



CAS/TECH REVIEW

By Chris and Kathi Morrison

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Mutoh's ValueJet and MultiCam's MultiVision

Mutoh offers a digital-printing value; MultiCam's hardware/software product aids routing.

Mutoh's ValueJet

Outdoor digital printing for the rest of us



Wandering around a giant tradeshow like ISA, you can get overloaded by gigantic printers cranking out billboard-sized images. Walk a little further, and you see the latest UV printers imaging directly onto wood and metal. Things always look so cool until you look at the pricetag. Sometimes you wonder if the little guy is being left in the dust.

Today, you can make a decent living with a good set of paintbrushes and paint — if you have the talent. Vinyl graphics are still a good business, but it's becoming harder to compete with shops that can also produce full-color graphics. You seemingly need \$20,000 to \$30,000 just to get in the game.

Well, while wandering the ISA aisles, we happened upon what may answer many small-signshop owners' dreams. In addition to Mutoh's new 100-in. Toucan LT, we spied the new Mutoh ValueJet. It looked like a child

next to its parents; we could immediately tell this machine could help small shops get on the outdoor, full-color train. So, how about \$15,000 for the printer and RIP software? While that's not chump change, it's affordable.

If you've been dreaming of getting into digital printing, then keep reading. With a name like ValueJet, what exactly do you get and what, if anything, do you need to add? This is pretty much a turnkey solution. Just add a computer and a few graphics skills, and you're ready to go.

Specifications

Like most of today's full-color digital printers, the ValueJet uses piezo-print technology. It uses eco-friendly ink with an outdoor life up to three years. While the printer doesn't have the industrial look of

Key Information

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Company Profile

Established in 1963 as a subsidiary of Mutoh Industries Ltd., Mutoh America began as a drafting-machine distributor to the U.S. market. Spurred by the parent company's reputation for industry-leading technology, and by its own quest for new, innovative products, Mutoh America played a key role in the PC-CAD revolution of the 1980s.

Mutoh plotters, introduced to North America in 1985, were primarily positioned in architectural and CAD/CAM industries. Now, Mutoh America has earned acclaim for superior media handling and precision motion control in its new generation of large-format inkjet printers and computer-aided signmaking (CAS) equipment.



Fig. 1: The ValueJet's precision is largely due to the media handling, which features grips or hold-downs all across the printer.

its bigger (and more expensive) brothers, it's well built and designed for serious use. The media hold-down exemplifies this (Fig. 1) — a must for good registration.

The printer's dimensions are 70 in. wide × 38 in. tall × 26 in. deep. Not a small printer, but one that most signshops can accommodate. It weighs 176 lbs., so installation will require at least two people.

The ValueJet can handle media widths (Fig. 2) up to 51.2 in., and

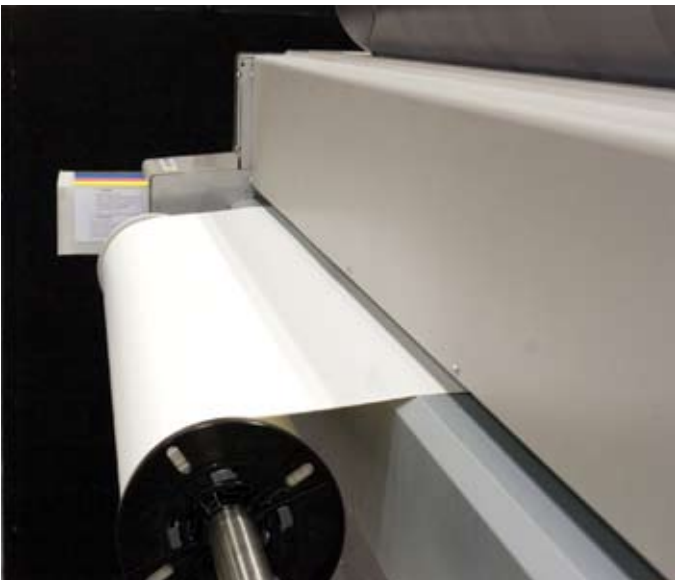


Fig. 2: The easy to install media roll is equipped for media sizes up to 51.2 in. (48-in. printing area).



Fig. 3: The control panel has an easy-to-read display with flashing lights for maintenance and data processing.

its maximum printing width is 48 in. Although a little narrower than many of its competitors, it's also half the price. A 4-ft.-wide image is still fairly wide, and, through tiling, it can handle virtually any size job.

The printer is equipped with two interfaces. The TCP/IP interface is becoming a standard on most printers. Also included is a USB 2 interface that lets you directly connect the printer to a computer system.

The ValueJet's fairly robust control panel (Fig. 3) doesn't have to be operated by a scientist. Included are flashing lights for maintenance alerts and data processing, along with up and down arrows to move around the menu easily.

Inkjet head design

The piezo printhead incorporates a new design that allows the user to select from up to 10 printing modes. The new head has a 360-dpi resolution, but it can also produce variable dot sizes. With 1,440 nozzles and the new X-Rail design, the printer can produce images in 360, 540, 720 and 1,440 dpi.

The printer's image quality is excellent, especially for a four-color device. The 1,440 × 1,440 prints offer photographic quality, and even the high-speed production resolutions of 720 × 360 look great. Of course, the higher the quality, the slower the speed, which leads to our next topic.

Printing speeds

Here's where we were really surprised. Usually a low-cost printer will be considerably slower than the larger and more expensive printers. That holds true for the ValueJet as well.

Compared to some larger printers, like the Toucan LT, the speed is approximately four times slower. Of course, the price for that printer is much higher. But, in comparing the ValueJet's speed with other printers in its class, it's near the front of the pack. In most cases, those printers cost \$20,000 and more.

At its fastest, the ValueJet can print 93 sq. ft./hr., by selecting a

720 × 360-dpi image resolution in a bi-directional printing mode. At this speed, you could produce four 4 × 8-ft. prints in an hour. At 720 × 360 dpi, you're also producing some very acceptable print quality.

Other combinations include 720 × 720, 540 × 720, 1,440 × 729 and 1,440 × 1,440. You can also run any of the print modes in bi-directional or uni-directional mode. You still get 29 sq. ft./hr. in bi-directional fine-quality mode.

It's rare to find any printer that has this many print modes. It's especially surprising coming in a \$15,000 printer.



Fig. 4: The ValueJet snap-in, eco-friendly, solvent-based ink cartridges provide a scratch-resistant image. The printer uses Mutoh's new Eco-Ultra ink sets.

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Even the inks are new

Mutoh now offers Eco-Ultra ink sets (Fig. 4). This new ink replaces the Eco-Solvent Plus inks used in the Falcon Outdoor and Toucan LT. Luckily, the ValueJet also uses these new inks. So what's new?

The ValueJet uses eco-friendly, solvent inks. A waterbased ink, like those typically used in desktop printers, requires a coating on the media to stick. If you want to print directly onto a media like adhesive vinyl, your ink type must bond to it. Waterbased inks would simply wipe off.

Solvent inks' downside has been their bad smell and detrimental effects on breathing. Solvents have their place — in a shop with industrial, dedicated, filtering and ventilation systems. Eco-friendly solvents don't produce the strong odors, and their manufacturers say they can be used in offices with good air-flow conditions. Their downside has always been less aggressiveness than true solvents and, thus, a shorter outdoor life.

The new Eco-Ultra inks are designed to offer the environmental advantages of eco-friendly inks with true solvents' durability. For example, the new formulation has improved scratch resistance. Applications, such as vehicle graphics, will last longer without lamination. According to Mutoh, ValueJet prints are water and UV resistant up to three years outdoors.

In addition, the new inks adhere more aggressively to the media. This, along with a faster drying time, means quicker print use. In many cases, the print can come straight off the printer without a drying step. The ValueJet incorporates three independently controlled heaters to make image drying as fast as possible.

The colors' vibrancy has also been improved in the new inks (Fig. 5). The ink is more dense, and the color gamut is larger than in the previous Eco-Solvent Plus inks. Mutoh has made the inks virtually



Fig. 5: Vibrant prints are ready for the true test of the UV-harsh outdoor world.

odorless so the ValueJet can run in an office environment.

The new Eco-Ultra inks are 20% less expensive than the Eco-Solvent Plus ink. In essence, a 200ml cartridge will cost \$59.95. This makes the ValueJet even more economical.

Other features

A digital printer doesn't serve its purpose if you can't get the design onto the print. So you need a raster image processor (RIP). Now that you've dropped \$15,000 for a printer, do you need to spend another \$600 to \$3,000 for a RIP?

Included with the ValueJet is a special-edition version of the Scanvec Amiable RIP. You need only add a computer, and you're ready to go.

Or are you? Often, price-leading products, especially printers, won't include any supplies. You'll receive a starter set of Eco-Ultra inks. Now you just need a roll of white vinyl and a few jobs.

Normally, you get a 90-day warranty when you purchase a printer in this price range. Mutoh includes a one-year, onsite warranty with the ValueJet. You just need a computer and some type of drawing or image-editing software, and

you're ready to produce full-color, outdoor graphics.

Most printer manufacturers are gunning for the sign industry's big guys. Most new hardware announcements have been for 100-in.-plus printers. The good news is that the price is really coming down fast for these devices. The bad news is even these great prices are a fortune to a small shop.

Mutoh's ValueJet is a refreshing new product, introduced this year, that targets the small to medium shop interested in adding full-color graphics. It's a great combination of price and features that will let a small shop jump into the market with both feet. Virtually everything you need, except for a computer and vinyl, are included in the package. The printing width, speed and image quality make it a real tool and not just a novelty that will collect dust in the corner.

The new Eco-Ultra inks make image quality and durability even better than Mutoh's Eco-Solvent Plus inks, at a much better price. Put all of this together, and you have a printer that can get you into the game without costing an arm and a leg. At \$14,995, the ValueJet truly lives up to its name.