

Innovation Inspired by Air

by **KEITH MILLER**

Whether it's wind tunnels, fighter jets, or roller coasters, Bill Kitchen's passion for flying fuels his creativity

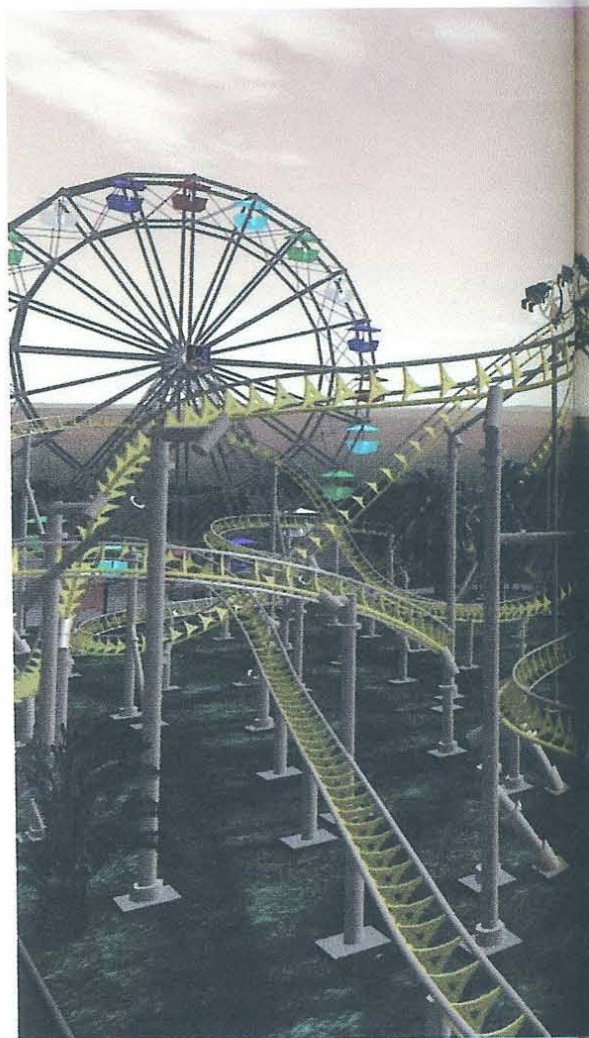
From his first skydive in 1990, Bill Kitchen was hooked on the freedom of flight. He was terrified and exhilarated at the same time, and wanted others to enjoy those same feelings without having to jump from an airplane thousands of feet in the air. What's followed from this creative entrepreneur has been the invention of the Skycoaster, the SkyVenture vertical wind tunnel, and now an innovative roller coaster called the Unicoaster.

Owner of Patent Lab, LLC in Orlando, Florida, Kitchen has impressed many in the amusement industry with his energetic innovations. John Arie, owner of Fun Spot Action Park in Orlando, has known Kitchen for nine years and bought the 300-foot-tall Florida Skycoaster from Kitchen in spring 2004. "Bill is a self-admitted ADD person," jokes Arie, "but he's very intelligent and very creative, and when you put those things together in our industry, you've got a fireball. He's imaginative and he's on the cutting edge, and when he tells you something, you know it will perform the way he says it will."

Kitchen's latest inspiration, the Unicoaster, is a unique roller coaster targeted at small amusement parks, FECs, malls, resorts, and other entertainment venues. Each of the Unicoaster's cars has an enormous six-foot wheel that rolls it along the track, one of the coaster's most distinctive features. "Each car's big wheel is beautiful while it's turning—that's the visual appeal—and each wheel can be a different color," says Kitchen. "It really looks great, much prettier than a normal roller coaster car."

The Unicoaster's striking appearance is just one of the things that makes it unique. "The cars are suspended out to the side of the track on seats that are balanced on an axle, similar to how cars are on a Ferris wheel, slightly below center of gravity," Kitchen explains. "Riders are not over the track, but off to the side, where the view is much more thrilling."

Other features include the capability for riders to spin their cars in forward somersaults, if they so desire, and an unusual track design. "Each car



The Unicoaster, whose cars are suspended out to the side of the track, is geared toward entertainment venues.

has a control on the left seat under the rider's left arm near their hand, like a handle," Kitchen says. "It looks similar to a bicycle break handle. The track is a tri-cord truss without a lot of the expensive steel normally required on a coaster." Kitchen says he has a patent pending on the Unicoaster so that buyers will have "exclusivity"

in their markets.

Keeping the ride's cost low in lieu of rising steel prices is one of the motivations for Kitchen in introducing this attraction. With a lift hill launch at a height of around 75 feet and a top speed of between 40 and 60 miles per hour over 1,200 feet of track, the Unicoaster would cost about \$2 million to \$2.5 million.

"That's in the range of a small amusement park or an FEC," notes Kitchen. In fact, though he can't announce the name yet, he says the ride's first buyer is an FEC.

Another version of the Unicoaster has computer-controlled self-powered cars with motors fed by an electrified rail, and they can move individually or in trains of up to 10 cars. "It can be used to connect the buildings of a resort or convention center," says Kitchen, "or it can hang from the ceiling

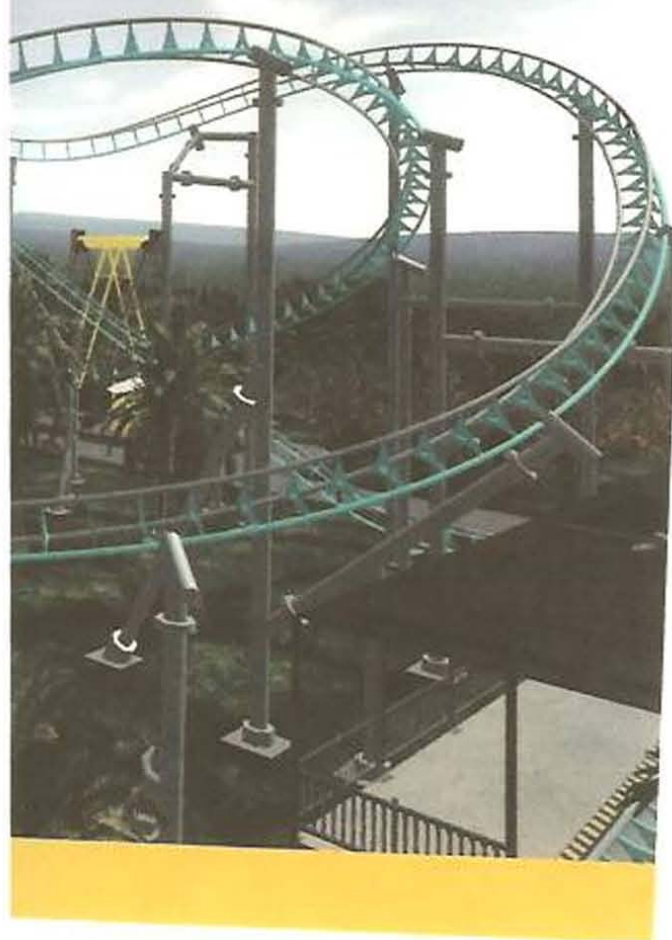
in large malls, like the Mall of America (in Minnesota), and wrap around the entire mall."

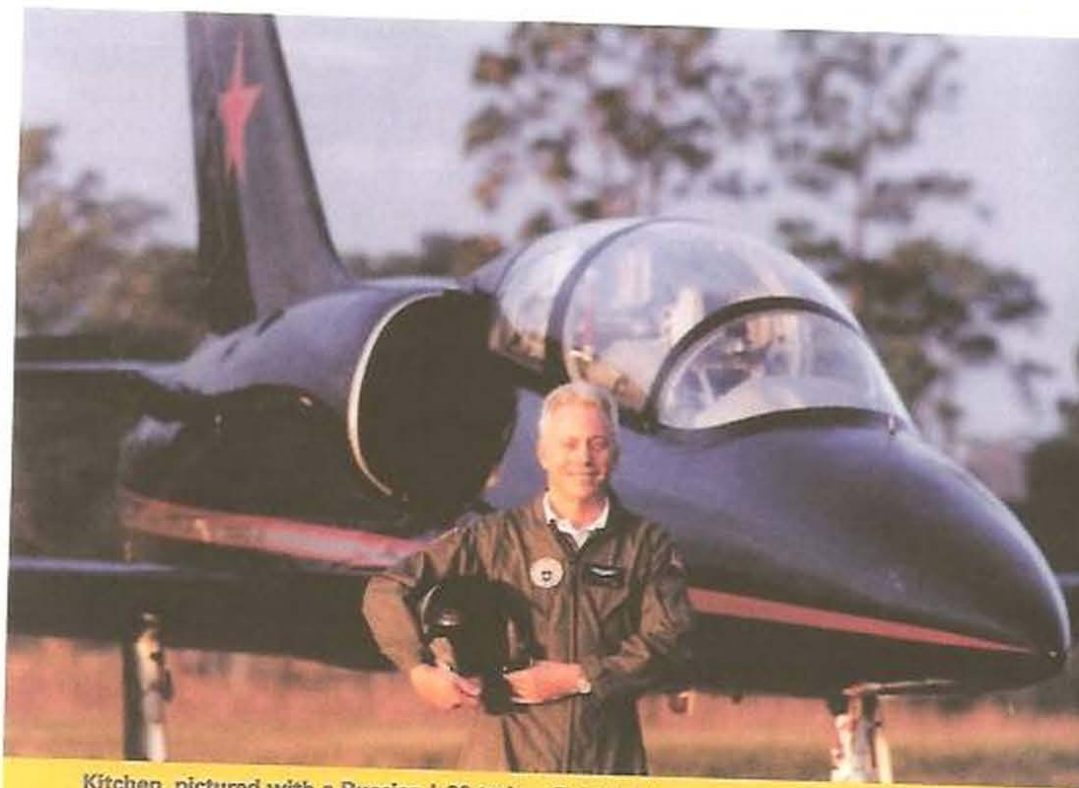
So what would inspire the inventor of a wind tunnel to dip into the coaster scene? "I was looking around for something that was new and unique again, and I wanted something that was aimed at stimulating skydiving people," Kitchen says. "But we weren't sure there was another ride to do that in the marketplace." He says he was told by park operators and by several associates in the ride business that now was the time for an inexpensive family-style coaster that would give small parks and entertainment venues the chance to enter the roller coaster arena.

"Many of them are looking for their first coaster at a price point they can afford, yet have something entirely different from everyone else," he observes. "I first conceived of this prior to [the development of] the 'X' coaster, and that coaster is way too expensive for small entertainment venues. I've been looking for a simpler, less expensive way to build a thrilling coaster that was affordable for a long time." The "X" coaster opened at Six Flags Magic Mountain in Valencia, California, in late 2001. Like the Unicoaster, riders on "X" are suspended out to the side of the track, but the appearance and configuration of the ride are quite different.



then, pictured model of the Unicoaster





Kitchen, pictured with a Russian L-39 trainer-fighter jet

In Search of Inspiration

Kitchen spent the first 15 years of his career in the broadcasting industry, constructing radio and TV stations before moving into ownership. In 1990, he sold his radio and TV business and retired. "That lasted all of about six weeks," quips Kitchen. "But during that time, I took my first skydive. I was completely terrified, but I decided to get my license and became a professional skydiver." He also did some bungee jumping and started a company called Sky Fun 1, which sold equipment to operators in the bungee-jumping business.

"My amusement business came out of my love for skydiving," he says. "That's what led to the

"Bill's genius is that he sees things differently than just about anybody else."

—Alan Metni, SkyVenture

Skycoaster and SkyVenture." He thought the Skycoaster was just as thrilling as bungee jumping, but smoother and safer.

Once Kitchen establishes an attraction in the marketplace, as he's done with the Skycoaster and SkyVenture, he gets the urge to take on something new and move on. "I tend to come up

with a new concept and bring it to fruition as if making it a marketing success, then I sell the company and move on to another concept," remarks Kitchen.

"He likes freshness and novelty, and likes to have several things going on at the same time," says SkyVenture CEO Alan Metni, who bought SkyVenture from Kitchen last summer after working with him for a couple of years. "Bill's genius is that he sees things differently than just about anybody else. He'll look at the same set of facts and see something completely different, and that frees him from looking at the world the way everyone else does."

Kitchen, now 56, says his first Skycoaster was built around 1990, but it had an inauspicious beginning. "I built my first model of the Skycoaster at my house out of broom handles, and the flyer was a little tin GI Joe," he says. "My girlfriend at the time looked at it and told me I was completely crazy, that no one would ever ride that. So I dumped the girlfriend and built the ride!"

Safety Fanatic

Whenever he's discussing his inventions, Kitchen talks a lot about safety. "I'm always thinking about rides and thinking about a safe way to do something," he says. "For example, my first successful attraction, the Skycoaster, was envisioned as a safer way for parks to have a

bungee-like ride, without the reliability problems of a rubber cord."

He says one of the big challenges in designing the Unicoaster has been the dramatic increase in steel prices, necessitating using as little steel as possible in the track while still keeping it safe. "I want it to be safe after running a thousand times, a million times," he says. "But safety is more than a design—it's a commitment by the manufacturer and the operator." Kitchen contends that it's probably easier to get a pilot's license than to get certified by him to operate one of his rides because buyers must agree to safety stipulations in their license agreements, including attending annual safety meetings about the operation of their rides.

Though safety is of premium importance in the amusement industry, Arie says Kitchen takes it to a new level: "After I bought [Florida Skycoaster], I realized how many programs he had in place to keep it safe—the levels of training, the written tests, and other steps instigated by him. I thought I was a '10' in safety until I met Bill."

In addition to skydiving and bungee jumping, Kitchen is also an experienced pilot who flies trainer-fighter jets, his favorite being the Russian L-39 fighter/trainer. But with all of his daredevil

pastimes and his penchant for designing extreme attractions, he does have a down-to-earth side, as evidenced by his support of the Compassion charity, which is near and dear to him. He donates \$100,000 a year to the organization, funding the full-time college education of 40 kids around the world. "I have pictures of them and write to each of them. I've been doing this for years," he says.

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As for what he's learned from his experiences developing the Skycoaster, SkyVenture, and Unicoaster, Kitchen replies, "It's taught me to be very conservative in the design of an attraction, and to get input from other consultants and engineers because they all add wisdom and value to the design. I've learned you can't come up with a good design overnight, and this is proven by the fact that only about 50 percent of the designs built as prototypes ever make it to the market."

Though Kitchen has certainly achieved a full measure of success, he's not done yet. "The Unicoaster won't be my last project. I have several others on the drawing board in the prototype stage," he declares. "I just enjoy watching people have a good time." 🌐

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A close-up rendering of the Unicoaster cars, as they roll along the side of the track