



Innovative brand in small sizes UV printers

VARNISH INK

Maintenance Manual

2020

ABOUT THIS FILE

Thank you for spending your valuable time on reading this file.

This file is vital to your experience and safety, as well as proper maneuvering of artisJet printers in production. The contents herein will guide you through the maintenance procedures for varnish ink.

Please follow all the steps as instructed.

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INTRODUCTION

Clear ink is a kind of transparent UV ink, also known as UV Varnish. After printing on the media using UV lamp lighting printing machines, the liquid UV varnish will instantly dry on the surface of the printed media / sample / material. This way, the surface looks glossy and beautiful, while the print is enhanced for scratch resistance and durability.

1

UV Varnish Ink Features

Advantages

Clear ink / UV Varnish ink is a transparent UV ink that does not contain any color paste components. The performance of standby is better than other color inks.

Disadvantages

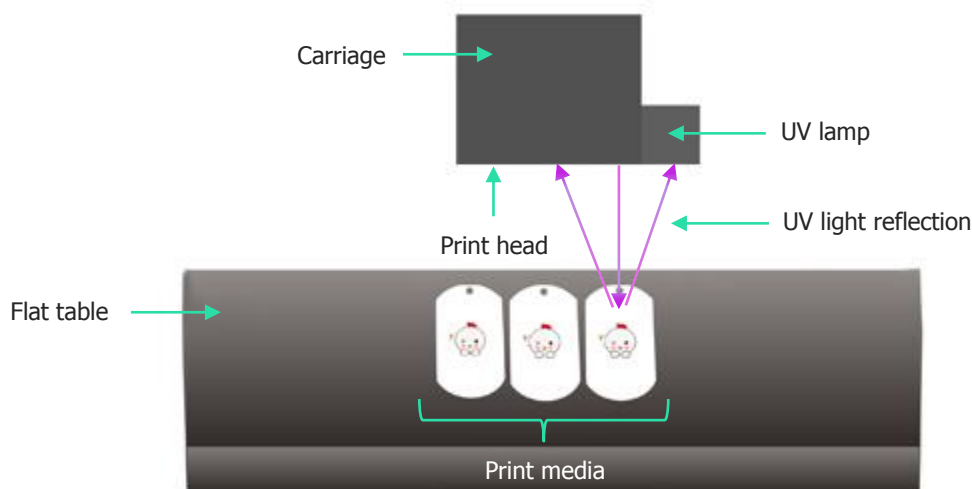
Because UV varnish ink is transparent, compared to colored inks, the reflected UV light can pass through and enter the head nozzles, increasing the risk of nozzle blockage.

2 How to avoid and reduce the risk of nozzle blockage caused by UV light reflection

There are a series of common causes of UV light reflection and methods to avoid it, as follows:

Problem 1 - UV light reflection caused by the printing media

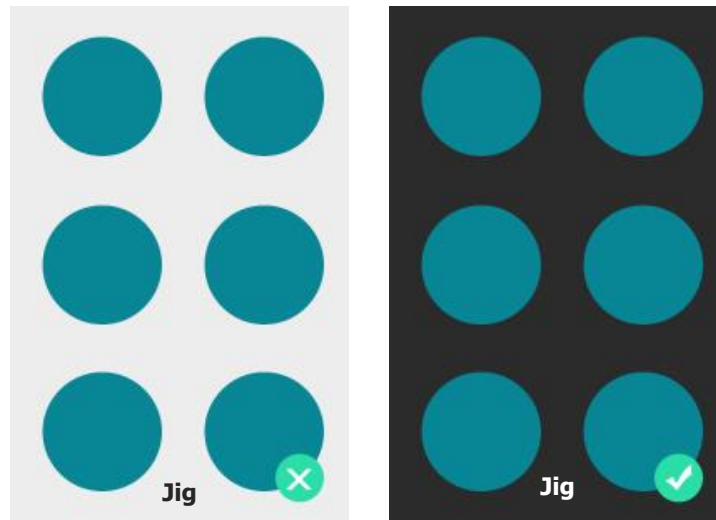
Different colors have different light reflectivity. Light-colored materials have poor performance of light absorption, and black has the best performance of light absorption. Therefore, compared with light-colored materials, black materials have lower light reflectivity. The light reflection of bright materials is greater than matte materials.



Solution

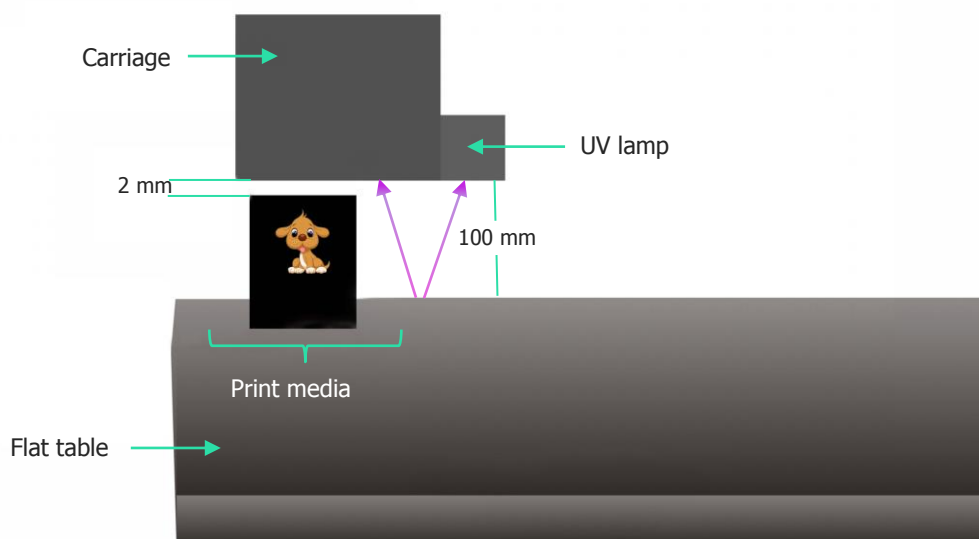
Avoid or reduce light reflection from the printing media by reducing the area of the UV lamp passing through the light-colored or reflective part through:

- customized jig / template which is matte black or black;
- for printing materials with larger volumes of white or lighter colors, print UV varnish in part area. Use black jig / template or black materials to cover the blank parts.



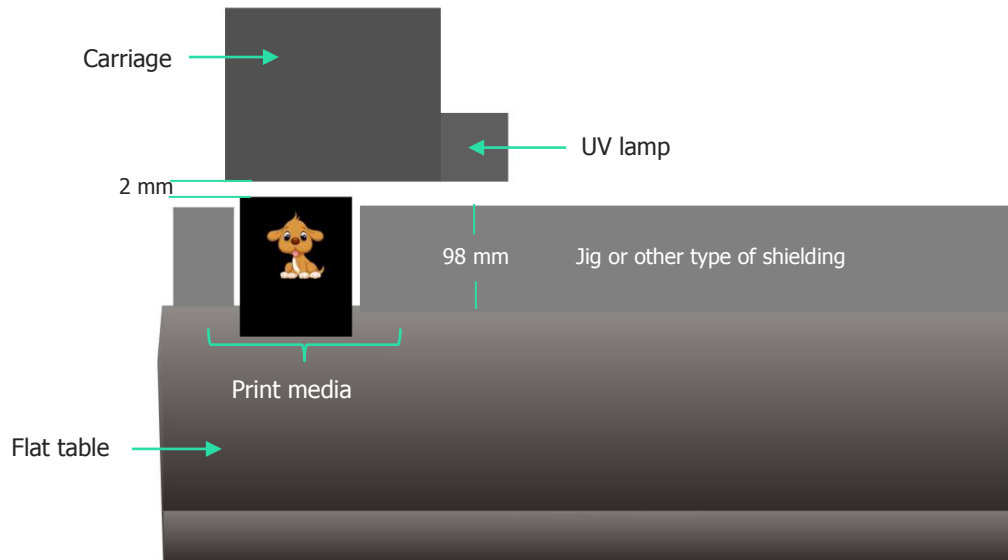
Problem 2 – The printing media is thick and the area on the flat table without print media is too high from print head

When the UV lamp passes through the area without print media, due to the distance which is too high from the print head, the UV light cannot reach the flat table or jig / template. The UV light will have distributed reflection to the print head surface.

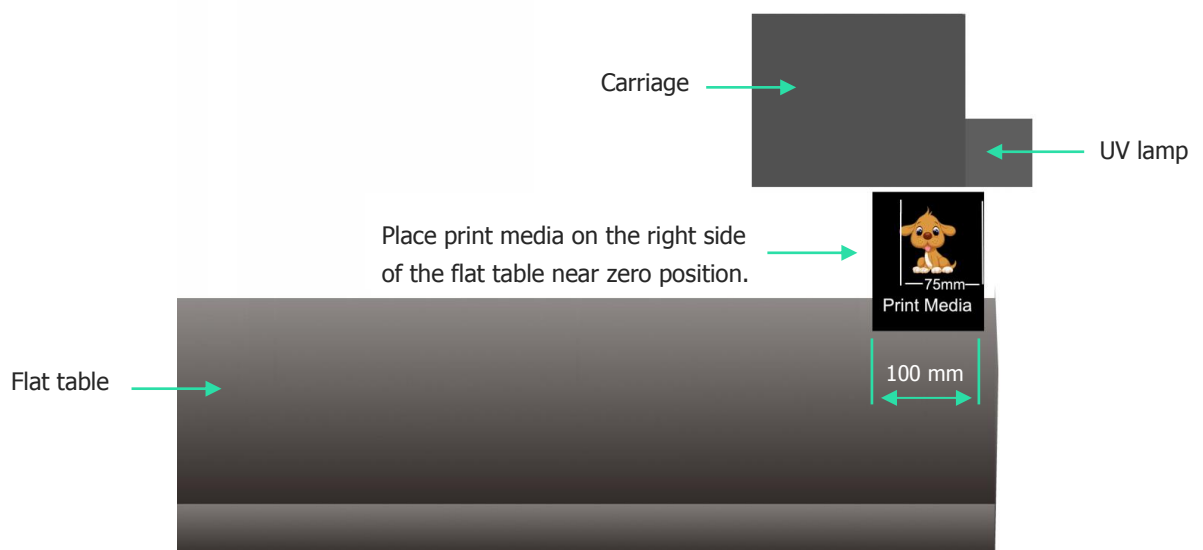


Solution

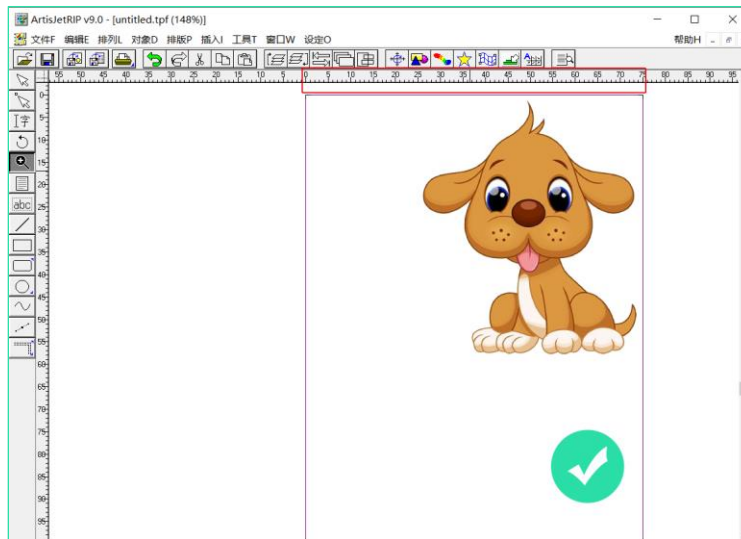
- a. Cover the area without print media with jig / template or other shielding which can effectively avoid this kind of reflection.



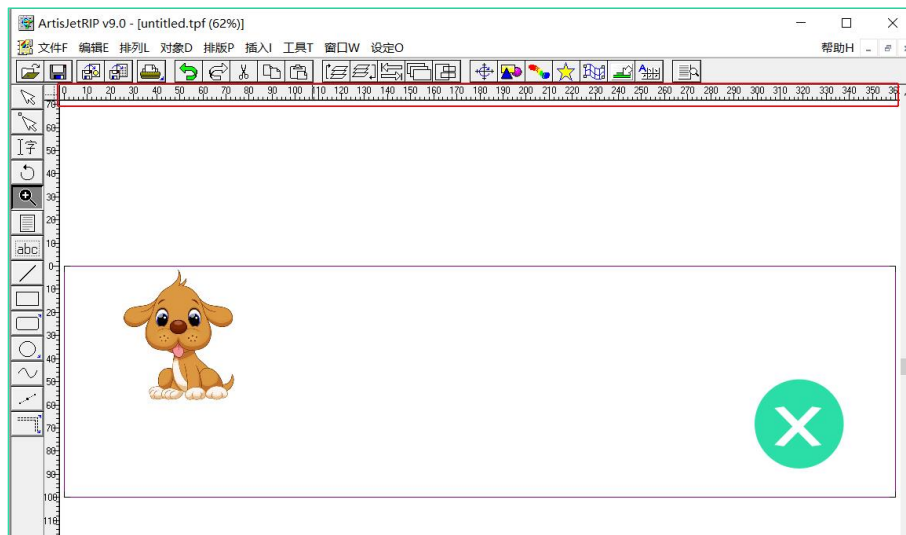
- b. Set the width of page size with proper value and adjust the placement position of print media on the flat table to effectively avoid this kind of reflection.



The reasonable page size settings can effectively prevent the risk of UV light reflection when the carriage moves to the non-printing area during printing.



Unreasonable page size settings will increase the excessive movement of the carriage during printing, increasing more print time and the frequency of UV lamp lighting.



Problem 3 – Print head nozzles clogging caused by low frequency or without use of UV varnish

If print only white or color inks for a long time, the nozzles of UV varnish will not work at same time. Under this circumstances, UV light reflection will pass through the nozzles of UV varnish. The nozzles of UV varnish will not be clogged in a short time, but there is still a risk of nozzle clogging when the UV lamp curing energy reaches its peak.

Solution

- a. When you do not use UV varnish and you need to print white or color inks for a long time (more than 2 weeks), it is recommended to replace the UV varnish with white ink.
When you need to use UV varnish, replace UV varnish cartridges to print.
- b. When print only white or color inks for a long time (several hours), it is recommended to perform head cleaning every 4 hours. The ink in the nozzles reflected by the UV light is discharged.
- c. Once the daily printing tasks are completed, perform head cleaning before powering off the printer. This way is more effective in order to avoid nozzles clogging compared to perform head cleaning before you start operating the printer again.



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