Often, momentum is a good thing. It keeps you going when nothing else will. Other times, it’s a liability. It keeps you moving in one direction, even though a change of course is called for. And so it is in the mini class. Since the Consumer Products Safety Commission-imposed Consent Decree which mandated displacement categories for youth quads, we’ve been seeing 50s for the 6-to-11 gang, as well as 80s and 90s for riders 12 through 15. You might have thought that 50cc was the limit for the youngest ATVers, as all the quads for kids 6-to-11 displaced about 50 cubes. Well, you’d have been wrong. The Decree’s displacement range for ATVs ridden by youngsters 6-to-11 is under 70cc!

E-ton is the first company to notice this reality and they have gotten a jump on the competition by offering a Viper 70 to go up against the 50s from Japan and Taiwan. Let’s find out if a 70 is a better 50!

For a mini, the 70 has stretched-out ergonomics. Most kids below eight years old will be too small for this 90-sized machine.
HOW BIG IS THE VIPER 70?
It's the same size as the Viper 90R we tested two months ago, which means it's roomy enough for an adult under six feet tall to bop around on it without bumping his knees on the bars. You might notice a few of the dimensions differ between the 90R and the 70. That's because the 70 has smaller wheels than the 90R, bringing the chassis closer to the ground. Ergonomically, the two machines are identical with no difference in the seat/footrest/handlebar relationship.

AREN'T ALL MINIS DESIGNED FOR THE SAME KIDS?
No. Even without the CPSC's interference, the mini class (we call the 80s and 90s youth quads) has split into two categories. You have the micro minis, such as the Suzuki QuadSport LT50 (or its twin, the Kawasaki KFX50), Polaris Predator 50, Kasea Skyhawk 50 Mini and E-Ton's own Viper 50M. These tiny quads are intended for the youngest of mini riders, ranging from age six to about age eight. Once they sprout a bit, the kids can move up to the larger Yamaha Raptor 50, Kasea Skyhawk 50, the Viper 70 and other minis with larger chassis until they're old enough to take on the youth quads. Depending on the size and strength of the child, we'd start considering a Viper 70-sized quad around the kid's ninth birthday.

DOES THE VIPER 70 HAVE MORE POWER THAN A 50?
Yes. When you ride it, the air-cooled, electric start, oil-injected Viper 70 feels more like a 90! It pulls almost instantly off-idle. It will tackle any hill you're likely to take on with a mini. It goes from zero to its CPSC-mandated top speed of 20 mph in no time at all. For kids weaned on the very mild Suzuki LT50, it's going to be an eye-opener.

HOW DOES IT HANDLE?
Better than most minis. The majority of minis we test have pretty significant understeer. The Viper 70 doesn't. There's enough weight on the front end, plus the excellent traction provided by the Maxxis tires, and the result is a mini that truly carves! Now, this might be intimidating for a youngster who is riding an ATV for the first time, but once he gets a decent amount of experience under his belt, he's going to love the Viper 70's accurate steering. There's no sense of body roll on the Viper 70—the solid rear axle and single A-arm suspension pretty much won't allow it. In a straight line, the 70 is rock solid stable up to its top speed.

IS THE SUSPENSION GOOD?
It's not nearly as good as we'd like. Just as the chassis is the same as the 90R, so is the suspension. That means the suspension that is too stiff for larger 90 riders is going to be even stiffer for the lighter 70-sized riders. Yes, we're aware that getting the right suspension rates on a mini is challenging, but that's no excuse! The rear suspension is long travel, providing around four inches of travel. It's plush, but still too firm. Almost no kids are ever going to bottom the suspension, so they aren't getting all the travel their parents are paying for. Still, E-Ton is so close to getting it right that we can taste it, but they're simply not there yet.
Up front, it’s a different story. We want all the R&D departments to listen up: single A-arm suspension is not acceptable! When the front shocks compress, the front wheels move out as much as they move up. That means that the front wheels are scrubbing sideways, making the action of the suspension appear much stiffer than actually is. Also, the travel isn’t nearly as long as it is in the back. This is the biggest drawback on the 70, but it’s one shared by every single mini except the front swingarm Yamaha Raptor 50, which is also a problematic design.

**CAN YOU TRAIL RIDE IT?**

As long as ground clearance isn’t an issue, absolutely! This is the best trail mini we’ve ever tested. It has great tires, outstanding power, good handling and decent suspension. It’ll dart between trees like an adult machine, and squeeze through narrow gaps where dad’s Z400 doesn’t stand a chance. It’s great on the way up hills, though the fully automatic belt/pulley transmission will freewheel on the way down. Fortunately, the right-hand operated rear disc brake is outstanding. To get decent slowing up front, the front drums require more pressure than most kids can provide—not great. Also, the levers should have been downsized for smaller hands.
IS IT A DUNER?
It could be a great duner, but not with the stock rear tires.
Like most minis, the front and rear tires are the same. The tread pattern on the
Maxxis tires is great for the dirt, but the pattern doesn’t provide enough
“paddle” for the rears to work in the sand. Find a small set of paddles for the
70 and it will happily roost through the dunes.

IS IT RELIABLE?
Yes. Forget about the early Taiwanese quads and their manufacturing prob-
lems. For the majors such as E-Ton, Kasea and Kymco, the quality of minis is
approaching what we see from Japan. People used to laugh at Japanese motor
vehicles in the ’50s and ’60s, but look at them now. Taiwan is on that same
track and is almost completely up to speed. We’d still like to see the air filter
holder moved from next to the right front wheel and require the removal of
less than seven fasteners to get to the filter.

HOW ABOUT SAFETY ISSUES?
It has the stuff we want to see, plus some. There’s a tethered kill switch, floor-
boards with integrated minipegs (we’d prefer full pegs), a horn, a color-
coordinated cross-bar pad, a blinking red LCD up front, and the ability to
easily add CPSC-banned headlights which will make the Viper 70 even safer.
Great job, E-Ton!

WHAT IS OUR FINAL ANSWER?
This is an outstanding mini quad and a groundbreaking machine in its class. As soon as
we see an ’05 Yamaha Raptor 50 and another ’05 Taiwanese machine (Kymco or Kasea,
probably), watch for a very serious mini shootout. In the meantime, to be at the top of the
mini class, this is the quad to beat.

WHO IS E-TON?
Not just ATVs

- While E-Ton is not as big a name as Honda or Yamaha, it isn’t building
  quads out of a garage. Twenty years old, JIEE Industry makes ATVs, elec-
  tric and gas scooters, motorcycles and motors, selling them worldwide.
- Multinational corporate experience under the JIEE brand name.
- The Viper 70’s motor is made in China by JIEE’s joint venture partners,
  Shenzhen Yihao Industrial Company.
- JIEE has an ISO9001:2000 certifica-
  tion in 2001. Part of the Shenzhen quality code reads “Yihao people are
  proud of qualified products and ashamed of defective products.”
- The future, JIEE is working on hybrid engines and solar cell produc-
  tion. We do know that E-Ton has four-strokes ready when the bar on
  ring-downs kicks in on December 31, 2002.

Single A-arms are standard issue on minis and they
don’t get the job done. When the wheel hits a
bump, it moves sideways almost as much as it does
up, reducing the effectiveness of the shocks.