

2005
BICYCLE COLLECTION

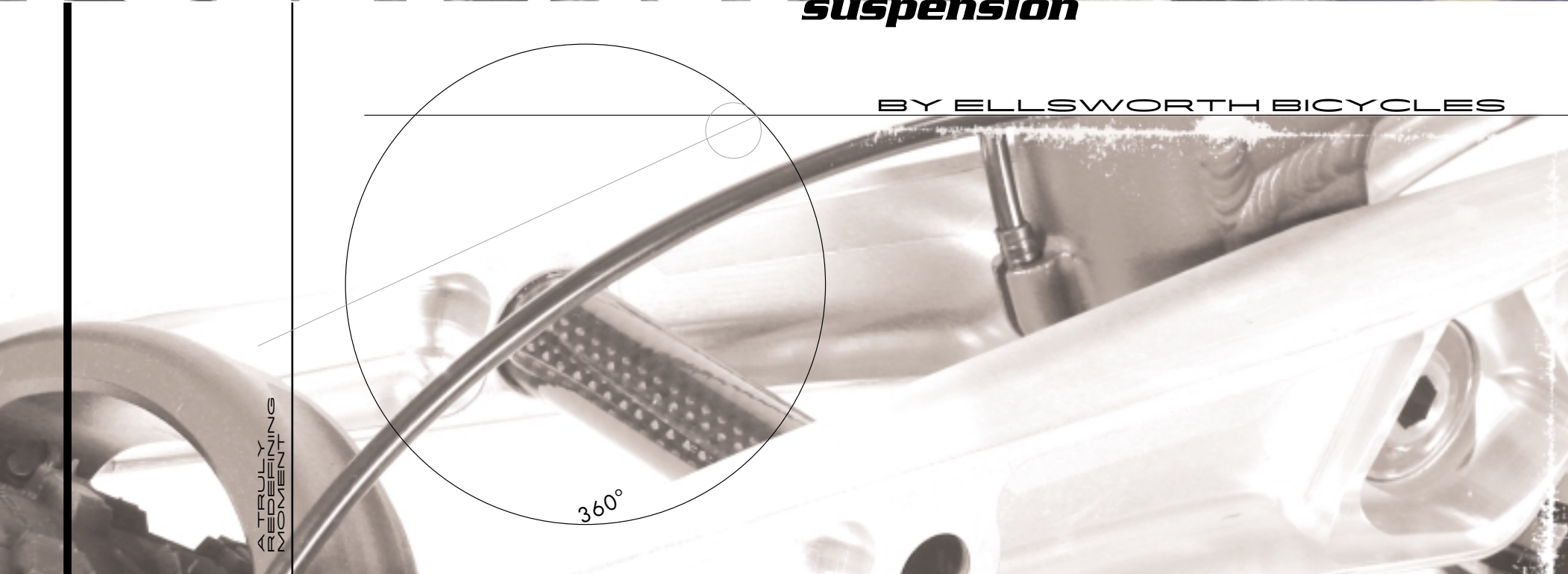


EllsworthTM
HANDCRAFTED BICYCLES, INC.



WELCOME TO
FULLY ACTIVE
suspension

BY ELLSWORTH BICYCLES



Our Story is more than just bicycles...

Ellsworth began as a passion; to create a simple, light, and beautiful hard tail bicycle with specifications that are now coined as "NORBA standard geometry". As the years rolled by, a hobby became more than a weekend passion, more than just a fantasy. A small company was born with a straightforward design, the "TRUTH." With a revolutionary linkage bike that would come to be known as an icon in the mountain biking industry, Ellsworth began to change. This frame design evolved over the last decade while Ellsworth's innovation became the staple of competition for any company looking to produce the best cross country full suspension bike available. As the company grew so did the products, technology, and reputation for quality.

Years after the Truth's inception, new technological advances in suspension, material, and production methods created the opportunity for even more inspiring designs. With the Instant Center Tracking Suspension technology model, new frame designs evolved to dominate other genres of bicycling. Strength, prowess, and performance were the primary focus when incorporating Instant Center Tracking into the most pedal efficient downhill frame ever, the "Dare." The freeride movement was met head-on with a powerful, durable frame that could out pedal most frames that offered half of the travel. Today, riders are taking longer, gnarlier trails that require bikes that possess the climbing agility to scale the same boulder riddled runs they descend down. Ellsworth answers that requisite with a 6" travel, all-mountain frame that bridges the gap between cross country climbing aptitude, stability, and the strength needed for a hard hitting, gravity connoisseur. The "Moment" redefines what is possible with one bike in the "all-mountain" category.

Any bike Ellsworth designs must hold true to, and expand the compelling magic of the machine. Tony still sees the bike as a fantastic machine that expands the world around him. The bike becomes a medium by which riders experience the environment and the earth around us. This concept motivates everyone at Ellsworth to do what we do. We love the bike; the bike is our friend and partner.

At Ellsworth, there is no compromise in the guiding principals of a bike when we design, execute, and complete frames. Without exception, every Ellsworth frame will go further with less energy, ride smoother so you can enjoy the terrain, and provide more traction and control in all conditions. Ellsworth frames are serious technical equipment, born of a commitment to the sport and the wonder of cycling.



TONY ELLSWORTH

the MANTRA

Every frame Ellsworth creates will carry an un-paralleled commitment to design & performance, in accomplishing our core features and benefits.

CORE FEATURES

Bump Absorption

Energy Efficiency

Braking, Traction and Control

CORE BENEFITS

The Ride Quality—smooth, comfortable, intuitive to negotiate. The bikes are less fatiguing to ride than one ever thought possible.

Increased Power—to climb, to go further, to go faster. These bikes are efficient. They don't carry unnecessary weight; they don't waste energy to do what they were designed to do. They are durable, and simple to own and maintain.

The Control—traction and control while braking, accelerating, climbing, cornering. These features make the bike safer and faster over formidable terrain allowing you to go further, faster, safer.



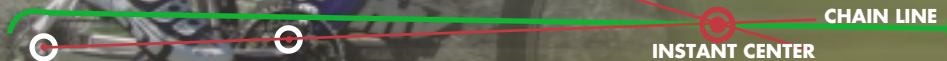
ICT Technology: Instant Center Tracking is internationally patented and quantifiably the most energy-efficient suspension design in the world. Internationally acclaimed, ICT four-bar linkage technology provides no energy loss by aligning the instant center of the linkage on the chain torque line and continually tracking it throughout the range of travel. The bike is designed to move toward that spot without jacking, squatting or stiffening. What does that mean in layman's terms? The rider cannot activate the suspension with forces associated with pedaling motion. This means that there is no pedal induced bob. The bike doesn't stiffen or lock out while pedaling. It stays fully active to keep the wheel in contact with the ground to provide a more comfortable and less fatiguing ride. It is the holy grail of bicycle suspension, the pinnacle of the four bar link designs. Any bike that is fully active and energy efficient will employ principals of Instant Center Tracking, or it will not completely meet the goal of fully active suspension without pedal induced bad habits which suck energy and reduce ride quality.

The most efficient rear axle travel path lies on a straight, vertical line. The horizontal movement of an arched travel path creates a continually changing space between your cranks and cassette. If the distance between the crank rings and rear cog changes the rear derailleur will move and adjust to tighten the slack. This kind of "chain grow" causes pedal kickback, which leads to fatigue and loss of control. The axle travel path that is closest to a straight, vertical line will be the most efficient and have the best suspension characteristics.

Similar 4-bar linkage designs do not utilize the concept of tracking the instant center created by the linkage. Other 4-bar linkages have an instant center behind the front tire, behind the bike itself, or the linkage tracks a point above the rider. The figure below demonstrates the dynamics of our instant center which lies far in front of the front tire and creates a much larger arch for the suspension travel path.

ICT Technology: Instant Center Tracking is the closest design that the mountain bike industry has to mechanical perfection in regards to efficiency and control.

"100% pedal efficient power with ICT."



ATLAS Technology: Anti-Torsion, Lower forward pivot, Active Suspension technology is Ellsworth's single-pivot solution for riders seeking legendary Ellsworth suspension performance, in a simple and affordable design. Using a one-piece CNC machined rear swing arm yolk on ATLAS designed bikes produced a stiffer ride to create a bike that is more energy efficient. By aligning the pivot point on the chain torque line, ATLAS single pivot technology establishes the most efficient and most active single pivot bicycle available. Positioning the pivot point directly on the chain torque line creates an optimized suspension with the swing arm moving as close to a perfect vertical line as a single pivot will allow throughout the range of travel. The position of the pivot allows less horizontal movement in the travel path of the rear axle and maintains the consistency of the chain line without increasing or decreasing chain tension. This decreases pedal bob, and yields a suspension design that is more active than any other bicycle in its class. ATLAS technology has been recognized as a superior single pivot design and is currently licensed by other companies committed to quality and performance.

Anti-Torsion Lower forward pivot offers linkage performance in a simple, stiff, cost effective, fully active design.

"The best single pivot on the market."



NEW
ICT TUNED
FOX FLOAT R SHOCK
DESIGNED FOR ELLSWORTH

By understanding ICT on our bicycles we decided to go one further by custom valving a shock to mate perfectly with ICT bicycles.

TRUTH
THE RACERS DREAM BIKE.

XCRACER

24 HR
ENDURANCE



FEATURES

- 4" Rear travel
- Internally taper-buttressed, externally shaped tubing
- Custom tuned float R (ICT)
- Instant Center Tracking
- Brake Torque Isolation
- Anti-Squat Corrective Tuning



The Truth is an efficient, ultra light yet durable machine plain and simple. Through over 10 years of rider experience, advanced engineering and field-testing the Ellsworth Truth has been engineered to perfection. The 05 Truth is the most advanced cross-country frame that Ellsworth has ever produced. The Truth boasts 4" of fully active travel to devour trails, not rider energy. A lower leverage ratio combined with a longer 2" stroke shock drastically reduces the amount of stress on the frame, also providing a patented, buttery-smooth, fully active suspension platform that cancels out chain torque, eliminating energy wasting pedal bob. The overall effect is an incredibly efficient, outstandingly light, amazingly durable race ready machine that only needs a pilot to take to the podium. The Truth has quickly become the endurance racer's choice for fatigue free, energy saving race bikes. It is the official bike of the 24 Hours of Adrenalin, and is widely used in adventure racing.

FORK TRAVEL
Recommended 80-105mm

SHOCK OPTIONS

Air: Fox Custom Tuned Float R,

Swinger Air 3-Way

Coil: Romic D



SPECIFICATIONS

	14"	16"	18"	20"
RIDER HT.	<5'4"	5'4" - 5'7"	5'5" - 6'2"	>5'9"
STANDOVER HT.	28"	29"	30"	31"
TOP TUBE	20.7"	22.25"	23.5"	24.25"
HEAD TUBE	3.75"	3.75"	4"	4.75"
CHAINSTAY	16.75"	16.75"	16.75"	16.75"
BB HT.	13.25"	12.8"	12.8"	12.8"
WHEELBASE	41"	41.5"	42.5"	43.5"
H/S ANGLE	70°/73°	70.7°/73°	70.7°/73°	70.7°/73°
SPECS ASSUME BUILD WITH 100MM FORK (REC 80-105MM)				



ALL MOUNTAIN

ROUGH
XC TRAIL

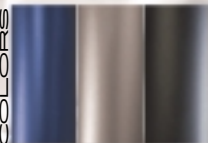
FEATURES

- 6" Rear travel
- Instant Center Tracking
- Anti-Squat Corrective Tuning
- Brake Torque Isolation
- Linear Progressive Shock Motion Ratio

MOMENT

THERE IS ONLY ONE

COLORS



SPECIFICATIONS

	15"	17"	19"
RIDER HT.	<5'7"	5'5" - 6'2"	>5'9"
STANDOVER HT.	27"	28.5"	30.5"
TOP TUBE	22.25"	23.5"	24.25"
HEAD TUBE	4.75"	4.75"	4.75"
CHAINSTAY	16.75"	16.75"	16.75"
BB HT.	13.7"	13.7"	13.7"
WHEELBASE	41.5"	42.5"	43.5"
H/S ANGLE	69°/72°	69°/72°	69°/72°

SPECS ASSUME BUILD WITH 125MM FORK (REC 125-150MM)

THE MOMENT'S GEOMETRY WORKS WELL WITH ALL NEW ALL MOUNTAIN FORKS



ELLSWORTH ENERGY EFFICIENT SUSPENSION TECHNOLOGY
INSTANT CENTER TRACKING

FORK TRAVEL
Recommended 125-150mm
SHOCK OPTIONS
Air: Fox Custom Tuned Float R
Coil: Fox Vanilla RC, Fox DHX 5.0

Id

AN "ID" TO MATCH YOUR "EGO"

XC RACER



SINGLE TRACK

FEATURES

- 5" Rear travel
- Instant Center Tracking
- Breaking Torque Isolation
- Linear Progressive Shock Motion Ratio

SPECIFICATIONS

	15"	17"	19"
RIDER HT.	<5'7"	5'5" - 6'2"	>5'9"
STANDOVER HT.	29"	30"	31"
TOP TUBE	22.25"	23.5"	24.25"
HEAD TUBE	4.75"	4.75"	4.75"
CHAINSTAY	16.75"	16.75"	16.75"
BB HT.	13.75"	13.75"	13.75"
WHEELBASE	41.5"	42.5"	43.5"
H/S ANGLE	69°/72.5°	69°/72.5°	69°/72.5°

SPECS ASSUME BUILD WITH 125MM FORK (REC 125-150MM)

That little voice on your shoulder opposite the whining angel (Superego) is what we like to call the Id. The Id, according to Freud, is the component of the personality that is addicted to instant gratification, seeking satisfaction of primal needs with reckless abandon and no thought of consequence. Think of the Id as a long travel version of the Truth with a dark side. Take impossible terrain effortlessly with a full suspension 4-bar, ICT linkage that keeps you and your tires in contact with the terrain at all times. Hold on to your bars and enjoy this masterpiece that amazes the XC rider with its long legs for covering rough terrain with supple yet efficient ICT suspension. The Id can smooth out terrain that would render a typical cross country race frame helpless. The geometry creates a nimble bike that can handle long single track and endurance rides. This is the perfect bike for people who ride too rough for a purely XC bike but will not accept a heavier ride.



ELLSWORTH ENERGY EFFICIENT SUSPENSION TECHNOLOGY
INSTANT CENTER TRACKING

FORK TRAVEL
Recommended 125-150mm
SHOCK OPTIONS
Air: Swinger Air 3-Way,
Fox Custom Tuned Float R
Coil: Swinger Coil 3-Way



FREERIDE

DOWN HILL

FEATURES

- 9" of honking rear travel
- Instant Center Tracking
- Brake Torque Isolation
- Linear Progressive Shock Motion Ratio
- Anti-Squat Corrective Tuning

Dare
GO BIG

COLORS



Specialist
CAN YOU HANDLE IT

DIRT JUMP

EXTREME
TRAIL



FEATURES

- High strength tubular rear end
- Bomb proof construction
- International Standard Disc Brake mounts
- Replaceable Derailleur hanger



SPECIFICATIONS

	16"	18"
RIDER HT.	5'3" - 6'	5'7" - 6'4"
STANDOVER HT.	29.5"	29.5"
TOP TUBE	22.5"	24"
HEAD TUBE	5"	5"
CHAINSTAY	17.4"	17.4"
BB HT.	14.75"	14.75"
WHEELBASE	46.2"	47.2"
H/S ANGLE	66°/73°	66°/73°
SPECS ASSUME BUILD WITH 180MM FORK		

SPECIFICATIONS

RIDER HT.	N/A
STANDOVER HT.	29.75" w/ 5" fork
TOP TUBE	22.5"
HEAD TUBE	4.75"
CHAINSTAY	16.5"
BB HT.	12.8"
WHEELBASE	41.5" (+.325")
H/S ANGLE	67°/69.5°
SPECS ASSUME BUILD WITH 125MM FORK	



Dare to dream. Dare to drop into what ever may come. You can harness the madness and retain a bike that can maneuver; a bike that can still pedal. The Dare's world cup descending ability paired with ICT climbing efficiency redefines what is possible on a full-blown DH bike. Strong, quick, and efficient, the Ellsworth DARE delivers the ride that you have been dreaming of. Hold on, ride fast, and go big or go home.

The Downieville Classic is the longest downhill race in the nation. That is one of the reasons this venue is the premier opportunity for the best riders in the world to show off their talent and compete on one of the most difficult courses in the sport. The infamous race is 15miles long and riders contend with 550 feet of climbing. This is true downhill racing. Manufacturers use this course as a testing ground for the most advanced technology available in a mountain bike. In 2003 Mark Weir set a new course record of 39:48.87. Mark chose to rip the course on an Ellsworth Dare even though he was not sponsored or paid to do so.

FOKTRAVEL
Recommended 150mm and up
SHOCKOPTIONS
Coil: Fox Vanilla RC, DHX 5.0


FOKTRAVEL
Recommended 100-150mm






SPECIFICATIONS

	15"	17"	19"	21"
RIDER HT.	<5'6"	5'6" - 5'11"	5'11"	>6'2"
STANDOVER HT.	29.5"	29.5"	29.5"	29.5"
TOP TUBE	22.2"	23.2"	24.25"	25.0"
HEAD TUBE	4.75"	4.75"	4.75"	4.75"
CHAINSTAY	17.0"	17.0"	17.0"	17.0"
BB HT.	13.5"	13.5"	13.5"	13.5"
WHEELBASE	42.5"	43.7"	45.2"	46.5"
H/S ANGLE	69°/72.5°	69°/72.5°	69°/72.5°	69°/72.5°
SPECS ASSUME BUILD WITH 125MM FORK (REC 100-125MM)				




XC
ALL MOUNTAIN



ADVENTURE
RACING

Distance

HE'S GOING FOR SPEED



COLORS

FEATURES

- 5" Rear travel
- ATLAS
- Anti-Torsion
- Lower forward pivot



ENJOY THE RIDE!

FREERIDE

EXTREME
TRAIL



COLORS

FEATURES

- 7/4" of rear travel
- ATLAS
- Anti-Torsion
- Lower Forward Pivot
- Active Suspension



SPECIFICATIONS

	13" ISIS	16"	18"	20"
RIDER HT.	<5'4"	5'3" - 5'6"	5'6" - 5'11"	>5'11"
STANDOVER HT.	26"	29"	29"	29"
TOP TUBE	21"	22.2"	23.2"	24.25"
HEAD TUBE	4.75"	4.75"	4.75"	4.75"
CHAINSTAY	17"	17"	17"	17"
BB HT.	12.7"	14"	14"	14"
WHEELBASE	41.2"	43"	44"	45.5"
H/S ANGLE	70°/72.5°	67°/69°	67°/69°	66.5°/69°
JOKER: SPECS ASSUME BUILD WITH 180MM FORK (REC 125-180MM) ISIS: SPECS ASSUME BUILD WITH 100MM FORK (REC 80-125MM)				



There are some of us who just ride, plain and simple. We do not shave our legs, wear heart rate monitors, drop off 40 foot cliffs, or show up for a group ride looking like we are about to play hockey. If you know what we are talking about, you are serious enough to go the Distance. The Distance is an ATLAS equipped bike that pedals more efficiently than most linkage bikes, climbs with reckless abandon, and descends faster with more stability than bikes that weigh much more. For riders who want to spend all day in the saddle and, go the Distance.

FORK TRAVEL
Recommended 105-125mm

SHOCK OPTIONS
Air Fox Custom Tuned Float R,
Swinger Air 3-Way

Coil Romic D

Joker/Isis
The Joker is a freeriding beast that consumes drops, and spits out smooth single track. Learn to fly on 7" of travel that will take you far beyond the boundaries you have set for yourself. Tackle the most ridiculous stunts, hit the north shore, or drop the boulders of Moab all on the same bike. The Joker is the bike of choice for those who laugh at fear.

The Isis
The 13" Isis is made expressively for those small in stature, who want the big features of a full sized bike. This bike is a lightweight, fully anodized, laser etched, trail ripping machine. The Isis has the lowest standover of any full travel, full 26" wheeled frame. Its small size delivers BIG performance for the all-mountain XC rider who needs a frame design without the height or hype. If you are small enough to fit the bike, it will reward you in the BIGGEST way!

FORK TRAVEL
Recommended 125mm and up

SHOCK OPTIONS
Coil Romic D,
Swinger Coil 3-Way





XCRACER
ADVENTURE
RACING

enlightenment

THE HARDTAIL IS BACK

FEATURES

- Light Weight Enlightenment Tubing
- Specific geometry which is Norba Standard.
- Vertical Dropouts



SPECIFICATIONS

	14"	16"	18"	20"
RIDER HT.	<5'5"	5'4" - 5'7"	5'6" - 6'1"	>6'1"
STANDOVER HT.	26"	28"	29"	30.5"
TOP TUBE	21.25"	22.25"	23.5"	24.25"
HEAD TUBE	3.75"	3.75"	4"	4.75"
CHAINSTAY	16.75"	16.75"	16.75"	16.75"
BB HT.	11.75"	11.75"	11.75"	11.75"
WHEELBASE	~40"	~41"	~42"	~43"
H/S ANGLE	70.5°/73.5°	71.5°/73.5°	71.5°/73.5°	71.5°/73°
SPECS ASSUME BUILD WITH 100MM FORK (REC 80-105MM)				



TO PREPARE TO RIDE

Going back to your roots and working forward to rediscover true potential and original intent is what improvement is all about. By looking to the past and rediscovering our roots we have applied new innovative technology and design to recreate the Ellsworth hard tail. The new design, crafted from superior material, has resonance absorbing properties and increased liveliness that make it the best hard tail we have created to date. The dual mono stay technology in the rear utilizes continuous CNC shaped stays to absorb the trail resonance vertically, without sacrificing lateral stiffness. This frame is a blatant summons to proven hardcore racers who utilize every available edge. This is a call to the "soon to be great" cross country rider that has the heart but needs the machine. With verified, race ready geometry, this frame will take you down many different paths with one final destination, Enlightenment.

FORK TRAVEL
Recommended 80-105mm

one

ONE RING, ONLY ONE WAY



FEATURES

- Horizontal Dropouts
- Light Weight geometry
- Low Center of gravity for maximum efficiency



SPECIFICATIONS

	14"	16"	18"	20"
RIDER HT.	<5'5"	5'4" - 5'7"	5'6" - 6'1"	>6'1"
STANDOVER HT.	26"	28"	29"	30.5"
TOP TUBE	21.25"	22.25"	23.5"	24.25"
HEAD TUBE	3.75"	3.75"	4"	4.75"
CHAINSTAY	16.75"	16.75"	16.75"	16.75"
BB HT.	11.75"	11.75"	11.75"	11.75"
WHEELBASE	~40"	~41"	~42"	~43"
H/S ANGLE	70.5°/73.5°	71.5°/73.5°	71.5°/73.5°	71.5°/73°
SPECS ASSUME BUILD WITH 100MM FORK (REC 80-105MM)				

One ring in the front is paired with one ring in the back. Henry David Thoreau said, "Simplify, simplify, simplify. " Look beyond what is offered and organize your existence in the most straightforward manner possible. The One is simplicity embodied by every available definition of the word. Riding a bike without gears is unsympathetic to say the least and Ellsworth would like to encourage the sadistic riders that enjoy this punishing pastime by making it lighter, stiffer, and smoother. This frame is designed to complement the iron legs of a rider that can grind a bike up a hill without the necessitation of a transmission. The One is for the hardcore, who want to do the work themselves.

FORK TRAVEL
Recommended 80-105mm



XC
ALL MOUNTAIN

ADVENTURE
RACING

WITNESS
TWO WHEELS, TWO PEOPLE

FEATURES

- 4" Rear travel
- Internally taper-butted, externally shaped tubing
- Custom tuned float R (ICT)
- Newly designed with new 2:1 leverage ratio



SPECIFICATIONS

19/16"

RIDER HT.	5'4" - 6'2"
STANDOVER HT.	32/29"
TOP TUBE	23.5/31.5"
HEAD TUBE	4.75"
CHAINSTAY	16.75"
BB HT.	12.75"
WHEELBASE	73.8"
H/S ANGLE	70°/73.5°/73.5°

SPECS ASSUME BUILD WITH 125MM FORK



When unity and cohesion go beyond the coordinated talent of two riders working as one, the steepest mountains on the horizon become screaming downward gradients before the stoker even knows that the climb took place. The Witness allows great riders to synergize in order to conquer the trail. If two minds are superior to one, than 4 legs can clean the impossible trails that left 2 legs suffering alone. Having a Witness gives you an advantage on any terrain.

The Witness is about cooperation and mutual understanding. It is about the shared talent of 2 riders, completed with a mechanical masterpiece that enables both to reach their collective potential. A new, lower leverage ratio and elongated shock combined with a roomier cockpit for the stoker offer an even smoother ride with 4" of velvety travel.

FORK TRAVEL

Recommended 125-150mm

SHOCK OPTIONS

Air: Fox Custom Tuned Float R,
Swinger Air 3-Way

Coil: Romic D

WHICH BIKE
IS RIGHT
FOR YOU

(a break down of the Ellsworth bikes and their intended use)

DEFINITION

1. Brake Torque Isolation

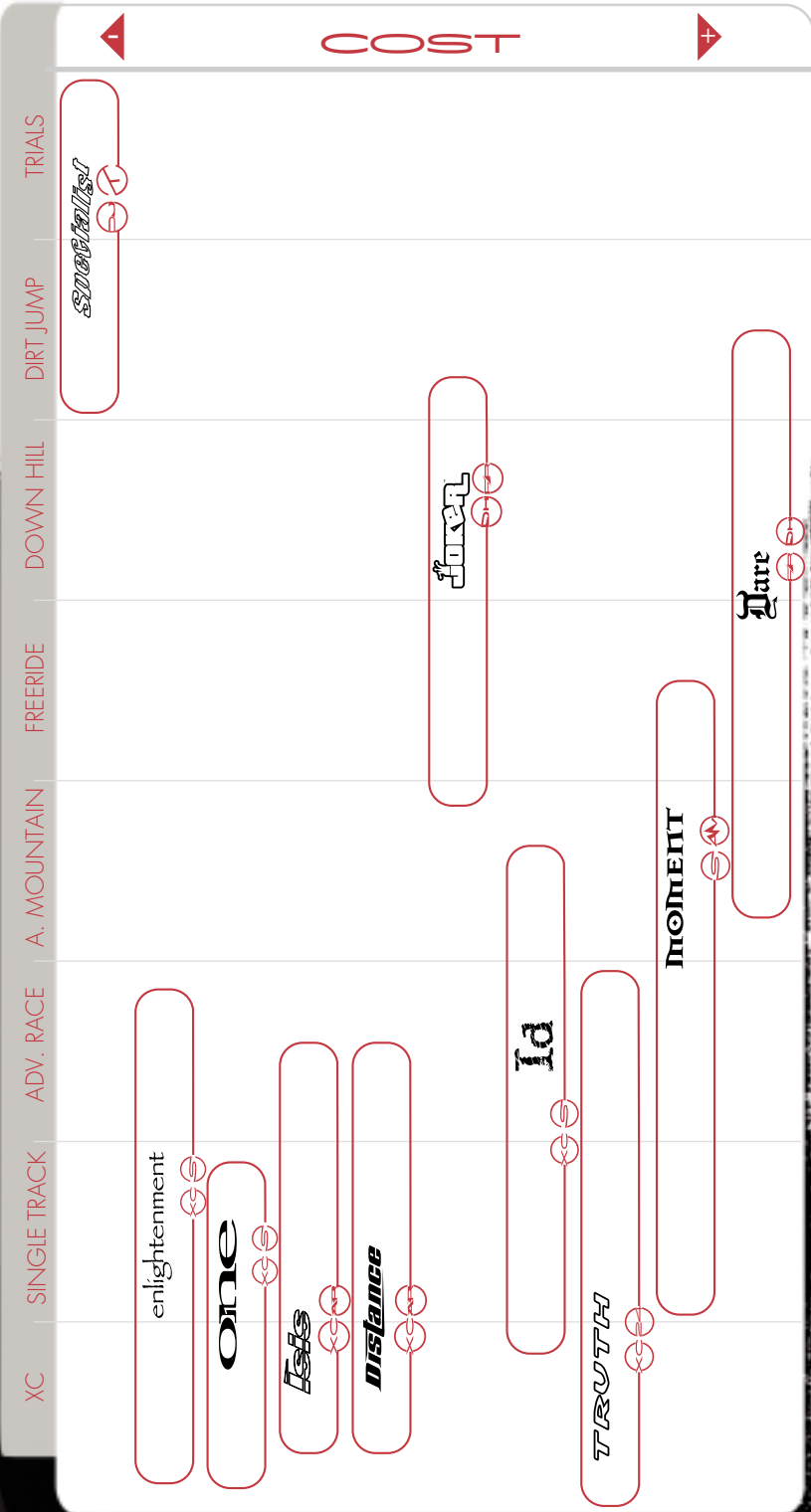
Brake Torque Isolation is integrated into our patented ICT suspension system. BTI keeps brake forces from interfering with suspension activity, letting the rear wheel track the terrain under heavy braking.

2. Linear Progressive Shock Motion Ratio

This movement provides plush yet controlled movement in a suspension over a full range of bumps and speeds. By using this ratio on our ICT and ATLAS bicycles we have created a bike that is fully active through out it's entire motion.

3. Anti-Squat Corrective Tuning

A power robbing symptom is when a suspension squats under acceleration. Anti-Squat Corrective Tuning eliminates this illness by isolating the chain line and creating a suspension that does not squat as you accelerate.



CUSTOM PAINT PROGRAM

create the bike of your dreams
create the bike of your dreams

Titanium Crystal

Custom Flames
ORANGE/BLUE

Custom Flames
BLUE/ORANGE

Custom Flames
BLACK/ORANGE

Toxic Green

Toxic Red

Tribal Flames:

Ferrari Red with Silver Flames
Toxic Green with Blue Flames

Ti Crystal w/ Silver Flames:

There's no photo that can capture the ever changing color dynamics of the Titanium Oxide Crystals reflecting light throughout the spectrum in a prismatic iridescence. Titanium Crystal uses a light activated paint which changes colors as the frame is viewed from different angles.

Hot Rod Flames:

You choose the base color (black, blue, or orange) and flame color (white to blue or white to orange) to create a head turning machine.

Ellsworth

HANDCRAFTED BICYCLES, INC.

In a world that promotes conformity while strangling out individuality, customizing the influences in your life that matter most can preserve the uniqueness of your personality.

How do you define yourself? Do you ride the same line that everyone ahead of you on the trail lined up and succeeded down, or do you try something different? Are common, well known, overpopulated trails more appealing than scary, undefined singletrack that could lead to anything, good or bad? Taking the path (or trail) that is less traveled always presents a risk, but with risk comes reward. For 2005 Ellsworth deepens the commitment to cater to distinctive and unique riders with 3 separate paint options. You can now individualize your Ellsworth to reflect the same exclusivity that is demonstrated by the way you ride. For questions on this program please contact us at:

info@ellsworthbikes.com

(or call)

760•788•7500.

All of the custom painted frames offer an automotive grade clear coat to protect the frame and preserve the beauty of the art for years to come.

THE RIDE

Bump Absorption: characteristics can either enhance your ride or hinder it. Ellsworth suspension designs are described by many riders as "plush" which is the difference between a sore rear or a silky smooth ride.

THE POWER

Energy Efficiency: is a primary feature of all Ellsworth bicycles designs. While competitors' designs in many cases absorb pedal inputs, wasting energy, our patented ICT and ATLAS convert power into forward motion creating efficiency.

THE CONTROL

Braking: Ellsworth does much more than create light frames, our Brake Torque Isolation enhances control of fully active suspension under the act of braking to reduce skidding and increase handling.

DESIGN TYPE

BUMP ABSORPTION

ENERGY EFFICIENCY

BRAKING



Fully Active suspension design allows for plush bump absorption and trail tracking.



Laziness will result from riding a frame that does so much of the work for you.



Optimal bump absorption over slow, small terrain and excellent performance over large obstacles and deep dips.



You may end up riding your bike and forgetting about small things like eating.



100% pedal energy efficient means not energy is lost in suspension bob. The suspension still reacts to the trail without reacting to pedaling.



Please look to above fact and realize that there is no negative in 100%



Fully-active suspension does not react from the force braking creates. Your suspension remains unaffected by your braking.



Don't follow to close, this may cause accidents.



By aligning the pivot on the chainline, the suspension is not activated by pedal torque.



Excess energy and frantic panic spells may occur.



Brake jack is neutralized by the position and motion of the suspension.



You may regretfully have to decline from the over the handle bars club.

VS

Single Pivot



A single pivot can be optimal for bump absorption when the pivot has the correct placement.



Distance from cog to chainrings varies transmitting chain loads to suspension. This causes a variable suspension with bump absorption.



The single pivot can be highly efficient if the geometry and pivot location are optimized.



The single pivot design by nature has persistent issues with bob, pogo effect and pedal kick.



The single pivot design has fair performance under the pressures of braking.



All single pivots suffer an amount of braking influence on the suspension making the bike less reactive.

Monolink



Monolink rear axle travel mimics the front suspension of the bike which creates great bump compliance.



Shifting is not consistent through the complete range of travel due to derailleur movement with suspension.



With a firm planted pedal feel the Monolink climbs very efficiently and uses power efficiently.



The front may be difficult to get working which makes shifting efficiency bad.



The Monolink has reasonably good response to braking with out limiting the suspension.



The suspension is not fully active under braking.

Pseudo-4- bar



Pseudo 4-bar suspension, which pivot at the seatstays, have good bump absorption but the pseudo flex bars have only fair bump absorption characteristics.



The suspension created with Pseudo 4-bar has a harsh quality.



The Pseudo 4-bar is a low efficiency design.



Diagonal Axle path causes pedal kick-back decreasing efficiency and promoting "bob."



Not a fully active design, brakes are good over small bumps and light braking only.



The rear end rises up under the pressures of braking causing the suspension to bind on promoting skidding.

Virtual



Good square edge bump absorption while costing with no rear brake applied.



Suspension performance is canceled out by the torque from heavy pedaling. Pedal hard and the VPP system rides like a hard tail.



The Virtual design is an efficient pedaling design under low chain torque.



The Virtual design is a semi active suspension design. There is pedal kick back which leads to bob and loss of efficiency.



Novice level riders may not notice the stiffer suspension in the rear of the bike under brake tension.



All Virtual pivots suffer a significant amount of inherent brake jack by design. Semi-active designs also decrease rider comfort.

FSR™ type



FSR™ type has excellent absorption qualities and is fully active unless using inertia-sensing shock.



Small round edge bumps or soft muddy terrain may not activate the shock, creating a rigid rear end when using a inertia-sensing shock.



The efficiency of this design can be good when the geometry is correct along with the Instant Center of the chain torque line.



The FSR™ can suffer under suspension squat. With inertia shocks the bike can feel rigid.



This is a type of fully-active 4-bar design. The suspension is fully active under braking.



With inertia-shocks the suspension can become stiff and locked out making the suspension worthless and non-responsive.

ELLSWORTH SUSPENSION

For any items not pictured here please visit our website at: www.Ellsworthbikes.com

CLOTHING & ACCESSORIES



- a. Jersey's: are available in long sleeve, short sleeve and sleeveless
- b. Socks: Comfort is a key with these socks made by Sock Guy.
- c. Lycra Ellsworth Shorts: with side and lower back panels.
- d. DH Jersey: Made from rip stop material and sized loose for DH padding.
- e. Cobalt Blue Ellsworth Glass: 16 ounces of drinking pleasure.
- f. Ellsworth Hat: Flex fit hat with finely stitched embroidery. (m/l)
- g. Grease: specially formulated for the leader in 4-bar linkage bikes.

- h. Ellsworth Crest T-shirt: Heavy duty Navy Hanes shirts, meant to last. (m,l,xl)
- i. Dragon T-shirt: Heavy duty black shirt with amazing graphics. (m,l,xl)
- j. Ellsworth Derailluers: CNC machined for perfection. (not shown)
- k. Ellsworth ICT Chainstay protector: made by the dependable Lizard Skins. (not shown)
- l. Wind Jacket: Keep warm on the night rides or during the cold season. (not shown)
- m. Head badges: strong adhesive badges to replace your old badges. (not shown)



THOSE THAT RIDE, KNOW...

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COMPONENT PARTNERS





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