

RCD Spotlight

by Chris Long

Smooth operator

RC-MONSTER

Slipperential

To compensate for the instant torque of brushless motors, most ESCs now include a “punch control” feature that overrides transmitter input to slow the motor spool-up and limit torque. But the ESC doesn’t know how fast you’re going, and if you need to accelerate quickly for a jump, you do not want the ESC to “smooth” the power delivery.

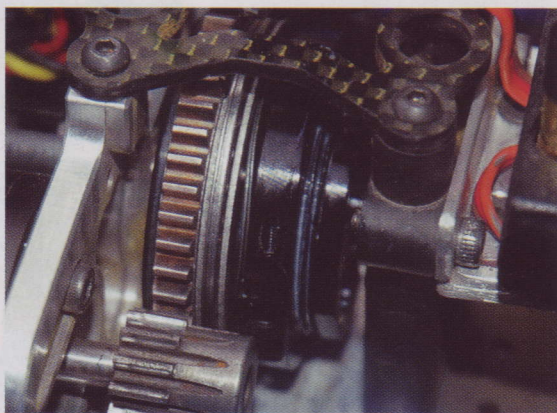
RC-Monster’s Slipperential combines a standard 1/8-scale diff and a traditional slipper-clutch system. It allows the usual center diff action to control front and rear power distribution and it smooths power delivery at low speeds; but once you’re rolling, it delivers full power without delay. It offers the advantage of using standard Mod 1 pinions and allows ESC/motor braking, and it’s infinitely adjustable (no messing with changing clutch springs and pads).

The Slipperential is available with a 46T (buggy) or 50T (truggy) spur and is a drop-in for Xray, Mugen, Associated and Losi cars with a 46T or 50T spur. For Ofna and Kyosho cars, you’ll need extra shims as the Slipperential is shorter than the stock diff.

INSTALLING & TESTING

I used my brushless Jammin’ X1X buggy with the 46T spur, and in a little under 30 minutes, I had installed the Slipperential. The instructions tell you to add grease and Loctite, and unless you want to take your diff apart, have a couple of new bearings ready, too. You can use the same diff oil, so I stuck with 10,000WT.

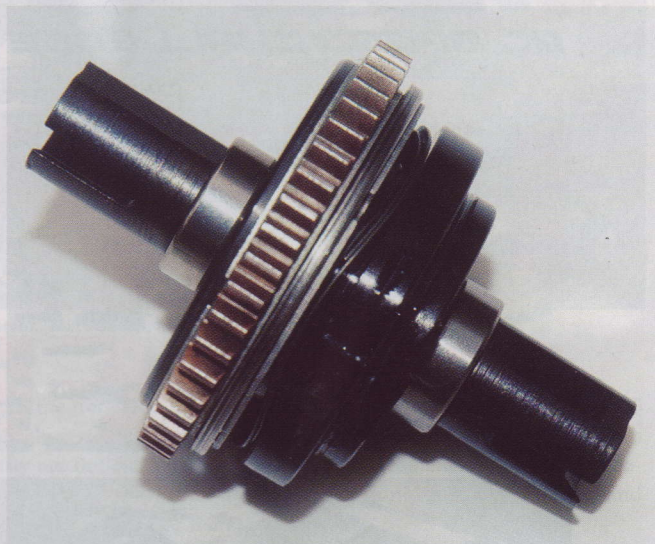
Before you hit the track, there’s some setup to do: using the tool included, adjust the slipper to a loose



The Slipperential bolted right into my Electric X1X buggy. The slipper can easily be adjusted while in the buggy with the included adjustment tool. The setting are held with a clamping collar.



Dump out the bag the Slipperential comes in and get ready for some assembly. Once the diff is assembled you can change diff oils without losing your slipper adjustment.



setting but tight enough to stay together; 10 start/stops help to seat the slipper pads against the pressure plate; fully tighten the slipper; do more start/stops while gradually backing off the slipper until it has a slight slip. This is a benchmark setting for the track. Tuning the slipper once it’s installed is very easy, and when you’ve finished adjusting it, screw the locking screw back in to lock your setting.

We’ve had a shocking amount of rain in New Jersey so the local

bashing ground was very slippery—not good test conditions because the wheels tended to spin rather than engage the slipper. But the Slipperential really helped here: I quickly backed off the slipper to smooth starts, and I maintained traction on heavy acceleration.

Once rolling, I didn’t really feel the effect of the Slipperential; the motor is always connected to the drivetrain, and the instant-power feeling of a brushless makes easy work of tight turns. I noticed the slipper engaging during full-power landings off large jumps. The slipper engaged for an instant to absorb the drivetrain shock, and this should help my driveshafts/diffs last longer and need less maintenance.

IN THE END

I was very pleased with the Slipperential’s performance. It’s the next step forward in the 1/8 brushless evolution. It gives e-drivers the characteristics of a clutch without the headache of mechanical brakes or tweaking shoes and springs. ☺

Links

RC-Monster, rc-monster.com

For more information, please see our source guide on page 137.

VITAL STATS

MANUFACTURER RC-Monster

PRODUCT Slipperential

PRICE \$120

FITS Mugen, Losi, AE, XRay and buggies with a similarly sized diff

KIT CONTAINS instruction sheet and all parts required to build one complete 1/8 Slipperential center diff.

NEEDED TO COMPLETE 8mm inside diameter bearings specific to their application (i.e. 8x16x5), silicone diff fluid