

Ink-jet Printer ALT 200

MANUAL

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Declare

- Please read the manual seriously before running machine. Any mistake or damage caused by user's incorrect operation, shall be not on our responsibility.
- In any circumstances, the ink-jet printer shall use the accessories and consumables (include inks & cleaner) approved by our company. Disassemble machine without our agreement is strictly prohibit.
- The machine we produced which includes appearance, structure, hardware and software, has already got patent. Any piracy shall bears the legal liability.
- Our company reserves the right of final interpretation. If you have any questions, please feel free to contact us.
- Our company reserves the right of update at any moment, and unnecessary to notify the users.
- Copyright reserved by CYCJET. Any unauthorized reproduction, articles picked or other non-approved usages shall bears the legal liability.

Safety Instructions

Personal Safety

- Some inks & cleaners are harmful, please installing & running machine in well ventilated conditions.
- > Some inks& cleaners are flammable, Keep away from all sources of heat and ignition. Fire-extinguisher shall be equipped nearby the machine.
- Wear safety glasses, gloves and masks when handling inks & cleaners.
- In the condition of inhalation and eye contact, please flush thoroughly with water and seek medical aid immediately.
- > Turn the power off before maintenance.
- Forbid to disassemble machine without our technician's instruction. The ink-jet printer must be properly grounded. When connecting electricity, the cabinet is powered with high voltage to risk life.
- Only trained technicians are authorized to carry out installation, maintenance or repair.

Machine Safety

- Loading Requirement
- 1. Ink-jet printer shall be packaged in standard carton which filled with anti-vibration materials.
- 2. Purge the inside and outside of printhead and plug up the ink inlet. The printhead shall be covered by cap and packed by anti-vibration film to prevent from scratch.
- 3. Just left an empty cartridge in lnk system before loading.
- > The warranty calims will not be accepted in the following situations:.
- 1. Printhead or inks system damages caused by using unauthorized inks and cleaners.
- 2. Printhead or inks system damages caused by replacing different types of consumable randomly. Such as replaced oil-base inks into solvent-base inks, the two types of ink will cause chemical reaction to damage machine.
- 3. Damages caused by running in unsuitable environments or electrical requirements.
- 4. Damages caused by unauthorized disassembling and assembling.
- 5. The permanent damages caused by not performing scheduled maintenance, or printhead scratching.
- 6. Damages caused by disassembling or assembling through unauthorized people.
- 7. Damages caused by the Force Majeure.

Environmental Protection

Dispose of the waste inks & cleaners shall be in accordance with Local Authority Regulation. The wastes are not allowed into the sewer system.

Packing List

Name	Quantity
Controller	1 PC
Printhead System	1 Set
Photoelectric sensor & Clip	1 Set
Encoder & Accessories	1 Set (choose accessory)
Stands & Fittings Installation	1 Set
AC/DC Adapter & Power code	1 PC
Manual	1 Copy
Ink catridge & cleaner	1 Set (purchased in seperate)
Injector	1 PC (only used in solvent-base ink printer)

Technical Data

- System: 32-bit high-speed processor
- > Printhead: 128 dots height, holediameter in 50 um, 185dpi in vertical.
- Printhead number: 1
- Print height from 0.8mm to18mm.
- Print Lines capability: Multi-lines(up to character height)
- Line speed capability: Max.33mt/min (200 dpi in lateral).
- > Print Information: Date, Time, Character, Photo, Shiftgroup, Serial number and Barcode.
- > Storage: 100 text files and a bitmap in 256*128.
- Operation: Color touch screen with photo menu

Independence Print Parameters

Online Editing

- Display:3.5 inch color touch screen
- Inks: Porous ink, Non-porous ink, UV anti-counterfeit inks, food grade ink, invisible ink etc.
- Inks color: red, yellow, blue, green, black, white etc.
- > Through USB interface to import single color bitmap which can be operated by mouse.

Environment/Electrical Requirement

Electrical requirement: AC 100-240V 50/60Hz

Max Power: 13W (average < 5W)</p>

➤ Temperature: 5-40°C

> Humidity: 10-90%(non-condensing)

> Electromagnetic interference: running far away from electromagnetic radiation zone

Install & Test

Only trained technicians are authorized to carry out installation.

Before install, confirm the machine was stay in a solid & smooth place without electromagnetic radiation. Installed as stipultated in manufacturer's specification, do not change the relative position of ink system and print head. Any special requirements, please consult the manufacturer and supplier directly.

Ink-jet Printer Installation & Testing



- 1. Unpacking: open the package and move out printhead, host machine, suspension pad etc.
- 2. Suspension Pad Installation: 1) fix pads into triangle stands with same height. 2) adjust the three pads so as to keep the triangle stand in vertically. 3) fasten the three screw nuts with the spanner.
- 3. Ink tank installation: 1) Put small steel pipes into large ones and put large steel pipes into striangle stands, after adjusted the height, fasten the starlike screw.2) Put the two-hole aluminium stand in profile of ink tank system into small steel pipe, and then fasten by starlike screw.
- 4. Host Machine Insatalltion: Put the two-hole aluminium stand in profile of host machine into small steel pipe, and then fasten by starlike screw.
- 5. Printhead Insatalltion: 1)put the aluminum stick into the two-hole aluminum stand, and fanstened by starlike screw. 2)Screw the printhead on aluminum stick. 3)connect one side of ink tube to filter and the other side to ink inlet.

Install & Test

- 6. Photoelectric Sensor Installation: 1. Screw the photoelectric clip on the printhead stand. 2. screw the photoelectric sensor on the clip or other position as request, or use different types of sensor. When using solvent-base inks, the sensor shall be fixed in front of printhead.
- 7. Encoder Installation: If the production line is not in constant velocity, it must be equipped with encoder.
- 8. Power connection: connect AC adapter to suitable AC power. Connect DC to the socket behind of main machine.
- 9. Printing Test: 1. Put the ink cartridge into the ink system in correct position. 2. Remove the cap of the printhead, and squeeze the ink cartridge to drain out the air and cleaner until no bubbles. 3. Clean up the surface by blotting-paper. 4. Tested by blank papers(with more details see page 26).
- 10. Product moving position: the speed of production line shall be slower than the speed of printing. A guide plate can be installed to receive the exactly position of product which has passed the printhead. In principal, the distance between product and print head more closer, the printing result will be better.
- 11. Production Line adjustment: more details see page 10.

Switch on/off

> Switch on:

Checked up the power connection status before switch on. After switch on, it will enter into the operation system within 15 seconds. Remove the printhead cap and press PRINT key to start printing when using oil-based inks.

When using solvent-base inks, please purged printhead and drained out the dry-inks by blotting-paper. After that, test the printing result by a blank paper. (more details see page 24)

The procedure for using solvent-base inks: purge-squeeze-clean-test.

Switch off:

Press the power botter off and cover up the print head cap.

Note: Before switch off, ensured the printhead in normal condition. Forbid to purge printhead gap before/after switch off! Just sealed by cap!

> 1. <The mian screen>

At switching on the printer, it will show <The main screen> as Photo2.

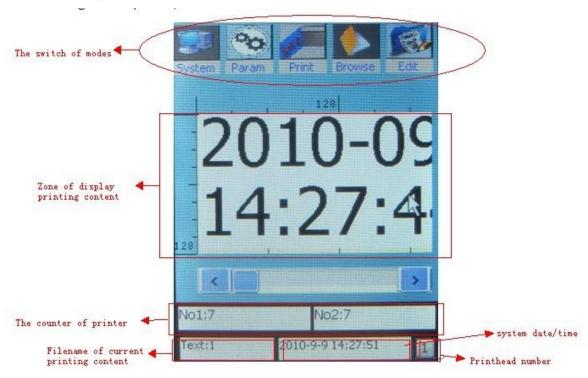


Photo 2

<the main screen> contains the following zones:

- Zone of display printing content
- The counter of printer
- Filename of current printing content
- System date/time
- The number of print head
- The switch of modes
- Zone of display printing content is located in the middle part of screen.

128 dots height *20000 dots width with graduated scale.

The content shows here is what will be printed out.

- The counter of printer is located in the bottom part of the screen. It can count the printing number of times. It is kept at corrent deenergizing the printer.
- Filename of current printing content is in a left bottom corner of the screen.
- System date/time is in a middle bottom corner of the screen. Shows the current system time/date.
- The number of print head is in a right bottom corner of the screen. It shows the current choosed printhead. If in multi-head system, it can also shows No.2 No.3….
- The switch of modes is located in the top part of the screen and contains 5 buttons.
 - <System> The basic management in printer
 - <Param> Management in parameters of current printing content
 - <Print> Carry on printing task
 - <Browse> selecte the saved printing files
 - <Edit> Edit printing content

> 2. <The switch of modes>

2.1 <system>-click the button<system> opens a screen as photo3. And shows the following buttons: "Password" "Load" "Ink Info" "Date Time" "Calibrate" "Idle Jet" "Counter continue".



Photo 3

2.1.1 "password"- click the button<password> opens a screen as photo4.





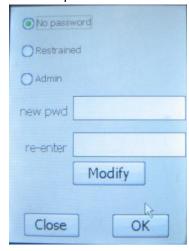


photo 5

Click<OK> button of photo4, to open screen as photo5.

In photo5 besides "No password", there are two levels protection "Restrained" & "Admin"

- "No password" means no limit of authority(every people can edit and operate printer).
- "Restrained" the frist level protection at activation of the restrained function, without password, the <Edit> mode will be locked.
- "Admin" the second level protection at activation of the admin function, without password, just can operate<Print> mode.

Final value should be confirmed with button "OK" or the reference value is retruned by button "Cancle" / "Close".

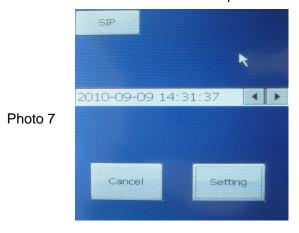
2.1.2 "load" – it can only load .bmp format single color files from storage disk throught USB interface. Insert a storage disk into USB interface and click the botton<load> opens a screen as photo 6.



photo6

touch the needed file in the top zone of screen and click< an arrow downwards> button in the middle part, when file shows in download zone, it means download successful.

- 2.1.3 "Ink Info" click the botton<ink info> ,it shows information as follow:
 - <Cur Dots> The dot numbers of the current printing content takes.
 - <Breadths/Litre> number of times for printing current content by one liter ink.
- 2.1.4 "Date Time" click the botton<Date Time> to open screen as photo7



Adjust Date Time by <an arrow left/right>, or touch the button <SIP> to open an keyboard for help. Perform IdleJet

Final value should be confirmed with button "Setting" or retruned by button "Cancle"

2.1.5 "Calibrate" - If the keypad misalignment, click CALIBRATION for adjustment. click the botton<Calibrate> to open screen as photo8

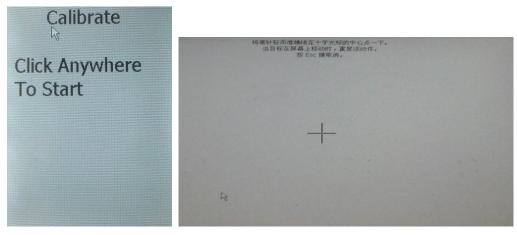


Photo8

Use nib to click the cross center shows in photo10. when target moving above the screen, please repeat it. After the first click, the latest calibration will be settled. If the second click is correct, please back to system window and click OK to finish.

If the two times calibration are differen, it means failed. Please click again for a new calibration.

2.1.6 "*IdleJet*"- see photo3. By setting the parameter of Idle Jet Gap (interval of time) and IdleJet Column, the printer will spray out ink automatically at regualr intervals

Perform Idlejet when using solvent-base inks(non-porous ink).

It can prevents from illegible printing result caused by dry-ink of printhead after printer long time no running.

The IdleJet interval and IdleJet lines are depend on ink types, temperature, humidity and the speed of air flow. In normal situation, the suggested IdleJet interval is 10 seconds and the IdleJet lines shall be in 10.

When using oil base ink, it is unnecssary to perform IdleJet, however, in dusty environment, perform idlejet could protect printhead.

When start IdleJet Printing, please keep sensor in non-reaction status.

2.1.7 "Counter Continue" - see photo3.

When printing serial number, it can be changed along with printing times. No matter switch off or inter-print other documents, the serial number is continuing.

2.2. <Param>- click of the button<param> opens a screen as photo9.

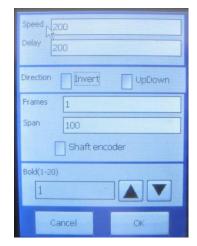


Photo 9

There are 7 buttons: "speed" "Delay" 'Direction' "Frames" "Span" "Shaft encoder" "Bold".

- 2.2.1 "Speed" The value shall be on the contrary of production line speed.(micro second)
- 2.2.2 "Delay" start print within the setted value(millisecond) after object passed sensor.
- 2.2.3 "Direction" management in the direction of printing content.
- 2.2.4 "Frames" after object passed across sensor, the number of times for content will be printed.
- 2.2.5 "Span" the space of time between two times contents(millisecond).
- 2.2.6 "Shaft encoder" activates the button when using encoder. Encoder could prvents from irregular printing result which caused by inconstant speed of production line.
- 2.3. <Print>- click of the button<print>, when it turns red means start printing
- **2.4. <Browse>** click of the button<Browse> opens a screen as photo10.

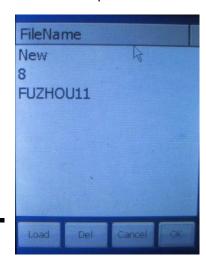


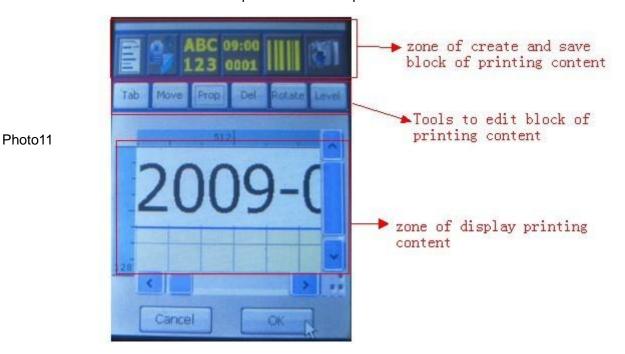
Photo 10

It is a storage disk to store jet. format files only. It allows replace printing files quickly by click related filename. Select filename on your request and click the OK key to complete files replacement. Delete useless files to enlarge the storage space.

What if not replace printing files, please click the CLOSE key to exit system.

Note: The deleted files are unrecoverable, please pay attention to delete files.

2.5. <Edit>- click of the button<Edit> opens a screen as photo11.



<Edit> contains the following zones:

- Zone of display printing content
- Zone of create and save text block
- Tools to edit text block
- 2.5.1 **zone of display printing content** What shows in is what will be printed out.
- 2.5.2 **zone of creat and save text block** it contains five buttons as follow:



"create a new printing content"



"saved as ... "



"create <character or number content> "



" creat <Date> <Time> <Serial No.> <Shift group>"



" creat <Barcode>"



"load saved sigle color bmp. format "







photo12 photo13

button<Reverse> - obtain the effect of reversed out.

Click the blank zone of <Text> opens a keyboard as photo13. Move the cursor to creat content. If the content is what you want, click OK to save it

See photo12. button**** - revise content font.

Squrare button <Lattice> - change the printing matrix to dot matrix(dot in square shape) button<width> - the distance from dot matrix content to right margin(in Lattice mode) button<Height> - the distance from dot matrix content to up margin(in Lattice mode) button<Spacing> - the distance two dots (vertical direction, horizontal direction) button<Lattice> - adjust dot size(in Lattice mode) button<dot> - change the square shape dot into circle shape dot.(in Lattice mode)

See photo13. Button <C> - clear whole content.

Button

blank> - blank key

Button<Back> -back to last edit content.

Button<Shift On> - Caps Lock

Button<CHN> - Chinese language input.

Button<Language selection> - select different languages or special signs as photo14





2.5.2.2 Click button of "creat <Date> <Time> <Serial No.> <Shift group>" opens a screen as photo15. Select<Date> - click the button <Config> to set up date, see as photo16.



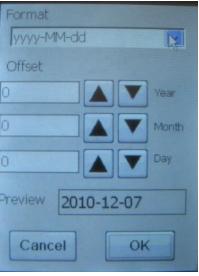


Photo15 photo16

Select <Time> - click <Config> to set up time, see as photo17, photo18.

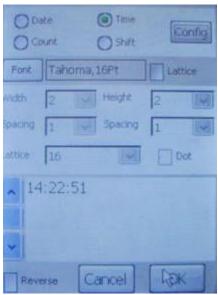






photo18

Select <Count> - click <Config> to set up serial number, see as photo19, photo20.



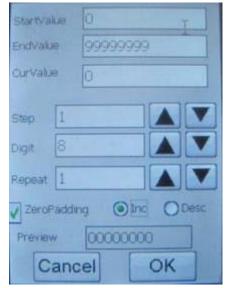


Photo19 photo20

Serial number:

See photo20 - <StartValue>- the original value of serial number.

- <EndValue> the final value of serial number.
- **<CurValue>** the current printing value of serial number.
- <Step> each time printing will skip over setted number. (example: set it as 2, the printing content shall be 00000002, 00000004, 00000006...)
- <Digit> the shown digit numbers.
- <Repeat> each serial number repeat printing time.
- <ZeroPadding> -set zero in preposition.
- <Inc> serial number count increased.
- **<Desc>** serial number count descreased.

Select <Shift> - click <Config> to set up shiftgroup, see as photo21, photo22.

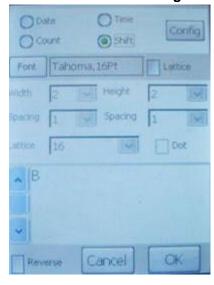




Photo21 photo22

Operation

shiftgroup: If a working day has some group working people, set up shift group could trace the goods information.

For example, we set up three group a day, named A, B, C, each working time is 8 hours. After passed the frist 8 hours, the printing content will be changed from A into B auto.

2.5.2.3 Click button of opens a screen as photo23 to set up barcode:



Photo23

Barcode:

Click the blank zone of **<Barcode>** opens a keyboard. Input the number on request.

Click the arrow of **<Type>**, there are 14 types for selection.

- <Height> adjust the barcode height.
- <Width> adjust the barcode width.
- -the size of Arabic numerals.
- <HumanReadable> hide up the Arabic numerals.

Note: The validation code of barcode will be obtained automatically.

2.5.2.4 Click button of



opens a screen as photo24 to edit saved bitmap files.



Photo24

2.5.3. Tools to edit text block. – it contains 6 tools:

<Tab> - select each text block with blue frame in order.

<Move> -Click the button opens 4 arrows of to adjust the position of each

text block. Click the buttons of ______ to alter the offset text block. see photo25.

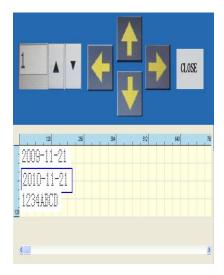


Photo25

- <Prop> -management in parameter of each selected text block.
- Delete selected text block.
- <Rotate> each time click to rotate selected text block 90 degree in anticlockwise. See photo26.
- **Level> -** seveal text blocks suprapositon. Click this button to alter the level orders. the frist click, it will remove to the bottom. Click again, it will remove to the top. See photo27.

Note: the supraposition of blocks level is a important part to apply in anti-counterfeit! such as add the time in text information.





Photo 26 photo27

Note: "Tools to edit text block" are very important to revise the block property and perfect the printing effect.

Eliminate Troubles

> 3. System troubles:

Trouble	Reason	Solution
The character is entire, however is illegible and in shadow	The distance from printhead to product surface is too far; or running in fast airflow condition.	Shorten the distance
The character is un-entire	The surface of printhead & nozzle leaves impurity, or the inks were dry. Printhead system is damaged.	Purge the printhead by cleaner; Squeeze the ink-cartridge until the inks spill out. Replace printhead system
Ink leaks for long time(It's a normal situation that after squeeze ink cartridge, ink will spill out for seconds)	Printhead stand is not in horizontal. Printhead installation is not according to user manual. Some parts connection are	Adjust the stand in horizontal. Inquire manufacturer to re-install. tighten or replace the parts.
character is shortage After squeezed the ink	As above Injector or filter was blocked	As above Purge or replace the blocked parts.
cartridge, it can get a good result, however the result will goes bad in a very short time, especially the top of character.	Some parts of ink system was loose.(ink hose, ink cartridge, injector ect.)	Tighten or replace the blocked parts.
No dot can be spilt out	Printhead cap is not open, or did not purge printhead gap. Print function is not start up The indicator light of sensor shows dark or bright all the time.	Open printhead cap, purge printhead gap and squeeze ink cartridge. Press PRINT key Adjust installed distance. Check up if the surface has inks Check up the cable plug. Replace the photoelectric sensor
	Printing parameters are incorrect	 Turn down speed rate. Reduce print delay Shorten the files space. When encoder is not connected, cacel the encoder selection.
	No inks leak when squeezed ink cartridge; injector, filter or printhead were blocked.	Purge or replace blocked part.
	Ink cartridge is too thick or uselss Working condition temperature is too low	Replace a new ink cartrige and squeeze it $ \begin{tabular}{ll} The working condition temp, shall higher than 5^{\circ}{\rm C} \end{tabular} $

Eliminate Troubles

> System troubles:

	The date wine of maintheast is	Dower off connect the date wire are
No dot can be spilt out	The data wire of printhead is loose	Power off, connect the data wire once again
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	electromagnetic radiation	Far away from the source of radiation
	interference.	and restart the machine
	Printhead system is damaged	Replace the printhead system
Printhead system is damaged	 Scratch caused by something inserting into printhead gap. Printhead blocked caused by using non-approved consumables. Printhead blocked caused by Blended using the different types of consumable. The unregular mantenance makes ink dryness. The electrocircuit is damaged by connecting the data wire in POWER ON status. Break wire or loose wire caused by pulling. Printer is not grounded, and the power supply is not good. 	Replace the printhead system
When installed with encoder, the printing result	The encoder selection function is not startup.	Please start up the encoder selection function
shows nonuniform in length.	Encoder wheel rolls unentired	Ensure the encoder wheel is contact product completely.
	speed rate of printing is too small	The normal value of speed rate is around in 8, the value is smaller, the printed file is shorter.
	Product moving speed is too fast.	Slow down the moving speed. The

Daily maintenance

- Daily maintenance
- 1. In the condition of machine vebreition, the function of spray in seconds is poor and the environment is bad, you can squeeze the ink cartridge to drain away the bubbles, dryness inks and dirts.
- 2. In the condition of Swicth Off in short time without seal cap, when you switch on, you shall squeeze ink cartridge.
- 3. When using solvent base ink, you shall squeeze ink cartridge once switch on. Before squeeze, you shall purged the printhead gap fristly for protecting the printhead and squeezing easily.
- 4. When air and cleaner leaves in ink hose, please squeeze the ink cartridge.

how to squeeze the ink cartridge?

- a. stop printing and close spray in seconds function. If the surface of printhead is dirty, please purge it.
- b. if it is installed for forward printing, put blotting-paper all around the printhead, squeeze ink cartridge slowly, the inks will leak out from top to bottom. The squeeze strength shall ensure inks can leak out in the top position. when you found some bubbles, please continue to squeeze until no bubble can be found. If it is installed for down printing, put the blotting-paper in the bottom. Squeeze ink cartridge slowly for inks leaking.
- c. when squeeze the ink cartridge, please keep blotting-paper staying around for 3 seconds for leaking inks. After that, clean up the inks leave on the surface by blotting-paper.
- d. when using solvent base ink, start up spray in seconds function for testing.
- 5. cannot get a good printing result after squeezed ink cartridge, please refer to page25.
- 6. How to replace ink cartridge:

When replace the ink box, you can keep printer running, even if it's in printing status. However, you shall replace quickly to prevent from air flow into.

If the print content is too large and the print speed is too fast, it's better to replace ink cartridge after stop printing. (it's better to leave some inks in ink cartridge when replacing, which can prevent from air entering)

Note: 1.Forbid cleaning by inserting printhead gap. It will make printhead permanent damage.

2.After purged printhead, please squeeze ink cartridge and clean up the leaking inks by blotting-paper. The dryness inks can protect the printhead, however the dryness cleaner cannot! Please do not purge printhead after power off. Just covered by cap!!!

Daily maintenance (continue)

- Maintenance for long time un-running.
- 1. When printer does not running every day, please swtch on for mantenance each three days. Purge printhead, squeeze ink cartridge, take a printing test. Before switch off, ensure the printing result was perfect. Do not purge printhead after switch off, cover up the printhead by cap.
- 2. If you cannot switch on each three days, please purge the printhead inside completely.
 - a) Printhead face down put a container under the printhead unscrew and block ink hose (otherwise inks will flow out from ink hose).
 - b) take fresh air to injector insert the injector to inks inlet push away the inks from printhead repeat action.
 - c) Take 100ml cleaner to injector insert the injector to inks inlet slowly push away the inks repeat the action for at least four times(even use 40ml cleaner) seal the inks inlet covered by cap and plastic bag.
 - d. conected ink supply hose before use next time squeeze the ink cartridge to drain out the airs and cleaners until no bubble can be found clean up by blotting-paper testing by blank paper.
- 3. It will spend long time in transportation of the damaged machine, so please do the maintenance as above.

Note: it's very important to operate as above, otherwise the printhead may be damaged and the related warrantly calims will not be accepted !!!

- 4. When using oil base ink, it is not have to do the maintenance as above. Just covered up the printhead by plastic bag! Do not require to replace the printhead even thought without use for 2 years. Just need to replace the ink cartridge each 2 years.
- 4. Keep printer staying in dryness and cleaness environment, and covered up by cap. The temperature of environment shall be during $5^{\circ}C^{\sim}40^{\circ}C_{\circ}$
- 6. Replace the filter each two years as per inks usage.

The maintenance terms stipulated in contract is base on this manual. Please read it carefully. Thanks for reading. If you have any questions or problems cannot soluted, please consult supplyer immediately!!!

Daily Maintenance for Printer with Solvent Base Ink(Non-porous Ink)

- 1) The first time to use ink-jet printer with solvent base ink, please do the follow three steps.
 - A. Purged printhead by cleaner several times as per video.
 - B. Inject air to push out cleaner.
 - C. Squeeze ink cartridge to drain out cleaner and air.
- 2) Each time to use ink-jet printer with solvent base ink, please do the follow steps:
 - A. Spray some cleaner to printhead surface to clean up printhead gap.
 - B. Squeeze ink cartridge and clean the leaking ink by paper.
- 3) Idle printing Function:
 - If stop working in few hours, we suggest to start Idle printing function.
- 4) What is IdleJet printing?
 - By setting the parameter of Idle Jet Gap (interval of time) and IdleJet Column, the printer will spray out ink automatically at regualr intervals. IdleJet keeps printhead wet and ensure perfect printing result.
 - The standard parameter of Idle Jet Gap and IdleJet Column are both in 10. However, when use EJ12QBK, or in high temperature or high wind condition, the parameter of IdleJet Gap shall be smaller than 10 and IdleJet Column shall be larger than 10.
 - When start IdleJet Printing, please keep sensor in non-reaction status.
- 5) When stop using printer, please exit printing status and switch off.
- 6) In condition of long time no use, please squeeze ink cartridge and test printing result at least ten times every three days.
- 7) Forbid anything inserting printhead gap.
- 8) Forbid mix-using different types of ink or cleaner(porous ink, non-porous ink, food grade ink...)

PRINTHEAD DAMAGES CAUSED BY UNCORRECT MAINTENANCE, THE WARRANTY CLAIMS WILL NOT BE ACCEPTE