019-01-10 18:58:42', a red status bar with 'Equipment failure (202)', and buttons for 'Ready Print' and 'Start Printing'. The main display area shows the text 'zt 18:58:42' and a QR code. Below this is a configuration panel with the following fields and options:

- Content:** Text1, Time1, No.1
- Barcode Types:** QRcode
- x-axis:** 1085
- y-axis:** 0
- Inserts:** NO
- Size:** 6
- Direction:** 0
- Border Size:** Text
- Inverse:** NO
- Fault Tolerance:** L

At the bottom of the configuration panel are 'Return' and 'Delete' buttons.

Select a QRcode or DataMatrix code in the barcode type and insert it in the text message. Edit the information in the inserted content to generate the corresponding QRcode or DataMatrix code.

Barcode Type: Select QRcode or DataMatrix code.

X, Y-axis position: The position of the text can be moved by the touch screen or accurately positioned by the X-axis and Y-axis positions.

Inserts: Insert text, time, serial number, shift, file, serial data and other information content, If you need a QR code such as WeChat or website, you cannot enter the content through the QR code. You can only insert the corresponding QR code by inserting the image.

Size: Size of the inserted 2D code. Exceeding the maximum print range, the printout will be incomplete.

Direction: Set the direction of the 2D code (90°, 180°, 270° rotation).

Border Size: The size of the red border outside the 2D code.

Inverse: A contrast color is formed with the color of the inserted 2Dcode.

Fault Tolerance: The ability of the 2D code to be scanned after it is occluded. The higher the fault tolerance rate, the more parts the 2D code can be occluded. The fault tolerance are divided into: L, M, Q, H. level.

Function key options:

Return Returns to the previous menu without entering the 2D code.

OK Insert a 2D code into the message.

Delete Delete the 2D code information.

## INSERT BARCODE

EAN13/8 code, CODE128/39 code or UPCA/E code can be selected in the barcode type and inserted in the text message. The information is edited in the inserted content to generate a corresponding EAN 13/8 code, CODE 128/39 code or UPCA/E code.

Barcode Type: EAN13/8 code, CODE128/39 code or UPCA/E code.

X, Y-axis position: The position of the text can be moved by the touch screen or accurately positioned by the X-axis and Y-axis positions.

Insert: Insert text, time, serial number, shift, file, serial data and other information

content, If you need to insert special content into the barcode, you cannot enter the content through the barcode. You can only insert the corresponding barcode by inserting the image.

Size: Size of the inserted barcode. Exceeding the maximum print range, the printout will be incomplete.

Direction: Set the direction of the barcode (90°, 180°, 270° rotation).

Border Size: The size of the red border outside the barcode.

Inverse: A contrast color is formed with the color of the inserted barcode.

## Function key options:

- Return Returns to the previous menu without entering the barcode.  
 OK Insert a barcode into the message.  
 Delete Delete the barcode information.

**INSERT LOGO**

Select a logo in the logo save and insert it in the text message. Printing is incomplete beyond the editing area.

File Source: The small triangle slide menu has two options to choose from, including local files and U disk files.

Select File: Find the corresponding logo name in the local file or U disk file to insert the logo.

Inverse: A contrast color is formed with the color of the inserted logo.

Height: The height of the inserted logo. Logo height cannot be changed.

Width: The width of the inserted logo. Logo width cannot be changed.

Direction: Set the direction of the picture (90°, 180°, 270° rotation).

X, Y-axis position: The position of the text can be moved by the touch screen or accurately positioned by the X-axis and Y-axis positions.

## Function key options:

- Return Returns to the previous menu without entering the logo.  
 OK Insert a logo into the message.  
 Delete Delete the logo information.

## INSERT SHIFT

Shift Code	AAA	BBB	CCC	DDD	EEE	FFF
Starting Time	00 : 00	04 : 00	08 : 00	12 : 00	16 : 00	20 : 00
End Time	04 : 00	08 : 00	12 : 00	16 : 00	20 : 00	00 : 00

Font	Noto Sans M ▾	Direction	0 ▾	Space	0 ▾
Font Size	32	X-axis	1085	Y-axis	0

Return	OK	Delete	Increase Shift	Reduce Shift	Other Properties
--------	----	--------	----------------	--------------	------------------

Create shift code information and increase or decrease shifts.

Shift code: You can enter the shift code according to the user's needs. (name and identification number, etc.).

Start time: Enter the hour and minute of the start time in the format of a 24-hour clock system.

End time: Enter the hour and minute of the end time in the format of a 24-hour clock system.

Function key options:

Return Returns to the previous menu without entering the shift code.

OK Enter the shift code in the message.

Delete Deletes shift code information.

Increase shifts Spawn more shifts to the shift code you create.

Reduce shifts Deductions for derivative shifts.

Other properties Insert shift font, orientation, spacing formatting. (see page 5)

## INSERT VARIABLE

主菜单 117 2018-11-29 23:14:10 设备故障(202) 无打印数据 开始打印

20181129 20191129

文件来源: 本地文件 选择文件: 001.csv

当前项: 1 起始项: 1 总项数: 10

选择列: 1 结束项: 10 总列数: 10

分区长度: 3 重复打印: 是 重复次数: 0

返回 确定 删除 其他属性

The .TXT (text file, tab delimited) or .CSV (comma separated) documents specified in the local or U disk file can be printed in sequence.

.TXT/.CSV document production: Create a new Microsoft Office Excel worksheet and enter the content you want to print in the form. Each column is distinguished and saved as a specified .TXT (text file, tab delimited) or .CSV (comma separated) document.

File Source: The small triangle slide menu has two options to choose from, including local files and U disk files.

Select file: Find the corresponding variable name in the local file or U disk file to insert the variable.

Current Row: The first item of the current print column, the number of items of attention cannot exceed the total number of items.

Start Row: The current print column starts printing from that item, and the number of items must not exceed the total number of items.

Total Row: How many items are added to the current print column.

Select Column: Select the first few columns of the current variable to print.

End Row: The current print column ends printing from that item, and the number of items must not exceed the total number of items.

Total Columns: How many columns are added to the current variable.

Partition length: The length of the current variable print area, which can be adjusted according to the length of the text in the document.

Repeat printing: whether to use the repeat printing function, you can choose yes or no

Repeat Times: The number of times the variable being printed is printed repeatedly before starting to print the next variable.



Function key options:

- Cancel    Return to the previous menu without entering the shift code
- OK       Enter the shift code in the message
- Delete    Deletes shift code information
- More Properties    Shift property menu settings format (see page 5)

## SERIAL DATA

The screenshot displays the 'SERIAL DATA' configuration screen. The top navigation bar includes a 'Menu' icon, the number '118', the date and time '2019-01-11 18:08:39', a battery status icon, a red error banner for 'Equipment failure (202)', the text 'Ready Print', and a green 'Start Printing' button. The main content area shows the time '18:08:39' and the text 'null' enclosed in a red rectangular box. Below this is a scrollable list of serial communication parameters: Baud Rate (115200), Data Bits (8), Start Character (H), Check Position (None), Stop Bits (1), Terminator (H) (0d0a), Data Length (4), Font Size (32), X-axis (1085), and Y-axis (0). The bottom of the screen features four function buttons: 'Return', 'OK', 'Delete', and 'Other Properties'.

The RS232C communication interface is used, and the data can be sequentially transmitted one by one through the serial interface to the printer. The transmitted data format consists of a start bit, a data bit, a parity bit, and a stop bit.

**Baud rate:** The modulation rate of the data signal to the carrier, which can be selected according to the user serial port parameters.

**Check digit:** Also known as the parity bit, it is a binary number indicating whether the number of 1 in the binary number of the positioning number is odd or even, which can be selected according to the user serial port parameters.

**Data Bit:** Indicates the number of data bits actually contained in a group of data. When serial data is transmitted on the line using a serial converter or modem, each piece of data transmitted must contain corresponding control data.

**Stop Bit:** Used to represent the last bit of a single packet, typically 1, 1.5 and 2 bits.

**Start and end:** A sign indicating the start and end of a statement.

**Font size:** Adjust the data font size as needed.

**X, Y-axis position:** The position of the text can be moved by the touch screen or accurately positioned by the X-axis and Y-axis positions.

Function key options:

- Returns    Return the previous menu without inserting data.
- OK        Insert data into the message.
- Delete    Deletes data information.



Other properties      Insert data font, orientation, spacing formatting. (see page 5)

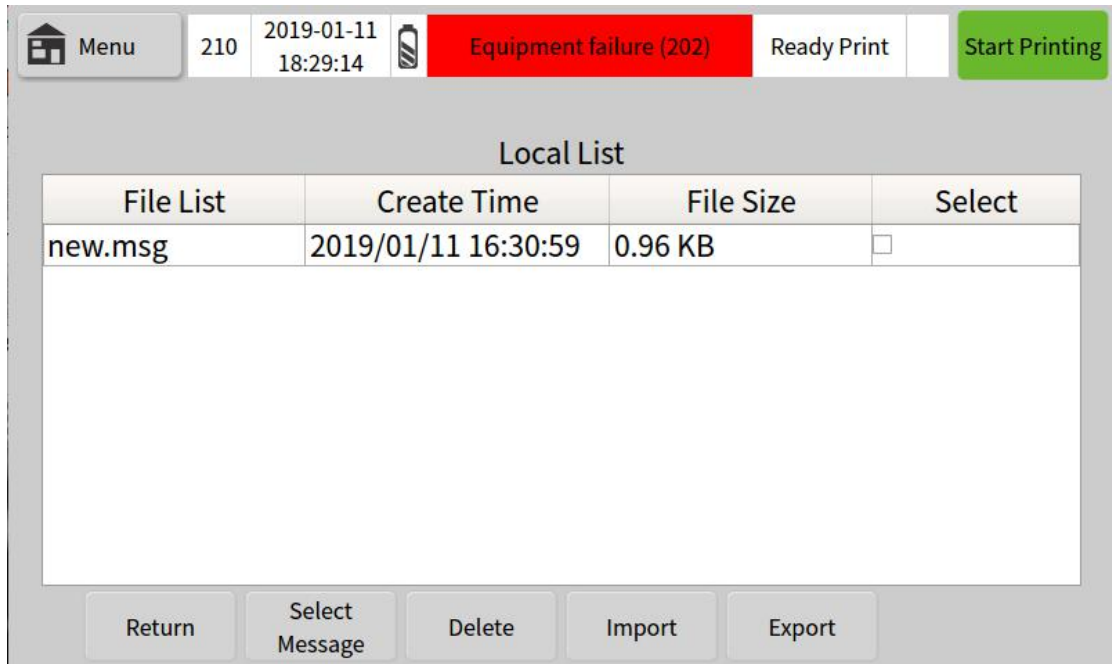
## FILE STORAGE

File Type	Saved number	File Format
	1	*.msg
	0	*.bmp
	0	*.ttf/*.ttc
	0	*.txt/*.csv

At the bottom of the interface, there are four buttons: Message Save, Logo Save, Font Save, and Data File.

In the main menu file management, the information, pattern, font and data of the printer can be managed. The main interface of the file management will display the status information of the current printer storage space, wherein the information file format supports \*.msg, pattern file. The format supports \*.bmp, the font file format supports \*.ttf or \*.fon, the data file supports \*.txt or \*.csv format, and the printer contains 256MB of storage space.

## MESSAGE SAVE



The information storage in the file management can edit and manage the information files stored in the printer. Pattern storage, font storage, data file function key options refer to information storage instructions.

Function key options:

**Cancel** Returns to the previous menu without entering the information store.

**Select Message** After selecting the information to be printed, click on the selected information to print the selected information, and only one file can be selected at a time.

**Delete** After selecting the information you want to delete, click Delete to delete the selected information, and you can choose to delete multiple files each time.

**Import** After inserting the USB to the corresponding interface of the printer, the information in the USB device can be imported into the printer.

**Export** After inserting the USB to the corresponding interface of the printer, you can export the information in the printer to the USB device.

# PRINT PARAMETERS

Menu	301	2019-01-11 18:36:42		Equipment failure (202)	Ready Print	Start Printing																								
Message																														
File Storage																														
Print Parameters	<table border="0"> <tr> <td>Cartridge Parameters:</td> <td>Auto</td> <td>Rate Source:</td> <td>Internal</td> </tr> <tr> <td>Print Width:</td> <td>2us</td> <td>Print Mode:</td> <td>Close</td> </tr> <tr> <td>Nozzle Voltage:</td> <td>11v</td> <td>Photocell Level:</td> <td>High</td> </tr> <tr> <td>Preheat Setting:</td> <td>Close</td> <td>Reverse Control</td> <td>Close</td> </tr> <tr> <td>Free Jet settings:</td> <td>Close</td> <td>Inverse Control</td> <td>Close</td> </tr> <tr> <td>Cartridge Putter:</td> <td>Released</td> <td>Grayscale setting:</td> <td>1</td> </tr> </table>						Cartridge Parameters:	Auto	Rate Source:	Internal	Print Width:	2us	Print Mode:	Close	Nozzle Voltage:	11v	Photocell Level:	High	Preheat Setting:	Close	Reverse Control	Close	Free Jet settings:	Close	Inverse Control	Close	Cartridge Putter:	Released	Grayscale setting:	1
Cartridge Parameters:	Auto	Rate Source:	Internal																											
Print Width:	2us	Print Mode:	Close																											
Nozzle Voltage:	11v	Photocell Level:	High																											
Preheat Setting:	Close	Reverse Control	Close																											
Free Jet settings:	Close	Inverse Control	Close																											
Cartridge Putter:	Released	Grayscale setting:	1																											
Machine Parameters																														
Services																														
Homepage																														
<table border="0"> <tr> <td>Delay Word Width</td> <td>Invert Reverse</td> <td>Dynamic Settings</td> <td>Repeat Print</td> <td>Serial Number Control</td> <td>Cartridge Parameters</td> </tr> </table>							Delay Word Width	Invert Reverse	Dynamic Settings	Repeat Print	Serial Number Control	Cartridge Parameters																		
Delay Word Width	Invert Reverse	Dynamic Settings	Repeat Print	Serial Number Control	Cartridge Parameters																									

In the main menu printing parameters, the printing parameters of all the information in the printer can be adjusted. The printing parameters are common settings, and all the information is valid. The main interface of the printing parameters will display the information of the current printing parameters after the printer is adjusted.

## Delay Word Width

Source and internal rate generation source description

When the rate generation source is internal:

Menu 317 2019-01-11 23:27:16 Equipment failure (202) Ready Print Start Printing

Stroke Source

Internal Width  Stroke rate range: 1-(12000/grayscale setting)

Encoder Selection

Word-Wide  Divider Ratio: 1-32 division

Print Delay  Range: 0-8191 column

Trigger Level  Current Level:

Return OK

Control internal and external interfaces (product detector and rate generation source), word width and delay. The rate generation source can be directly selected as internal or external (the peripheral is typically a rotary encoder). Encoder selection and external word width settings are not available when the rate generation source is internal. When the stroke rate generation source is external, the internal word width setting is not available, and the print delay column number and the light eye level parameter are shared.

Stroke Source: Select internal/external ----- external is a rotary encoder.

Internal Width: When the stroke rate generation source is internal, the setting word width is in the range of 1-12000 columns/second.

Print Delay: Enter the delay (in number of columns) between the start of the print input signal and the first sequence of print information. Each print format has a minimum delay value, and the set value must not be lower than this minimum. 光眼

Trigger Level: High/low level can be selected.

Current Level: Displays the current eye level status.

Function key options:

- Cancel Abandon the changes and return to the previous screen.
- OK Modify the settings to return to the previous screen.

When the rate generation source is external:

The screenshot shows a configuration menu on a device. At the top, there is a status bar with a 'Menu' button, a page number '317', a date and time '2019-01-11 23:39:56', a battery icon, a red status indicator 'Equipment failure (202)', and buttons for 'Ready Print' and 'Start Printing'. The main configuration area has the following settings:

- Stroke Source:** External (dropdown menu)
- Internal Width:** 600 (text input)
- Encoder Selection:** Internal (dropdown menu)
- Word-Wide:** 1 (text input)
- Print Delay:** 0 (text input)
- Trigger Level:** High Level (dropdown menu)
- Current Level:** low (text input)
- Stroke rate range:** 1-(12000/grayscale setting) (text label)
- Divider Ratio:** 1-32 division (text label)
- Range:** 0-8191 column (text label)

At the bottom of the configuration area are two buttons: 'Return' and 'OK'.

When the stroke rate generation source is external, the internal word width cannot be set.

Encoder selection: select internal or external.

Word Width: When the stroke rate generation source is external, enter 1-32 as the divisor of the external input rate to make it printable.

The print delay, Trigger level, and wipe rate generation source are internally time synchronized.

Function key options:

- Cancel Abandon the changes and return to the previous screen.
- OK Modify the settings to return to the previous screen.

## Invert Reverse

The screenshot shows a printer's control panel interface. At the top, there is a status bar with several elements: a 'Menu' button with a house icon, the number '315', the date and time '2019-01-11 23:47:42', a battery level icon, a red banner displaying 'Equipment failure (202)', the text 'Ready Print', and a green 'Start Printing' button. The main display area is a large light gray rectangle. In the center of this area, there are two settings: 'Reverse Control' and 'Inverse Control'. Each setting has a dropdown menu currently showing the word 'Close'. At the bottom of the screen, there are two buttons: 'Return' and 'OK'.

Invert or reverse each message. This option will be applied to all information unless dynamic control is used. If dynamic control is used, you can set the number of times to flip or reverse the print.

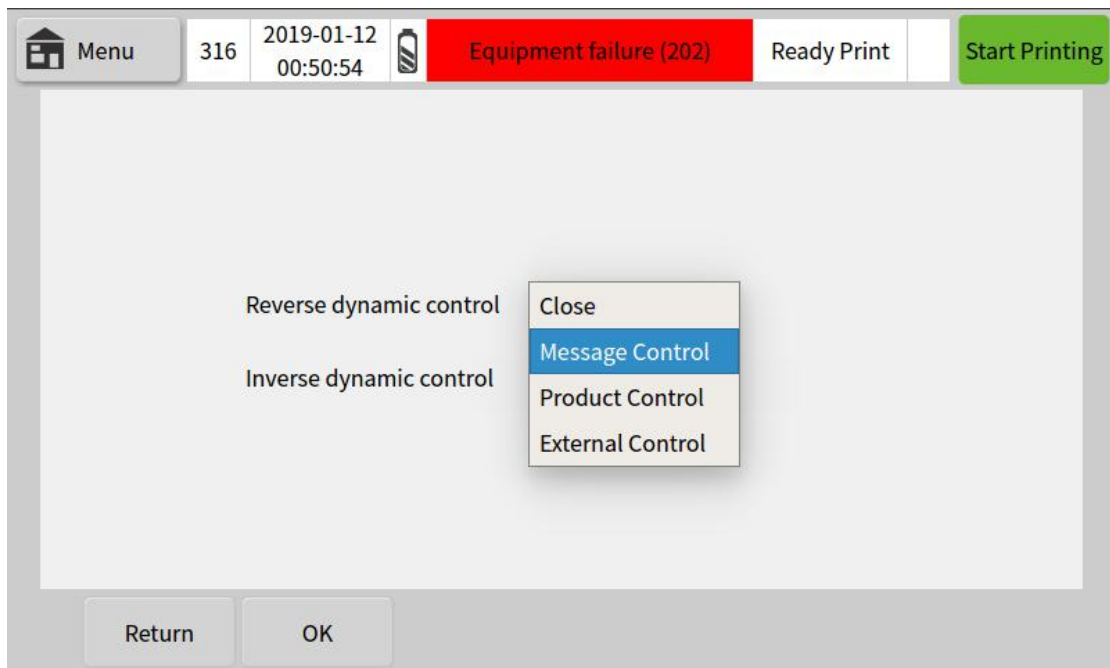
Reverse Control: You can choose to turn it on or off, and use it for all information.

Invese Control: You can choose to turn it on or off, and use it for all information.

Function key options:

- Cancel Abandon the changes and return to the previous screen.
- OK Modify the settings to return to the previous screen.

## DYNAMIC SETTING



Set the number of times a piece of information needs to be flipped or reversed. The number of times can be set by "repeat print" as described below.

Reverse dynamic control: optional Close, Message control, Product control, External control.

Message Control: Set the initial direction and number of repetitions of flipping or reversing the print according to the amount of information.

Product Control: The initial direction and number of prints of the reverse printing can be set according to the number of product inspections.

External Control: You can enter external control print settings to flip or reverse the print.

Inves dynamic control settings can refer to the Reverse dynamic control.

Function key options:

- Cancel      Abandon the changes and return to the previous screen.
- OK          Modify the settings to return to the previous screen.

## Repeat Print

Menu 314 2019-01-12 01:14:22 Equipment failure (202) Ready Print Start Printing

Repeat print mode: Close, Continuous, Count

Continuous printing interval: 600

Update Numbers each Repe: NO

Last Message Print All: Yes

Count the number of prints: 1

Counting print interval: 600

Update Numbers each Repe: NO

Use Product End: NO

Last Message Print All: NO

Return OK

You can choose to print continuously or count, and set whether you need to update the variables for each iteration. The maximum continuous/counting print interval is 65535, and each print format has a minimum interval value. The interval set by the printer must not be lower than this minimum value.

Repeat print mode: select off / continuous / count.

When the repeat print mode is selected as continuous:

Continuous printing interval: The continuous printing interval can be adjusted. Every time the information is printed, the clock, shift and serial number are updated once. Each print format has a minimum interval value, and the interval value set by the printer must not be lower than this minimum value.

Whether to update the variable repeatedly: Select Yes or No, select Yes to update the variable at the same time each time the print is repeated, and then not update.

Whether to print the last message completely: Select Yes or No.

When the repeat print mode is selected as the count:

Counting the number of prints: The count print starts after the product sensor detects the product. Whenever a product is detected, the shift, serial number, clock, etc. are updated once.

Counting print interval: The countable print interval can be adjusted. Each print format has a minimum interval value. The interval value set by the printer must not be lower than this minimum value.

Whether to update the variable repeatedly: Select Yes or No, select Yes to update the variable at the same time each time the print is repeated, and then not update.



Whether to use the product end signal: Use Yes/No to select whether to stop the repeat when the product is detected.

Function key options:

- Cancel Abandon the changes and return to the previous screen.
- OK Modify the settings to return to the previous screen.

## SERIAL NUMBER CONTROL

Editable information editing → Insert the serial number in the serial number, reset the current serial number or specify a value and update it. (The serial number has and can only exist 4)

No. 1/2/3/4: Click on the value to modify it, click Update to set the sequence number to the updated value, and reset to reset the current serial number to the limit value of 1.

Whether the serial number stops stepping during the fault: You can choose yes or no.

Function key options:

- Cancel Abandon the changes and return to the previous screen.
- OK Modify the settings to return to the previous screen.

## CARTRIDGE PARAMETERS

Menu 310 2019-01-13 17:10:02 Equipment failure (202) Ready Print Start Printing

Nozzle Selection Left nozzle 3 Nozzle Scanning Left

Preheat Setting Close

Cartridge Parameters Auto Config Free Jet Set Close

Print Width 2.1us Free Jet Columns 1

Nozzle Voltage 11.0v Grayscale setting 1

Return OK Cleaning Nozzle

Provide general information about the ink cartridges.

Nozzle selection: You can choose to do 300dpi or 300dpi in the right column.

Nozzle scanning: You can choose left or right.

Preheat setting: Selectable /60 °C / 65 °C / 70 °C / 75 °C / 80 °C.

Ink Cartridge Parameters: You can choose automatic setting or manual setting. The automatic setting is used for the ink cartridge to have the chip to sense the automatic setting. You can also manually set the printing pulse width and the nozzle voltage according to the ink cartridge parameters.

Print pulse width, nozzle voltage: Adjust according to the ink cartridge parameter information.

Idle spray setting: select off / 1min / 5min / 10min / 20min / 30min / 40min / 50min / 60min.

Number of idle spray columns: 1-5 columns can be selected.

Grayscale setting: Adjustable print font grayscale, the higher the grade, the darker the color, you can choose from 1 to 6.

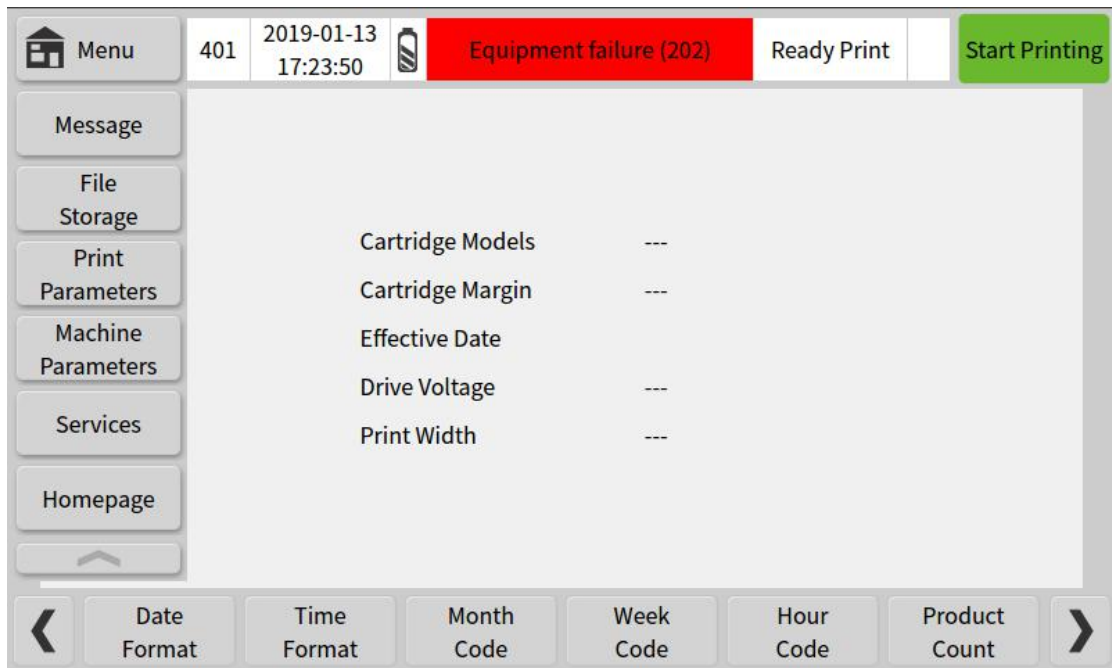
Function key options:

Cancel Abandon the changes and return to the previous screen.

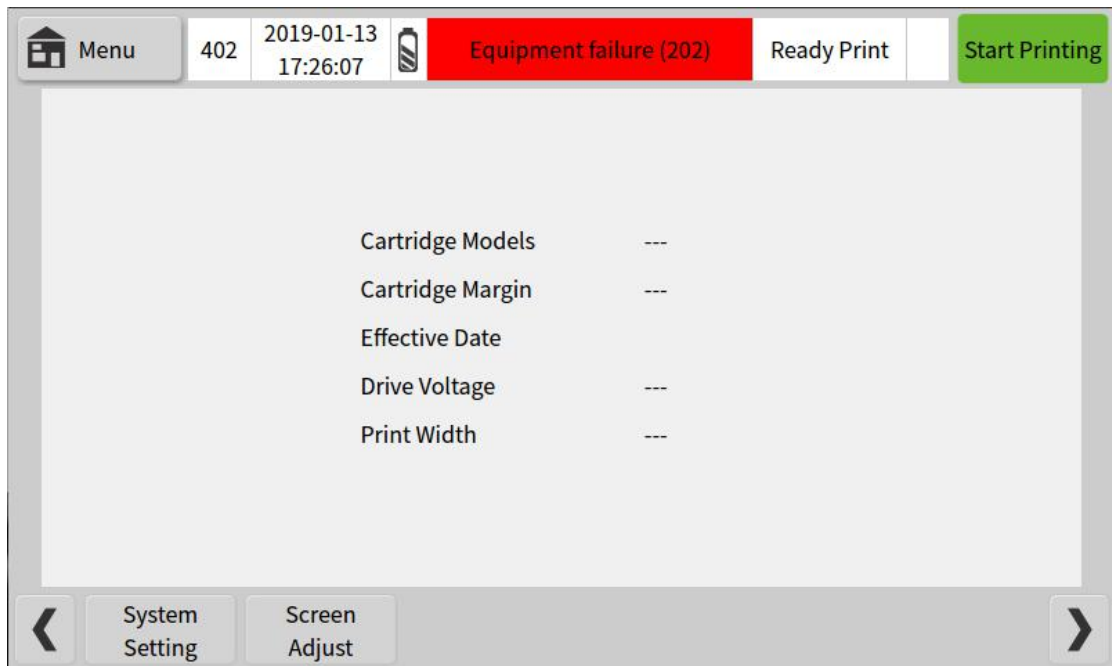
OK Modify the settings to return to the previous screen.

Cleaning Nozzle The cleaning nozzle can be used to clean the nozzle of the printer.

## MECHANICAL PARAMETER (1)



## MECHANICAL PARAMETER (2)



It is used to modify the format of the printer and adjust the mechanical parameters of all information in the printer. The mechanical parameters are common settings and are valid for all information. The main interface of the mechanical parameters

will display the current printer cartridge model, margin, effective date, drive voltage and print pulse width.

## DATE FORMAT

Date formats in memory can be added, added or deleted. The new date format can be used in Information Editing → Insert Clock. (see page 6)

Create a new format: Select to create a new date format in the year variable / month variable / week variable / day variable / delimiter, Click on the two undersizes to delete the variable, edit the new date format and click Add to create a new date format.

Function key options:

- Cancel Returns to the previous screen.
- OK Add a new date format and return to the previous screen.
- Delete Deletes the date format in memory.

## TIME FORMAT

The screenshot shows the 'TIME FORMAT' screen. At the top, there is a status bar with the following elements: a 'Menu' button, the number '411', the date and time '2019-01-13 17:43:51', a battery icon, a red bar with the text 'Equipment failure (202)', the text 'Ready Print', and a green 'Start Printing' button. Below the status bar, there is a list of time formats: 1.hh:mm:ss, 2.hh:mm, 3.hh:mm:ss, 4.mm:ss, and 5.ss. Below the list, there is a 'Create New Form' section with a text input field, a '<<' button, and an 'Add' button. Below the input field, there are three rows of variables: 'Hour Variable' with 'hh' and 'HCODE', 'Minute Variable' with 'mm', and 'Second Variable' with 'ss'. To the right of these variables, there is a 'Separator Symbol' section with a '/' button, a '-' button, a '.' button, and an empty button. At the bottom of the screen, there are three buttons: 'Return', 'OK', and 'Delete'.

Time formats in memory can be added, added or deleted. The new time format can be used in Information Editing → Insert Clock. (see page 6)

Create a new format: Select Create a new clock format in the hour variable / minute variable / second variable / separator, click the two less than the number to delete the variable, edit the new time format and click Add to create a new time format.

Function key options:

- Cancel Returns to the previous screen.
- OK Add a new time format and return to the previous screen.
- Delete Deletes the time format in memory.

## MONTH CODE

Month	Code
1Month	DEC
2Month	JAN
3Month	FEB
4Month	MAR
5Month	APR
6Month	MAY
7Month	JUN
8Month	JUL
9Month	AUG
10Month	SEP
11Month	OCT
12Month	NOV

The month name can be modified to be used when inserting the clock function when editing information.

January, February...December: Enter up to 3 numbers and alphabetic characters.

Function key options:

Cancel    Abandon the modification.

Saving current settings    Use the new settings in the current information.

Save as default    Leave a new name for the new information.

Use default values    Use the default name in the message.

## WEEK CODE

Menu 413 2019-01-13 17:50:26 Equipment failure (202) Ready Print Start Printing

Monday	<input type="text" value="MON"/>	Friday	<input type="text" value="FRI"/>
Tuesday	<input type="text" value="TUE"/>	Saturday	<input type="text" value="SAT"/>
Wednesday	<input type="text" value="WED"/>	Sunday	<input type="text" value="SUN"/>
Thursday	<input type="text" value="THU"/>		

Return OK Save as Default Use Default Value

The day of the week name can be modified for use when inserting the clock function when editing information.

Monday, Tuesday... Friday: Enter up to 3 numbers and alphabetic characters.

Function key options:

Cancel Abandon the modification.

Saving current settings Use the new settings in the current information.

Save as default Leave a new name for the new information.

Use default values Use the default name in the message.

## HOUR CODE

Day	Code
Monday	MON
Tuesday	TUE
Wednesday	WED
Thursday	THU
Friday	FRI
Saturday	SAT
Sunday	SUN

An alphanumeric character can be associated with each 24 hour, and the insertion clock can be used to insert these characters into the message.

0:00, 1 hour...23: Enter up to 3 numbers and alphabetic characters.

Function key options:

Cancel    Abandon the modification.

Saving current settings    Use the new settings in the current information.




Save as default    Leave a new name for the new information.

Use default values    Use the default name in the message.

•



## PRODUCT COUNT

 Menu	415	2019-01-13 17:55:15		Equipment failure (202)	Ready Print	 Start Printing														
<table> <tr> <td>Product Detect</td> <td><input type="text" value="0"/></td> </tr> <tr> <td>Product Printed</td> <td><input type="text" value="0"/></td> </tr> <tr> <td>Last reset time</td> <td><input type="text" value="2019-01-09 02:51:02"/></td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>Product Total Detect</td> <td><input type="text" value="0"/></td> </tr> <tr> <td>Product Total Printed</td> <td><input type="text" value="0"/></td> </tr> <tr> <td>Last reset time</td> <td><input type="text" value="2019-01-09 02:51:02"/></td> </tr> </table>							Product Detect	<input type="text" value="0"/>	Product Printed	<input type="text" value="0"/>	Last reset time	<input type="text" value="2019-01-09 02:51:02"/>			Product Total Detect	<input type="text" value="0"/>	Product Total Printed	<input type="text" value="0"/>	Last reset time	<input type="text" value="2019-01-09 02:51:02"/>
Product Detect	<input type="text" value="0"/>																			
Product Printed	<input type="text" value="0"/>																			
Last reset time	<input type="text" value="2019-01-09 02:51:02"/>																			
Product Total Detect	<input type="text" value="0"/>																			
Product Total Printed	<input type="text" value="0"/>																			
Last reset time	<input type="text" value="2019-01-09 02:51:02"/>																			
Return		OK		Subtotal Reset	Total Reset															

You can check the number of printers and the number of prints, as well as the total number of tests and the total number of prints, in the product count.

**Product Inspections:** The number of times a product is being tested before it begins to detect the next product.

**Product Prints:** The number of times the product is being printed before starting to print the next product.

**Total product count:** The total number of products detected by the printer.

**Total product prints:** The total number of prints the product prints on the product.

**Last reset time:** Click the reset time of the subtotal reset or total reset.

**Function key options:**

**Cancel** Returns to the previous screen.

**OK** Add a new time format and return to the previous screen.

**Subtotal reset** Resets the number of product detections and print counts, resets the time, and records them.

**Total reset** Resets the total number of products detected, the total number of prints, resets the time and records.

## SYSTEM SETTING

Setting	Value
System Time	2019-01-13 19:07:37
Button voice	Open
Print trigger sound	Open
Print end sound	Open
Screen Saver	Close

Set the system time, button language, screen saver and other settings in the printer.

System time: Please refer to the Beijing time setting.

Button sound: Select to turn it on or off.

Print Trigger Sound: Select On or Off.

Print end sound: Select to turn it on or off.

Screen saver settings: Select to turn it on or off.

Function key options:

Cancel Returns to the previous screen.

OK Add a new time format and return to the previous screen.

## Screen Adjust

是否保存当前校准状态，保存请点击是！

9秒后，自动恢复到校准前状态。

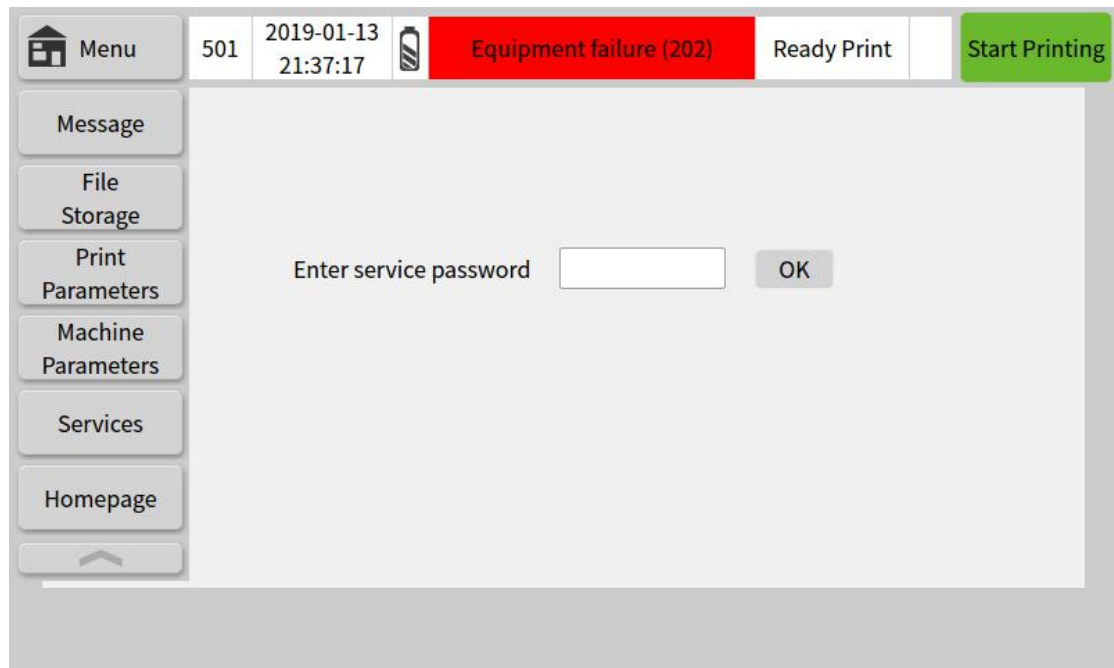
否(N)

是(Y)

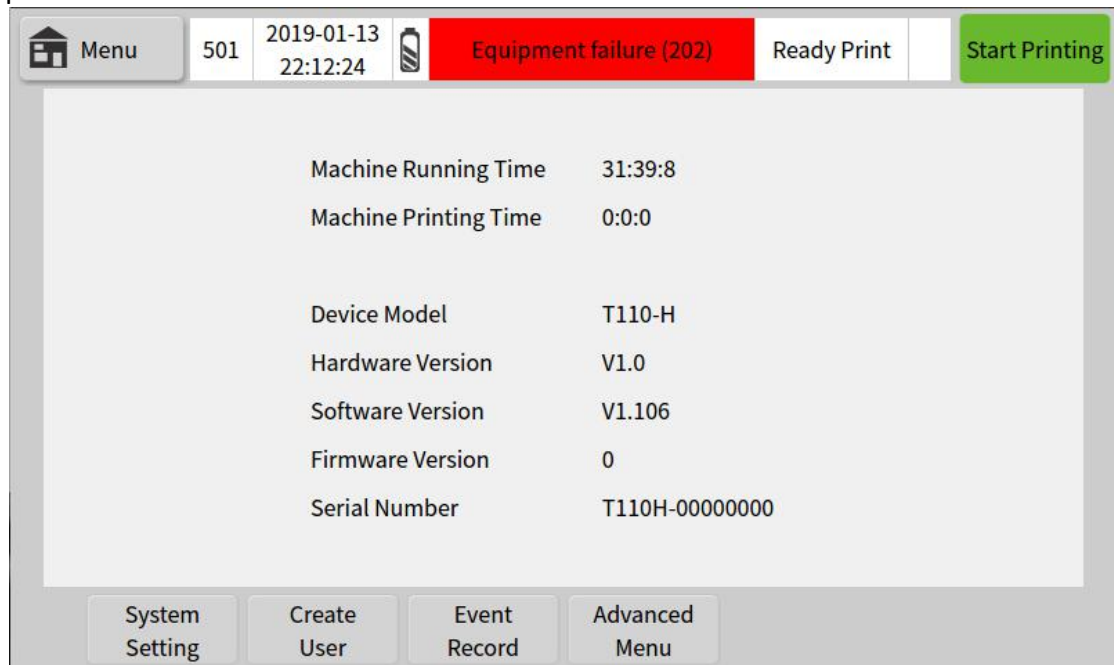
The printer uses a 5.0-inch color industrial-grade resistive touch screen. The resistance screen has different resistances due to the contact between the two layers of the screen at different locations. The resistance of the different resistor screens will be slightly different.

After screen calibration is selected, the system will automatically enter the 5-point touch screen calibration process. Click on the five calibration cross positions in the upper left, upper right, lower left and middle of the screen to complete screen calibration. Click on the confirmation to save the calibration status, cancel or 10 seconds without clicking on the confirmation to restore the pre-calibration status by default.

## SERVICE MENU



It is used to observe the running state of the jet printer, change the system language, create new users, set up boot logo and so on. When you click on the service menu, a screen similar to the screen shown in the figure will appear, and you can enter your password to enter the service menu area.



Entering the service menu area after entering the password will show the running time and printing time of the current printer, equipment type, hardware, software, firmware version and machine serial number.

## SYSTEM SETTING

Setting	Value
System Language	English
Input method language	English
Cartridge Putter	Detect
Min print delay	100

The system settings in the mechanical parameters are upgraded. The system settings in the service menu can change the system language and lock switch.

**System language:** You can change the language of the printer system. Customers can choose the language according to their needs. After selecting and restarting the printer, it will take effect.

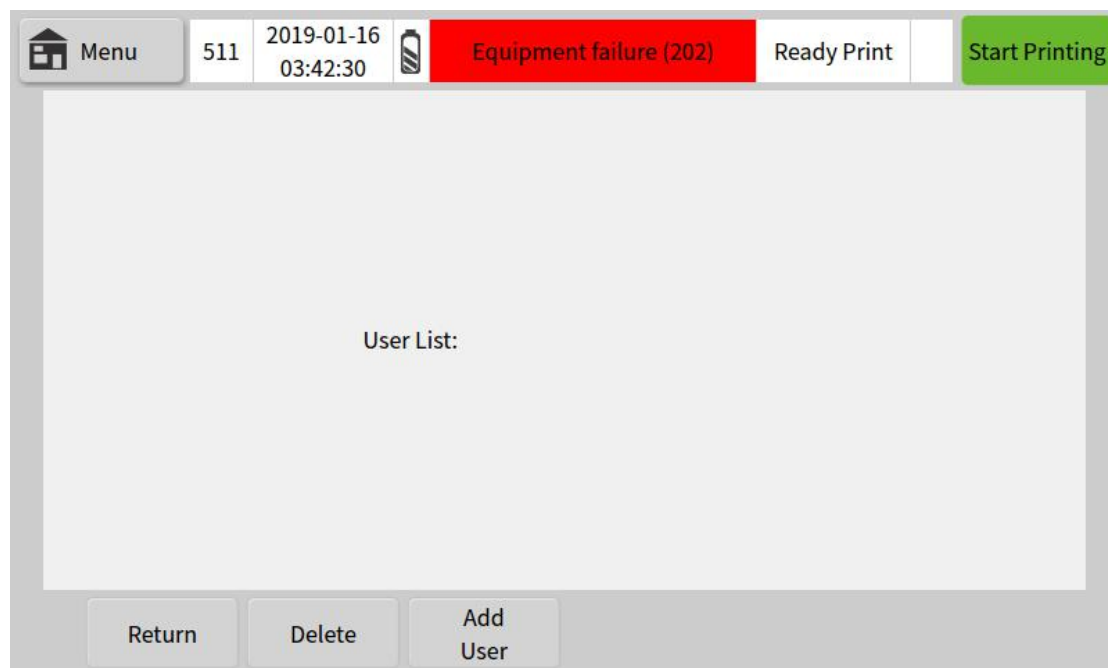
**Lock switch:** Select automatic or forced off.

**Function key options:**

Back Returns to the previous screen.

OK Modify the settings to return to the previous screen.

## CREATE USER



It is used to add or delete printer users. Each user has a corresponding user name and password. After adding a user, you can select login to switch users on the home page.

Function key options:

- Cancel      Returns to the previous screen
- Delete      Enter the user name and user password and delete to delete the user.
- Add User    Enter User Name and User Password and click OK to add user

## Event Record

Menu		512	2019-01-16 03:47:10		Equipment failure (202)	Ready Print	Start Printing
	55	Equipment failure (202)		2019-01-11 16:49:45			
	56	printThread驱动初始化不成功		2019-01-11 16:49:45			
	57	tagInfo驱动初始化不成功		2019-01-13 16:38:13			
	58	串口无法打开		2019-01-13 16:38:14			
	59	Equipment failure (202)		2019-01-13 16:38:16			
	60	printThread驱动初始化不成功		2019-01-13 16:38:16			
	61	tagInfo驱动初始化不成功		2019-01-16 03:40:55			
	62	串口无法打开		2019-01-16 03:40:55			
	63	Equipment failure (202)		2019-01-16 03:40:56			
	64	printThread驱动初始化不成功		2019-01-16 03:40:56			

It is used to record the running status of the printer machine.

Function key options:

Back Returns to the previous screen

OK Modify settings to return to the previous screen

## PART 4:OPERATION

### CONTENTS

<b>PART 4:OPERATION</b> .....	1
START-UP.....	2
SHUT DOWN.....	2
REPLACE THE INK TANK.....	2
CREATE INFORMATION.....	3
Print information.....	3
Save information.....	4
Select information from memory.....	4
Insert clock.....	4
Insert serial number.....	5
INSERT 2D CODE.....	5
Insert barcode (not perfect).....	6
INSERT LOGO.....	6
INSERT SHIFT.....	6
Insert variable.....	7
Serial data.....	8



## START-UP

Press the button switch on the upper side of the printer screen

Note: (1) There is a reminder light next to the online (handheld) power adapter interface, which needs to be lit red to prove that there is power input.

(2) After pressing the switch for about three seconds, the green light will be on and it will be released. The boot process takes about 20 seconds.

The boot screen displays the CODPAD logo and prohibits the insertion and removal of the cartridge in the print state.

- Enter the main interface, the status bar displays "Device normal", "No print data" and other information.
- Enter the password by pressing the unlock button directly below the screen to enter the main menu area.

Create a new message in the information editing or in the file management → information storage, select the information that the user needs to print, and click Send.

Note: Do not insert or remove cartridges in the print state

- The print is sent before starting the print, otherwise the start print button is grayed out.
- The print status bar displays information such as "Device OK", "Ready to print", and so on.

The printer is ready to print information, click to start printing.

## SHUT DOWN

Click the Stop Printing button in the upper right corner of the screen.

Note: The printer must be powered off before the printer is stopped.

- Status bar displays information such as "Device OK", "Ready print", and so on.
- If it does not print for more than 30 minutes, please remove the ink cartridge and cover the nozzle protection cover.

Press the button switch on the top of the printer screen to turn off the printer.

## REPLACE THE INK TANK

- When the capacity of the ink cartridge is too low, the screen will display information such as "low ink cartridge remaining" and "ink cartridge is empty". When the ink cartridge capacity is empty, the printer will not continue printing.

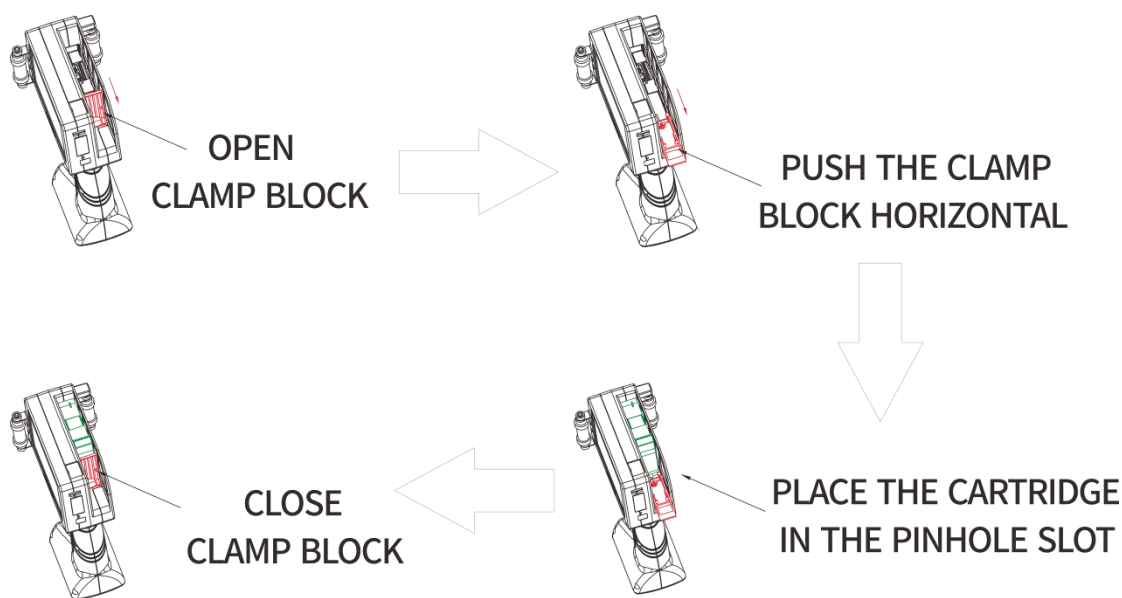
Follow the steps below to replace the ink tank.

Note: The printer main power must be turned off according to the shutdown procedure before replacing the ink tank.

- Install the ink tank (as shown on the next page).  
Loosen the clamp block of the ink tank in the direction shown, and release the

clamp block horizontally onto the ink tank slot. After aligning the ink cartridge with the pinhole card slot, gently press the position of the ink cartridge by hand to fasten the compression block.

- Remove the ink tank  
Fix the ink cartridge with one hand and release the cartridge buckle with the other hand. Place the buckle horizontally on the ink slot, hold the protruding part of the ink cartridge, and gently remove the ink cartridge.



## CREATE INFORMATION

The following describes how to create a print. The user can use our suggested project as an example. See Section 3: Screen Description for all displayed screens.

- After booting and unlocking, in the main menu → Information Edit → New Information.
- Type information (such as abc123, etc.).

You can also type clock data, serial number, bar code, pattern, shift, variable, and serial port data when creating details. The method of creating simple information will be listed below.

## Print information

- (1) After selecting the information editing function, find the “New Information” in the function key at the bottom of the screen.
- (2) After editing the information and pressing “Send Print”, the screen display will change from “No Print Data” to “Ready Printable” status, then the printer will print the message once it receives the print signal.

Note: Regardless of the method used, if you modify a single message, you must press the Send Print button again for the changes to take effect.

## Save information

- (1) After the new information has been edited, press the "Save Information" button.
- (2) The box for entering the name of the message will pop up from the screen.
- (3) Type the name of the information (such as "AAA").
- (4) Select OK from the button options.

## Select information from memory

- (1) In the main menu file management information storage, you can call the edited saved information.
- (2) Select the information you want to print according to the name. A small tick will appear when selected.
- (3) Click on the selection information to print the selected information, and only one file can be selected at a time.
- (4) Click on Send Print in the message editing menu to print the message.
  - Follow the steps (1), (2), and (3) above to select the information you want to delete and click Delete to delete the selected information. You can choose to delete multiple files at a time.
  - Note: Information cannot be restored after it has been deleted.

## Insert clock

- (1) Insert the clock in the main menu information editing, and the clock content can be selected as the date or time.
- (2) Click the date/time format, select the desired date or clock format, and the date/time format can be modified by yourself (see pages 3-23 and 3-24).
- (3) Enter 0-24 hours to offset the current time;  
Enter 0-365 days to offset the current date.
  - For example: The current time is 2018/10/01 00:00 (production date), you need to insert a 2019/10/01 15:00 (shelf life), the shelf life is 1 year and 15 hours later than the current time (production time), and For dates that require continuous updates, we can make a 365-day offset on the date, with a time offset of 15 hours.
- (4) Change the size of the clock/date font to the specified position of the text, and the screen will change and display the clock.

## Insert serial number

(1) Insert the serial number in the main menu information editing, and insert the serial number into the print information.

(2) Each time a serial number is added, the serial number will be numbered by itself, and the KD110 printer can have 4 serial numbers. It can be updated according to the serial number, after the print parameter → serial number control is reset or a certain value is specified. (See pages 3-20)

(3) If the limit value 1 is greater than the limit value 2, the sequence number will be incremented in order, that is, positive, and vice versa.

(4) If necessary, you can also set the number of times a certain serial number is repeated before the update.

- For example: Create sequence number 0000, 0001... until the end of 1000, the step size is 1.

Limit 1: 0000

Limit 2: 1000

Step size:1

Repetitions: 0

Front position 0: Choose yes or no

## INSERT 2D CODE

(1) Insert the QR code in the main menu information editing to insert the QR code into the print information.

(2) The barcode type can be selected to generate QR code or DataMatrix code.

(3) The current barcode content is empty. You can click the "Insert Content" drop-down box to select the new content.

- If you need a QR code such as WeChat or website, you cannot enter the content by QR code. You can only insert the corresponding QR code by inserting the picture.

(4) If necessary, the reverse color can be selected to form a contrast color with the color of the inserted QR code.

(5) The fault tolerance rate from low to high is L<M<Q<H respectively. After the two-dimensional code is blocked, it can still be scanned out. The higher the fault tolerance rate, the more the part of the two-dimensional code can be blocked. many

(6) The size of the two-dimensional code and the size of the outer frame can be adjusted by itself.

(7) The direction in which the two-dimensional code is inserted can be set (90 degrees, 180 degrees, 270 degrees rotation).

- Note that the red frame status will appear in the edit area beyond the print range.

## Insert barcode (not perfect)

- (1) Insert barcode in the main menu information editing, and insert the barcode into the print information.
- (2) The barcode type can be selected to generate EAN13/8 code, CODE128/39 code or UPCA/E code.
- (3) The current barcode content is empty. You can click the "Insert Content" drop-down box to select the new content.
  - If you need to insert a special barcode, you cannot enter the content through the barcode. You can only insert the corresponding barcode by inserting the image.
- (4) If necessary, you can choose the reverse color to form a contrast color with the color of the inserted barcode.
- (5) The size of the barcode and the size of the outer frame can be adjusted by itself.
- (5) The direction in which the barcode is inserted can be set (90 degrees, 180 degrees, 270 degrees rotation).
  - Note that the red frame status will appear in the edit area beyond the print range.

## INSERT LOGO

- (1) The insertion pattern in the main menu information editing can be inserted into the print information.
- (2) Pattern insertion can be performed in a local file or a U disk file.

The images in the printer can be managed in File Management → Pattern Storage. (See pages 3-13)

- (3) If necessary, the reverse color can be selected to form a contrast color with the color of the inserted pattern.
- (4) The direction of the insertion pattern can be set (90 degrees, 180 degrees, 270 degrees rotation).
  - Note: The red box status will appear in the edit area beyond the print range.

## INSERT SHIFT

- (1) The insertion shift in the main menu information editing can be inserted into the print information.
- (2) According to the start and end time (in hours and minutes according to the 24-hour clock system) and the shift code name.
 

(In the shift code column) enter up to 6 shift codes
- (3) Determine from the options in the function key options. As long as the current actual time is within the specified shift code start and end time range, and the shift code name (such as "AAA") is inserted, the screen will change and display the

information.

- For example: Starting at 07.30, ending at 15.30, code is AAA
- Starting at 15.31, ending at 23.30, code is BBB
- Starting at 23.30, ending at 07.29, code is CCC

## Insert variable

(1) Insert variables in the main menu information editing to send variables to the print information.

- Variable format:  
a computer new Microsoft Office Excel worksheet;  
b Enter the content to be printed in the form, pay attention to distinguish each column

粘贴 格式刷
B I U
背景色 字体颜色 文字颜色

剪贴板 字体

A1 fx 111

	A	B	C	D
1	111	121 QWE		32654
2	222	232 ASD		4563
3	333	343 ZXC		123
4	444	454 RTYU	dfg	
5	555	565 FGHJ		4664
6	666	676 VENM		456213
7	777	787 IOPLLK	cfgd	
8	888	898 LKJHGF		45645
9	999	909 MNEVCX		1445
10	110	101 ZXCVMNJ		12354

\* In the figure, column A represents a column and 111 represents a column.

c edited and saved as the specified .TXT (text file, tab delimited) or .CSV (comma  
number Document



\*Save as → other formats → save type as text file (tab delimited) or .CSV (comma separated)

(2) Variable file insertion can be performed in a local file or a U disk file.

The variable files in the printer can be managed in the file management → data

file. (See pages 3-12)

(3) The coding machine generates the total number of items and the total number of columns according to the contents of the read variable file.

(4) Select which item to start printing, and which item ends (no adjustment is required in special cases).

(5) Select column to choose which column to print, the current item is which one to print.

(6) Set the length of the print partition. (When the variable has a print message that is too long, you need to adjust the partition length)

(7) If necessary, you can also set the number of times a variable is repeatedly printed before updating.

For example, you need to print the first column of variables 111, 222, 333, 444, 555, 666, 777, 888, 999, 1100

The second column AAA, BBB, CCC, DDD, EEE, FFF, GGG, HHH, KKK, LLLL

a: At this point we need to create a new Microsoft Office Excel worksheet on the computer, in the first column

Enter the corresponding value, enter the corresponding value in the second column, and save it as .TXT (text file, system

Tab delimited or .CSV (comma separated) document, insert the prepared document into the printer

USB interface, imported into the data file in file management.

b: Select the start item, end item and corresponding column, adjust the partition length, and repeat printing.

## Serial data

(1) In the serial port data in the main menu information editing, the serial port data can be sent to the print information.

(2) The RS232 communication interface is used, one end is connected to the printer and the other end is connected to the signal source.

(3) Select the corresponding baud rate, data bit, check bit, stop bit according to the user serial port parameters.

(4) Input the start and end characters of the data to be transmitted. When the printer receives the corresponding print data, the corresponding data in the serial port data of the display will change accordingly.

E.g:

Data format ASCII, baud rate 115200, 8 bits without check, 1 stop bit.

The output data format is: @XXXXX<CR><LF>, @ is the start character, XXXXX is the check weight, <CR> enter, <LF> line feed.

When the check weight is 20.0g, the output data is: 40 30 30 32 30 30 0D 0A (in hexadecimal notation)

## PART 5:DISPLAY MESSAGES AND FAULT FINDING

### CONTENTS

<b>PART 5:DISPLAY MESSAGES AND FAULT FINDING.....</b>	<b>1</b>
PREFACE.....	2
INFORMATION BAR MESSAGES.....	2
ALERT BAR MESSAGES.....	3
Green Alerts.....	3
Yellow Alerts.....	3
Red Alerts.....	3
STATUS BAR MESSAGE.....	4
PRINTER FAULTS.....	4
Light Does Not Shine.....	5
Printer Does Not Print.....	5
Print Position Incorrect.....	5
Print Size Too Small.....	5
Print Starts Complete Then Becomes Incomplete.....	6
Printed With Dashed Or White Lines.....	6
Print Completely Blank.....	6
PRINT QUALITY FAULTS.....	6



## PREFACE

There is a corresponding column display on the screen:

- Information message
- Alert message
- Status message



## INFORMATION BAR MESSAGES

This bar generally shows the current menu name, and the meaning of this information is generally clear at a glance.

- Page: The page corresponding to the current menu. This setting has been set at the factory and the user does not need to change it.
- System time: It is recommended to set the actual time.
- Battery Status: This content is only valid in the handheld printer, the current battery remaining capacity.
- Information bar popped up in the current menu

E.g:

Your current information has been modified, confirm or return to modify!

The file already exists, whether it overwrites the original file.

The current information is open.

The meaning of this information is generally clear at a glance.

## ALERT BAR MESSAGES

There are three background colors for the warning display bar:

- Green: Machine status is completely normal.
- Yellow: Machine has alarm, but it does not affect printing.
- Red: Machine has fault alarm and cannot print normally.

### Green Alerts

When the background color of the warning display bar is green, machine is in a normal state.

### Yellow Alerts

When the background color of the warning display bar is yellow, it means machine has alarm, but it does not affect the printing. It is used to remind the operator that the printer needs maintenance or information processing error.

Common warning display bar alarm when the background color is yellow:

- Low ink cartridge  
The ink level in the ink cartridge is too low.  
Installed new ink tank.
- Encoder is too fast  
Note: Only happens when using a rotary encoder.  
Encoder speed exceeds maximum sequence speed.  
Reduce encoder movement speed.
- Machine service time is coming  
Note: This alert is configurable, so may not be displayed.  
The machine repair service is almost finished. (A second warning shutdown will be given when the machine repair service hours have arrived)  
It can be closed in the service menu. If the fault cannot be eliminated, the maintenance personnel should be repaired.
- Low battery  
Note: This warning is only displayed on the handheld printer.  
The machine battery is too low.  
Reinstall a new battery or charge.

### Red Alerts

When the background color of the warning display bar is red, it indicates that the machine has failed, and at the same time, stop printing or prevent unsafe conditions.

After the operator confirms, the corresponding processing is performed. If the printer successfully returns to the normal working state, the warning bar information also disappears accordingly.

Common warning display bar alarm when the background color is red:

- Ink cartridge information is not recognized  
     Unable to read cartridge information.  
     Check the cartridges are in the correct position, reinstall or replace.
- The ink cartridge is empty  
     The ink in the cartridge has run out.  
     Install a new cartridge.
- Ink cartridge not installed  
     The ink cartridge was not detected before starting the print.  
     Install and check the ink cartridge to start printing.
- The ink cartridge is not locked  
     The clamp block of the ink cartridge is not locked.  
     After aligning the ink cartridge with the pinhole card slot, gently press the ink cartridge to fix the position of the ink cartridge.
- Machine service time has arrived  
     Note: This alert is configurable, so may not be displayed.  
     The machine repair service hour has arrived and the machine stops printing.  
     It can be closed in the service menu. If the fault cannot be eliminated, the maintenance personnel should be repaired.
- The ink cartridge has expired  
     Cartridge life has expired.  
     Install a new cartridge before restarting printing.

## STATUS BAR MESSAGE

- No print data  
     The information editing area is empty or the "send print" is not pressed.  
     Write a message or recreate a message with content and click "Send Print".
- Printing does not start  
     There is print information, no print is activated, and the ink line symbol is ✕.  
     Click to start printing to enter the printing state, and the ink line symbol next to the printing is ✓.
- Can print  
     The printer is fully turned on and ready to print. This status is reported when the printer is actually printing. The ink line symbol next to it is ✓.

## PRINTER FAULTS

Following describes the printer malfunction and possible causes and repair methods.

## Light Does Not Shine

- Power/Machine failure  
Re-power on, if not able to resolve contact with local dealer or after-sales service.
- Low battery (handheld)  
Charge or replace a new battery

## Printer Does Not Print

- Did not press "Start Printing"  
Press "Start Printing" next to the status bar.
- No print data  
Select or edit the information and click the "Send Print" button.
- Print delay value is too large  
Check if the print delay value is normal.
- Product detector is disconnected or malfunctions  
Check the product detector and cable.
- Cartridge not installed /Cartridge out of ink  
Try to reinstall the cartridge.
- Rotary encoder failure  
Check the rotary encoder and cable.
- Photocell failure  
Check if the Photocell is connected normally
- Selected external rate generation source (without encoder installed)  
Change to the internal rate generation source.

## Print Position Incorrect

- Printing delay is incorrect  
Re-enter the print delay parameter.
- Product detector is not aligned  
Realign the product detector.
- Edit information location has moved  
Click on the screen to re-position the information or enter the X and Y axes for precise positioning.

## Print Size Too Small

- Edit information font size adjustment is too small  
Adjust the font size.

- Word width setting adjustment is incorrect  
Adjust the word width setting.
- Nozzle too close to product  
Adjust the position of the printer.

## Print Starts Complete Then Becomes Incomplete

- Insufficient ink or bubble blocking nozzle  
Check for low ink alarms, replace the cartridge, and if it is not resolved, send it back to the supplier or company for testing

## Printed With Dashed Or White Lines

- Nozzle blocked or damaged  
Refer to the “Repair and Maintenance” section to wipe and clean the print head with a non-woven fabric.
- Poor contact between the ink cartridge and the printer  
Reinstall the cartridge and reinstall it to check for foreign objects at the cartridge contact plate.

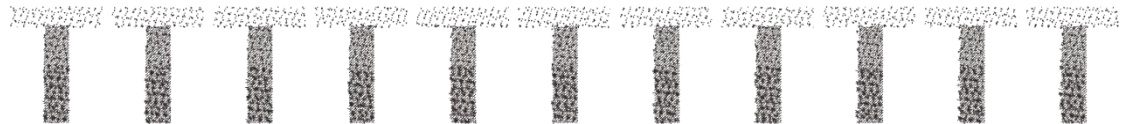
## Print Completely Blank

- *Exhausted ink or blocked nozzle*  
Check if the ink is empty. If the problem is not resolved, please reinstall the cartridge or replace the cartridge.

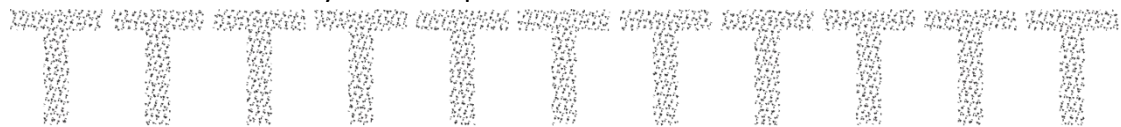
## PRINT QUALITY FAULTS

The following are typical print failures. In most cases, the nozzle should be kept clean and aligned first, and then the possible causes of the failure can be further analyzed.

Print head does not form a 90 degree angle with the product moving direction.



Print head is too far away from the print surface.



## PART 6:REPAIR

### CONTENTS

<b>PART 6:REPAIR.....</b>	<b>1</b>
PREFACE.....	2
PRINTER REPAIR AND MAINTENANCE.....	2
CARTRIDGE REPAIR AND MAINTENANCE.....	3

## PREFACE

The handheld/online inkjet printer is mainly divided into two important parts: the body and the ink cartridge. The use of the machine is important in maintenance and repair. The quality of the maintenance and repair directly determines the use effect and service life of the machine. Proper maintenance can make equipment more profitable.

The following mainly describes the two parts of the printer and ink cartridge.

## PRINTER REPAIR AND MAINTENANCE

If the working environment of the printer is not good, dust can easily enter the printer port or ink cartridge, which affects the printing effect of the printer and shortens the service life of the printer. If it is too cold or too hot, it will directly affect the printing effect of the printer. The maintenance printer must clean the print head before the power is turned off, and cover the print head with the cap attached to the ink cartridge. This will ensure the quality of the inkjet when used again, and also extend the service life of the ink cartridge to a certain extent.

- The touch screen is the main part of the main control printer. To ensure the normal use of the machine, please keep the touch screen clean. Do not use sharp objects or hard objects to click on the touch screen to keep the surface and port clean.
- Make sure the printer is equipped with ink cartridges and batteries (handheld). If the battery is exhausted, please replace it.
- Do not insert or remove the ink cartridge during system startup and while printing.
- Check the warning bar when the machine starts up to check if there is a faulty alarm. Make sure that the machine is turned on normally. (if there is an error alarm, please check the solution for troubleshooting)
- Depending on the properties, some cartridges may need to be removed from the printer when the machine is not in use. Remove the cartridge and remove the cartridge. Wipe the nozzle with a non-woven cloth. Cover the print head with the cap that comes with the ink cartridge to prevent the nozzle from leaking or clogging the dust. Store the capped cartridge in a safe place. Note that the nozzle is facing up. (Please refer to the ink cartridge repair and maintenance section for details)
- (Handheld) battery power has a display prompt, you can fully charge the battery, but please do not overcharge the battery. If you do not use the printer for a long time, you can remove the battery from the printer and store it. It is recommended to charge the battery before using it again. Do not use the battery if it is too cold or too hot. Note that you cannot replace the printer battery with another battery.

## CARTRIDGE REPAIR AND MAINTENANCE

The ink cartridges are divided into water-based ink cartridges and solvent ink cartridges. According to the ink color in the ink cartridges, the ink cartridges can be divided into various types. The quality of the ink cartridge directly affects the quality of the print. It is best to use the ink cartridges recommended by the equipment manufacturer when purchasing ink cartridges, because these ink cartridges are subjected to strict, long-term testing and have certain guarantees for the equipment. When the machine is not in use, remove the ink cartridge and take it with care to avoid damage to the ink cartridge. The print head part cannot be rubbed with any object, and the fine hair is easy to hang on the surface of the print head, causing plugging and dripping, which affects the coding effect.

- Do not shake the cartridge hard, as ink pressure can damage the printhead
- If the print quality is not good, check the remaining ink in the cartridge. If the ink runs out, please replace the ink cartridge. If there is still ink in the ink cartridge, the print quality will be poor due to dust or paper fibers on the nozzle surface.
- If the ink cartridge is not used for more than 20 minutes, the ink may dry out and cause a sticky clogging of the print nozzle, and the dry ink eventually causes the nozzle to clog.
- If blank streaks appear during printing, you need to clean the clogged nozzle.
- If there is ink leakage, do not wipe the print head vigorously or dry the ink. To avoid nozzle clogging, clean the print head with a clean paper towel/non-woven cloth. Solvent cartridges should be wiped gently with alcohol and ensure that there are no impurities and other suspended particles in the alcohol.
- To ensure high-quality printing results after each use, you need to clean the nozzles of the ink cartridges. Please use a clean paper towel/non-woven fabric, solvent cartridge, please use alcohol to gently wipe and ensure that there are no impurities and other suspended particles in the alcohol. Solvent cartridge to wipe the print head, please ensure that the paper towel / non-woven fabric penetrates into the alcohol. Then clean the print head to follow the cartridge shaft, and 2 ink lines will appear after wiping.
- You can use the machine's own cleaning nozzle to clean the print head, print a few lines of text or high-resolution graphics after cleaning, and check the printed image. If the print quality is still not guaranteed, repeat the process of cleaning the cartridge several times. If it still doesn't work, please replace the cartridge.



## PART 7:SPARES AND ACCESSORIES

### CONTENTS

ACCESSORIES.....	2
CONSUMABLES.....	2
TOOLS.....	2
KD110-H Hand-held Inkjet Printer Control Box Assembly.....	4
KD110-M For Production Line Control Box Assembly.....	6
KD210 For Production Line Control Box Assembly.....	8
KD110-H Handle Assembly.....	9
Slide Assembly.....	10

## **ACCESSORIES**

TIJZJ100	KD110-M Mount
TIJZJ200	KD210 Mount
TIJZJ002	Photocell Mount Brackets
	Stylus
	RJ45 Interface Line
	Power Adapter

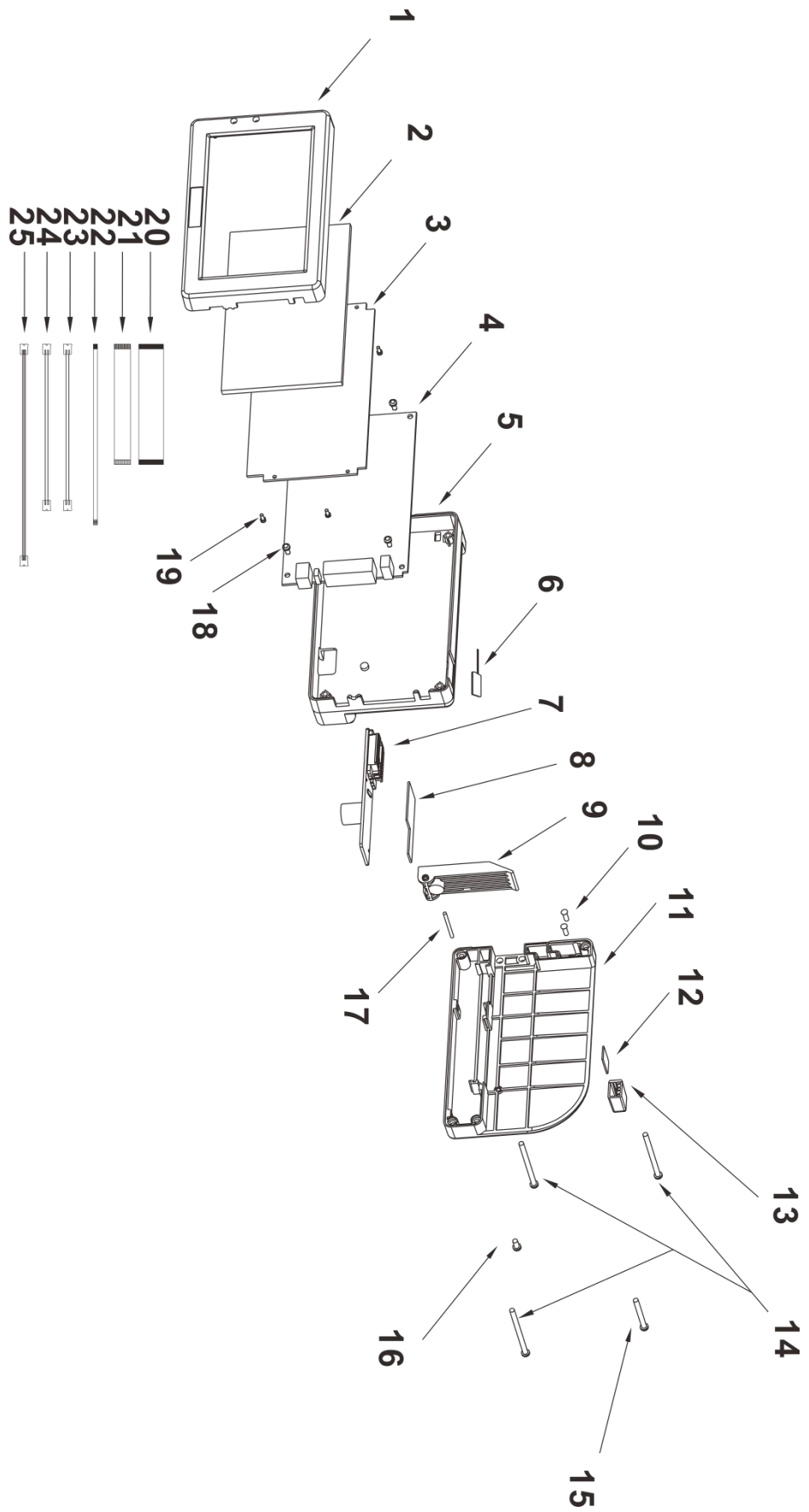
## **CONSUMABLES**

HP Black Solvent Based Quick-drying Cartridge

## **TOOLS**

6mmNLJBS	6mm Allen Wrench
5mmNLJBS	5mm Allen Wrench
3mmNLJBS	3mm Allen Wrench
2mmNLJBS	2mm Allen Wrench

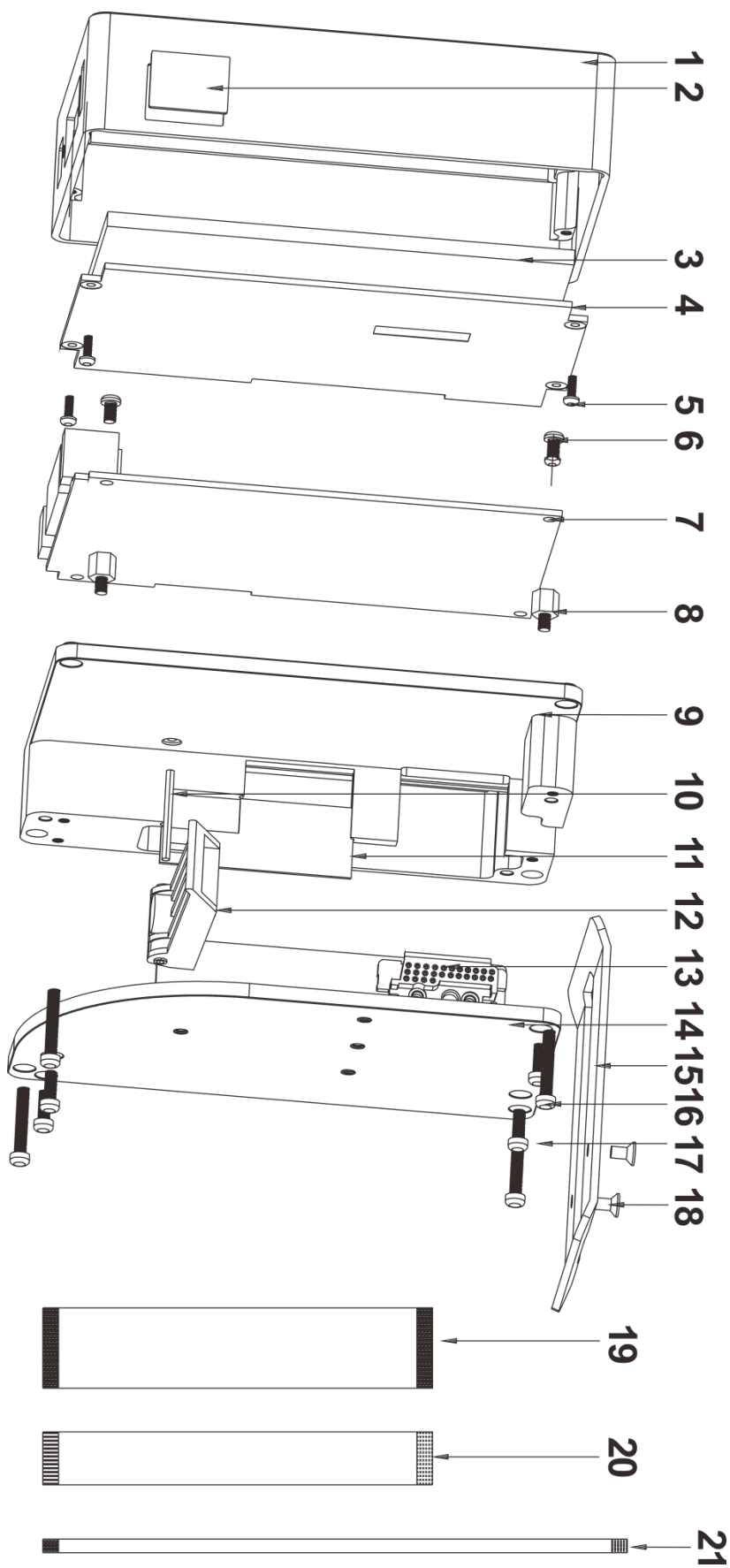
# SPARES AND ACCESSORIES



KD110-H Hand-held Inkjet  
Printer Control box

**KD110-H Hand-held Inkjet Printer Control Box Assembly**

Item	Part Number	Part Description	Quantity
(1)	KD110-H016	Control Box Front Frame	1
(2)	KD110-H208	5-inch Resistive Touch LCD Screen	1
(3)	KD110-H102	TIJ_LCD_BOARD_V3	1
(4)	KD110-H101	TIJ_CPU_BOARD_V3	1
(5)	KD110-H017	Control Box Middle Frame	1
(6)	KD110-H209	Switch	1
(7)	KD110-H103	KD110-H Print Driver Board	1
(8)	KD110-H105	TIJ_RFID_BOARD_V2	1
(9)	YJG01	Clamp Block	1
(10)	M2.6PWZG-8	M2.6 X 8 Screw	2
(11)	KD110-H018	Control Box Back Frame	1
(12)	KD110-H	TIJ_ENCODER_BOARD_V2	1
(13)	KD110-H019	Synchronizer Shell	1
(14)	M3YTSZ45	M3 X 45 Screw	3
(15)	M3YTSZ-30	M3 X 30 Screw	1
(16)	M3YTSZ-8	M3 X 8 Screw	1
(17)	Φ2 X 25BXGZ	Φ2 X 25 Axis	1
(18)	M3PWZG-8	M3 X 8 Screw ( Stainless Steel Flat Tail Self-tapping Phillips Screw )	1
(19)	M2YTSZ-6	M2 X 6 Screw	1
(20)	KD110-H202	PFC Cable 40 PIN; Distance 0.5mm; Long 10cm; Syntropy	1
(21)	KD110-H201	PFC Cable 14PIN; Distance1.0m; Long 10cm; Reverse	1
(22)	KD110-H203	PFC Cable 6PIN; Distance 0.5mm; Long 15cm; Reverse	1
(23)	KD110-H206	XH-1.25 Cable 2PIN; Long 15cm; Syntropy Double Head;	1
(24)	KD110-H204	XH-2.54 Cable 2PIN; Long 15cm; Syntropy Double Head;	1
(25)	KD110-H205	XH-1.25 Cable 3PIN; Long 20cm; Single Head	1

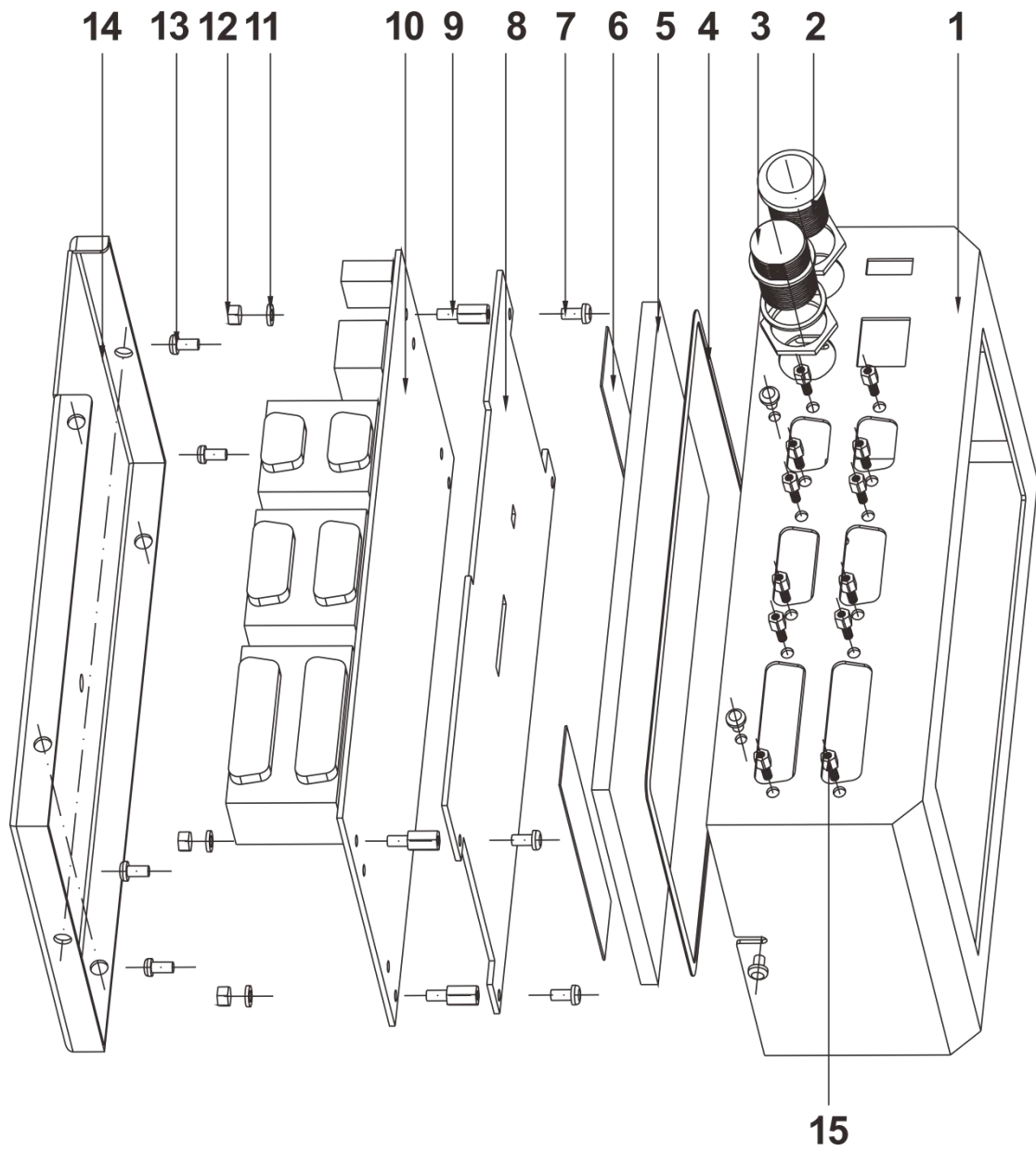


KD110-M KD110 For  
Production Line Control Box

**KD110-M For Production Line Control Box Assembly**

Item	Part Number	Part Description	Quantity
(1)	KD110-M001	Control Box Front Frame	1
(2)	KD110-H209	Switch	1
(3)	KD110-H208	5-inch Resistive Touch LCD Screen	1
(4)	KD110-H102	TIJ_LCD_BOARD_V3	1
(5)	M2YTSZ-6	M2 X 6 Screw	4
(6)	M3YTSZ-5	M3 X 5 Screw	4
(7)	KD110-H101	TIJ_CPU_BOARD_V3	1
(8)	M3 X 6-4GLZ	M3 X 6-4 Isolation Column	4
(9)	KD110-M002	Control Box Middle Frame	1
(10)	Φ2 X 25BXGZ	Φ2 X 25 Axis	1
(11)	KD110-H105	TIJ_RFID_BOARD_V2	1
(12)	YJG01	Clamp Block	1
(13)	KD110-H103	TIJ_PCA_BOARD_V1	1
(14)	KD110-M003	Control Box Back Frame	1
(15)	KD110-M004	Stainless steel baffle	1
(16)	M3YTSZ-18	M3X18 Screw	4
(17)	M3YTSZ-8	M3X8 Screw	4
(18)	M3CTSZ-5	M3X5 Screw ( Stainless Steel Flat Tail Self-tapping Phillips Screw )	2
(19)	KD110-H202	PFC Cable 40 PIN; Distance 0.5mm; Long 10cm;Syntropy	1
(20)	KD110-H201	PFC Cable 14PIN; Distance1.0m; Long 10cm; Reverse	1
(21)	KD110-H203	PFC Cable 6PIN; Distance 0.5mm; Long 15cm; Reverse	1

SPARES AND ACCESSORIES



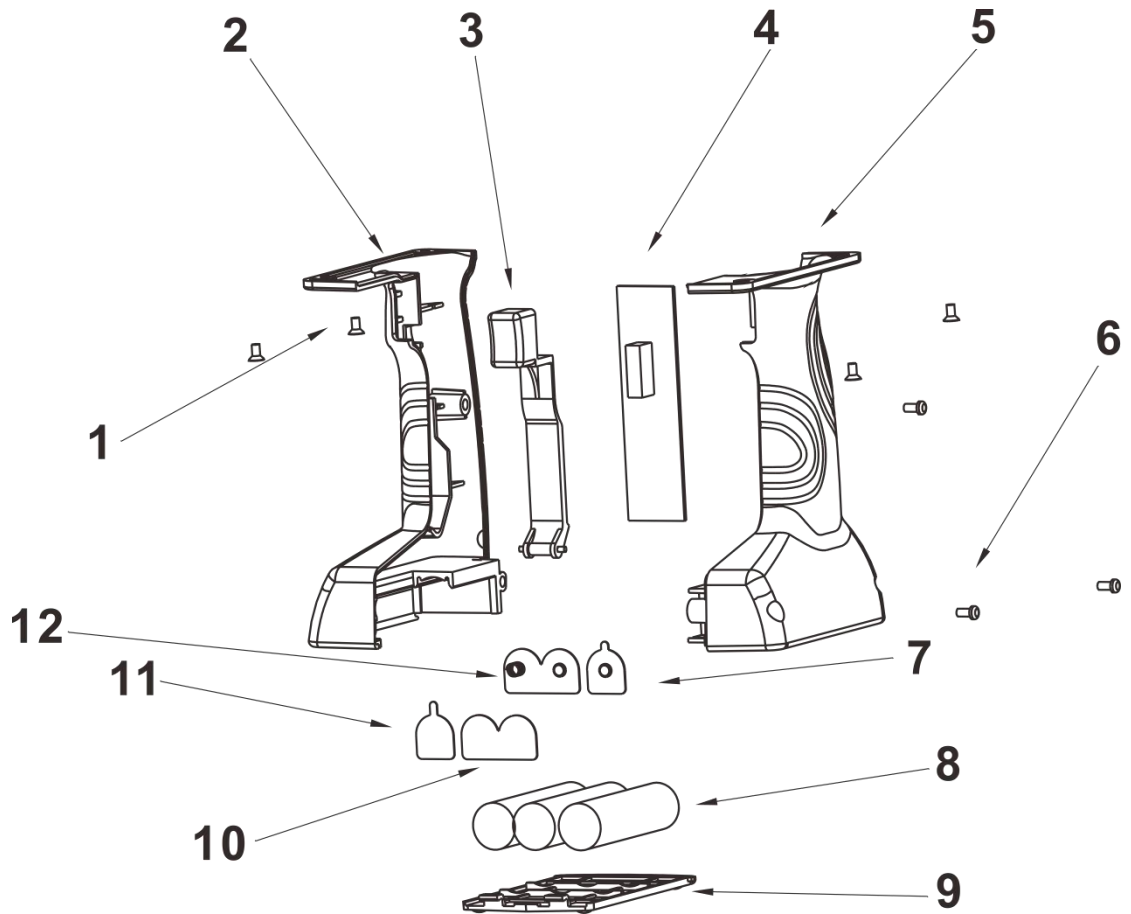
KD210 For Production Line Control Box

**KD210 For Production Line Control Box Assembly**

Item	Part Number	Part Description	Quantity
(1)	KD210-001	KD210 stainless steel Shell	1
(2)	KD210-002	Switch	1
(3)	KD210-003	KD210 Power Plug	1
(4)	KD210-004	KD210 EVA Wad	1
(5)	KD210-005	KD210-7 inch Touch Screen	1
(6)	KD210-006	KD210 Double-sided Tape	1
(7)	M3YTSZ-6	M3X6 Screw	4
(8)	KD210-007	KD210 Screen PCB	1
(9)	M3X8-6GLZ	M3X8-6 Isolation Column	4
(10)	KD210-008	KD210 MAIN Board	1
(11)	M3DP	M3 Spring Gasket	4
(12)	M3FSLM	M3 Relax Nut	4
(13)	M3YTSZ-6	M3X6 SCREW	4
(14)	KD210-009	KD210 Baseboard	1
(15)	M3X5-6GLZ	M3X5-6 Isolation Column	12



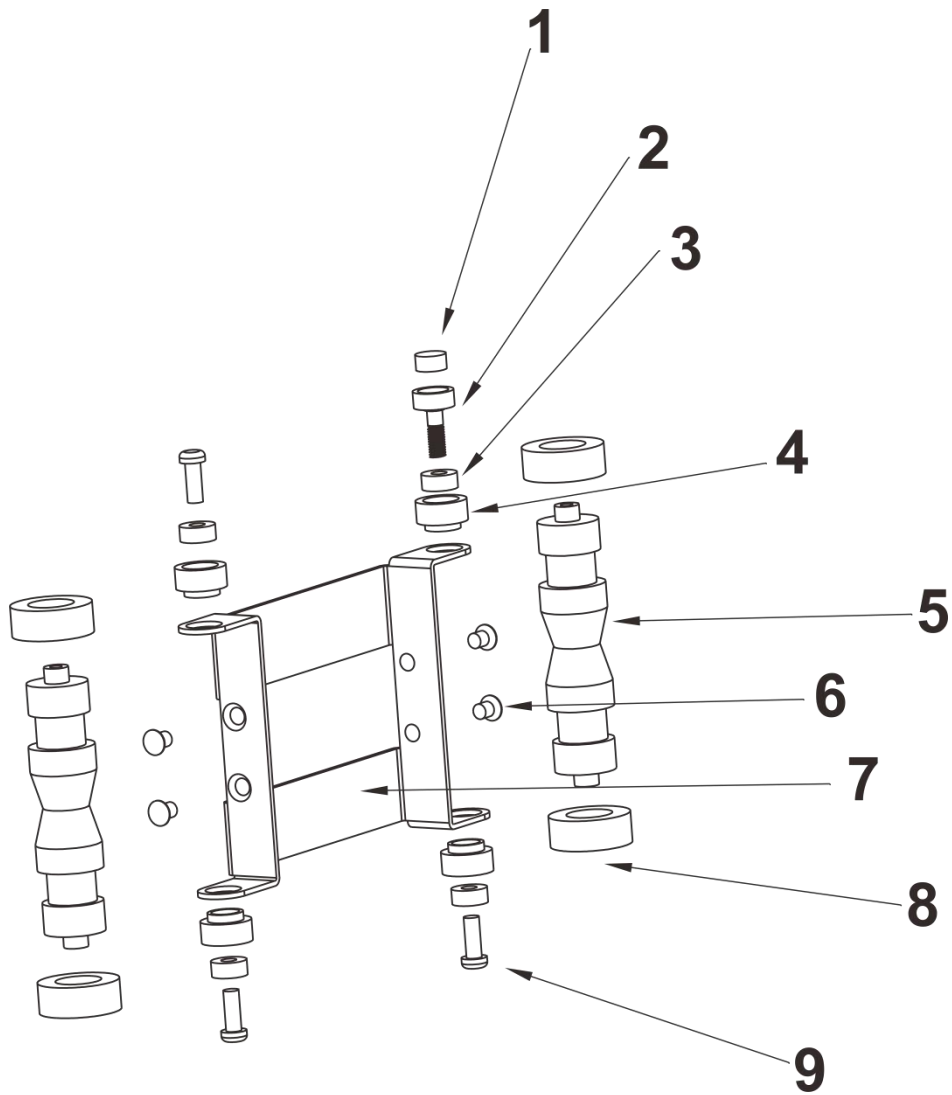
## SPARES AND ACCESSORIES



### KD110-H Handle Assembly

Item	Part Number	Part Description	Quantity
(1)	M3CTS-4	M3 X 4 Screw	4
(2)	KD110-H013	Left Handle Case	1
(3)	KD110-H011	Trigger Button	1
(4)	KD110-H106	TIJ_CHARGE_BOARD_V2	1
(5)	KD110-H012	Right Handle Case	1
(6)	M3YTS-8	M3 X 8 Screw	3
(7)	KD110-H015	Negative Battery Plate	1
(8)	KD110-H008	18650 Battery	3
(9)	KD110-H007	Battery Cover	1
(10)	KD110-H009	Battery Positive And Negative Bridge	1
(11)	KD110-H010	Battery Positive Electrode Sheet	1
(12)	KD110-H014	Battery Negative Bridge	1

# SPARES AND ACCESSORIES

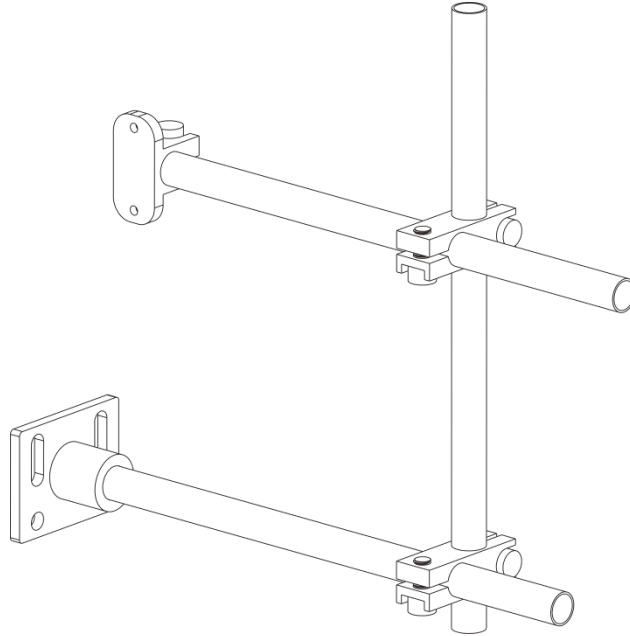


## Slide Assembly

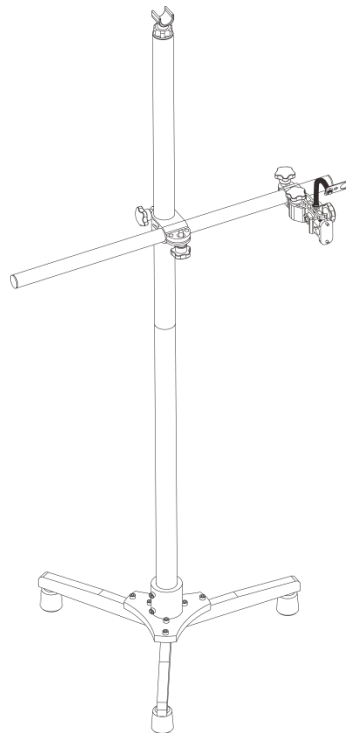
Item	Part Number	Part Description	Quantity
(1)	KD110-H006	Round Magnet	1
(2)	KD110-H005	Φ8 Screw	1
(3)	ZC001	Bearing	4
(4)	KD110-H004	Bearing Sleeve	4
(5)	KD110-H002	Wheel	2
(6)	M3CZSZ-4	M3 X 4 Screw	4
(7)	KD110-H003	KD110-H Stainless Steel Bracket	1
(8)	KD110-H001	Silicone Wheel	4
(9)	M3CZSZ-10	M3 X 10 Screw	3

## PART 8:OPTIONS

KD110-M (ONLINE) Production Line Bracket

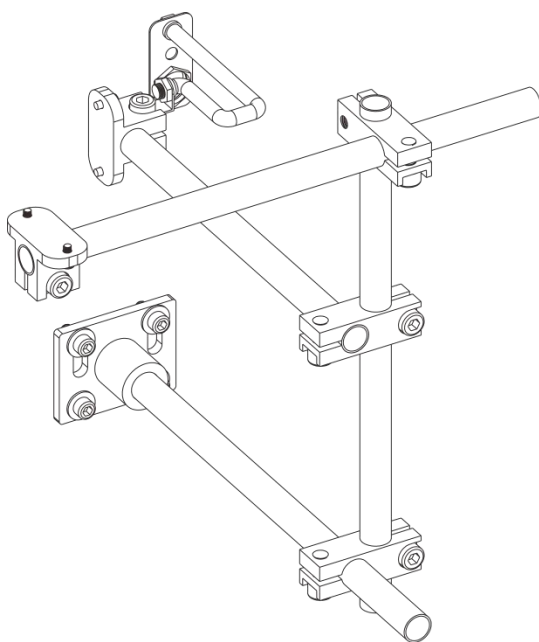


KD110-M (ONLINE) Floor Stand



KD210 Production Line Bracket

## OPTIONS



## KD210 Floor Stand

