

PROFLEXNEWS 1997 MORE



Since 1989, Girvin Mountain Sports has provided innovative products to address the challenges of cyclists everywhere. Before front suspension forks existed, Girvin was there with the Flexstem, a suspension system to take the sting out of mountain biking.

In 1989, GMP introduced the Rock-Ring chain ring protector, proclaiming "Don't knock your teeth out... Bite back with Rock-Ring." Since then, we've added sizes and colors to spare thousands of chain rings world wide.

In 1990, Girvin introduced the first production suspension bike, the Pro•Flex, ushering in a new niche in performance cycling.

If you see a pattern here, you're probably on to something. We identify needs, and design products that provide solutions. From suspension to improve comfort and performance to lightweight magnesium pedals that don't sacrifice functionality to deliver weight savings, the GMP design house delivers engineered solutions that work.



Innovation Where it Counts.

	Rise	Reach (mm)	Color	Headset
Comfort	30"	115, 130	Black	1", 1 1/8"
Cromoly	10", 20"	120, 135, 150	Black	1", 1 1/8"
Threadless	8.5"	120, 135, 150	Black	1", 1 1/8"
Aluminum	8.5"	100, 120, 135, 150	Black, Silver	1", 1 1/8", 1 1/4"
Ti Bar/Stem	8.5"	135, 150	Ti	1", 1 1/8", 1 1/4"
Road	0"	100, 115, 130	Black, Silver	1"

Flexpost

Available in 300mm length, 26.0 mm diameter. All posts come with shim set to accommodate 26.2, 27, and 27.2 mm seat tubes.

Mag Pedal

	Axle	Body	Weight	Color
Mag-C	Cromoly	Magnesium	335g	Anthracite
Mag-T	Titanium	Magnesium	285g	Pearl

Rock-Ring

	4-Bolt	Hyper Drive	46 T	48 T
Silver	✓	✓	✓	✓
Black	✓	✓	✓	✓
Red	✓	✓	✓	✓
Blue	✓	✓	✓	✓
Green	✓	✓	✓	✓
Purple	✓	✓	✓	✓
Black Light	✓	✓	✓	✓
Rasta	✓	✓	✓	✓



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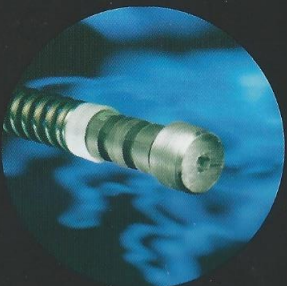


Full suspension is hot! It absorbs shock, reduces upper body fatigue, and makes riding comfortable. Racers swear by it, but recreational riders have the most to gain from a suitable suspension system.

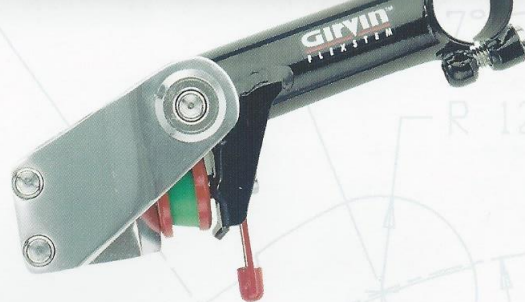
Not everyone needs a high-dollar long-travel suspension bike, though. Flexstem's 3/4" of travel and light weight make it the perfect cushion for sore hands and wrists. Flexpost's coil spring and elastomer internals ease sore backs and back sides, enabling recreational riders to cycle longer and feel fresher the next day.

Often called the "Gel saddle for your hands," Flexstem has been chosen by nearly a quarter of a million cyclists since its introduction in 1989. In fact, some say Flexstem started the suspension revolution.

Now, with the introduction of the Flexpost, an inexpensive suspension "bump survival kit" can be added to virtually any bicycle. Join the suspension revolution with Girvin Mountain Sports, "#1 in Bicycle Suspension."



Comfort Suspension for the Masses



Flexstem

Before suspension forks, there was Flexstem—the product that jump-started the suspension revolution. Available in Comfort, Cromoly, Aluminum, Titanium bar/stem combo, threadless, and road versions, a Flexstem exists for every application. All Flexstems are tuneable with a single Allen wrench and three elastomer spring rates. What's more, a Flexstem is the lightest form of front suspension, weighing as little as 200 grams more than a conventional stem. For a cost-effective comfort solution, Flexstem can't be beat.



Flexpost

The perfect complement for a Flexstem up front, the Flexpost isolates your rear end and back from pot holes and trail chatter. Reliable coil spring and elastomer internals deliver 3/4 of an inch of cushy travel. Use Flexpost alone, or in conjunction with a Gel Saddle for the ultimate ride. Or mate it with a Flexstem and make your bike "fully suspended." Flexpost is available in a 300mm length to accommodate a variety of inseams. Shims adapt the post to fit 26.0, 26.2, 27, and 27.2 mm seat tubes on most popular bicycles.



Mag Clipless Pedals

Magnesium. It's 20% lighter than aluminum and just as tough. The feathery Girvin Mag-C (cromoly) and Mag-T (titanium axle) have cast magnesium bodies with an open cleat design to shed mud. They utilize state-of-the-art coil spring cleat recentering devices with 4° of float (no-float cleat available) and adjustable release tension. The new easy-entry toepeice makes click-ins a breeze in the toughest conditions, while sealed bearings ensure trouble-free operation over time. Weight: 335 grams (cromo), 285 grams (ti).



Rock-Ring

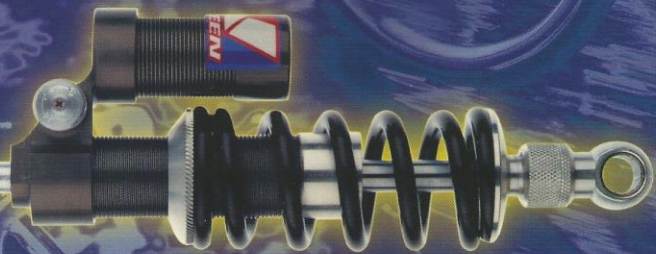
From urban jungles to backwoods singletrack, large chainring clearance is a problem. Snapping teeth off your cog doesn't just make it a hassle to ride out of the woods—it gets expensive. Rock-Ring provides cheap insurance to keep your bike on the trail, and your cash in your pocket. Constructed of aircraft grade 2024-T3 aluminum, Rock-Rings are available in 4-bolt Hyperdrive, Hyper C/Microdrive, 46 tooth, and 48 tooth sizes. Hard anodized colors include Silver, Black, Red, Green, Blue, Purple, Blacklight, and Pasta.

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Girvin
MOUNTAIN SPORTS

NOLEEN
RACING



**Suspension...
It's in Our Blood.**

Innovation. Stop and you might as well throw it in reverse, because you won't be moving forward. At Girvin Mountain Sports, we push the envelope of technology to provide the best performing suspension components available. Our shock absorber division, Noleen Racing, is one of the premier motorsports suspension specialists in the world. Noleen has designed suspension components for supercross, motocross, road racing, sprint cars, and Indy cars. Suspension is what we do.

With a rich heritage in racing, Noleen knows mountain bikes are the logical recipient of advanced suspension technology. Anyone who's ridden a full suspension bike has felt that all designs are not created equal. And while many shock absorbers look similar, the technology inside, and the performance they deliver, varies drastically.

In the NR series of shock absorbers, Noleen has designed a damping system that's better performing, more durable, more adjustable, and lighter weight than any other—a system with no equal. We use multiple damping circuits, floating pistons, stable nitrogen gas, and adjustable damping to deliver performance previously available only on works machines.

Mountain Bike Action remarked "Noleen took a decade of motorcycle suspension knowledge and stuffed it all into a diminutive nitrogen charged hydraulic shock... Noleen's sophisticated valving has made its shocks the kings of crush for five years to date."

To make the most of your full suspension rig, experience the shock that sets the standard in mountain bike suspension. We guarantee you'll expand the boundaries of your mountain biking experience.



**Noleen
NR-4 Features**

Nitrogen Charged Floating Piston

Chrome Silicon Steel Springs

Finger Adjustable Preload

Compression Adjustable

Rebound Adjustable

Remote Reservoir

Only Noleen is valved and sprung to fit the requirements of individual frame manufacturer's geometries and leverage ratios. Through internal valving and tuning knobs, high and low speed compression and rebound damping are infinitely adjustable. Cannondale Super V Active pictured.

We wind our springs from the finest chrome silicon steel, yielding consistent ride durability. Coils are available in a variety of rates and stiffnesses to suit individual riders. Rates can be changed in seconds without tools using our super-light titanium springs to shave weight.



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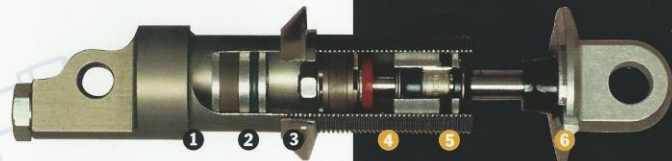


Noleen NR-2 Features

- Nitrogen Charged Floating Piston
- Chrome Silicon Steel Spring
- Finger Adjustable Preload
- Compression/Rebound
- Adjuster



Noleen Racing NR-1



Our lab testing includes everything from life testing to shaft seal compatibility studies. In fact, we can pound a shock with 1,000 cycle in days, simulating years of destructive off-road miles. Noleen owners receive the best of consistent, reliable performance.



If you're going to build exceptional suspension, you've got to race, race it, and race it some more. Our Supercross and Motocross team is one example of our commitment to real world race testing. If it works for the pros week in and week out, it'll work for you on the weekend.



Delivering the Goods: The Quality Process.

If you can't take an idea and translate it into a working product, you're just daydreaming. At Noleen Racing, we're not only the leader in suspension design and performance—we're the leader in shock absorber manufacturing.

We quality control inspect every step in the assembly of NR shocks. From raw materials to sub assemblies to finished product, our technicians are there every step of the way.

We even go so far as randomly testing finished units on our shock dyno. The attached computer provides a readout of performance and durability capabilities to ensure that you get the no-compromise ride we demand—the ride you expect when upgrading to Noleen.

We also utilize actual enthusiasts in key supervisory positions throughout the manufacturing process. Our team leaders know mountain bike suspension. They care about the finished product, and take pride in being involved in the creation of something extraordinary—the finest bicycle shock absorbers in the world.

- 1 Nitrogen charge delivers consistent damping
- 2 Floating piston separates nitrogen and oil
- 3 Finger-adjustable pre-load tunes in the field
- 4 Chrome hardcoated steel shaft for strength
- 5 Multiple damping circuits for total control
- 6 Completely rebuildable and revalveable



Tech Talk: Behind the Scenes.

Noleen NR Shocks are nitrogen charged oil filled spring assisted dampers. We separate oil and nitrogen with a floating piston to prevent cavitation (foaming) and deliver consistent action on the roughest rides. Damping is accomplished by regulating fluid as it passes through multiple damping orifices. Noleen shocks control both rebound and compression damping.

NR-2 and NR-4 models provide external damping adjustment for on-trail tuning. The NR-2 uses a single knob which proportionally adjusts both compression and rebound damping. The NR-4 employs separate compression and rebound adjusters. Spring preload can be tuned with a twist of the wrist.

We make every NR shock using the finest materials. Springs are wound from chrome silicon-wire to deliver consistent rate and long-term durability. Shock bodies are CNC (Computer Numeric Control) machined from 6061 aluminum, then hard anodized for performance and toughness. We machine every bearing, valve, and shaft to precise tolerances, and inspect parts before assembly.

Field Testing

Once the product is finished, we go racing. You'll see our "laboratory on wheels," the Noleen box van, at NORBA events across the country. Our R&D/Technical Support truck features a mobile workshop, letting us make modifications in the harshest environments. We test and refine Noleen shocks with professional racers, as well as average riders, to develop performance levels based on broad input—levels that perform in the real world.



Does Noleen Make a Shock for Your Bike?

Of course we do. NR-4s, NR-2s, and NR-1s are available for Cannondale Super Active, Cannor Super V, Trek Y, Gary Fisher Joshua, GT LTS RTS, Specialized, AMP, Mantis, Diamond E Scott, Pro•Flex, and other custom applicati



**Noleen
NR-1 Features**

- Nitrogen Charged Floating Piston
- Chrome Silicon Steel Spring
- Finger Adjustable Preload

We CNC machine our shock bodies from blocks of heat-treated 6061 aluminum billet for ultimate precision. Then we hardcoat the units to eliminate friction and reduce long term oil contamination. You can't see it, but you'll feel it in the ride.

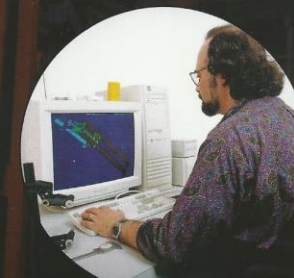
Noleen Racing's years of experience in suspension design and modification enable us to develop accurate valving and spring rates quickly. Once the "bench" R&D is completed, protos and test lead to finished product. Trek Y-22 pictu



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In an industry driven by image, Girvin's emphasis on technology you can "feel" goes against the stream. Sure, our forks look different. We don't preconceived notions of what a suspension fork should look like. If dual triple clamps make a telescopic fork more rigid for downhill use, we engineer them. If linkage forks offer the best steering and control for cross country use, who cares if they look different? At Girvin, we utilize the most extensive design and testing programs in the industry. We strive to design, test, and refine every suspension product we make to outperform and outlast the best our competitors offer. What goes into every fork we make? The 12 man Girvin engineering team rivals those of the biggest fork companies in size, and far outweighs them in suspension experience. We use Pro-Engineer, the same CAD (Computer Aided Design) and 3-D modeling program used by the Aerospace and Defense industries, to design all of our products. The program is so advanced, our engineers can select various materials for each fork component, and derive a computer generated weight that's within grams of the actual production product. After preliminary design with Pro-Engineer, Rasna's Mechanica, an advanced FEA (Finite Element Analysis) program, allows us to mesh a Pro-E model with simulated stresses. Through Mechanica, we locate areas that need to be reinforced, and remove material at non-stressed areas to produce the lightest, safest fork possible—all before a single prototype is made. And once prototypes are made, they're in for a rough ride! Our custom-built torture chamber houses some of the most destructive testing equipment in the bicycle industry—all of it attached to the latest computer hardware and software for measurement and analysis. The "Elevator," a three-story front end impact machine, simulates fork loads equivalent to riding your bike off a six-story building, while our bump drum machine and shock dyno pulverize spring and shock absorber designs day after day, helping us evolve the best spring and damping systems available. Finally, 3-time World Champ Henrik Djernis leads the five man BMW Pro•Flex squad in putting our forks to the toughest test around the world. What we learn from Hank and the guys on the pro circuit proves invaluable in the technology (and durability) every Girvin fork owner receives. So visit your local Girvin fork dealer and get your hands on the fork with differences you can feel. Ride the revolution.



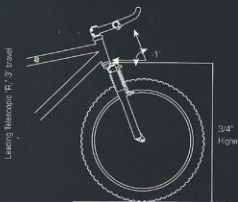
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Geometry Preservation: Better Handling.

As travel increases, head tube height and angle may increase, negatively affecting handling. For instance, bolting a 3" travel telescopic fork onto a frame designed for less travel jacks up the front end of the bicycle, 3/4" and increases wheelbase by 1/4". On the trail, these geometry changes lead to sketchy steering and a light front end on climbs.

Because Cross-Link's linkage design eliminates the need for tall telescopic fork crowns, you can add 3" of controlled travel to any frame without giving up the crisp handling you trust. Try that with a long-travel telescopic!



Light weight is critical in a cross-country fork. Every piece of the '97 Cross-Link line has been evaluated and redesigned for durability and gram savings. In fact, not a single piece from last year's fork remains—not even a brake boss. Total weight: 3.0 lbs. (MCU spring, carbon legs).



Cross-Link Elite Comp Features

Easton 6061 Aluminum

Girvin Lite MCU Sho

Hydraulic Damp

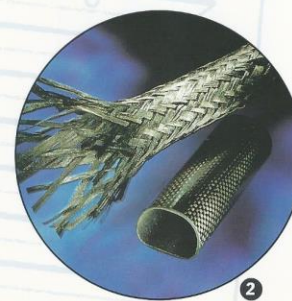
Adjustable Prelo

Grease P

3" Tra

Girvin's modular design philosophy enables Cross-Link users to upgrade forks in the future. Noleen and MCU spring units and Easton aluminum and carbon fiber legs fit on all fork models. Other upgrades include a 126 gram lighter stem which eliminates the link adapter.

With V-brakes and hydraulic brakes gaining popularity, front cable hangers are unnecessary, adding senseless weight. Cross-Link's exclusive removable cable hanger comes off in seconds with the removal of two bolts, and saves 35 grams of fork weight.



Cross-Link Pro Carbon



Cross-Link Elite



Cross-Link Elite Comp



Cross-Link Expert



Pipe-Line Chubby

Linkage Forks: Your Link to X-Country Performance.

Cross-Country Racing. It demands controlled travel, pinpoint steering accuracy, and the durability to last through hours of abuse in the toughest conditions. Five-minute runs down the mountain are easy. A cross-country fork has got to help a rider perform in all types of terrain, when he's fresh, and when the only thing keeping him rolling is sheer willpower.

Girvin has been building and improving linkage forks since 1993. While many telescopic forks exist, they all exhibit similar weaknesses—independent leg movement, stiction, brake scrub, and lack of steering precision. The Cross-Link targets the inherent weaknesses of all telescopic forks, providing the best steering and travel quality available for the sole purpose of cross-country riding and racing.

1 What's the secret to Cross-Link's steering accuracy and travel quality? Links and legs. The heart of the Cross-Link fork lies in the forged "Uni-Links." Uni-Links resist torsional and lateral flex, converting horizontal bump energy into vertical link travel, and transferring it through the links into the shock absorber. Uni-Links simplify Cross-Link, making it easier to tune and maintain.

2 Now that you know we've got heart, check out our legs. Cross-Link's massive D-section design eliminates flex and independent slider movement, transferring steering input directly to the front wheel. Super-stiff Cross-Link legs come in extruded 6061 aluminum, Easton® Taper-Wall aluminum, and indestructible Easton Carbon Fiber. Leg sets are interchangeable for future upgradability.

All this may seem like a radical departure, but so is the Cross-Link's performance. Read on to find out more about the fork that's revolutionizing cross-country riding and racing as we know it... only from Girvin.

Get a Chubby: Ride the Banzai Pipe-Line.

Riding the big steeps is a bit like surfing—once you commit, there's no turning back. But the consequences of a fall are exponentially higher than a pleasant dip in the drink. A good fork can make the difference between carving seconds off your run and skin off your knees.

The Pipe-Line Chubby utilizes dual triple clamps for stiffness and steering precision. Its telescopic leading axle design is ideal for extreme use, delivering a whopping 4" of travel standard (upgradeable to 5") and rock-solid stability. Inside, a combination of MCU, coil springs, and an air damping chamber soaks up the G's. Can a Chubby improve your performance? No doubt.

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Cross-Link Expert Features
 6061 Aluminum Leg
 GDT Coil-Over-Oil
 Charged Chamber
 Grease Port
 4" Travel



Girvin GDT Lite
 285 grams. Retrofittable to any Cross-Link Fork.

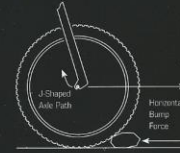
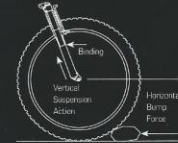
In conjunction with the materials pros at Easton, our engineers formulated a carbon-fiber resin that yields legs that are 20% stiffer and 10% lighter than standard aluminum. They pass rigorous abrasion and dent tests, and are able to upgrade any '97 Cross-Link model.



For a suspension fork to last, it's critical to seal mud, dirt, and grime out of the mechanism, and keep it all well lubricated. Girvin Goo is specially formulated with teflon and performance additives for all suspension applications. Link grease ports make "Goo-ing" your fork a breeze.

J-shaped Axle Path: Throw Bumps a Curve.

The primary challenge to any front suspension system is to convert horizontal bump forces to vertical suspension action. Due to the nature of telescopic design, internal stanchion tubes bind against external sliders when encountering horizontal bump forces. Stiction and unpredictable suspension action results. Cross-Link's J-shaped axle path smooths the transition of horizontal bump forces into the vertical linkage arc, absorbing energy and keeping you rolling in the roughest terrain.



Keep Your Wheel on the Ground
 IF YOU CAN YOU'RE TOO



3-time World Champ Henrik Djennis and the 6 member BMW Pro•Flex Team put the Cross-Link to the test on the toughest cross country circuits around the world. Their weapon of choice—the Elite-Comp with Carbon Fiber legs, dedicated stem, and brake hanger removed.



Telescopic: The Logical DH Choice.

Do you crave more than 3" of controlled suspension travel? When designed properly, telescopic forks deliver unparalleled performance in extreme downhill conditions. Many telescopic fork manufacturers eliminate the top triple clamp when designing a fork. Big mistake. A single crown can't come close to equalling the stiffness and predictability of a dual triple clamp design.

Like its motocross predecessors, the Pipe-Line Chubby's dual triple clamp configuration extends and braces the stanchion tubes for pinpoint steering accuracy. The clamps are forged from aluminum for strength and light weight. They grip super-stiff 28.5mm hardcoated 7075 stanchions which glide on space-age bushings to eliminate stiction.

At the front wheel, the Chubby's magnesium sliders ensure durability and shave unnecessary grams. Their leading axle design increases stability and makes longer travel possible. A magnesium brake arch and molded disc-brake mounting tabs come stock.

Hidden inside the massive tubes, an MCU/coil spring stack provides controlled travel, while a feather-weight air-damping chamber takes the shock out of horrifying impacts. 4" of travel is standard, and can easily be extended to 5" with an optional travel kit. Stiffer springs are included so you can tune your Chubby to your weight and riding style.

Details? We thought of them. Fork boots keep performance-robbing crud out of critical internals, while foam stanchion guards protect your frame in full-lock situations. Go ahead. Hang it out. The Chubby's got you covered.



Pipe-Line Chubby Features

Stiff dual triple clamp design
 4" travel (extendable to 5")
 Light Magnesium sliders



- MCU and Coil spring
- Stiffer Springs Included
- Tough 7075 stanchions
- Air damping chamber
- Disc Brake Ready
- Race Red or Jet Black



Girvin's innovative MCU/Coil spring stack is easily serviceable with a single 5mm Allen key. Light, reliable dual air damping chambers take the sting out of big hits. Add the included heavy-duty springs for heavier, more aggressive riders.

The Chubby's forged aluminum triple clamps were run through multiple sessions of FEA (Finite Element Analysis) to ensure optimum strength and weight. At 215 grams per pair, they're as light as comparable single crown clamps.

