The New System Component Family for Every Riding Style



DEALER SALES MANUAL

SHIMANO



sport LX

The Sport LX group is on top in both looks and performance. All-alloy construction, 7-speed freehub SIS shifting, and other super-functions respond to a competitive sport cycling style. The unified Pearl White color treatment enhances Sport LX's image.

A New Component Fa
Range of Bicyc



EXAGE sport

Exage Sport takes the "no frills" approach to high-performance sport cycling. Full Shimano functions, including optional front SIS, put the accent on riding fast and easy. Cosmic Blue surface treatment unifies and enhances Exage Sport's system design.



EXAGE ACTION

Exage Action stresses both performance and value. This group realizes advanced Shimano functions in a reasonably priced 12-speed sport bike with down tube shift levers. Handsome blue-gray component finish means "system" appearance and appeal.



EXAGE MOTION

Exage Motion's 6-speed SIS, freehub, Biopace chainrings, and SLR brakes translate into high-performance sport cycling that won't strain a budget. Bar-mounted "flipper" levers make SIS shifting easier than ever.

Exage responds to any

Mountain LX is the off-road component system that roughs it with style. Super-functions like wide-range 7-speed SIS, Hyperglide sprockets, and HP Biopace triple crankset make Mountain LX the undisputed performance leader in its class.

mountain LX



mily Serving a Wider le Styles

Exage Mountain delivers refined off-road performance made possible by wide-range 6-speed SIS, SLR U-Brake and cantilever, Biopace chainrings, and optional front SIS shifting. High-tech gray color treatment means system performance all the way.

EXAGE mountain



Exage Trail brings new value to the moderately-priced all-terrain bike. Front and rear cantilever SLR brakes, Biopace triple crankset, 6-speed SIS shifting, and rear freehub make the Exage "Trail" bike a real performer on or off the road.

EXAGE trail



On country lanes or city streets, Exage Country components bring more quality and performance to the entry level ATB. Advanced Shimano functions like Biopace, 6-speed SIS, and SLR cantilever brakes make this system the cost-performance leader in its class.

EXAGE COUNTRY



riding style.

sport LX

A new synthesis of style and performance for the lightweight sport bicycle.



More Style and Recreation S

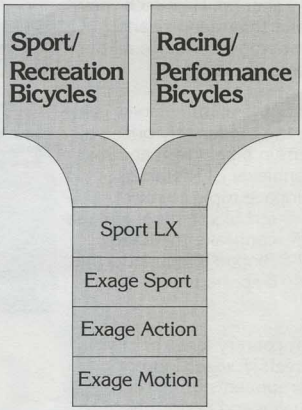
The new Exage family of components brings Shimano syste

Exage is now an expanded component family which includes four separate component systems for on-road sport bicycles. This means Exage components can be applied to a variety of bicycle types which span casual, recreational, and performance-oriented machines. That's why we refer to it as a "crossover" component system. Exage realizes the benefits of Shimano quality, high-performance functions, and sales appeal throughout a broader segment of the bicycle market.

At the top is Sport LX. It's unified Pearl White color theme, 7-speed SIS, and other advanced Shimano functions make possible a stylish and high-performance racing-type bicycle. Next in line is the Exage Sport group offering 12-speed SIS, Biopace chainrings, and SLR brake system. The result is a sport bike that accents both performance and value.

In the same way, the Exage Action and Motion groups offer the latest Shimano functions plus the advantages of system design and appeal for lightweight recreational bicycles in the lower price ranges.

The Exage family of on-road components enhances the value, performance, and sales appeal of a wider range of sport and recreational-use derailleur bicycles.



Exage sport component groups "crossover" between recreation and racing-oriented bicycles.

mountain-LX

Advanced functions for the recreational ATB



Performance for port Bicycles

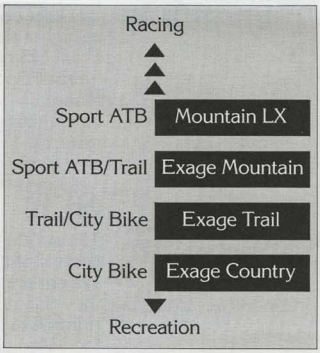
m performance and value to the recreational cycling market.

The Exage family also offers four complete component groups for all types of fat tire bicycles. Like the road groups, Exage ATB component systems offer Shimano quality and advanced functions for a variety of bicycles ranging from real performance-oriented ATB's to trail bikes and city cruisers.

The flagship of the Exage off-road groups is Mountain LX. Just like Deore XT-II, Mountain LX offers the latest Shimano super-functions including SLR U-Brake with Power Plate (U-II Brake), 7-speed SIS shifting with Hyperglide sprockets, and triple HP Biopace crankset.

Positioned just beneath Mountain LX is the Exage Mountain group. It offers 6-speed SIS freehub, alloy U-Brake and cantilever, and Biopace triple crankset which realizes a competitively priced off-road bike that clearly outperforms anything in it's price class.

Continuing down the Exage off-road component lineup are Exage Trail and Exage Country. Both of these groups offer Biopace triple cranksets, 6-speed SIS shifting with freehub, and front and rear SLR cantilever brakes. Exage Trail and Country make possible entry level all-terrain, fat tire, and city type bicycles that make Shimano system performance available to more people than ever before in the fast-growing off-road market.



Exage ATB component groups cover a range of fat tire bicycles and riding styles in the recreational market.

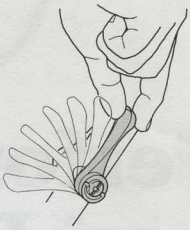
With Exage, Shimano advanced func range of cycling styles.

All Exage groups offer these advanced Shimano functions...

SIS
SHIMANO
INDEX SYSTEM

Shimano Index System

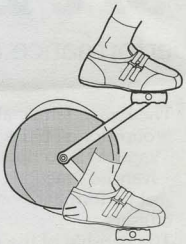
On-road Sport LX and off-road Mountain LX both use performance-oriented 7-speed SIS shifting for a wider gear choice. Mountain LX includes the new computer-designed Hyperglide sprockets that make wide-range SIS shifting faster and smoother than ever. All other groups use freehub-based 6-speed SIS shifting. The Exage Motion group utilizes new hands-on "flipper" levers that make SIS shifting even easier.



biopace
COMPUTER DESIGNED
DRIVE SYSTEM

HP Biopace

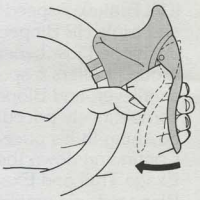
With the exception of Mountain LX, Biopace chainwheels are standard equipment on all Exage groups. Mountain LX uses the new HP Biopace triple crankset designed to provide the Biopace advantage at higher pedaling speeds than standard Biopace. Front SIS compatible Biopace chainwheels for the on-road Sport and Action groups and the off-road Mountain group are of chrome plated steel construction to be compatible with front SIS systems.



SLR
SHIMANO
LINEAR RESPONSE

SLR

The strong braking power and sensitive fingertip control of the Shimano Linear Response braking system are standard equipment on Exage. Whether they ride on or off the road, recreational cyclists riding Exage-equipped bicycles can now realize the increased confidence and feeling of control that SLR makes possible. Friction-reducing SLR design has been incorporated in all the brake components throughout the Exage family.



tions are now available to a wider

Super-system design is the key to Exage performance and flexibility...

Colorful Surface Treatment

The component groups within the Exage family are electro-statically painted with a lustrous and durable baked-on finish that lends a distinct image to the group. For example, Sport LX components are Accented Pearl White in order to create a balanced image of both sophistication and performance. Exage Sport components use a Cosmos Blue Metallic color treatment which stresses a look of cool performance. Action and Mountain have blue-gray and dark-gray color accents on selected components to establish a visual theme and product identity.

The "Super-System" Design Concept

"Super-System" means all the component groups in the Exage family offer the same basic design theme which highlights compactness, smooth aerodynamic lines, and surface color treatment. Exage groups are differentiated primarily in terms of quality and performance by the type of functions they offer, extent of surface treatment, and the type of materials used in the components. With four distinct component groups to choose from, Exage offers great flexibility in assembling a bicycle to fill a particular market segment within a specific cost frame.

Exage is a Crossover System

Although Exage components were developed in distinct component groups, there is still sufficient room in the system to mix and match components in order to respond to more specific needs. For example, an Exage Sport bicycle can be assembled without the front SIS function by simply specifing the A452 components from the Sport LX group. The Exage Mountain and Trail off-road groups can be specified with either a one-piece brake/shift lever assembly or separate types to meet user or builder preferences. These types of substitutions enhance the flexibility of Exage.

Model Number Designations in the Exage Family

Model number designations for all components within the Exage family are as follows:

Sport LX: A452
Exage Sport: A450/451
Exage Action: A350/351
Exage Motion: A250

Mountain LX: M452
Exage Mountain: M450/451
Exage Trail: M350/351
Exage Country: M250

Mountain LX Incorporated New Shim

biopace
Computer Designed Drive System

HP Biopace—A New High Performance Version of Biopace

The performance cycling trend has gone off-road. More off-road cycling enthusiasts are riding faster and harder than ever.
The Mountain LX group uses a new type of Biopace triple chainwheel, called HP Biopace, which was developed specifically for this aggressive off-road cycling style. HP Biopace is a special version of Biopace designed to provide a more comfortable pedaling cadence with less leg strain at the higher pedaling cadences used by performance-oriented cyclists.
The shape of HP Biopace was specifically developed with a different phase (position of shape relative to crank arm) than standard Biopace. This allows the cyclist to pedal more comfortably in the higher speed ranges where the acceleration and deceleration forces on the leg are shifted due to the accentuated spinning effect. HP Biopace allows the cyclist to develop a more fluid pedaling style the advantage the Biopace effect.
As with Biopace, HP Biopace's profile becomes progressively more pronounced in the middle and small chainrings. This is to maintain the optimum Biopace effect at the lower cadences generally used against a strong wind or when climbing.



The point symmetrical egg curve of the standard Biopace chainring.

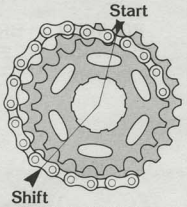


Phase shift of HP Biopace is turned for higher pedaling cadences.

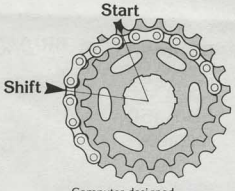
ano Super-Functions.

HG
HYPERGLIDE

A Significant Improvement in SIS Shifting Performance



Chain riding on top of gear teeth results in slower and less precise shifting.



Computer-designed Hyperglide sprockets let the chain move quickly, directly, and smoothly from gear to gear.

Mountain LX features the new computer-designed Hyperglide sprocket system that significantly improves SIS shifting.

With a normal gear cluster, a downshift to a larger sprocket causes the chain to ride up on top of the larger gear's teeth before it drops onto the teeth to complete the shift. This results in slow and relatively imprecise shifting.

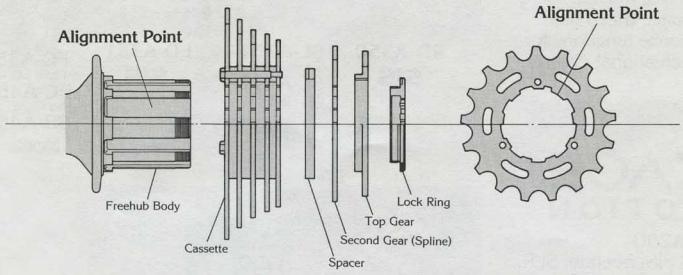
The Hyperglide sprocket solves this problem by using specially configured teeth which determine exactly where the chain will begin to release from the sprocket when the shift begins, and wide-cuts for exact chain pick-up.

The sprockets are aligned with each other in relation to these chain release and pick-up points in order to maintain a constant chain pitch dimension between them.

The result is that the chain moves directly from cog to cog without riding on top of the teeth before seating on the gear. Shifts are significantly smoother, faster, and more precise.

On or off the road, Shimano is still the leader in index shifting technology.

U.S.PAT. 4,268,259



Note: Do not mix Hyperglide and UG Sprockets.

The Exage On-Road Component Gro

sport LX

Model A452/A450-B
High-performance functions with style makes Sport LX the Exage on-road leader.



RD-A452 SIS
SL-A453-7
SL-A452-6 SIS
FD-A452
FC-A452
BB-A450 biopace
BR-A450 SLR

EXAGE sport

Model A450/A451
Refined functions and system group appearance create the cost-performance advantage of Exage Sport.



RD-A450 SIS
SL-A451 (Front SIS)
SL-A452 (No Front SIS) SIS
FD-A451 SIS
FC-A450 SIS (Front SIS Compatible)
FC-A452 (No Front SIS)
BB-A450 biopace
BR-A450 SLR

EXAGE ACTION

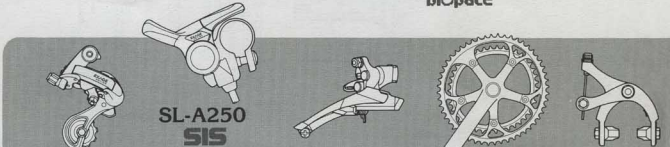
Model A350/A351
6-speed SIS, freehub, SLR, and Biopace mean high-performance functions for more recreational cyclists.



RD-A350 SIS
SL-A351 (Front SIS)
SL-A452 (No Front SIS) SIS
FD-A351 SIS
FC-A350 SIS (Front SIS Compatible)
FC-A450 (No Front SIS)
BB-A450 biopace
BR-A350 SLR

EXAGE MOTION

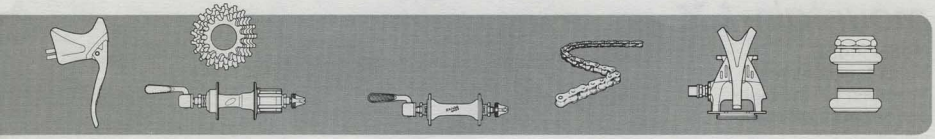
Model A250
6-speed SIS, freehub, SLR, Biopace, and new "flipper" shift levers make cycling more enjoyable for everyone.



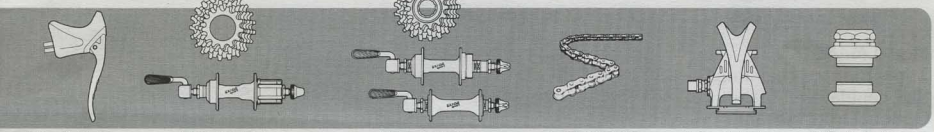
RD-A250 SIS
SL-A250 SIS
SL-A452 SIS
FD-A250
FC-A250
BB-A450 biopace
BR-A250 SLR

up Lineup

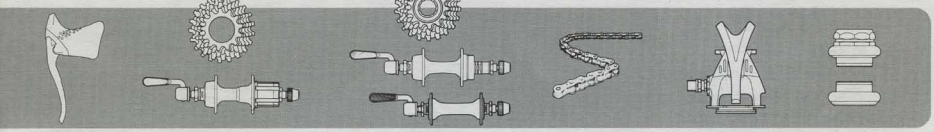
A Note on Exage Flexibility: (For OEM Only)
Exage Sport and Exage Action groups can be specified without the front SIS and steel Biopace chainrings by ordering the SL-A452-6S shift levers, FD-A452-F front derailleur, and FC-A452 front chainwheel. Exage Motion is available with a choice of the bar mounted SL-A250 "flipper" levers (which allow shifting without taking the hands from the bars) or the SL-A452 down-tube shift levers.
The HB-A450-R boss-type rear hub (conventional hub) and MF-Z012 freewheel can be specified for the Sport LX and Exage Sport groups. The HB-RM50-R boss-type rear hub and MF-Z012 freewheel can be specified for the Exage Action and Motion groups.



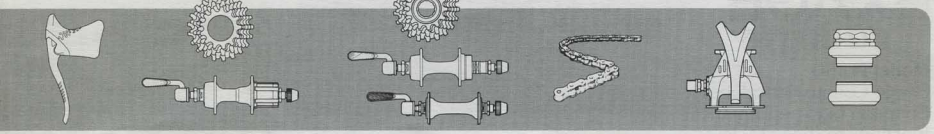
BL-A450 BL-A451 BL-A452 BL-A453 SLR	FH-A450-6/7 CS-1000-6/7 SIS	HB-A450	CN-UG50 (7-speed) CN-UG20 (6-speed)	PD-A450	HP-A450



BL-A450 BL-A451 BL-A452 BL-A453 SLR	FH-A450 CS-1000 SIS	HB-A450 MF-Z012 SIS	CN-UG20	PD-A450	HP-A450



BL-A351 SLR	FH-RM50 CS-1000 SIS	HB-RA50 MF-Z012 SIS	CN-UG20	PD-A450	HP-A450



BL-A251 BL-A251-EX SLR	FH-RM50 CS-1000 SIS	HB-RA50 MF-Z012 SIS	CN-UG20	PD-A450	HP-A450

The Exage Off-Road Component Gro

mountain-LX

Model M452
Super-functions make Mountain LX the high-performance off-road leader.



RD-M452 SIS | FD-M452 | FC-M452 BB-M450 biopace-HP | SL-M453-7 BL-M451 SIS SLR

EXAGE *mountain*

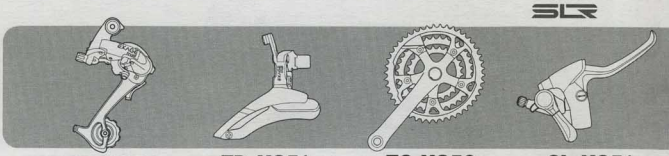
Model M450
Triple Biopace chainrings, SLR cantilever/U-Brake, Optional front SIS and 6-speed SIS freehub shifting spell performance on or off the road for Exage Mountain.



RD-M450 SIS | FD-M451 SIS | FC-M450 SIS (Front SIS Compatible) FC-M452 (No Front SIS) BB-M450 biopace | SL-M451 (Front SIS) SL-M452 (No Front SIS) BL-M451 SIS SLR

EXAGE *trail*

Model M350
Front and rear SLR cantilever brakes, 6-speed SIS freehub, Biopace chainrings and other advanced features translate into high-performance on a budget for Exage Trail.



RD-M350 SIS | FD-M351 | FC-M350 BB-M450 biopace | SL-M351 BL-M350 SIS SLR

EXAGE COUNTRY

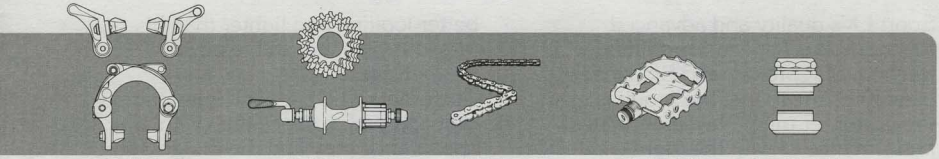
Model M250
Exage Country introduces Shimano high-performance functions to the entry-level fat tire bicycle.



RD-M250 | FD-M250 | FC-M250 BB-M250 biopace | SL-M250 BL-M250 SIS SLR

up Lineup

Note on Front SIS: (For OEM Only)
The Exage Mountain group can be ordered without the front SIS function by specifying the FD-M452 front derailleur, FC-M452 triple chainwheel crankset, and SL-M452-A shift lever.



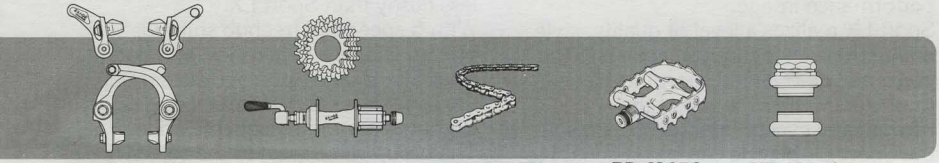
BR-M454
BR-M452
BR-M453
SLR

FH-M452-7
CS-MT62-7
SIS
HG

CN-MT62
HG

PD-M450

HP-M450



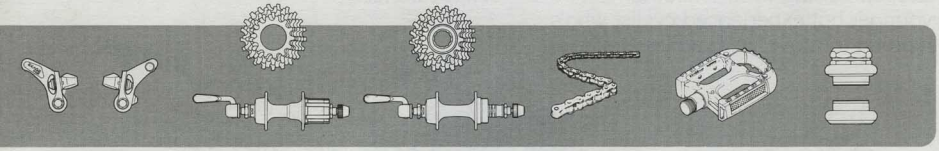
BR-M450
BR-M452
BR-M453
SLR

FH-M450
CS-1000
SIS

CN-UG20

PD-M450

HP-M450



BR-M350
SLR

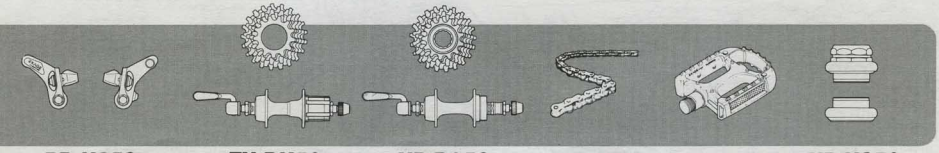
FH-RM50
CS-1000
SIS

HB-RA50
MF-Z012
SIS

CN-UG20

PD-M350

HP-M350



BR-M250
SLR

FH-RM50
CS-1000
SIS

HB-RA50
MF-Z012
SIS

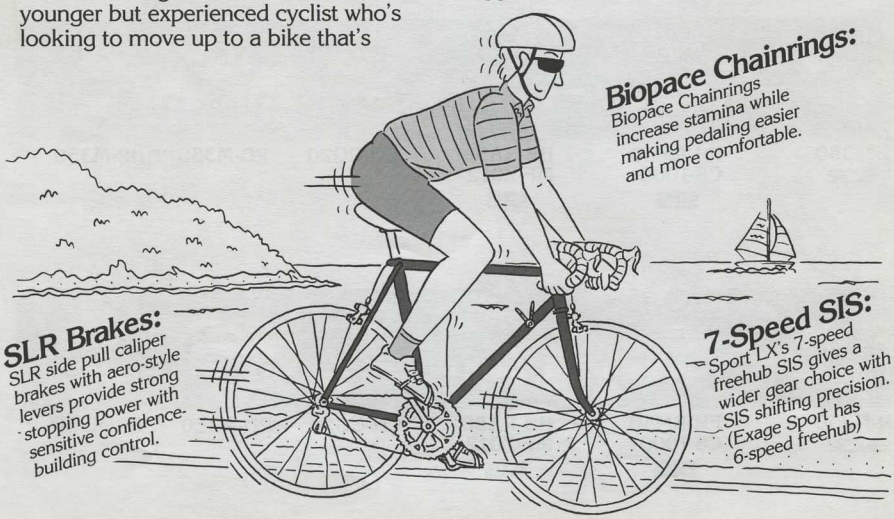
CN-UG20

PD-M350

HP-M350

Sport LX Realizes Upgraded Style the Recreational Sport Bicycle.

Sport LX's quality and advanced functions like 7-speed SIS shifting with freehub, SLR brakes, and Biopace chainrings mean that the group is giving the customer much the same level of performance as with the more expensive Shimano system groups.
Furthermore, Sport LX's system appearance and unified Pearl White color accents create a sophisticated high-performance image.
Sport LX realizes a level of quality, style, and performance that can appeal to the performance-oriented sport bicycle market as well as the top of the recreational cycling market. As a result, the Sport LX bicycle can be presented to very different types of customers.
One, for example, is the fashion-conscious adult looking for that first high-performance lightweight bike to start exercising with. The other can be a younger but experienced cyclist who's looking to move up to a bike that's better-looking and lighter than his previous bike, but still relatively inexpensive.
Customers who are concerned more with cost and performance than with appearance may find the Exage Sport bike more to their liking. The Cosmic Blue Metallic color treatment of Exage Sport still creates a unified system component image but in a way that's less flashy than Sport LX.
With 6-speed SIS freehub shifting, SLR brakes, Biopace chainrings, and optional front SIS, Exage Sport provides much the same level of performance as Sport LX but at a more reasonable price.
The group will appeal to the selective shopper who's looking for an inexpensive yet high-performance bike and who responds more to the bike's performance capability than its appearance.



and Performance for

Some questions and answers about Sport LX & Exage Sport

Q.1:

Sport LX and EXAGE Sport look Fairly similar. What are the major differences?

A.1:

There are some important differences. Sport LX is an all-alloy group that is, on the whole, superior to Exage Sport both in terms of lighter weight and performance.
For example, Sport LX uses light alloy Biopace chainrings as opposed to the steel type on Exage Sport.
Sport LX uses a high-performance 7-speed freehub SIS shifting system, the same type used on real racing groups like Dura-Ace, which gives you a larger gear selection for finer cadence control. Exage Sport uses the more standard 6-speed freehub.
Other than that, the SLR brake system, front hub, pedals, crank arms, and headset differ in appearance but are mechanically identical components.

Q.2

If front SIS is such a breakthrough, why isn't it used on the Sport LX group?

A.2

Although front SIS does significantly improve the speed and accuracy of chainwheel shifting, design considerations call for the use of a steel chainrings. That's because front SIS shifting performance is closely linked to the shape and condition of the teeth on the chainwheel. Alloy chainwheels wear at a relatively fast rate which would have an adverse affect on front SIS shifting. So, front SIS requires the use of steel chainrings.
Performance-conscious cyclists tend to be more weight-conscious (about the bike's weight, not their own!) They usually have some cycling experience and would in most cases want non-SIS alloy chainrings.
Sport LX is aimed more at these types of cyclists.

Q.3

My old 10-speed had only ten gears. Do you really need 14-gears on this Sport LX bike? Isn't it harder to shift?

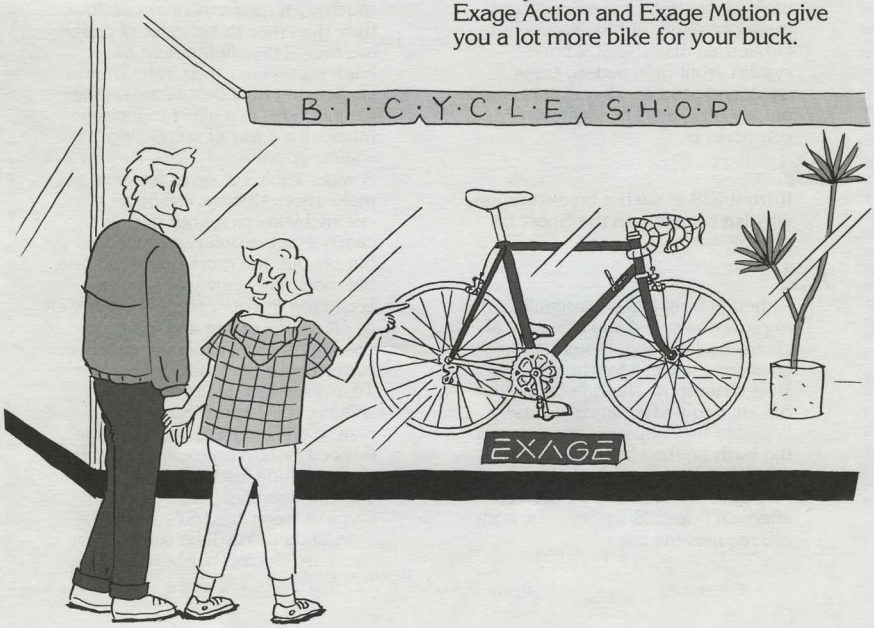
A.3

First of all, today's sport cyclists are much more performance conscious than they used to be. A lot of people are riding good lightweight bikes harder and faster than ever. They're challenging their best times on their favorite rides in a effort to increase fitness. It's a way of competing against yourself.
A wider choice of gears lets you make more efficient use of your energy by keeping your pedaling cadence at the optimum speed. Simply put, the more gears you have the more efficiently you can ride according to your energy level as well as different weather and road conditions. More gears increases your performance potential.
To answer your question about shifting, the 7-speed SIS shifting system on Sport LX, as well as the 6-speed system on Exage Sport, have made shifting faster and easier than you can imagine.
If you've never tried SIS, now's the time to do it. You'll be surprised by how easy shifting has become.

Exage Action and Motion groups act high-performance bicycles.

When people first get enthusiastic about cycling, they think all bikes are the same. So they look for the cheapest bike they can find.
Unfortunately, their enthusiasm for the sport may soon diminishes when they get tired of pedaling a heavy bike.
The Exage Action and Exage Motion groups give you a chance to change all that. These are all-alloy component groups that now realize a wider range of Shimano high-performance functions for lightweight entry-level sport bicycles in the lower price ranges.

Younger cyclists, adult recreational cyclists, students, commuters...everybody and anybody who wants to ride a bike can now have Biopace chainrings, a 6-speed SIS shifting system, optional front SIS, SLR brakes, and rear freehub on a sports bike that offers the best balance yet between quality, cost, and performance.
The Exage Action and Motion groups are not really "economy" bicycle components in the traditional sense of the word. They are real component systems with the advanced functions and high quality made possible by Shimano cycling research and the application of highly automated manufacturing techniques.
Exage Action and Exage Motion give you a lot more bike for your buck.



EXAGE ACTION
EXAGE MOTION

ually create a new class of

Some questions and answers about Exage Action & Exage Motion

Q.1:

Didn't Shimano make some pretty drastic reductions in quality by making all these functions possible in a bike in this price range?

A.1:

Not at all. Biopace, SIS, SLR and other improvements in cycling technology were made possible through Shimano's work in constantly refining components in order to create a better man-machine interface. Once these new functions are developed, they can be applied with relatively little cost increase to many component groups. For example, the caliper arm profile of the Exage Action SLR brake was computer-designed from the same data that determined the shape of the Dura-Ace brake caliper.

Furthermore, Shimano has the most advanced automated production system in the world in terms of efficiently manufacturing a wide range of product types with great speed and precision. This system maintains high quality while offsetting the increased costs that it takes to develop more advanced component groups.

It all comes down to technology. Shimano human-engineering technology combined with advanced manufacturing technology is making possible better performing and higher quality components that cost less.

Q.2

Exage Action and Motion components look very similar to Exage Sport. Aren't they the same?

A.2

They are basically the same in terms of design and materials. The difference is primarily in the type of fastening hardware used in each component and the surface finish of the components. Also, more of the components in the Sport LX and Exage Sport groups are alloy. They're also finished to a higher standard.

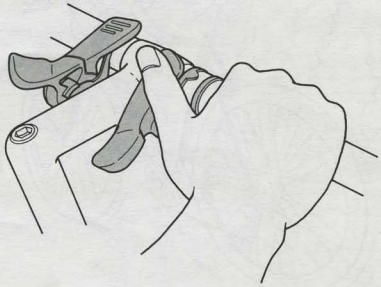
The design similarities between Sport LX/Exage Sport and Exage Action/Motion prove that you're getting an excellent cost-performance value with the Exage Action and Motion-equipped bike.

Q.3

These shift levers really look strange! How do they work?

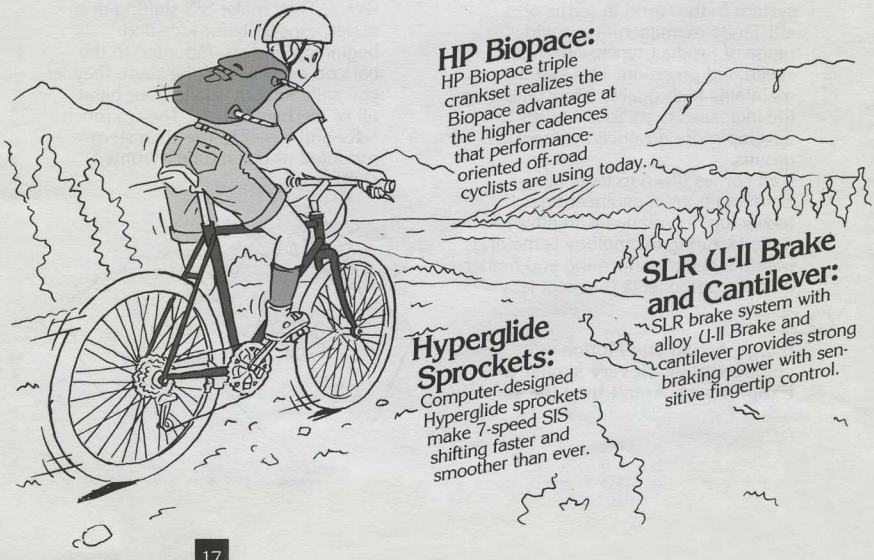
A.3

Those are Exage Motion's "flipper" levers. They make SIS shifting even easier, especially for kids and beginning cyclists. Mounted to the bars on each side of the stem, they let you shift without taking your hands off of the handle bars. They're much safer and easier to use than stem-mounted or down tube mounted shifters.



Shimano Super-Functions Now Reali

The Mountain LX and Exage Mountain off-road component systems realize a higher level of value and performance for the middle-level all-terrain bicycle.
These are the moderately priced ATB's used by many sport cyclists for recreational trail riding and occasional cross-country touring.
The Hyperglide sprockets and HP Biopace triple crankset of the Mountain LX group are Shimano's new "super functions," the same features found on the more expensive competition-oriented Deore XT-II and Deore II off-road component groups. Mountain LX also features 7-speed SIS with freehub, SLR brake levers, and alloy U-II Brake and cantilever brake.
The appeal of the Mountain LX components lies in their quality and array of advanced functions. They make possible a moderately priced yet high-performance off-road machine that actually exresses the current state of Shimano ATB component technology available today.
The cost-performance value of the Exage Mountain group puts the stress slightly on value over performance by eliminating the 7-speed SIS, Hyperglide sprockets, HP Biopace chainrings, and booster-equipped U-Brake.
Exage Mountain still offers refined functions and flexibility in creating a slightly more conventional ATB.
The group features an all-alloy SLR U-Brake and cantilever, Biopace triple chainrings, and 6-speed SIS with freehub. Exage Mountain also gives you a choice between front SIS or standard type friction chainwheel shifting systems. A one-piece shift/brake lever assembly or separate brake and shift levers are also available.
Mountain LX and Exage Mountain are component groups that make the performance ATB go...for a lot less.



zed for the Sport Touring ATB

Some questions and answers about Mountain LX and Exage Mountain

Q.1:

What is Hyperglide? Is it supposed to compensate for some problem with SIS?

A.1:

It's difficult to get any wide-range SIS sprocket cluster to shift as fast and smooth as close-ratio racing cogs. The gears are bigger and there's less of a deflection angle. The chain tends to ride up to top of the teeth before mating with the sprocket to complete the shift. This takes time and acts to slow down the shift.
Hyperglide is a new sprocket design that helps speed up and smooth out shifting for the wide-range clusters that the ATB uses.
Hyperglide sprockets incorporate specially shaped "release" teeth that determine exactly where the chain will separate from the cog when a downshift is initiated. All the sprockets on the freehub are aligned in relation to these release teeth in a way that maintains the chain pitch dimension (the distance between chain links) between the gears. Incidentally, this is where the computer was employed. This careful sprocket alignment allows the chain to mesh directly and smoothly into the larger gear without riding up on top of the teeth. SIS shifting is noticeably faster and more precise.

Q.2

If I have Hyperglide sprockets, does this mean that I can't change the sprockets myself?

A.2

Individual sprockets can be replaced when worn or damaged. Different sprocket combination must be used as a set. Do not mix hyperglide sprockets with UG sprockets.

Q.3

What's a U-Brake? And what's a Power Plate?

A.3

The U-Brake uses two caliper arms that ride on pivot bosses brazed onto the stays.
This innovative design provides the rigidity of a cantilever type brake with the high power multiplication factor of a center-pull type brake. It's the best of both worlds, so to speak.
A mounting position under the chainstays can create a cleaner bike appearance and forms a more rigid base for the brake.
The Power Plate is a device that acts like a bridge between the U-Brake's two brazed-on pivot bosses. It reduces flexing of the stays when the brakes are Applied hard in order to increase braking power.

Q.4

Why doesn't the Exage Mountain group use the new HP Biopace chainrings?

A.4

HP Biopace chainrings are designed to provide the optimum Biopace effect at faster pedaling speeds than Biopace. Because Mountain LX is a slightly more performance-oriented group than Exage Mountain, it's equipped with HP Biopace.

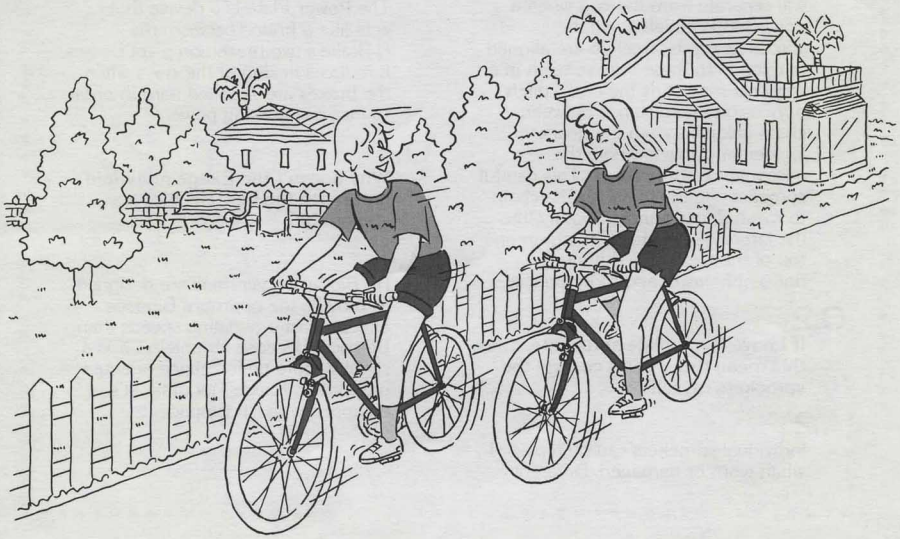
Expanded Performance Capabilities Fat-Tire Bicycles

The upright riding position and comfortable ride of today's fat-tire bicycle are making it an increasingly popular cycling style among dedicated sport cyclists and recreational riders alike.

The Exage Trail and Exage Country component groups enhance the image of the fat-tire bike. Furthermore, they provide the quality and much of the performance capability which is found on all-terrain bikes with more expensive component groups.

That's because there's hardly anything that separates Exage Trail and Country from Shimano's more expensive of-road component groups. For example, they both offer 6-speed SIS thumb shifting systems and use the Shimano freehub. They incorporate a new off-road SLR brake system along with high-tech composite cantilever brakes front and rear. Biopace triple cranksets are standard. Exage Trail offers either separate or one-piece shift/brake lever assemblies.

Exage Trail and Exage Country offer real off-road quality and performance capability for the fat-tire bikes that more and more people are riding today.



and Value for a Variety of

Some questions and answers about Exage Trail & Country

Q.1:

My friend bought a bicycle a couple of weeks ago that cost just a little less than this one. I rode it and it felt heavy and slow. The brakes hardly worked and it was really hard to shift. Are all these fat-tire bikes like that?

A.1:

No they aren't. There's a great difference in performance and quality among the bikes in this price range. Your friend's bike was obviously not equipped with the Shimano Exage Country group like this one. This bike shifts superbly. All you've got to do is push the lever to the next click-stop and you're in gear. The SLR brakes are amazingly sensitive and powerful. That Biopace crank will make the bike feel more comfortable to pedal. I guarantee you that this bike is a blast to ride. And as you become a better cyclist, you won't outgrow it.

Q.2

I've got a road bike but want another one to ride off-road. But I don't want to spend a lot of money. Is this Exage Trail model good enough for that?

A.2

It sure is. This Exage Trail bike gives you real ATB performance at a price you'll be happy to pay. Look what you get; cantilevers front and rear, SIS shifting, triple Biopace crankset, SLR brake system, and the Shimano freehub. Exage Trail offers almost the same quality and durability and most of the high-performance features found in the more expensive Shimano off-road groups.

Q.3

I want a bike for daily exercise. Is this the kind of bike I can ride regularly and not have any problems with?

A.3

Sure. Not only will you not have any problems with this bike, but you'll discover how much more enjoyable cycling becomes on a fat tire bike that has a Shimano system component group like Exage Trail. You'll find that controlling the brakes is much easier than you'd expected. The Biopace chainwheel creates a natural and comfortable pedaling feeling. And SIS shiftng is just a matter of pushing the lever to the next click-stop. These components are rugged too. They'll hold up as long as you want to ride the bike.

sport LX

Rear Derailleur

RD-A452

•275g. •6 & 7-speed SIS Compatible, Link Sealed, Double Sporke Barriers, Double Servo-Panta Mechanism, B-Tension Adjust Bolt •Maximum Rear Sprocket: 28T., Minimum Rear Sprocket: 13T., Maximum Front & Rear Sprocket Difference: 28T. •Light Alloy•Blue-Gray Metalic Finish (Bracket & Plate Body), Light Alloy•Pearl White Finish (R. Link)



EXAGE sport

Rear Derailleur

RD-A450

•302g. •6-speed SIS Compatible, Pre-Select Mechanism (Cable Saver Arm), Double Servo-Panta Mechanism, Double Spoke Barriers, Sealed Mechanisms, B-Tension Adjust Bolt •Maximum Rear Sprocket 28T., Minimum Rear Sprocket 13T., Maximum Front & Rear Sprocket Difference: 28T. •Light Alloy•Cosmos Blue Metallic Finish (Bracket & Plate Body)



EXAGE ACTION

Rear Derailleur

RD-A350

•302g. •6-speed SIS Compatible, Pre-Select Mechanism (Cable Saver Arm), Double Servo-Panta Mechanism, Double Spoke Barriers Sealed Mechanisms, B-Tension Adjust Bolt •Maximum Rear Sprocket: 28T., Minimum Rear Sprocket: 13T., Maximum Front & Rear Sprocket Difference: 28T. •Light Alloy (Bracket & Plate Body)



EXAGE MOTION

Rear Derailleur

RD-A250

•275g. •6-speed SIS Compatible, Pre-Select Mechanism (Cable Saver Arm), Double Servo-Panta Mechanism, Double Spoke Barriers, B-Tension Adjust Bolt, Cable Saver Arm •Maximum Rear Sprocket: 28T., Minimum Rear Sprocket: 13T., Maximum Front & Rear Sprocket Difference: 28T. •Light Alloy (Bracket Body)



mountain-LX

RD-M452-GS (Long Cage)

RD-M452-SGS (Super Long Cage)

•320g. (Super Long Cage) •7-speed SIS Compatible, Link Sealed, Double Servo-Panta Mechanism, Double Spoke Barriers, Chain Retainer, Sealed Mechanisms, Sealed Pivot Axles, Sealed Link Pivot B-Tension Adjustment Bolt, Heat Treated Guide Pulley Bushing, Digital Cable Adjustment •Maximum Rear Sprocket: 30T. (Long Cage), 32T. (Super Long Cage), Minimum Rear Sprocket: 13T., Maximum Front & Rear Sprocket Difference: 36T. (Long Cage), 38T., (Super Long Cage) •Light Alloy



EXAGE trail

Rear Derailleur

RD-M350-GS (Long Cage)

RD-M350-SGS (Super Long Cage)

•335g. (Super Long Cage) •6-speed SIS Compatible, Pre-Select Mechanism (Cable Saver Arm) Double Servo-Panta Mechanism, Double Spoke Barriers Chain Retainer, Sealed Mechanism,B-Tension Adjust Bolt •Maximum Rear Sprocket: 30T. (Long Cage), 32T. (Super Long Cage), Minimum Rear Sprocket: 13T., Maximum Front & Rear Sprocket Difference: 36T. (Long Cage), 38T. (Super Long Cage) •Light Alloy•Graphite Black Finish (Bracket & Plate Body), Steel•Satin Finish (R. Link)



EXAGE mountain

Rear Derailleur

RD-M450-GS (Long Cage)

RD-M450-SGS (Super Long Cage)

•330g. (Super Long Cage) •6-speed SIS Compatible, Pre-Select Mechanism (Cable Saver Arm) Double Servo-Panta Mechanism, Double Spoke Barriers, Chain Retainer, Sealed Mechanisms, B-Tension Adjust Bolt •Maximum Rear Sprocket: 30T. (Long Cage), 32T. (Super Long Cage), Minimum Rear Sprocket: 13T., Maximum Front & Rear Sprocket Difference: 36T. (Long Cage), 38T. (Super Long Cage) •Light Alloy•Graphite Gray Metallic Finish (Bracket & Plate Body), Steel Black Finish (R. Link) Steel•Satin Finish (Pulley Plates)



EXAGE COUNTRY

Rear Derailleur

RD-M250-GS (Long Cage)

RD-M250-SGS (Super Long Cage)

•298g. (Super Long Cage) •6-speed SIS Compatible, Pre-Select Mechanism (Cable Saver Arm), Double Servo-Panta Mechanism, Double Spoke Barriers, Chain Retainer, B-Tension Adjust Bolt, •Maximum Rear Sprocket: 30T. (Long Cage), 32T. (Super Long Cage), Minimum Rear Sprocket: 13T. Maximum Front & Rear Sprocket Difference: 36T. (Long Cage), 38T. (Super Long Cage) •Light Alloy



sport LX

Shifting Lever

SL-A453-BCAI (7-speed SIS, Band A Type)

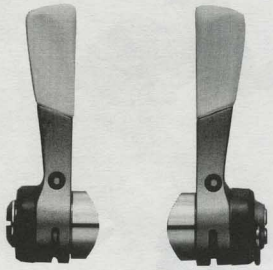
SL-A453-FCAI (7-speed SIS, Brazed-on Type)

SL-A452-BCAI (6-speed SIS, Band A Type)

SL-A452-FCAI (6-speed SIS, Brazed-on Type)

"C" of Model Number Means Italian Type (Fixing Bolt is 5mm. Diameter)

•76g. (SL-A453) •7-speed SIS (Shimano Index System) w/One-Touch Mode Switch (SL-A453), 6-speed SIS (Shimano Index System) w/One-Touch Mode Switch (SL-A452) •Light Action Shifting Front & Rear, Rubber Lever Cover •Light Alloy



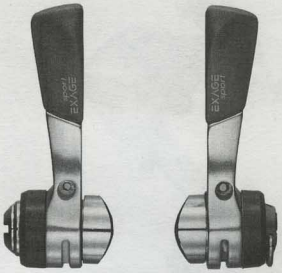
EXAGE sport

Shifting Lever

SL-A451-FCAI (SIS, Brazed-on A Type)

"C" of Model Number Means Italian Type (Fixing Bolt is 5mm. Diameter)

•SL-A451-FCAI: 72g. •6-speed SIS (Shimano Index System) w/One-Touch Mode Switch •Light Action Front SIS (Shimano Index System) w/Cable Adjust Mechanism and Friction Mode •Light Action Shifting, (Front & Rear), Rubber Lever Cover •Light Alloy•Barrel Finish (Lever)



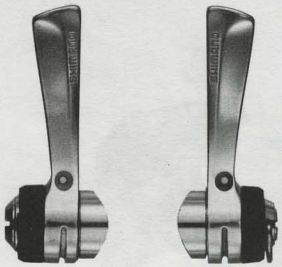
EXAGE ACTION

Shifting Lever

SL-A351-FCAI (SIS, Brazed-on A Type)

"C" of Model Number Means Italian Type (Fixing Bolt is 5mm. Diameter)

•SL-A351-FCAI: 84g. •6-speed SIS (Shimano Index System) w/One-Touch Mode Switch •Light Action Front SIS (Shimano Index System) w/Cable Adjust Mechanism and Friction Mode •Light Action Shifting (Front & Rear) •Light Alloy

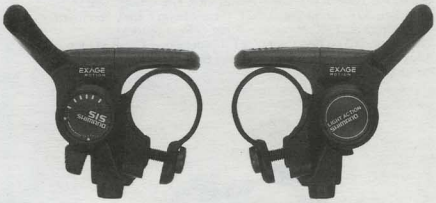


EXAGE MOTION

Shifting Lever

SL-A250 (Flipper)

•169g. •6-speed SIS (Shimano Index System) w/One-Touch Mode Switch •Light Action Shifting (Front & Rear) •Installation Position: Handlebar •Resin

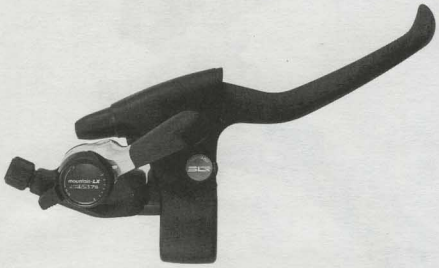




mountain-LX

SL-M453
•184g. Pair w/o BL-M451 •7-speed SIS (Shimano Index System) w/One-Touch Mode Switch •Light Action Shifting, Position Adjustment •Type: Thumbshifter Integrated w/Brake Lever •Light Alloy

BL-M451-A
•344g. Pair w/o SL-M453 •SLR (Shimano Linear Response) •Dust Cover, Lever Reach Adjust Screw, Hidden Clamp Band, Compact Design, Soft Touch Lever Cable Adjustment •Lever Clamp Diameter: 22.2mm. •Alloy•(Bracket Body), Resin (Lever)

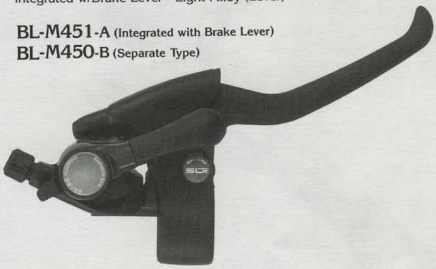


EXAGE mountain

SL-M451-A (Integrated with Brake Lever)
SL-M451-B (Separate Band Type)
•180g. Pair w/o BL-M451 •6-speed SIS (Shimano Index System) w/One-Touch Mode Switch •Light Action Front SIS (Shimano Index System) w/Digital Cable Adjust Barrel and Friction Mode •Type A: Thumbshifter Integrated w/Brake Lever, Position Adjustment, Light Alloy (Bracket), Resin (Lever) Type B: Separate Band Type •Steel (Clamp Band), Resin (Lever)

SL-M452 (Integrated with Brake Lever)
•180g. Pair w/o BL-M451 •6-speed SIS (Shimano Index System) w/One-Touch Mode Switch •Light Action Front Shifting Position Adjustment, Digital Cable Adjustment •Type: Thumbshifter Integrated w/Brake Lever •Light Alloy (Lever)

BL-M451-A (Integrated with Brake Lever)
BL-M450-B (Separate Type)



EXAGE trail

Shifting Lever

SL-M351-A (Unified with Brake Lever)
SL-M351-B (Separate Type)
•168g. Pair w/o BL-M350 •6-speed SIS (Shimano Index System) w/One-Touch Mode Switch •Light Action Front Shifting •Type A: Thumbshifter Integrated w/Brake Lever, Type B: Separate Type •Resin•

Brake Lever

BL-M350
BL-M351-B (Separate Type)
•280g. Pair w/o SL-M351 •SLR (Shimano Linear Response) •Dust Cover, Lever Reach Adjust Screw, Hidden Clamp Band, Compact Design, Cable Adjustment •Lever Clamp Diameter: 22.2mm. •Resin•Steel Composite



EXAGE COUNTRY

Shifting Lever

SL-M250
•90g. Pair w/o BL-M250 •6-speed SIS (Shimano Index System) w/One-Touch Mode Switch •Light Action Front Shifting •Type: Thumbshifter Integrated w/Brake Lever •Resin•

Brake Lever

BL-M250
•362g. Pair w/o SL-M250 •SLR (Shimano Linear Response) •Lever Reach Adjust Screw •Lever Clamp Diameter: 22.2mm. •Resin•Steel Composite



Specifications

sport LX

Front Derailleur

FD-A452-B (Band Type)

•Band Type: 113g. •Leading-Action Pantagraph Mechanism, Rigid Chainguide, Brass Bushings •Maximum: 14T. •Light Alloy



EXAGE sport

Front Derailleur

FD-A451-B (Band Type)

•Band Type: 105g. •Light Action Double Front SIS Compatible, Leading-Action Pantagraph Mechanism, Rigid Chainguide •Maximum: 14T. •Light Alloy•Cosmos Blue Metallic Finish (Right Link), Light Alloy•Silver Finish (Left Link), Steel•Cosmos Blue Metallic Finish (Clamp Band), Steel•Satin Finish (Chainguide)



EXAGE ACTION

Front Derailleur

FD-A351-B (Band Type)

•Band Type:121g. •Light Action Double Front SIS Compatible, Leading-Action Pantagraph Mechanism, Rigid Chainguide, Brass Bushings •Maximum: 14T.•Light Alloy (Right Link), Steel Pearl Bright Finish (Clamp Band), Steel Satin Finish (Chainguide)



EXAGE MOTION

Front Derailleur

FD-A250-B (Band Type)

•Band Type:127g. •Leading-Action Pantagraph Mechanism, Rigid Chainguide, Light Action •Maximum: 17T.



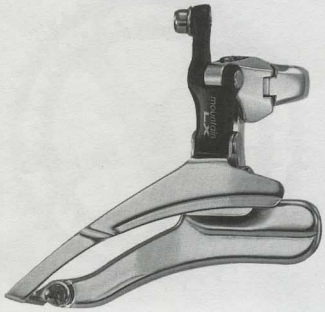
mountain-LX

Front Derailleur

FD-M452

• 116g. (Clamp Type) • Trailing Action Pantagraph Mechanism, New Trapease Mechanism, Rigid Chainguide • Clamp Diameter: 28.0, 28.6mm. (Clamp Type), 31.8, 34.9mm. (EC Type) • Light Alloy

Capacity (Front gear difference)	FD-M452-AL (Alpine)	Biopace gear.....8T.~24T.
	FD-M452-HS (Halfstep)	Biopace gear.....5T.~24T.



EXAGE mountain

Front Derailleur

FD-M451

• 108g. (Clamp Type) • Triple Front SIS Compatible, Trailing Action Pantagraph Mechanism New Trapease Mechanism • Clamp Diameter: 28.0, 28.6mm. (Clamp Type), 31.8mm. (EC Type) • Maximum: 20T. (SIS Type), 24T. (Normal Type) • Light Alloy•Graphite Gray Metallic Finish (Body, Outer Link) Steel•Satin Finish (Chainguide)

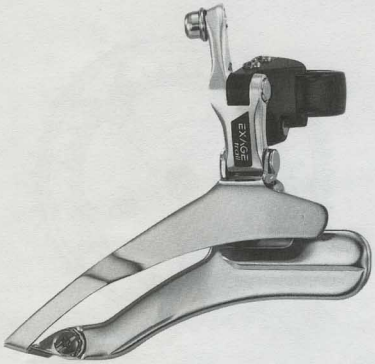


EXAGE trail

Front Derailleur

FD-M351

• 125g. (Clamp Type) • Trailing Action Pantagraph Mechanism, New Trapeze Mechanism, Rigid Chainguide • Maximum: 22T. • Clamp Diameter: 28.0, 28.6mm. (Clamp Type), 31.8mm. (EC Type) • Light Alloy•Graphite Black Metallic Finish (Body), Light Alloy•Barrel Finish (Outer Link), Steel•C.P. Finish (Chainguide)



EXAGE country

Front Derailleur

FD-M250

• 140g. (Clamp Type) • Trailing Action Pantagraph Mechanism, New Trapease Mechanism, Rigid Chainguide • Maximum: 22T. • Clamp Diameter: 28.0, 28.6mm. (Clamp Type)



sport LX

Front Chainwheel

FC-A452 **(Biopace Double, LD Type)**
•728g. (42, 52T., 170mm.) •Alloy Biopace Chainrings, Off-Set Crank Arm, CAD Shape •1/2" x 3/32" Chain •Teeth (Biopace): Inner 42T., Outer 52T. •Crank Length: 165mm., 170mm. •Crank Thread: BC 9/16" x 20T.P.I. •Light Alloy•Silver Finish (Chainring), Light Alloy (Crank Arm)



EXAGE sport

Front Chainwheel & Bottom Bracket Assembly

FC-A450 **(Biopace Double, LD Type)**

BB-A450 **(B.B. Set)**
•924g. (42, 52T., 170mm.), 333.3g (B.B. Set) •Front SIS Compatible, Biopace Chainrings, Off-Set Crank Arm, CAD Shape, Sealed Mechanism (B.B. Set) •For 1/2" x 3/32" Chain •Teeth (Biopace): Inner 42T., Outer 52T. •Crank Length: 165mm., 170mm. •Crank Thread: BC 9/16" x 20T.P.I. •B.B. Size: 68-W-113 •Light Alloy•Barrel Finish (Crank Arm), Steel•Titanium Gray Color Finish (Chainring), Steel (B.B. Set)



EXAGE ACTION

Front Chainwheel

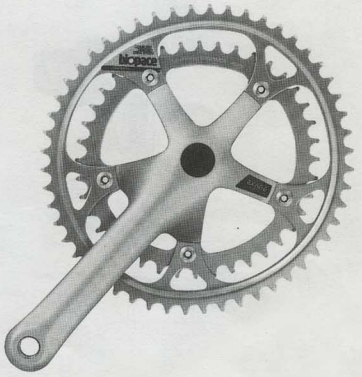
FC-A350 **(Biopace Double, LD Type)**
•902g. (42, 52T., 170mm.) •Front SIS Compatible, Biopace Chainrings, Off-Set Crank Arm, CAD Shape •For 1/2" x 3/32" Chain •Teeth (Biopace): Inner 42T., Outer 52T. •Crank Length: 165mm., 170mm. •Crank Thread: BC 9/16" x 20T.P.I. •Light Alloy (Crank Arm), Steel (Chainring)



EXAGE MOTION

Front Chainwheel

FC-A250 **(Biopace Double, LD Type)**
•851g. (42, 52T., 170mm.) •Biopace Chainrings, Off-Set Crank Arm, CAD Shape •For 1/2" x 3/32" Chain •Teeth (Biopace): Inner 42T., Outer 52T. •Crank Length: 165mm., 170mm. •Crank Thread: BC 9/16" x 20T.P.I. •Light Alloy (Crank Arm), Steel (Chainring)



mountain-LX

Front Chainwheel

FC-M452 (Biopace Triple, MD Type)

•785g. (28, 38, 48T., 170mm.) •High-Performance Biopace Chainrings, Off-Set Crank Arm, CAD Shape •For 1/2″ × 3/32″ Chain •Teeth (Biopace-HP): 26T., 28T. (Inner), 36T., 38T., 44T. (Middle), 48T., 50T. (Outer) •Crank Length: 170mm., 175mm. •Crank Thread: BC 9/16″ × 20T.P.I. •Light Alloy (Chainring), Light Alloy (Chank Arm)



EXAGE mountain

Front Chainwheel & Bottom Bracket Assembly

FC-M450 (Biopace Triple, MD Type)

BB-M450 (B.B. Set)

•1015g. (28, 38, 46T., 170mm.), 339g (B.B. Set) •Front SIS Compatible, Biopace Chainrings, Off-Set Crank Arm, CAD Shape, Sealed Mechanism (B.B. Set) •For 1/2″ × 3/32″ Chain •Teeth (Biopace): 28T. (Inner), 38T. (Middle), 48T. (Outer) •Crank Length: 170mm., 175mm. •Crank Thread: BC 9/16″ × 20T.P.I. •Cup Thread: English 1.37 × 24T.P.I. •B.B. Size: 68-T-117.5 •Light Alloy (Crank Arm), Steel•Titanium Color (Chainring) (Black Finish Available)



EXAGE trail

Front Chainwheel

FC-M350 (Biopace Triple, MD Type)

•1050g. (28, 38, 48T., 170mm.) •Biopace Chainrings, Chain Protection Guards (Inner), Off-Set Crank Arm, CAD Shape •For 1/2″ × 3/32″ Chain •Teeth (Biopace): 28T. (Inner), 38T. (Middle), 48T. (Outer) •Crank Length: 170mm., 175mm. •Crank Thread: BC 9/16″ × 20T.P.I. •Cup Thread: English 1.37 × 24T.P.I. •Light Alloy•Barrel Finish (Crank Arm), Steel•Satin Finish (Chainrings), (Black Finish Available)



EXAGE COUNTRY

Front Chainwheel & Bottom Bracket Assembly

FC-M250 (Biopace Triple, MD Type)

BB-M250 (B.B. Set)

•940g. (28, 38, 48T., 170mm.), •Biopace Chainrings, Chain Protection Guards (Inner), Off-Set Crank Arm, CAD Shape •For 1/2″ × 3/32″ Chain •Teeth (Biopace): 28T. (Inner), 38T. (Middle), 48T. (Outer) •Crank Length: 170mm., 175mm. •Crank Thread: BC 9/16″ × 20T.P.I. •Cup Thread: English 1.37 × 24T.P.I. •Light Alloy (Crank Arm), Steel•Satin Finish (Chainring) (Black Finish Available) •Double Chainwheel (38T., 48T.) Available



sport LX EXAGE sport

Brake

BR-A450-49 (Short 49 Type)

BR-A450-57 (Long 57 Type)

•299g. (F & R 49 Type) •SLR (Shimano Linear Response) •Easy Centering, One-Piece Brake Shoe w/Tire Guide, Cable Adjuster, CAD Shape •Light Alloy (Arm) •For SLR System use SLR brake lever and Shimano Outer Cable with Liner.

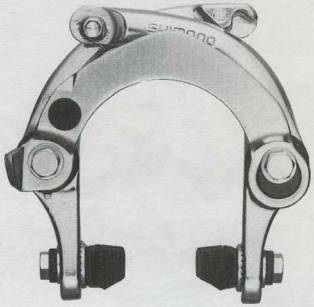


mountain-LX

U-II Brake

BR-M453

•346g. 1 pc. •SLR (Shimano Linear Response) •Adjust Screw for Spring Tension Balance, Low-Profile Brake Shoe, Allen Key Type Fixing Bolt, Power Plate with Shark Tooth •Center Wire Diameter: 1.6mm. •Light Alloy•Silver Finish (Black Finish Available)



EXAGE ACTION

Brake

BR-A350-49 (Short 49 Type)

BR-A350-57 (Long 57 Type)

•324g. (F & R 49 Type) •SLR (Shimano Linear Response) •Easy Centering, One-Piece Brake Shoe w/Tire Guide, Cable Adjuster, CAD Shape •Light Alloy

*For SLR System use SLR brake lever and Shimano Outer Cable with Liner.



EXAGE MOTION

Brake

BR-A250-57 (Long 57 Type)

•330g. (F & R 57 Type) •SLR (Shimano Linear Response) •Easy Centering, One-Piece Brake Shoe w/Tire Guide, Cable Adjuster, CAD Shape •Light Alloy

*For SLR System use SLR brake lever and Shimano Outer Cable with Liner.

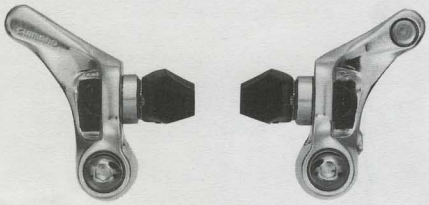


mountain-LX
EXAGE mountain

Cantilever Brake

BR-M454

•185g. Pair •SLR (Shimano Linear Response) •Adjust Screw for Spring Tension Balance, Low-Profile Brake Shoe, Allen Key Type Fixing Bolt •Light Alloy•Silver Finish (Black Finish Available)



EXAGE mountain

U-Brake

BR-M452

• 270g. 1 pc. •SLR (Shimano Lenear Response) •Adjust Screw for Spring Tension Balance, Low-Profile Brake Shoe, Allen Key Type Fixing Bolt •Center Wire Diameter: 1.6mm. •Light Alloy• Silver Finish (Black Finish Available)

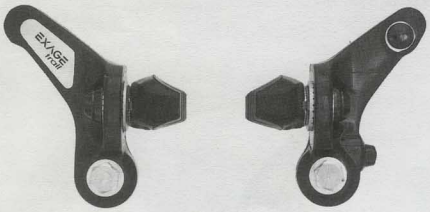


EXAGE trail

Cantilever Brake

BR-M350

•200g. Pair •Rigid Computer Designed Shape, Sealed Internal Spring Design, Spring Tension Adjuster, Low-Profile Brake Shoe, Easy Cable Attachment •Steel and Resin•Graphite Black Metallic Finish (Brake Arms), Black Steel w/Graphite Black Metallic Resin Cover (Cable Carrier)

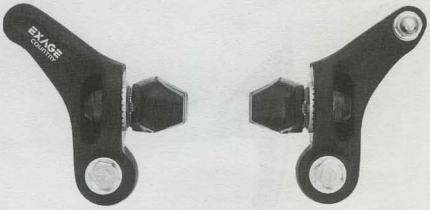


EXAGE COUNTRY

Cantilever Brake

BR-M250

• 239g. •Rigid Computer Designed Shape, Sealed Internal Spring Design, Low-Profile Brake Shoe, Easy Cable Attachment •Steel and Resin•Black Finish



sport LX
EXAGE sport

Brake Lever

BL-A450 (Standard Type)
BL-A451 (Aero Type)
BL-A452 (Aero Type, Short Reach)
BL-A453 (Flat Handle Type)

•BL-A450: (Pair, Including Rubber Cover): 264g. •SLR (Shimano Linear Response) •Ergonomic Design Cast Bracket Body w/Increased Leverage, One-Touch QR Mechanism, Soft-Touch Lever Grip, Hooded Lever with Rubber Cover •Lever Clamp Diameter: 23.8—24.2mm. •Bracket Cover: White, Blue-Gray Metallic •Light Alloy (Bracket Body & Lever), Steel (Clamp Band)
*Options: Outer Cable Guide/Joint (for BL-A451, BL-A452).



BL-A451

EXAGE ACTION

Brake Lever

BL-A351 (Aero Type)

•308g. (Pair Including Rubber Cover) •SLR (Shimano Linear Response) •Ergonomic Design Cast Bracket Body w/Increased Leverage, One-Touch QR Mechanism, Soft-Touch Lever Grip, Hooded Lever with Rubber Cover •Lever Clamp Diameter: 23.8—24.2mm. •Bracket Cover: Black, White •Light Alloy
*Options: Outer Cable Guide/Joint.



EXAGE MOTION

Brake Lever

BL-A251 (Aero Type)
BL-A251-EX (For use with Extension Lever)
BL-A25 (Extension Lever)

•308g. (Pair), •SLR (Shimano Linear Response) •Ergonomic Design Cast Bracket Body w/Increased Leverage, One-Touch QR Mechanism, Soft- Touch Lever Grip, Hooded Lever with Rubber Cover, Extension Lever (BL-A251-EX) •Lever Clamp Diameter: 23.8—24.2mm. •Bracket Cover: Black or White •Light Alloy•
*Options: Outer Cable Guide/Joint.



BL-A251

sport LX
EXAGE sport

Freehub

FH-A450-6/7 (Rear, 6-speed/7-speed)
CS-1000

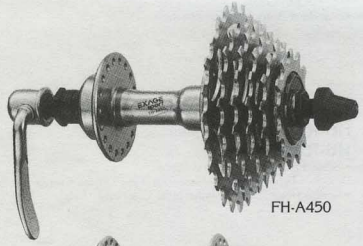
•410g. (Rear w/o Sprockets) •6 & 7-speed SIS Compatible (Sprockets), Sealed Mechanism •Type: Quick Release (Small Flange) •Teeth: Threaded Sprocket; 13T.~18T., Spline Sprocket; 14T.~28T., 30T., 32T., 34T. •Over Lock Nut Dimensions: 126mm. •Spoke Holes: 32H, 36H •Spoke Hole Diameter: 14G •For 1/2" × 3/32" Chain •Light Alloy•Blue Anodized Finish (Hub Shell), Resin•Blue Gray Finish (QR Adjust nut), Steel•Silver Finish (Sprockets)
•Standard Sprocket Combination:

6-speed	13, 14, 15, 17, 19, 21T. 13, 15, 17, 19, 21, 24T. 13, 15, 17, 20, 24, 28T.
7-speed	13, 14, 15, 17, 19, 21, 23T. 13, 14, 15, 17, 19, 22, 26T. 13, 15, 17, 19, 21, 24, 28T.

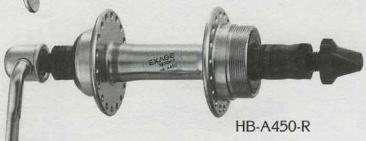
Hub

HB-A450-R (Rear Hub)
HB-A450-F (Front Hub)

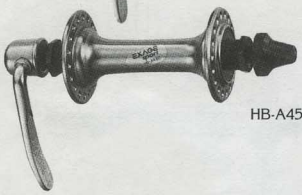
•318g. (Rear), 202g. (Front) •Sealed Mechanism •Type: Quick Release (Small Flange) •Light Alloy•Blue Anodized Finish (Hub Shell) •Over Lock Nut Dimensions: 100mm. (Front), 126mm. (Rear) •Spoke Holes: 32H, 36H •Spoke Hole Diameter: 14G •Light Alloy (Hub Shell)



FH-A450



HB-A450-R



HB-A450-F

EXAGE ACTION
EXAGE MOTION

Freehub

FH-RM50

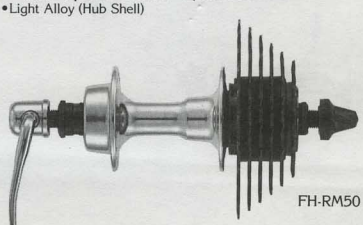
•446g. (QR-Type w/o Cassette Sprockets) •6-speed SIS Compatible •One Piece Design, Sealed Mechanisms •Type: Quick Release/Nut Type (Small Flange) •Over Lock Nut Dimensions: 126mm., 130mm. •Spoke Holes: 32H, 36H •Spoke Hole Diameter: 14G •Teeth: 13T.~16T. Top (Threaded), 14T.~26T., 28T., 30T., 32T. (Spline) •For 1/2" × 3/32" Chain •Light Alloy (Hub Shell)
•Standard Sprocket Combinations:

6-speed	13, 14, 17, 20, 24, 28T. 13, 15, 17, 21, 24, 28T. 13, 14, 17, 20, 25, 30T. 13, 15, 18, 22, 26, 32T.

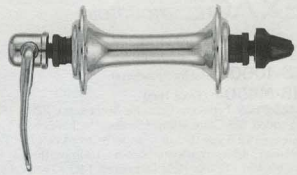
Hub

HB-RA50-R (Rear 6-speed)
HB-RA50-F (Front Hub)

•Sealed Mechanisms, One Piece Design •Type: Quick Release/Nut Type (Small Frange) •Axle: mm. •Spoke Holes: 36H •Spoke Hole Diameter: 14G •Light Alloy (Hub Shell)



FH-RM50

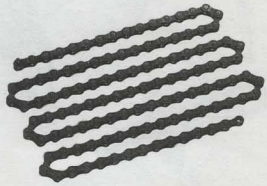


UG Chain

CN-UG20

CN-UG50

•Narrow Type Uniglide Chain



mountain-LX

Freehub

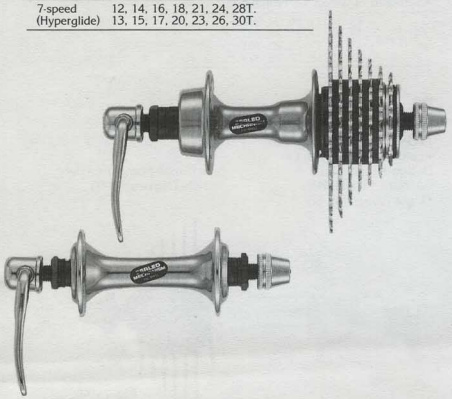
FH-M452 (Rear, 7-speed)

CS-MT62 (Cassette Sprockets)

HB-M451-F (Front Hub)

• 444g. (QR-Type w/o Cassette Sprockets), 227g. (Front) •7-speed SIS Compatible •7-speed Hyperglide Compatible •Sealed Mechanisms •Type: Quick Release/Nut Type (Small Flange) •Over Lock Nut Dimensions: 130mm., 135mm. (Rear), 100mm. (Front) •Spoke Holes: 32H, 36H •Spoke Hole Diameter: 14G •For 1/2" × 3/32" Chain •Standard Sprocket Combinations:

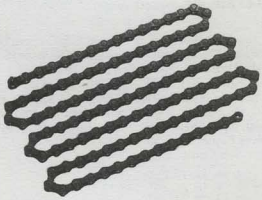
7-speed (Hyperglide)	12, 14, 16, 18, 21, 24, 28T. 13, 15, 17, 20, 23, 26, 30T.



UG Chain

CN-MT62

•Narrow Type Uniglide Chain •Hyperglide Compatible



EXAGE *trail*
EXAGE COUNTRY

Freehub

FH-RM50

• 446g. (QR-Type w/o Cassette Sprockets) •6-speed SIS Compatible •One Piece Design, Sealed Mechanisms •Type: Quick Release/Nut Type (Small Flange) •Over Lock Nut Dimensions: 126mm., 130mm. •Spoke Holes: 36H •Spoke Hole Diameter: 14G •Teeth: 13T.~16T. Top (Threaded), 14T.~26T., 28T., 30T., 32T. (Spline) •For 1/2" × 3/32" Chain •Standard Sprocket Combinations:

EXAGE *mountain*

Freehub

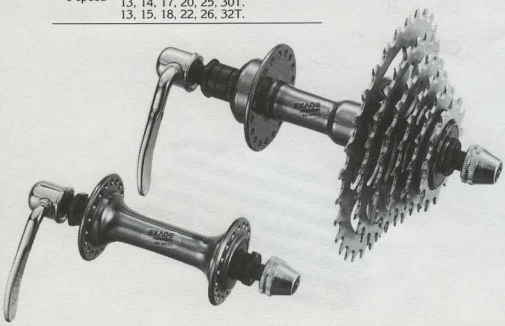
FH-M450 (Rear, 6-speed)

CS-1000 (Cassette Sprockets)

HB-M450-F (Front Hub)

• 423g. (QR-Type w/o Cassette Sprockets), 220g. (Front) •6-speed SIS Compatible •Sealed Mechanisms •Type: Quick Release/Nut Type (Small Flange) •Over Lock Nut Dimensions: 126mm., 130mm. (Rear), 96mm., 100mm. (Front) •Spoke Holes: 36H •Spoke Hole Diameter: 14G •Teeth: 13T.~16T. Top (Threaded), 14T.~26T., 28T., 30T., 32T. (Spline) •For 1/2" × 3/32" Chain •Standard Sprocket Combinations:

6-speed	13, 14, 17, 20, 24, 28T. 13, 15, 17, 21, 24, 28T. 13, 14, 17, 20, 25, 30T. 13, 15, 18, 22, 26, 32T.



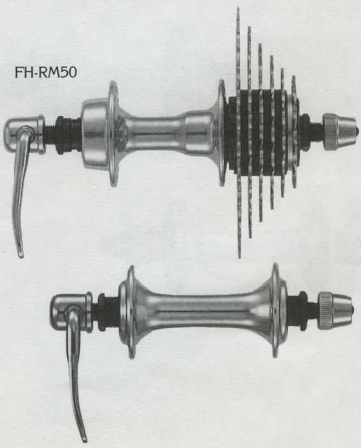
Hub

HB-RA50-R (Rear 6-speed)

HB-RA50-F (Front Hub)

• Sealed Mechanisms, One Piece Design •Type: Quick Release/Nut Type (Small Frange) •Spoke Holes: 36H •Spoke Hole Diameter: 14G

FH-RM50



EXAGE sport

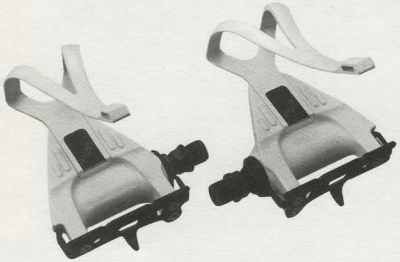
Pedal

PD-A450-A (Gray)

PD-A450-B (White)

•460g. Pair Toe Clip Size L •Compact Aero Design, 3.5° more Road Clearance, Adjustable Resin Toe Clip •Crank Thread: BC 9/16″ × 20T.P.I. •Resin (Body), Cr- Steel (Axle), Steel (Back Plate)

*PD-1050, PD-6400, PD-7400 Toe Clip Can be Used.



EXAGE sport

Head parts

HP-A450-A (Blue Gray Metallic)

HP-A450-B (White)

•125g. •Compact Design, Sealed Mechanism •Steel•C.P. Finish (Lock Nut), Steel and Resin•C.P. (Upper Cone), Steel•Zinc Plated (Upper & Lower Cone), Steel and Resin (Lower Cup)

EXAGE mountain

Head parts

HP-M450 (Graphite Gray Metallic)

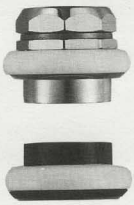
125g. •Compact Design, Sealed Mechanism •Steel•C.P. Finish (Lock Nut), Steel and Resin•C.P. Graphite Gray Metallic Finish (Upper Cone), Steel•Zinc Plated (Upper Cup & Lower Cone), Steel and Resin•Black Gray Finish

EXAGE trail

Head parts

HP-M350 (Graphite Black Metallic)

125g. •Compact Design, Sealed Mechanism •Steel•C.P. Finish (Lock Nut), Steel and Resin•C.P. Graphite Black Metallic Finish (Upper Cone), Steel•Zinc Plated (Upper Cup and Lower Cup & Cone)

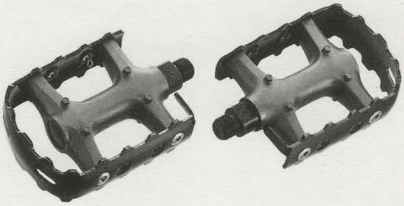


EXAGE mountain

Pedal

PD-M450

•486g. Pair w/o Reflector •Low Profile Design, Toe Clip/Reflector Attachable •Crank Thread: BC 9/16″ × 20T.P.I. •Bear Trap Type •Toe Clip: Standard (Special Spacer Needed) •Cr- Steel•Black Finish (Axle), Resin•Graphite Gray Metallic Finish (Body), Steel•Black Finish (Cage)



EXAGE trail

Pedal

PD-M350

•445g. Pair w/Reflectors •Compact Design, Steel Outer Cage Teeth, Built-in Reflectors •Crank Thread: BC 9/16″ × 20T.P.I. •Steel•Black Finish (Axle), Resin•Black Finish (Body), Steel•Black Finish (Cage)

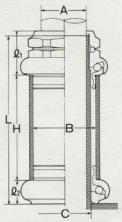


■ **Variations:**

Type	Thread	Press Race Diameter	
		Upper Cone & Lower Cup	Lower Cone
English/Italian	BC1 × 24T.P.I.	30.2mm.	26.4mm.
French	M25 × 1.0	30.2mm.	26.4mm.

■ **Dimensions**

ℓ_1	22.0mm.
ℓ_2	11.5mm.
H	Head tube Length
A	22.3mm.
B	30.2/30.0mm. (JIS)
C	26.4/27.0mm. (JIS)
Thread	BC1″ × 24T/M25 × P1.0



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