HI-FI JET PRO

HIGH FIDELITY 8 COLOR INKJET PRINTER

With V8 Color Technology

Product Overview

The new Hi-Fi JET PRO represents the highest technology Piezo inkjet printing available today. Utilizing new print head technology and advanced engineering on both the mechanical and firmware control on this device make it groundbreaking in several ways. First, the device will utilize Variable Droplet technology, which enables the RIP to control 3 different droplet sizes for ultra high-resolution printing as well as enhanced color control. Second, the Hi-Fi JET PRO employs 8-color process printing, offering the advantages of light cyan and light magenta – subtle changes in color transitions as well as orange and green colors – offering an expanded color gamut. Third, the machine effectively prints in 1440x1440 dpi, delivering exceptional resolution.

Feature Highlights

- V8 Variable Droplet – 8-color printing technology
- 1440x1440dpi print resolution
- Pantone® Hexachrome® *(in development)*
- 8- or double 4-color configuration options
- Brilliant dye or UV-stable pigment ink options
- Ethernet TCP/IP connectivity
- 52"/42" print widths
- Roland ColorChoice® 4.0 RIP for Mac® & PC included

V8 Print Technology

Variable Droplet

Variable droplet technology offers several advantages over fixed-dot or multi-drop on demand inkjet printing. The primary advantages are:

Smoother transitions between colors: Because there are different combinations of droplet sizes, there are more available color droplet and dot mixes. For example, a FJ-500 can fire 3 different droplet sizes. If we only analyze the direct combination of droplets (excluding dithering, or appearance management color theory), then we have 9 different colors available. The different droplet scenarios are in the table below with the combination of small (S), medium (M), and large (L) droplet sizes.

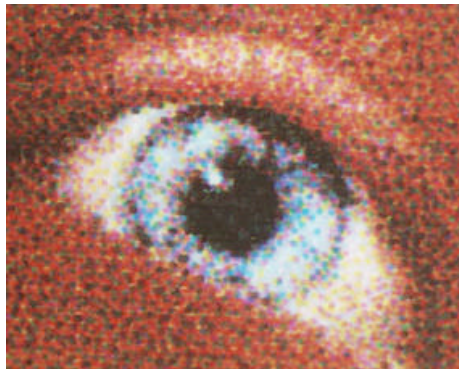| #1	#2	#3	#4	#5	#6	#7	#8	#9
S	S	S	M	M	M	L	L	L
S	M	L	S	M	L	S	M	L

Improved color matches: Whereas mixing colors in 4- or 6-color process allows for a large number of colors, there are many more color mixing options that allow for better color matches. With 4 colors there is a limitation to which colors you can match – and the spread between shades is not reachable without resorting to 6- or 8-color process printing – *until now*. By varying the droplet size, we can simulate more colors between reachable shades than in either a 4- or 6-color system.
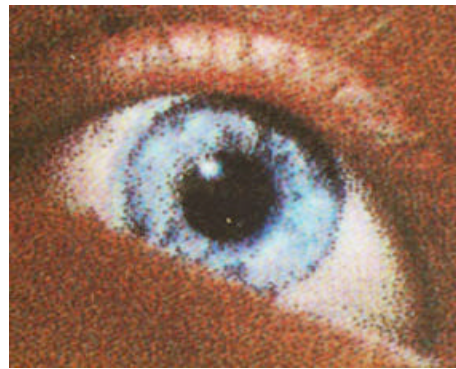
8-Color

The Roland Hi-Fi JET PRO FJ-500 offers several ink setup options, but the combination of CMYK + Light Cyan, Light Magenta and Orange and Green set a new standard for color gamut and in-gamut color transitions. Previously, there were distinct advantages for each ink setup.

CMYKLcLm:	Offered smooth transitions and subtle pastel reproduction.
CMYKOG:	Offered an expanded gamut, allowed Hexachrome matches, yet compromised in-gamut color transitions.

By combining both ink sets into one 8-color system, we reap the advantages of both light cyan and light magenta as well as the expanded gamut of orange and green.

FJ-50 Super Mode   FJ-500 Variable Super Mode

The 20x magnification above of a Hi-Fi JET FJ-50 *(on left)* vs. a Hi-Fi JET PRO FJ-500 *(on right)* illustrates the dramatic improvement of V8 technology. 8 colors combined with variable droplet technology improve on the award-winning Hi-Fi JET FJ-50 output capabilities.

Resolution & Speed

Color Mode	Print Mode	Resolution	Number of passes	Speed (Sq. ft/hr)
4	Draft	540 x 360 dpi	3	127
4	Normal	720 x 720 dpi	8	75
4	Super	1080 x 1080 dpi	18	36
4	*Variable Photo*	*1440 x 1440 dpi*	*32*	*16*
8	Draft	540 x 360 dpi	3	79
8	Normal	720 x 720 dpi	8	42
8	*Variable Normal*	*540 x 1080 dpi*	*9*	*30*
8	Super	1080 x 1080 dpi	18	20
8	*Variable Super*	*720 x 1440 dpi*	*16*	*17*
8	*Variable Photo*	*1440 x 1440 dpi*	*32*	*6*

Configuration Options

The FJ-500 can be set up in several different ink configurations. This allows more user options that address their needs. Below are the different options:

Setup Configurations	Advantage
CMYK LcLmOG Pigment ink	Absolute maximum resolution & quality
CMYK CMYK Pigment ink	Speed and ink longevity
CMYK CMYK Dye ink	Speed and cost effectiveness
CMYK Pigment CMYK Dye	Versatility

Media & Ink Compatibility

The FJ-500 will utilize the same media in Roland's PCM & PQM lineup. The device uses the same inks as the FJ-50/52, FJ-40/42, and CJ-500/400 series products. There are new profiles for these media specific to the machine, however all inks and media will be the same.

Connectivity

Parallel

The Hi-Fi JET PRO FJ-500 now has a full ECP parallel port support. It is fully IEEE 1284 compliant and can achieve transmission speeds of 750 kb/s, which is an improvement over the FJ-50 of 350 kb/s.

- **FJ-50: 350 kb/s**
- **FJ-500: 750 kb/s (ECP)**

Ethernet TCP/IP

To add to connectivity options, the FJ-500 is now standard with a built-in 10/100-Base TX port. This allows for TCP/IP connectivity with extremely fast transmission of data at 1.1 Mb/s.

🔴 **FJ-500 (TCP/IP) 1.1 Mb/s**
This will also allow for the Hi-Fi JET PRO to be connected with a direct Ethernet cable or across a network. The interface of the system and selected settings can be accessed via a web browser.

Roland ColorChoice® 4.0

ColorChoice® is improved to handle the new features of the Hi-Fi JET PRO. Some of the highlights of the software include:

🔴 **Adobe® PostScript® 3**
🔴 **PANTONE® Hexachrome® *(in development)***
🔴 **ICC Color Management**
🔴 **8-color & 4-color printing capabilities**
🔴 **Variable Droplet Control**
🔴 **Color Profile recreation *(will be available later as an optional upgrade)***
🔴 **New Dither Pattern**
🔴 **Simultaneous RIP and Print**
🔴 **Networking capabilities**

Machine Design Improvements

<u>Adjustable Head Height for a Wide Variety of Media</u>
Two-level head-height adjustment ensures consistently optimal output onto a wide range of media. Maximum media thickness is 1.0mm.
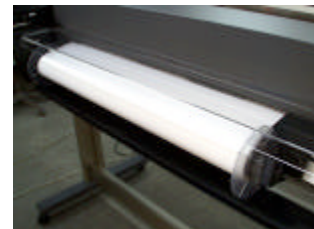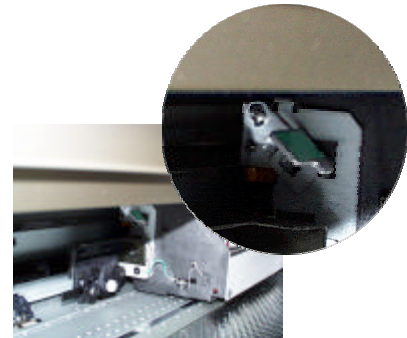
<u>Easy Panel Operation</u>
Newly designed panel switches with a positive click-feel and the Backlit LCD provide easy navigation of the detailed menu structure.

<u>Media Cover Guards against Dust</u>
A transparent cover positioned over the printing media protects it from ambient dust, ensuring a cleaner surface for the highest quality printing results.

Media Roll Damper Maintains Paper Feed Stability
A media damper, newly installed on the roll media flange, maintains feed stability by applying uniform tension to the media.

Easy-to-Replace Ink Cartridges
Inks come in clean-handling 220 cc cartridges that simply pop in and out for quick and easy replacement.

Automatic Sheet Cutter
After printing, just press a button to cut-off the printed page at one moment. This can also be controlled from software.

Optional Take-up Reel
The take-up roller automatically re-rolls the printed media for improved performance of unattended, roll-to-roll, and production environments.

Model No.
TU-500: For FJ-500 & FJ-400

Price & Accessories
The Hi-Fi JET PRO FJ-500 is priced at $18,995 and the Hi-Fi JET FJ-400 is $16,995, which includes the following components but does not include inks. ***Because of the variety of ink combinations – CMYKCMYK, CMYKLcLmOG, CMYK dye/CMYK pigment, inks must be ordered separately at the time of purchase.***
The included accessories:
- Stand
- Roland ColorChoice 4.0 CD (for Mac & PC)
- Roland PrintServer CD (for Mac & PC)
- Replacement blades
- Cleaning kit (cleaning swabs, tweezers, & sponges)
- Roland ColorChoice Installation Guide
- FJ-500 User's Manual
- Unpacking and Installation guide

Conclusion
The Hi-Fi JET PRO offers a new standard in inkjet technology and design. With V8 technology, we have created the most powerful machine available on the market today. Utilizing variable droplet and 8-color functionality, the Hi-Fi JET PRO sets a new benchmark for high quality reproduction.