

# **Bring out the best in the JV3**

**- Part I (Basic volume) -**

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# **Table of contents**

- 1. Changing Head Height**
- 2. Loading Media**
- 3. Recommended Media Temperatures**
- 4. Test Media Temperatures**
- 5. High Temperature Errors**
- 6. Media Feed Compensation**
- 7. Dot Position Compensation**
- 8. Pass Setup & ICC Profile Selection**
- 9. Pre-Ripped Test Prints**

# 1. Changing Head Height

- To avoid media collisions and Head strikes, head height must be set to “THICK” when thick media is loaded. Wrinkled or cockled media will also need to use the “THICK” height setting.
- Image quality is much greater at low head heights. If the above conditions are not present use the “THIN” setting.
- THIN = 2mm to platen; THICK = 3mm to platen

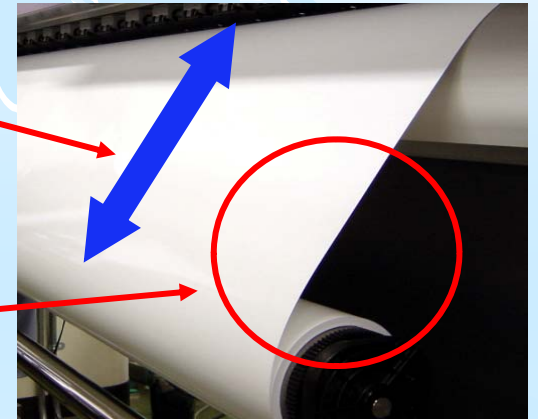
(When head height is changed, carry out dot position compensation under MAINTENANCE – PRINT ADJUST)

## 2. Loading Media - 1

- Media should have straight, even tension on the left and right side of the feed roll. Eliminate wrinkles or excess slack.

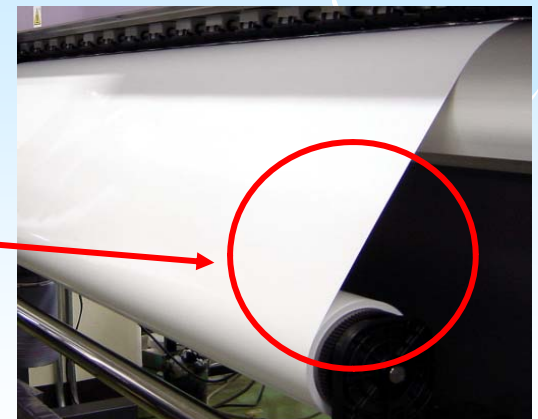
### A bad example with slack

This causes banding due to uneven left and right tension. Media comp will vary left to right.



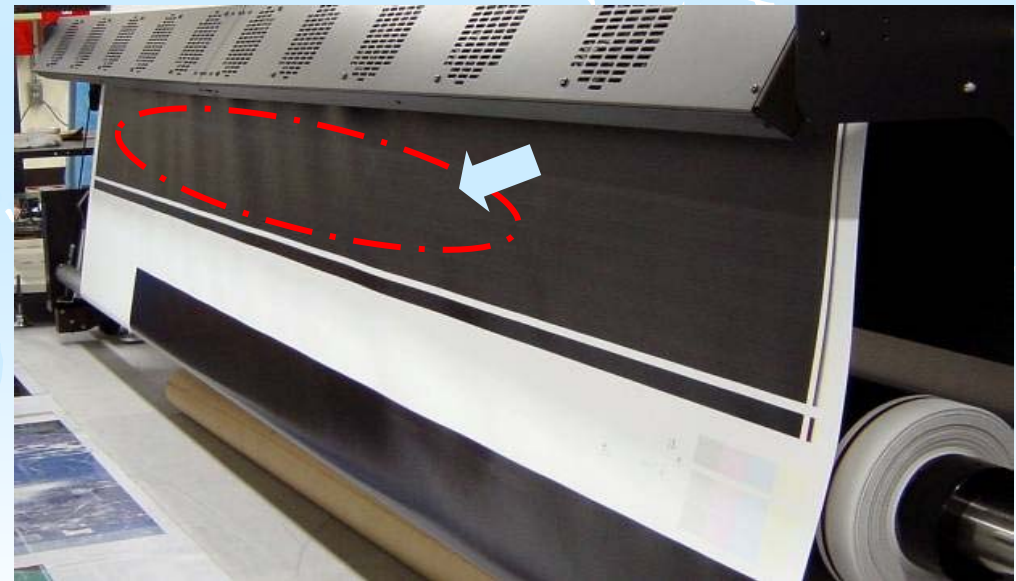
### A good example with no slack

Media is evenly stretched. Left and right feed roll tensions are the same. Media comp will be an even grey across the media width.



## 2. Loading Media - 2

- Pull a 4' lead from the rear roll through the front of the JV3. Rewind 2'-3' from the rear of the machine and lock the pinch rollers down.
- This image shows media that has not been properly loaded. Note the rippling in the front. This is caused by uneven left and right roll tensions. This will also occur if poorly loaded media is locked in place by the ping rollers.
- Watch for uneven pull on the take up device also. If rippling occurs, move the take up roll holders left or right to compensate.



Front (Take up) view

## 2. Loading Media - 3

- Proper media feed can only be achieved with a feed roll that is in good condition. Pyramid edges or damaged paper cores will cause improper media feed conditions.



Damaged paper core



Pyramid edges on feed roll

## 3-1. Recommended Media Temperatures SS1

Media Type	Supplier	Product Name	ICC Profile Name	Pre Heater	Print Heater
Gloss PVC	LINTEC	P-224RW	Glossy PVC	40C (104F)	40C (104F)
Matte PVC	LINTEC	P-243RW	Matte PVC	40C (104F)	40C (104F)
Gloss PVC	Intercoat	3104/H12/R2	Glossy PVC	45C (113F)	45C (113F)
FF	Hiraoka	SJT-VF	FF v2 (2Layer)	55C (131F)	55C (131F)
Tarpaulin	LINTEC	X-502	Tarpaulin	30C (86F)	42C (108F)
Clear PVC	LINTEC	P-245RC	Clear PVC	55C (131F)	55C (131F)
Matte Tarpaulin	IKC	YK-001	Matte Tarpaulin	30C (86F)	45C (113F)
Gloss Tarpaulin	IKC	YK-002	Glossy Tarpaulin	30C (86F)	45C (113F)
Gloss PVC	Avery	MPI 1005EZ	Avery MPI 1005EZ v2Y	50C (122F)	50C (122F)
Matte PVC	Avery	MPI 2010 White Premium 9A	Avery MPI 2010 White Perm 9A	50C (122F)	50C (122F)
Tarpaulin	Nu-sign	Front-lit Banner	NuSign Frontlet	30C (86F)	45C (113F)
Tarpaulin	Nu-sign	Back-lit Banner	NuSign Backlit	30C (86F)	45C (113F)

As of Feb. 10, 2004

## 3-2. Recommended Media Temperatures SS2

Media Type	Supplier	Product Name	ICC Profile Name	Pre Heater	Print Heater
Gloss PVC	LINTEC	P-224RW	Glossy PVC	35C	35C
Matte PVC	LINTEC	P-243RW	Matte PVC	35C	35C
Clear PVC	LINTEC	P-245RC	Transparency PVC	35C	35C
Tarpaulin	LINTEC	X-502	Tarpaulin	35C	35C
Clear PVC	Terumi	E-Flex C101	Clear PVC	35C	35C

### 3-3. Recommended Media Temperatures ES3

Media Type	Supplier	Product Name	ICC Profile Name	Pre Heater	Print Heater
Gloss PVC	Nichiei	SPC-0441	Glossy PVC	40C	40C
Matte PVC	Nichiei	SPC-0442	Matte PVC	40C	40C
Backlit PVC	Nichiei	SPC-0443	Transparency PVC	40C	40C
Tarpaulin	Hanfa	SPC-0447	Tarpaulin	40C	40C
Tarpaulin	Hanfa	SPC-0448	Tarpaulin	40C	40C

## 4. Test Media Temperatures

When testing new media, set the temperatures according to the flowing table. Temperatures can be set from the printer, software, or by heater button override.

Media Type	SS1		SS2	
	Pre	Print	Pre	Print
Paper Backed PVC	40C (104F)	40C (104F)	35C	35C
Tarpaulin	30C (86F)	42C (108F)		
Flex Face	55C (131F)	55C (131F)		

## 5. High Temperature Errors

- Use the test draw pattern and media comp to check feed conditions. Watch for head strikes and media adhesion.
- Poor feed accuracy may result from media adhering to the platen under high heat conditions. This occurs on media that expands rapidly when heated.
- In these cases, the print heater should be set to 40c (104F) and the pre heater in the range of 30c (86F).

## **6. Media Feed Compensation**

- **Only execute media comp after all print conditions are set. Media comp depends upon front roll tension, rear roll tension, media thickness, and heater settings.**
- **Changing the heat, media thickness, or attaching the take up device will all change the media comp value.**
- **Set the media comp after all feed conditions are stable. Be sure the pre and print heaters are at a constant temperature (green lights) before running media comp.**

## 7. Dot Position Compensation

- For bidirectional printing, the printer must know the distance from the print head surface to the media surface. This allows the outbound and inbound scan passes to land on one another. This ink travel compensation is set in the MAINTENANCE – PRINT ADJUST menu.
- This setting is not referenced for unidirectional printing.
  1. *Select PRINT ADJUST from the MAINTENANCE menu.*
  2. *Select appropriate head height under HEAD HEIGHT.*
  3. *Enter the best aligned values for compensation after printing patterns 1 to 7.*

## 8. Pass Setup & ICC Profile selection

- **Choose an ICC profile for the media to be used. Select resolution, number of passes, and drawing direction.**
  - Resolution should be "720 x 720" or "360x540".
  - For high image quality, recommendations are 8 Pass or higher for "720 x 720" and 6 Pass or higher for "360x540".
  - Choose High-speed and BiDir settings as desired. (Increased print speeds will result in the deterioration of image quality)

*[Note]*

*The "360x360" print mode has insufficient color concentration for many types of output and exhibits severe banding at low pass counts. This mode is only suitable for conditions where print speed is the highest priority. This mode is not recommended for good image quality.*

360x360 dpi	<p><b><i>Not recommended</i></b></p> <p>Dot gain (dot size) in 360dpi mode is very small, color concentration is low and banding is conspicuous.</p>	Flex Face Banner
360x540 dpi	<p><b><i>Recommended for high-speed output.</i></b></p> <p>6 or more passes are recommended. The amount of media feeding decreases so print accuracy improves. 6 or more passes can mitigate banding by software screening. Slightly lower print speeds will improving drying time reducing banding caused by ink beading.</p> <p>In 1-layer print, concentration may be thin. Depending on data, 2-layer print may be required.</p>	Tarpaulin Banner Flex Face Gloss PVC Matte PVC
720x720 dpi	<p><b><i>Highly recommended for best image quality</i></b></p> <p>8 or more passes are recommended. The amount of media feeding decreases so print accuracy improves. 8 or more passes can mitigate banding by software screening. Slightly lower print speeds will improving drying time reducing banding caused by ink beading.</p> <p>Outputting to back-lit or transparent media may require a 2 layer print for higher color density.</p>	Gloss PVC Matte PVC Clear PVC Flex Face Tarpaulin Banner

# 9. Pre-Ripped Test Prints

## Test Print 4C.prn MTP-300

- 4 color synthesis image. Quality check pattern for direct output.

## Test Print 6C.prn MTP-310

- 6 color synthesis image. Quality check pattern for direct output.

Composite patterns & charts shown below are output

- *Select either 4 or 6 colors patterns for JV3SP / JV3S*
- *If synthetically image quality is poor, review part II: Analysis & Countermeasures.*

