



MC PROJECT: BUELL TRIBUTE BIKE

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MAD PROPS!

WE BUILD THE ULTIMATE XB

Erik Buell had come a long way by the time Harley-Davidson axed his eponymous motorcycle company late in 2009. After 26 years trying, he had finally proven his American sportbikes were competitive with the best from Japan and Italy by winning the 2009 AMA Daytona Sportbike Championship. But way back before this racetrack success ... before the advent of the liquid-cooled, Rotax-built Helicon motor that powered the championship-winning 1125R ... back when company politics kept Harley's antiquated, air-cooled, pushrod V-twin tied like a boat anchor around his ankle ... Buell touted his machines as "the ultimate back road bikes."

This wasn't a cop-out, and Buell's agile, upright "sportfighter" motorcycle designs made the most of The Motor Company's technically crude but torque-rich powerplant—especially tuned to Buell's potent Thunderstorm specs. "Honestly, the air-cooled motor was perfect for the streetbike application," Buell reminded us recently. "It has loads of torque, and a lot of flywheel isn't a bad idea on rough, dirty roads. It's easier to put that power down. In fact, it's really fun!"

Buell/Harley reps had been urging us to do an XB-based project bike for some time, and even offered a scratch-and-demo 2008 XB12S Lightning as a starting point. We were waiting for inspiration to strike when financial realities hit the cooling fan in October '09, and Buell was shut down. That was all it took

to snap this project into focus. We decided to construct a two-wheeled tribute to Erik Buell's original vision of the ultimate back road bike: light, torquey and insanely fun to ride.

The long-stroke, 1203cc Thunderstorm V-twin is already a sweet street motor in stock form. It delivers a robust 70 lb.-ft. of torque with that singular, heavy-flywheel character that feels like you've been whacked by God's own nine-iron whenever you crack the throttle. More is always better, however, so we delivered the bike to air-cooled Buell guru Danny Bilansky at Hal's Harley-Davidson in New Berlin, Wisconsin. Having twice won the ASRA Pro Thunderbike National Championship, he knows how to make XBs go.

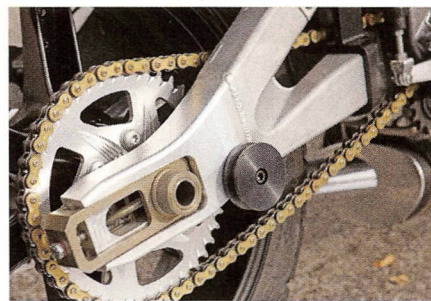
Bilansky began with a little low-buck hot-rodding, inserting off-the-shelf XB9R pistons that bump compression to 11.0:1. Next he shipped the stock muffler to Drummer Racing Products in the heart of North Carolina's NASCAR Country. Drummer guts the original muffler, deletes the heavy OEM muffler valve apparatus, and reassembles with a lighter,



Polished stainless-steel end cap is the only indication the muffler has been modified by Drummer. It's 7 lbs. lighter, makes 8 lb.-ft. more torque and triggers car alarms at nine paces



Fully adjustable, remote-reservoir Öhlins shock was custom-built to our specifications by David Behrend at Fast Bike Industries. The personalized sticker on the reservoir is a nice, individualized touch.



The chain-drive conversion swingarm from the old Buell race kit is now available through Erik Buell Racing, replacing the OEM belt drive and allowing easy gearing changes. It looks trick, too.

higher-flow core that delivers the flattest torque curve this side of Dale Jr.'s Impala. Then he plugged in Daytona Twin Tec's simple-but-effective Twin Tuner fuel-injection controller, which uses up and down push-buttons to let you quickly and easily trim the fuel mix.

Strapped to the Hal's Speed Shop dyno, the massaged motor put out 92 horsepower and 78 lb.-ft. of torque, a sizeable increase over stock. But peak numbers are just part of this story: The torque curve is a thing of beauty, one of those high and wide plateaus that only comes from a two-valve twin. Where the stock curve falls into a deep hole at 3500 rpm, the modded motor now produces a whopping 70 lb.-ft.—an 8 lb.-ft. increase, and equal to the stock bike's peak torque. Output climbs upward from there, and the difference in acceleration is night and day.

With great torque comes great back-torque, so Bilansky also installed an STM

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slipper clutch from Erik Buell Racing. On the stocker, heavy engine braking complicates aggressive corner entries with unwanted rear-wheel chatter. The Italian-made STM kit replaces the original pressure plate with a progressive-engagement, forced-lubrication slipper mechanism that absorbs this back-torque and eliminates wheel hop. The effect is dramatic, allowing you to drop multiple gears at a time and step the back end out as smoothly as Chris Carr on a mile dirt-track. The slipper mechanism also protects from unintentional overrevving that can result in bent valves—a not-uncommon danger for

these low-revving pushrod twins.

With the powertrain wrapped up, we turned our attention to chassis upgrades. Dumpster diving in the defunct Buell race department netted some unobtainium exotica in the form of a fully adjustable Öhlins fork originally intended for the ultra-rare XBRR Formula Xtreme racer. A one-off billet bracket holds a single race-spec, eight-piston Nissin brake caliper biting on Buell's patented Zero-Torsion-Loading (ZTL) front rotor, attached with Erik Buell Racing's new rotor-mounting kit for improved heat dissipation. It's worth noting that, even after two track days, this is

Our supermoto-inspired Super TT is purposeful, not pretty. Motocross-style graphics from DeCal Works look race-ready, while the black-and-orange color scheme pays homage to Harley-Davidson.





Buell's innovative, fuel-in-frame chassis always seemed incongruent with the low-tech, air-cooled V-twin. Comprehensively tweaking the engine and chassis makes the combination remarkably capable.

A license plate relocater from American Sport Bike, perfectly matched in Hammettone silver, deletes the original cheese grater extended fender for a tighter look. Dunlop's D616 sport radials—designed to resemble racing rain tires and offered as original equipment on first-year Buell XB12X Ulysses—look exactly right on our sumo-styled ride, and the thick, cool-running tread delivers long wear and good grip in all conditions, even at the racetrack.

The racetrack was where we debuted our Buell tribute bike, in front of Erik himself and a few hundred fans attending last summer's Buell Homecoming at Blackhawk Farms. Though he declined a ride, Buell spent some time inspecting the bike in every detail before giving it his ultimate endorsement: "Out on the back roads," he said, "that thing is just going to be a blast!"

He was absolutely right. In the twisty alphabet-soup of letter-named highways criss-crossing southern Wisconsin, our big-bore supermoto has no equal. It feels like a 92-horse BMX bike, and encourages the same sort of jackassery you practiced on your bicycle as a kid. It's ridiculously easy to wheelie—the short wheelbase and high bar make it feel like you could just yank the front wheel up manual-style. And with so much torque so low down in the rev range, this

Super TT stands right up on the gas. That smooth slipper clutch and mega-strong front stopper make it just as easy to get the rear Dunlop hacked out and howling whenever the throttle is closed, and it's all you can do not to jump every neighborhood curb—though the upgraded suspension could easily handle the hit. Like any Öhlins-equipped bike, this one feels unflappable and ultra-responsive over even the roughest pavement. Even better, the excessive fore-and-aft pitching that plagued the high-riding, short-wheelbase stock Lightning has been completely eradicated.

Buell was onto something with his original sportfighter XBs, and our hot-rodged Super TT is the best example we've ridden yet. Improved with suspension that's somehow firmer yet more compliant, and outfitted with technological assists like the slipper clutch, steering damper and flawless fuel injection that smooth over any rough edges, it's hard to put a wheel wrong. Our tribute bike gives new meaning to Buell's old "own the corners" tagline, and is endlessly entertaining in the ever-changing backroad milieu. The unique blend of power and simplicity makes it a supremely engaging bike to ride, guaranteed to spot-weld a smile to your face. We can't think of a better tribute to the man behind the Buell brand. **MC**

SOURCES

American Sport Bike

1341 Distribution Way #22
Vista, CA 92081
760.727.2333
www.americansportbike.com

LSL steering damper	\$379
License plate relocater	\$199.95

Daytona Twin Tec

933 Beville Rd. #101-H
South Daytona, FL 32119
386.304.0700
www.daytona-twintec.com

Twin Tuner fuel-injection controller	\$199
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DeCal Works

2021 Johnson Ct.
Kingston, IL 60145
815.784.4000
www.decalmx.com

Custom graphics	\$199.95
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Drummer Racing Products

672 Massey Deal Rd.
Statesville, NC 28625
828.381.7546
www.kdfab.com

Drummer original muffler	\$400
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Dunlop

P.O. Box 1109
Buffalo, NY 14240
800.548.4714
www.dunlopmotorcycle.com

D616 front tire	\$164.86
D616 rear tire	\$207.70

Erik Buell Racing

2799 Buell Dr. #C
East Troy, WI 53120
www.erikbuellracing.com

XB chain-drive swingarm kit	\$1795
Front brake rotor mounting kit	\$41
STM slipper clutch	\$999

Fast Bike Industries

18 Rugby Knoll Dr.
Hendersonville, NC 28791
828.435.0125
www.fastbikeindustries.com

Custom Öhlins shock	\$990
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Renthal

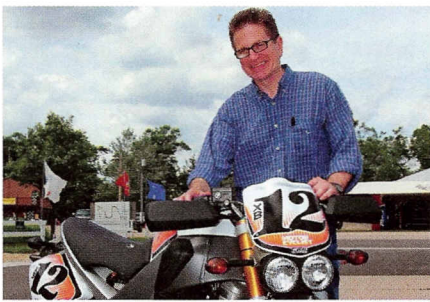
27636 Avenue Scott #A
Valencia, CA 91355
877.736.8425
www.renthal.com

Streetfighter handlebar	\$74.95
Dual-compound sportbike grips	\$15.95

Vortex Racing

1900 Gunn Hwy.
Odessa, FL 33556
800.440.3559
www.vortexracing.com

Rear sprocket	\$64.95
RK GB520GXW chain	\$134.95



Erik Buell envisioned his XB12 "sportfighters" as the ultimate back road bikes: light, torquy and perfect for tormenting supersport jockeys everywhere from the Angeles Crest to Deals Gap.



Renthal Streetfighter bar is lower and wider than stock, for a more aggressive riding position. Renthal also supplied a pair of dual-compound Sportbike Diamond grips. The hand guards are Buell OE parts.



The fully adjustable Öhlins fork was originally intended for Buell's controversial XBRR Formula Xtreme racebike. A custom lower right leg accommodates the massive eight-piston Nissin brake caliper

the only ZTL-equipped Buell we've tested that hasn't hot-spotted or warped its rotor. An adjustable LSL steering damper from Buell specialists American Sport Bike tucks under the lower triple to keep the front end calm when the inevitable wheelies arise.

The stock swingarm and belt final drive were likewise replaced with Erik Buell Racing's chain-drive swingarm conversion, shedding pounds and enabling easy gear changes. Covered with machining marks and capped with hard-anodized, endurance racing-style, quick-change axle adjusters, the EBR race-kit swingarm is pure hardware porn, and it simplifies tire changes, too. A Vortex Racing aluminum sprocket and gold-anodized RK #520 X-ring chain complete the final drive.

Connecting the race swingarm to the stock XB frame proved challenging. Our donor bike was a Lightning Long extended-wheelbase version, and there were no aftermarket shocks available. Our best (and possibly only) option was a custom unit from David

"It feels like a 92-horse BMX bike, and encourages the same sort of jackassery you practiced on your bicycle as a kid."

Behrend at Fast Bike Industries. A former Erion Racing crew member and Öhlins USA technical support manager, Behrend hand-built an Öhlins shock from parts and tuned it specifically for our intended use. FBI's typical custom shock pricing is around \$125 more than an off-the-shelf unit, making this service a great value for anyone needing a shock for a custom or vintage bike.

After the chassis was dialed-in, styling was all that remained. The upright, high-bar Buell already felt like a dirtbike from the saddle, so we decided to give it a flat-track/supermoto look. Simplifying matters was the fact that

Buell's Super TT bodywork—complete with number plates, fork guards, hand guards and front fender beak—bolt right onto the existing Lightning frame. Custom, XB12-themed vinyl graphics from motocross/supermoto masters DeCal Works, sub-surface printed on durable, 19-mil high-gloss vinyl, complete the competition-inspired look.

A taller, flatter Super TT saddle capped off the supermoto look and feel, along with a cross-braced Renthal Streetfighter handlebar that's slightly lower and wider than the stock bar for a more aggressive riding stance.

