

100% READER SUPPORTED SINCE 1991 — NO ADVERTISING

Motorcycle

CONSUMER NEWS®

NOVEMBER 2016
VOL. 47, NO. 11



SKIDBIKE

The Future of Training?

12 *Feature*—SKIDBIKE

15 *Impression*—2017 Yamaha SCR950

16 *Evaluation*—2016 Honda CB500X ABS

20 *Feature*—Honda Mystery Warehouse

25 *Reviews*—How to Ride Off-Road Motorcycles; Motorcycles and Our 2nd 50 Years

26 *Feature*—Hitch Racks

28 *Feature*—What's Really In Our Fuel?

32 *Legends*—Cary Tanner

34 *Design*—A&S Powersports Show

36 *Mechanics*—Simple Maintenance

38 *Proficient*—Twopers and Flirters

40 *Mental*—Sensory Connection

48 *Innovation*—Sidekick Stool

DEPARTMENTS

2 Editor's Letter

3 Letters

6 Bulletins

8 Downtime

10 World

41 Novice Notes

42 Rider Rights

43 Justice

43 Street Strategy

44 Happenings

46 Open Road

47 Contact Patch

Subscribe today at MCNews.com, or call 888-333-0354

AN IDEA THAT'S

Gaining Traction

SKIDBIKE provides a controlled learning environment for braking and steering, without risk of injury

text by Russell Evans and photos by Gina Cioli

Riders learn from mistakes on a motorcycle that won't fall down.

AFTER A COUPLE of initial turns to get the feel of the SKIDBIKE apparatus, the expert-level rider pushed harder to test its capabilities, knowing he was about to experience what motorcyclists fear most, but still unprepared for it.

With a small group of other motorcycle journalists watching and nervously await-

ing their turn, the rider increased speed on the KTM 1190 Adventure. He swung right, turned back to the left, then twisted the throttle to break traction and initiate countersteering. Suddenly, the bike caught traction and straightened up, whipping the rider back over the saddle, in the direction of the skid. In reflex, the rider had hit the brakes, quickly came to a stop and flopped

over the bike, off balance.

The group of spectators gasped in unison, then released a little quiet laughter.

"There's a crash," KTM's Tom Moen said.

But only a simulated crash. Because of the restraint offered by the unique SKIDBIKE "cradle," neither the bike nor the rider went down. The bike was bolted to the wheeled platform, which

Trainer Impression

Let's dissect SKIDBIKE from a couple of angles. First, there is the advanced rider—like the moto-journalists, who attended our event. These are the right people to be experiencing the KTM 1190 Adventure setup. The kind who will turn ABS and traction control off, then raise the bike's wheel almost completely off the ground so they can do doughnuts. Even we were told to "keep it under 20 mph." Apparently, that is the approximate threshold where adult strength can resist ejection. Faster than that and the laws of physics will still chuck a rider off, or perhaps even overcome the mechanical resistance of the SKIDBIKE. We were fitted with SaferMoto Air Bag Vests, just in case.

My first ride on the rig was with a good amount of traction and a marked sanity. I slid the rear sideways out of corners and locked up each wheel individually, "dumping" the bike. I observed other riders lock the front, impulsively release, then shake their head, acknowledging they could have kept it locked up, safely. After everyone had had their turn, I requested one more run, with the rear wheel raised high, creating very little traction. I proceeded to kick the rear wheel into a full spin, circling around the front wheel, then allowed the rear to regain traction and snap me over the seat. I laughed heartily aloud at my first ever purposeful, and forceful, highside—I was still sitting on the bike as it

hunched over limply. Our photographer shouted, "Man, I missed that." I yelled back, "You've got to be kidding me!" The results of my second attempt are on the cover of this issue—two highsides in 10 minutes, I didn't get thrown off or injured and the bike didn't either.

Next, let's discuss beginning riders. We did not test the CRF250L or 390 Duke models, so how well this device works with smaller and lighter bikes remains to be seen, as even the brutish 1190 had a hard time steering the added weight of the SKIDBIKE at low speeds. SKIDBIKE adds a couple of hundred pounds of unsprung weight below the bike, and while it is relatively evenly distributed and supported by its own suspension systems and casters, the front wheel encasement makes steering much heavier and slower. It felt a lot like riding a Can-Am Spyder at first. It was also challenging to upright the Adventure from a 35-degree lean when "dropped."

However, the beginning rider is more likely to start rolling straight ahead and not dive directly into turns. They can test the limits of traction by applying one or both brakes in increasing amounts, and the smaller bikes should be infinitely easier to right after a fail. Once comfortable with braking, beginners can practice leaning by pressing on the bars at a slightly higher speed. I imagine it would be relatively hard to break traction on the smaller bikes without raising the rear wheel almost entirely off the ground, and the skate-like effect of that reduced trac-

restricted the bike's lean to a maximum of 35 degrees. Its "safety wings," essentially training wheels, have a platform large enough for the rider to stand on or land on, should she or he be thrown by a sudden change in the bike's attitude. Because of this, the rider will most likely land on the moving cradle instead of the pavement. The physics of the bike in motion are real; the consequences to the rider, fortunately, are not.

"What we're able to do is eliminate the one thing that hinders learning—fear of falling," said Dane Pitarresi, president of SKIDCAR System, Inc., which has recently added SKIDBIKE to its product line.

The highside experienced by the expert rider is the most violent of traction-oriented get-offs and the peril is obvious: The change in inertia literally catapults a leaning rider from one side of the bike over the seat and ejects him off the other side in the most catastrophic manner. A lowside—in which the front wheel loses traction and slides out—is only slightly less devastating and its potential for injury is obvious. Braking while leaned is a common source of lowsiding, especially on bikes that do not have traction control or an anti-lock braking system (ABS). The brake is applied, the wheel skids out and down goes the bike, the rider with it.

How does a rider avoid these unwanted meetings with pave-

ment? Proper instruction and improved technique, along with lots of practice, are the keys. The problem is that crashes, falls, dumps, get-offs in practice can hurt as much as they do in traffic. There is, of course, the very natural fear of falling onto an extremely hard surface, and Pitarresi points out that when this much fear is present, it gets in the way of learning.

SKIDBIKE allows a rider to do

all the wrong things while riding a motorcycle, without the painful consequences of those mistakes. From there, proper technique can be taught to help avoid such mistakes in real world situations.

This is accomplished by attaching the SKIDBIKE cradle to the motorcycle's suspension. The technology is engineered to adjust tire grip through the electric ram and independent dual carriage sys-

Lowsides can be recreated and paired with corrective instruction, without any bumps or bruises.



tion is much more akin to riding off-road than anything these riders are likely to encounter short of a downpour. Since the feeling is different than riding an unladen bike, the learning will be different as well.

Finally, there are the training sites to which this device is marketed. The SKIDBIKE is more expensive than the motorcycle to which it is attached, and you need both. Site owners and training coordinators will need an advanced curriculum, specific to the SKIDBIKE, for which they can charge an additional fee. The manufacturer offers basic curriculum, which starts out much like a beginning rider course, "feel the controls, keep your eyes up, put both feet on the pegs." However, we didn't get to experience a full lesson. As an investment, many training locations will only be able to afford and have room for one device (it's big), which limits the student to instructor (revenue ratio) to one to one. How much are motorcyclists willing to pay to experience a "crash without the rash?" The challenge will be booking enough sessions to keep the wheels rolling. Motorcycle shows, rallies, track days and advanced training sites could be very successful. Basic training courses could be a trickier sell.

We highly recommend inquiring about demoing the SKIDBIKE for yourself.

—David Hilgendorf



How to highside.

tem. The cradle can lift the suspension on the fly, via remote control, to reduce the coefficient of friction, simulating speed and road conditions. This effectively reduces the size of the contact patch under the tire tread and lessens the rate of speed necessary to break traction, so learning can take place in a slower and relatively controlled environment.

"The systems are attached to the (bike's) suspension, at the frame and axle," Pitarresi said. "The motorcycle stays pretty realistic, so you've got weight shift. When you grab the brake, the suspension is going to work. All we've done with the adjustment of the coefficient of friction is, the less grip, the slower you need to go to realize what is going to happen at a very high rate of speed. It's like riding in

the rain; you reduce speed because the traction isn't there."

One of the most valuable features of the SKIDBIKE system is teaching new riders what they don't know and haven't experienced.

"Countersteering takes energy, it takes a change in your body position. The new rider doesn't know about that," Pitarresi said. "So that makes a big difference, because we can do that at low speed, and if they miss it, it's no harm, no foul."

"For beginners, we have a 30-minute curriculum, let them get up on the bike, get rolling, see how it moves. Then, after, it's mostly just braking. Let them see how hard they can get on the brake, see what it feels like to lock the wheels up. It will low-side. It will high-side. That's why it's

important to be able to do it at the lower speeds, so if it happens, you can still hang on."

That is something for which even the saltiest experts can be grateful.

At \$19,000, the SKIDBIKE system is prohibitively expensive for most individuals, and is currently only available for the Honda CRF250L, KTM 390 Duke and 1190 Adventure. It is being marketed to rider training and safety schools, and not just for beginning riders—the Adventure allows experienced riders to thoroughly test the limits of technological advances like ABS and traction control. The theory and technology originated with the SKIDCAR System, which employs carriages for cars, pickups, emergency vehicles, buses, light military vehicles, even 18-wheelers. **MCM**

Rider Impression

First, the SKIDBIKE was a lot of fun. I am a dirt bike rider as well, and with its decreased contact patch, the SKIDBIKE reacted much like a dirt bike in sand. That should bode well for the learning aspect. When it's fun, learning happens easily. It was fun to wick it and get a little sideways, just as I would out on the trail—though obviously something I try to avoid on a street bike. I found that my off-road instincts took over when it came to straightening up the bike to avoid a high-side. I never did get thrown over the bike on a "controlled" high-side. Either I didn't push it hard enough or I already had some of the necessary movements ingrained to avoid one. Maybe a bit of both.

I can really see the value of SKIDBIKE in braking and turning education. As a longtime dirt rider with limited street experience, I approached braking, cornering and steering on the side of caution when I bought my first street bike, a Honda VFR800. So, it took a long time for me to learn about braking distance, corner lean and contact patch. I got a few good tips from fellow riders on organized rides that helped me get off the seat and really lean into turns. I also learned a lot just watching MotoGP racers on TV, noticing how, even at 200 mph, they didn't make any sudden movements. With access to a SKIDBIKE (and access to Skid-bucks at my bank), I could no doubt have received good instruction in a fraction of my trial-and-hopefully-no-error period out on the mean streets.

I see great value in instruction on the basics in an environment where you don't have to worry about hitting the asphalt when you make a mistake. Out on the street, if you turn the front wheel and grab the brake,

you're going down. Have the back wheel start coming around on a rear brake skid and you've probably got a high-side in your immediate future. If SKIDBIKE instruction can teach how to avoid these terrifying situations, I'm all for it.

It was fun to hop on the bike and get loose, even for a short time. I wonder how much of that would carry over to the real world for the average beginner, and how quickly. It didn't feel exactly like being out on the road, but it has to help. My gut feeling is it would take multiple sessions to start getting real transference. It wouldn't be cheap, but if it helped prevent even one get-off, it would be worth every penny.

—Russell Evans



One of SKIDBIKES' most valuable lessons comes in learning what to do during loss of traction.