JV300/150 Series CJV300/150 Series
About Nozzle Check

Thank you for purchasing the JV300/150 series and CJV300/150 series inkjet printer.
This manual explains about the nozzle check function that are installed in the JV300/150 series and CJV300/150 series in easy-ti-understand base. If you use a nozzle check function, it allows you to keep the good condition of the nozzle automatically even nozzle failure occurs.

What you can do with the nozzle check function

If you use a nozzle check function, you can automate tasks below, which has been performed manually before.

During continuous printing, it performs automatic detection of defective nozzles and automatically judge the quality of the nozzle state.

It performs automatically the nozzle cleaning if nozzle conditions are poor and automatically determines whether the nozzle state is getting better. (No media consumed.)
Number of times of the cleaning nozzle can be set in advance.

When the nozzle state is not well, it automatically registers to the nozzle recovery.

In addition to the nozzle recovery that is currently set, it automatically registers a nozzle that has been determined to be defective at the nozzle check function. (The defective nozzle is the nozzle which fail to eject.)

Check the state of the nozzle, and automatically determines whether continuous printing is possible.

If the nozzle state does not recover, it will stop printing automatically.

Note about the nozzle check function

- Nozzle check is conducted at the start of printing of the second file or later file. Please note that it is not conducted during printing or at the first time printing after power ON.
- Nozzle recovery might be disabled depending on the print mode. (P. 3 see)
- Nozzle check and recovery operation are performed for all nozzle lines in both 2 heads.
- If an error occurs in the nozzle check unit which is mounted on the JV300/150 series and CJV300/150 series, this function will not be available.
- Running time per nozzle check and the ink consumption for one year is as follows
  Running time : about 50 seconds
  Ink consumption : about 670 cc / year
  (Assumption:Performs a nozzle check 10 times a day, working days in a year 240days)

Set the nozzle check function

Please refer to the operation manual of JV300/150 series and CJV300/150 series.

Nozzle check function menu list

Function name			Setting	Initial stage	Summary
Printing Check			ON / OFF	OFF	Run nozzle check at the start of the online printing.
	Check Interval	LENGTH	0.1 to 50.0m	30.0m	Run nozzle check after printing the set distance. *1
		FILE	1 to 100 file	30 file	Run nozzle check after printing a number of files that have set.
	Action	CLEANING	OFF/ SOFT/ NORMAL/ HARD	SOFT	Select the type of cleaning to be performed in the recovery operation.
		RETRY COUNT	0 to 3 times	1	Repeat the recovery operations for the numbers you have set.
NOZZLE RECOVERY			ON / OFF	OFF	After nozzle check, it automatically runs nozzle recovery.(up to 16 nozzles in 1 nozzle line)
Judgement Condition			1 to 180 nozzle	1	Implementation of the recovery operation. Set for each color the number of faulty nozzles that determine the propriety to continue printing.

*1.If the printing reaches the distance, which was set, during printing, nozzle check will be performed in the beginning of the next printing.

Implementation timing of the nozzle check

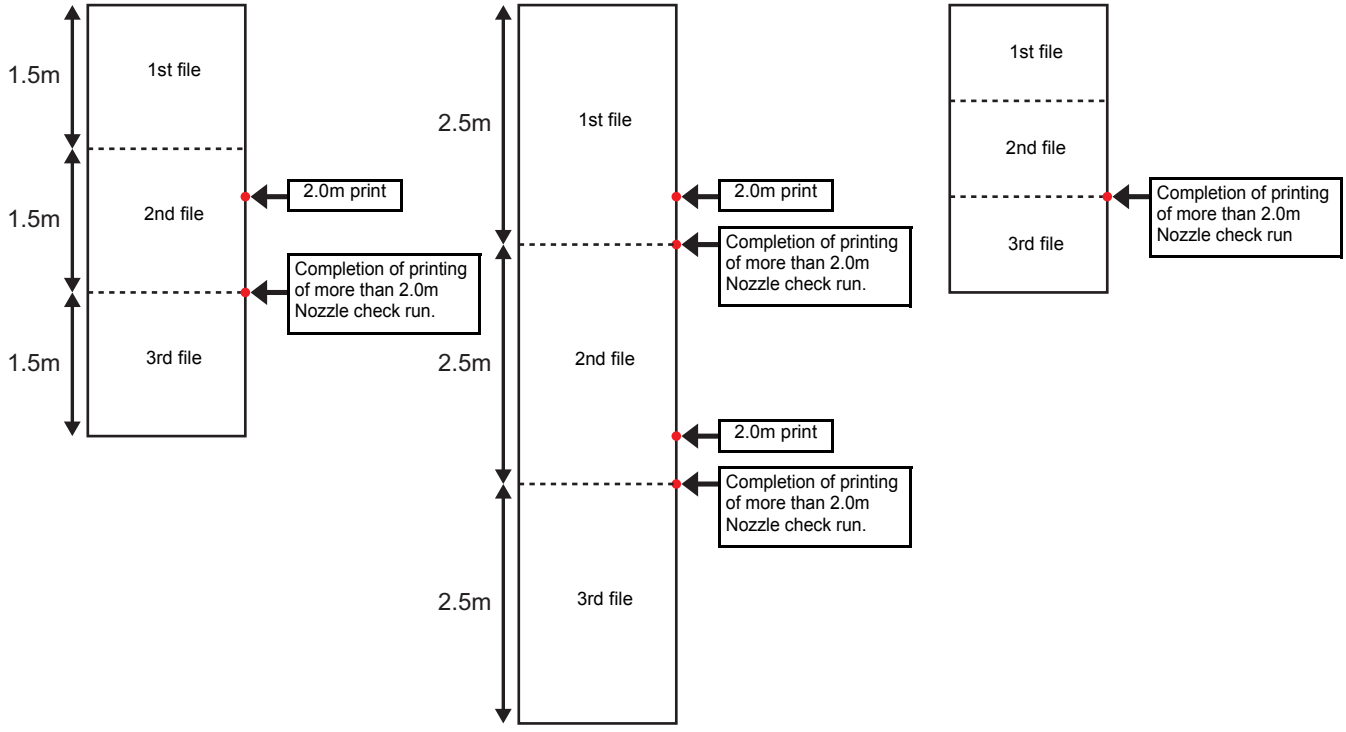
Nozzle check timing of each check interval is shown in the diagram below.

Important!

- Count the distance and the number of files at the end of printing. It does not count if the printing is cancelled.
- Count the distance and number of files to return to 0 after execution.

Example of Set Contents (1)
- Execution timing : Distance
- Interval : 2.0m

Example of Set Contents (2)
- Execution timing : File
- Interval : 2 files



Print modes that do not perform nozzle recovery

Important! • It is not possible to recover the nozzles in the following printing mode.

● **4 color ink set**

No.	Resolution (dpi)	Pass	Scan speed
1	540x720	4	Hish speed
2	720x720	4	Hish speed
3	720x1080	6	Hish speed
4	720x1440	8	Hish speed
5	1440x1440	8	Hish speed

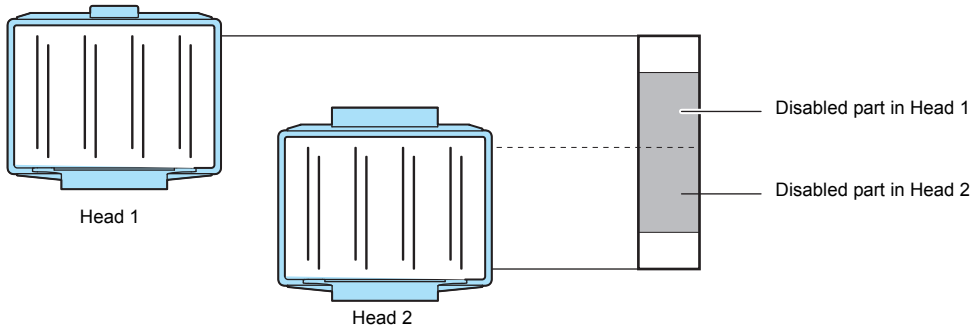
● **6/8 color ink set**

No.	Resolution (dpi)	Pass	Scan speed
1	540x720	8	Hish speed
2	720x720	8	Hish speed
3	720x1080	12	Hish speed
4	720x1440	16	Hish speed
5	1440x1440	16	Hish speed

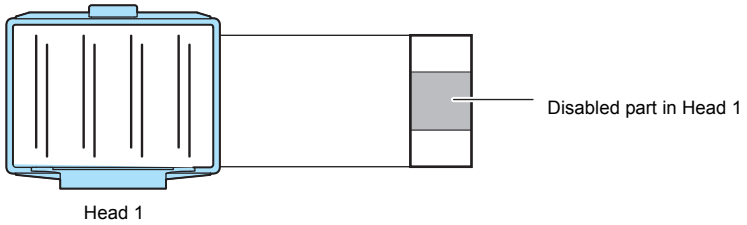
● In the following print mode the nozzle recovery is disabled partially.

Depending on the print mode to be set, nozzle recovery is disabled in some of the nozzles.
(Nozzle recovery is disabled in the nozzles in gray part of the figure below.)
We recommend to check in advance.

■ For JV300/CLV300



■ For JV150/CLV150



No.	Resolution (dpi)	Pass	Scan speed
1	540x720	4	Hish speed
		10	
		12	
2	720x720	6	Hish speed
		10	
		12	
3	720x1080	8	Hish speed
		10	
		14	
		16	
		18	

No.	Resolution (dpi)	Pass	Scan speed
4	720x1440	10	Hish speed
		12	
		18	
		20	
		24	
5	1440x1440	10	Hish speed
		12	
		18	
		20	
		24	

Condition of nozzle check to stop the printing

Nozzle check function stops the printing in the middle of printing in the following cases and return to the local. Also it does not enforce the data clear at this time, but initialize the information of automatic nozzle recovery. Because data is not cleared, it is possible to print by pressing the FUNC3 (REMOTE) key, but in this case, it does not perform the nozzle check again.

- If it is determined that a faulty nozzle does not recover and continuous printing is impossible, the display shows “Nozzle Missing Print Stopped”, and stops printing.
- If an error occurs in the nozzle check unit, which is mounted on the machine, during the nozzle check in progress, the display shows “NCU XX ERROR Nozzle check OFF”, and stop printing. (NCU for Nozzle Check Unit, XX displays an error contents. Please refer P. 4 “Error List” for contents of each error and the operation of occurrence.
- If an error occurs in the nozzle check unit, the setting of “Printing Check” will be changed to “OFF” automatically. After error is recovered, please re-set “Printing Check” to "ON".
- If the following operations are performed during nozzle check running,the nozzle check operation is cancelled and stop printing.
  - ⇨ Press FUNC3(REMOTE) key during nozzle check running and return to local.
  - ⇨ Emergency stop (open cover, media clogging, release the clamp lever etc).

Error List

No.	Indication in display	Cause	Solution
1	ERROR 652 NCU NZK CHK (HW)	It could not be parsed successfully pattern of defective nozzle detection. There is a possibility that a large amount of ejection failure has occurred.	Check the nozzle state. if there are many ejection failures, please carry out the cleaning to recover. If the display still shows the error, please call a service.
2	ERROR 653 NCU NZK CHK (MARK)		
3	ERROR 654 NCU CENTER POS		
4	ERROR 655 NCU FLUSH POS		
5	ERROR 656 NCU SN ADJST	Failed the light quantity adjustment to obtain the optimum sensitivity. Normal judgment is not possible due to large amount of ejection errors. Light intensity is low due to degradation of the LED light source, dirt or scratches.	Check the nozzle state but if it’s not recovered and improved, please call a service.
6	ERROR 64C NCU ERROR	Nozzle check was interrupted due to some problem.	Turn OFF the power and after some time turn ON the power again. If the error still remains, please call a service.
7	ERROR 650 NCU CONECT	Unable to verify the connection of NCU.	
8	ERROR 651 REPLACE NCU	Unable to perform nozzle check due to the reduction of the light amount, dirt or scratches.	Need to replace the nozzle check unit. Please call a service.
9	ERROR 657 REPLACE NCU INK PAD	The NCU ink pat is full.	Require to replace ink absorber of nozzle check unit. Please call a service.
10	ERROR 658 NCU SENSOR LV LOW	Light intensity to obtain the optimum sensitivity is reduced. Light quantity is reduced by degradation of the light source, dirt or scratches.	Recommend to replace NCU as soon as possible. Please call a service.

Important!

- No1 to 6 : After displaying error instantly, display a message indicating error occurrence. Press [ENTER] key to cancel.
- No7 to 10 : After displaynig error instantly, display an error always on the display.