



2009

# SHIMANO

COMFORT BIKE  
COMPONENTS SYSTEMS

English (GB)

# Components designed for more comfortable cycling

The idea behind comfort is to combine the efficiency of a road bike with the stability of a mountainbike. Shimano continues to refine the comfort concept with innovative components designed to create an enhanced feeling of comfort and control. A bike equipped with Shimano comfort components is easier to ride, so cycling becomes more fun especially for new cyclists, leisure riders or occasional riders. An enhanced feeling of confidence makes the cyclist feel either more relaxed on the bike.

The previous Deore LX, the middle-range MTB component group, was separated and inherited into two groups, SLX group for MTB and the new Deore LX group for Trekking. The new Deore LX component group can be characterized by three keywords: smooth, tough and RideLight. We present a new approach with those highly enhanced Shimano Components in the quest for diverse styles of comfort bikes.

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SHIMANO  
Deore

LX

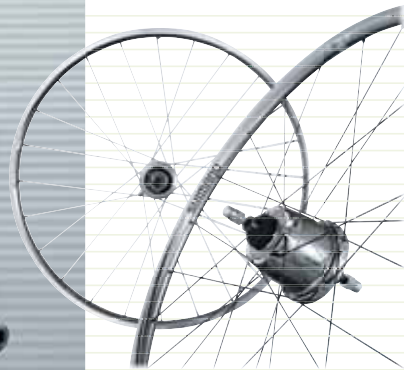
A close-up, artistic photograph of a bicycle's drivetrain. The left side of the image shows a portion of a silver-colored chainring and a black chain link. The background is a soft, out-of-focus gradient of green and blue, suggesting a natural outdoor setting. The lighting is bright, creating a clean and modern aesthetic.

## **Luxurious Touch**

**The new Deore LX component group is dedicated to Trekking and is characterized by three keywords: smooth, tough and RideLight, a coined word meaning "lightweight, compact and slim". This group offers a gentle and secure feeling with a smooth design and reliability based on Shimano's proven technology.**



# SHIMANO *ALFINE*



WH-S501-3D/8D (Silver)

# For sporty and fashionable cycling

Alfine is a stylish, premium-level component group sure to appeal to quality-minded consumers. Premium quality, style, versatility, and effortless operation define Alfine. Use the clean look and wide-range gearing of this internal 8-speed hub to enhance your bicycle brand.

## SG-S501 NEW

8-speed Internal Hub Gear for Disc Brake Use

- Highest Shimano internal hub efficiency
- Double roller clutch engagement for smoother, quieter shifting
- Center Lock rotor mount

## CS-S500

- Special Single Gear Design with Chain Tensioner
- Revised tooth profile to prevent chain skip
- 18T, 20T available

## CT-S500

- Chain Tensioner
- For vertical drop-out

## FC-S500

Crankset with Chainguard  
FC-S400

- OCTALINK Crankset with Chainguard (BB-ES25)
- Chainring : 45T, 39T
- Single or double chainguard integrated design
- Iconic Shimano cap-free design (FC-S500)
- OCTALINK splined axle crank arm interface (FC-S400)

- Use with CN-HG53 super narrow chain because of the 9-speed compatible chainrings

## SL-S500

RAPIDFIRE Plus Shifting Lever (for Inter-8)

- Refined & Sporty with Optical Gear Display
- Precise shifting

## BL-S500

Hydraulic Brake Lever (4-finger)

## BL-S502

Hydraulic Brake Lever (2.5-finger)

- Smooth integration with Alfine SL

## BR-S501

Hydraulic Disc Brake NEW

## SM-RT64

Disc Rotor NEW

- Hydraulic disc brake (mineral oil)  
The best balance between comfortable controllability and powerful braking force
- Opposed 2-piston design
- Easy and fast set-up
- Center Lock system

## DH-S501

Hub Dynamo NEW

- 6.0V-3.0W
- Use with Center Lock disc brake

## WH-S501-V-3D/8D

NEW

## WH-S501-V

NEW

## WH-S501-3D/8D

NEW

- Center Lock and V-BRAKE compatible
- Use with Center Lock disc brake only

(See page 22)



S500 (Black finish)

WH-S501-3D/8D (Black)



# SHIMANO *Cyber* **Nexus**



## Automatic shifting

- 3 modes (Ds, D, L) serve each rider's purpose, preference and situations.
- Choice of 8 different gear shift timings
- Can switch to manual shifting
- 14 pulses per wheel rotation create high precision automatic shifting.

## Auto light sensor

- CPU equipped with sensor automatically turns lamp on and off
- Compatible with wide variety of different lights

## Display

- Easy-to-read large digital display
- Light yellow backlight gentle on the eye

## Auto suspension

- Automatically adjusts riding conditions, switching between "HARD" and "SOFT"
- Suspension can be switched manually

FLIGHTDECK



**Di2**  
DIGITAL INTEGRATED INTELLIGENCE

## The ultimate components for comfort bikes

CyberNexus offers various features and benefits created by the leading-edge technology for advanced comfort and excitement. The dynamo supplies the operation power for a completely environmentally-conscious system-ECOVISION.



# SHIMANO NEXAVE C810 3X8-speed



## Digital Drive System

- Computer selects optimum gears in response to the speed. Ensured ideal gear ratios allow comfortable riding at all times.
- Synchronized gear changing and suspension.
- 11 internal dynamo magnets for immediate speed sensor input at 11 signals per rotation
- Instantaneous response to riding conditions
- No more wheel magnet systems

## Digital Suspension

- Hard ride at uphill and on start-up not to waste power; soft ride at normal riding.
- Computer selects optimum hardness.

## Self-energized by Freehub Dynamo

- No battery power for the system provides environmentally-friendly ECOVISION, no batteries needed.

## Display

- Simple and easy-to-read display
- Light orange backlight gentle on the eye



## Flagship components with Di2 technology for the ultimate comfort bike

NEXAVE C810 offers a lot of features and benefits for advanced comfort and excitement. The Freehub dynamo supplies the operating power for an environmentally friendly system (ecovision). SPCM3 offers enhanced smooth front triple gear shifting for a wider range of comfort cycling.

# The standard in internal geared hubs

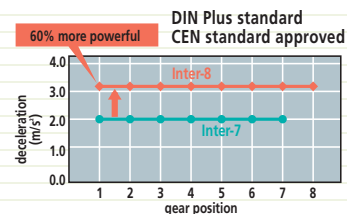
The NEXUS 8-speed system delivers a high level of design, quality and function. Many technical advances have been achieved, like incorporating Shimano's unique gear change support mechanism that makes truly a real low effort shifting.

INTER **M** MULTI CONDITION



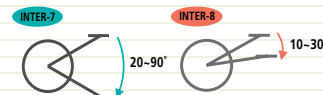
## NEXUS INTER-8 Internal geared hubs

- **INTER-8C (SG-8C31)** : 60% more braking power compared to INTER-7C
- **New seal design improves sealing performance.**
- **Needle bearing increases durability and offers high driving efficiency (SG-8R36).**



- **Gear change support mechanism** / Shimano's gear change support mechanism uses pedaling power to aid down-shifting. The result is fast and accurate down-shifting with an exceptional light feeling.

- **Smooth gear change** / The smaller idling angle realizes shockless, smoother shifting for stressless comfortable shifting.



- **Smoother rotation**
- **Close ratio wider range** / The INTER-8 hub has increased its gear ratio to 307%, compared to 244% of the current INTER-7 hub. The INTER-8 hub also incorporates a closer gear ratio allowing a more efficient and comfortable pedaling cadence.
- **Better sealing**
- **Robust construction** / Durable planetary and step-up gear sets assure long trouble-free service.
- **Premium version available** / INTER-8 Premium Version is lighter in weight, more driving-efficient and more durable.

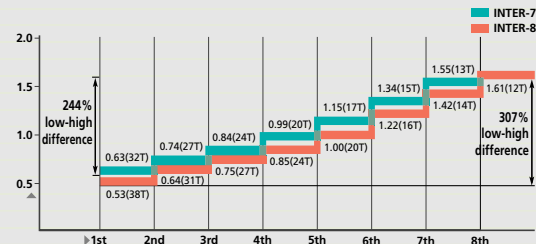
## Shift and brake levers

- **Fast and light shifting**
- **Easy-to-read gear indicator**

**SHIMANO**  
**Nexus**  
**INTER-8**

## INTER-7, and INTER-8 wide-range gearing

The table at the right shows the relative gear ratio for the INTER-7 and INTER-8 gear hubs when used with a 20T sprocket. The numbers in parenthesis show the sprocket size that each gear ratio corresponds to in a derailleur system.



## Internal geared hubs

### INTER-7

SG-7C18 (w/  
COASTER  
BRAKE)



SG-7R46



BR-IM41-R

### INTER-3

SG-3C41  
(w/COASTER  
BRAKE)



SG-3R40



BR-IM31-R

### NEXUS internal geared hubs

- **Internal gear shifting** / Gear shifting action is independent of pedaling. You can shift gears anytime, while standing still, pedaling or coasting.
- **Heavy-Duty Construction** / Rugged planetary and step-up gear sets assure long trouble-free service.
- **Integral coaster brake (SG-7C18/3C41)** / Back pedal braking action eliminates the need for a brake cable to the rear wheel.
- **Integral roller brake (SG-7R46/3R40)** / Cable activated roller brake works effectively in all weather conditions.
- **Shift modulator mechanism** / Smooths out the shifting action while pedaling.
- **Gear change support mechanism (SG-3R40/3C41)**

## REVOSHIFT levers

SL-7S20



SB-7S45



SL-3S35



SL-7S10

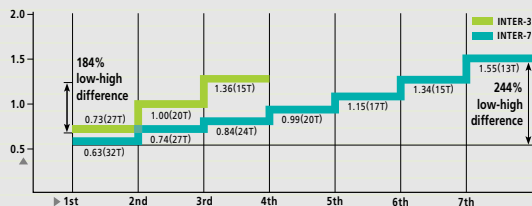


SL-3S41E  
SL-3S42E



### INTER-7, and INTER-3 wide-range gearing

The table at the right shows the relative gear ratio for the INTER-7, and INTER-3 hubs when used with a 20T sprocket. The numbers in parenthesis show the sprocket size that each gear ratio corresponds to in a derailleur system.



### REVOSHIFT shifters

- **Twist shifting action** / Low-effort rotational shift action doesn't depend on finger strength, keeps your hands on the handlebars.
- **Optical Gear Display** / Dial-type gear position display makes it easy to see your gear at a glance.
- **Full range shift action** / No need to sequentially shift through each gear. Just rotate the grip to the gear you need.
- **Two-position brake cable** / Allows brake lever to be used with hub roller brake, cantilever brake or V-BRAKE with POWER MODULATOR system (SB-7S45).

SHIMANO  
INTER-7

SHIMANO  
INTER-3

SHIMANO  
INTER-3

# Hub dynamos

## Hub Dynamo Features

- **No batteries needed** / Get bright illumination for safer night riding without the need and expense of replacing batteries.
- **Less rolling resistance** / Compared to previous model, Inter-L hub dynamos rotate with significantly less drag with the lamp off and when starting from stop.
- **Light Weight** / Hubs are significantly lighter than conventional model and offer a smaller axial cross section for improved appearance.
- **Plug-In Wiring** / Wiring harnesses use push-in connectors that make installation fast and easy.
- **Contact Seal** / Contact-type rubber seal enhances water resistance.
- **Disc brake mount compatible (DH-3D30/2D30)**
- **Roller brake compatible (DH-3R30/2R30-E)**

## Auto Lighting System Features

- **In-switch light sensor** / Ambient light sensor is located in the switch assembly.
- **Manual ON-OFF Switch** / Lighting system can be turned off when not needed or to prevent lamp illumination when not desired.
- **Lamp compatibility** / Various lamp types can be used with the Inter-L lighting systems.



# Roller brakes

## INTER-M hub roller brakes

- **Hub mounting /**  
No external calipers. Braking surfaces are sealed for all-weather performance.
- **Cam-roller activation /**  
Strong, easy-to-control braking power.
- **Cooling disc /**  
Better heat dissipation reduces fade, extends lubricant life.
- **Meets DIN-79100 specification /**  
Reliable DIN certified performance.

## INTER-M front brakes and hubs

- **Braking POWER MODULATOR /**  
Prevents accidental front wheel lockup.
- **Size specific design /**  
HB-NX50 and HB-IM40 are designed for 26-27" wheels, HB-IM30 for 20-24" wheels.
- **Sealed mechanisms /**  
Rubber seals keep out dirt and water.
- **Squeal suppression /**  
Brake and modulator operate silently.
- **Meets DIN-79100 specification /**  
Reliable DIN certified performance.

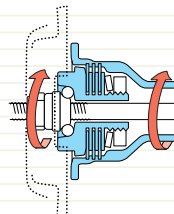


IB-DR70



## Braking POWER MODULATOR system (Front roller brake)

Braking force does not exceed clutch slip point.

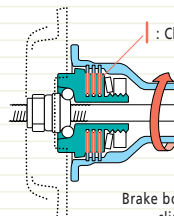


Friction clutch binds brake boss and hub together so they rotate as a single unit when brakes are released or applied lightly.



Hub and brake boss turn together.

Braking force exceeds clutch slip point.



: Clutch slips

When brakes are applied strongly, clutch allows brake boss to slip against the hub.

Clutch slips.

Brake boss slips.

Hub shell turns independently of brake boss.

SHIMANO  
INTER-M



**SHIMANO** *Deore*  
**XT**

For Trekking Bikes



# For comfortable trekking

DEORE XT is well known as a mountainbike component group, which is known for its high reliability. DEORE XT has a full lineup including a Trekking version with features such as 3-finger type brake lever and a crankset with 48T.

## **FC-M771-K** HOLLOWTECH II Crankset

### **SM-BB70** Standard Bottom Bracket

- Chainguard / chaincase compatible
- Gearing : 48-36-26T

## **FD-M772** TOP SWING Front Derailleur

### **FD-M773** DOWN SWING Front Derailleur

- For trekking bike
- Great shifting performance
- Angled adjustment screws for easy access with a screw driver.
- Lighter cage (chain guide)
- Increased tire clearance through modified cage tail shape
- More clearance behind the seat tube for down swing FD, mud guard, or suspension (FD-M773)

## **BL-M770** V-BRAKE Lever (1.5-finger)

### **BL-M771** V-BRAKE Lever (3-finger)

## **BR-M770** V-BRAKE

- Super light-weight
- 152g lighter (compared to previous model)
- Proven performance of Shimano's super Linear Response system
- Cartridge shoe holder

## **SL-M770** RAPIDFIRE Plus Shifter

- 2-way release for different riding styles or shifting (indexfinger or thumb) from various riding positions
- Instant release for quicker shifts
- Choice of inboard and outboard position
- Removable Optical Gear Display

## **RD-M771** Top Normal Rear Derailleur

- Double servo-panta mechanism
- Smooth operation and light action
- Capacity : GS 35T, SGS 45T

## **HB/FH-M770** Hub set for V-BRAKE

- Quicker engagement freehub body (10 degrees)
- Grease sleeve for longer durability
- Spoke holes : 32H/36H

## **CS-M770** Cassette Sprockets

- Increased stiffness
- Gearings : 11-32T, 11-34T

## **CN-HG93** 9-speed HG Chain

- Super-narrow 9-speed construction
- Precision construction
- Improved durability

**RAPIDFIRE**  
Plus



**3X 9-speed**

# Luxurious touch

The new Deore LX component group is characterized by three keywords: smooth, tough and RideLight, a coined word meaning "lightweight, compact and slim". The total weight of this T660 series is 130g lighter than M580 series.

## FC-T661 HOLLOWTECH II Crankset

## SM-BB70 Standard Bottom Bracket

- Cap-free iconic design
- Hyperdrive SG-X chainrings
- 32T composite gearing for durability
- Gearings : 44-32-22T, 48-36-26T
- Chaincase compatible

## FD-T660 TOP SWING Front Derailleur

## FD-T661 DOWN SWING Front Derailleur

- Hyperdrive compatible
- Wide link design
- Dual pull
- Multi clamp
- Designed for 50mm chainline
- Compatible with 44/48T

## RD-T661-SGS Top Normal Rear Derailleur

- Wide link design for stronger strength
- Lightweight/  
44g lighter compared with RD-M580

## • Shorter plate than RD-M581

- Light action
- Double servo-panta mechanism

## ST-T660

RAPIDFIRE Plus Shift/Brake lever (3-finger) for V-BRAKE

- 2-way release
- Light shifting action with less noise
- Easy to read Optical Gear Display
- Luxury/comfortable shift feeling & lever material
- Integrated streamline design

## SL-T660 RAPIDFIRE Plus Shifter

- 2-way release
- Gentle shift lever touch
- Light shifting action
- Easy to read Optical Gear Display

## BL-T660 V-BRAKE Lever (3-finger)

- Luxury feeling lever touch
- Slim/sleek design
- Secure new ergonomic and noiseless brake lever

## BR-T660 V-BRAKE

## SM-PM70 POWER MODULATOR

- Reliable and good modulation brake
- 107mm arch for better clearance with mud guard/lamp
- Lightweight

## HB/FH-T660 Hub Set for V-BRAKE

- High quality seal mechanism prevent mud intrusion
- Adjustable bearing system
- Longer lasting smoother rotation
- Spoke holes : 32H/36H

## CS-HG80-9 9-speed HG Cassette Sprocket

- Alloy carrier for 3 large sprockets
- Gearings : 11-28T, 11-32T

## CN-HG73 9-speed HG Chain

- Super -narrow 9-speed construction
- Precision construction

## DH-T660-3N Sport Hub Dynamo (6V-3.0W)

## DH-T660-2N (6V-2.4W)

- Single contact seal (better than double contact seal of DH-3N71/2N71)
- Lightweight and smooth rotation
- Deore LX logo

## BR-T605 Hydraulic Disc Brake

## BL-T605 Disc Brake Lever

## SM-RT64 Center Lock Disc Rotor

- Opposed 2-piston system
- Easy and fast set-up
- 4-finger lever use for reliable brake operation (BL-T605)
- Center Lock rotor mount system
- Shimano logo



RAPIDFIRE  
Plus



3X9-speed

SHIMANO  
Deore LX

For Trekking Bikes

NEW





# Great looks and performance for entry model sports bikes

TOURNEY group has been developed to give entry level sports bikes a boost. It fully incorporates advanced Shimano functions including DUAL SIS Front and Rear Index Shifting and MEGARANGE 34T Super Low Gear. TOURNEY is also compatible with Hub Dynamo and Hub Roller Brake components. Best of all, its visual appearance has the high-level impression that is in no way inferior to the upper classes, its finished form sets the appealing standard in this category.

## Rear Derailleur

- 7/6-speed SIS rear index shifting (RD-TX71/TX51/TX31/FT30)
- 6-speed SIS rear index shifting (RD-TZ50)
- **Slant Pantograph /** Precise shifting, reliable shifting
- **SMARTCAGE pulley plate** (RD-TX71/TX51/TX31)
- **Short cage /** Smallest cage in all Shimano rear derailleur. Fit for folding bike. For 16x1.75 and larger wheel (RD-FT30).
- \* Compatible with single chainwheel only.
- **Aluminum right link (RD-TX71)**
- **Wheel type cable guide pulley /** Light action shifting effort (RD-TX71/TX51/FT30)

## Multiple Freewheel

- **7-speed :** MF-HG37/TZ31-CP/TZ31/TZ21-CP/TZ21/TZ07
- **6-speed :** MF-TZ30-CP/TZ30/TZ20-CP/TZ20/TZ06
- **Close ratio gears with MEGARANGE 34T Gear for easy climbing** (MF-HG37/TZ31-CP/TZ31/MF-TZ30-CP/TZ30)
- **Integrated chain protector** (MF-TZ31-CP/TZ21-CP/TZ30-CP/TZ20-CP)

## Crankset (FC-M151)

- 8,7,6-speed
- Gears : 42-34-24T, 48-38-28T
- Chainline : 47.5mm
- Chainguard option available
- Crank arm length variation : 170mm

## Front Derailleur

- TOP SWING FD (FD-C051/C050)
- Down Swing FD (FD-TY10/TZ31/TZ21/TZ30/TZ20)
- 48-38-28T compatible (FD-C051/TZ31/TZ21)
- 42-34-24T compatible (FD-C050/TY10/TZ30/TZ20)
- Dual Pull cable anchor (FD-C051/C050)
- Multi Clamp system (FD-C051/C050)
- DUAL SIS front index shifting (FD-C051/C050/TY10)

## HG/UG Chain

- HG/UG chain for precise SIS / DUAL SIS index shifting

## EZ FIRE Plus Shifter

- ST-EF50 : 3x7-speed, ST-EF40 : 3x7/6-speed
- DUAL SIS front index shifting
- Easy gear changing and lever reach adjustment
- Optical Gear Display

## REVOSHIFT Shifter

- DUAL SIS front index shifting (SL-RS43/RS41A/RS41/RS35)
- SIS rear index shifting (SL-RS43/RS35)
- Easy gear changing with REVOSHIFT shifter
- Optical Gear Display
- CI-DECK gear indicator compatible

## Thumb Shifter Plus

- 3x7-speed : SL-TX50/TZ20, 3x6-speed : SL-TX30/TZ20
- DUAL SIS front index shifting (SL-TX50)
- SIS rear index shifting (SL-TZ20/TX30)
- Optical Gear Display

## Hub Roller Brake

- Require less maintenance at all, such as toe-in adjust, balancing L & R spring, shoe angle adjustment on V-BRAKE
- All-weather performance (performs same in rain condition)
- Almost no noise

## Rear Hub

- Roller brake compatible rear hub for multi-speed
- O.L.D : 133mm (6-speed), 135mm (7-speed)

## Front Hub

- Roller brake compatible front hub for 26" wheel or larger
- Braking POWER MODULATOR system

SHIMANO  
*Tourney*





MEGARANGE

3X7/6-speed



## Exclusively designed for comfortable cycling

NEXAVE T300 component series offers a comfortable riding experience to casual and recreational cyclists with its easy-to-operate design. NEXAVE T300 is featured with a TAP FIRE shifter and V-BRAKE MODULATOR mechanism. NEXAVE-equipped bicycles provide a comfortable feeling that gives cyclists more confidence to shift gears and control brakes.

MEGARANGE

3X7-speed

### TAP FIRE Lever Set

- Easy TAP FIRE shifting
- More intuitive shifting
- Optical Gear Display

### Rear Derailleur

- Advanced Light Action design
- 11-tooth pulleys

### Front Derailleur

- TOP SWING design
- DUAL SIS front index shifting

### Crankset

### Cartridge Bottom Bracket

- Chaincase compatible
- Sealed cartridge assembly
- Chainguard availability
- DUAL SIS compatible

### Front Hub

### Roller Clutch Rear Freehub

- Engages instantly and freewheels silently(FH-T300).
- Light alloy quick release

**SHIMANO**  
**NEXAVE**  
**T300**

# CI-DECK / Cycle computer / Lamp

The CI-DECK features easy assembly. The bracket uses a single-piece construction so there will be minimal to no damage even if it is tampered with in shops. The common drive cable drastically reduces the number of parts. The cycle computer SC-TX50 / SC-TX30 / SC-TX31 are lined up for the high-grade version of CI-DECK. It is an advanced system that hub dynamo supplies electric power and the cycling information is always visible by backlight. The Xenon/LED dual lamp LP-M300 and the cycle computer SC-M300 are also available.



ID-TX50 / SM-TX50



ID-TX50 / SC-TX50



ID-TX50 / SC-TX30 / SC-TX31  
SM-TX30 / SM-TX31

## CI-DECK

### ID-TX50/SM-TX50

- Dual gear position display / Easy-to-read gear indicators
- Single-piece construction (SM-TX50)
- Easy assembly
- Simplified ordering
- Multi-clamp band / Fits both 22.2/25mm handlebars

### SM-TX30 \*1

- Single-piece construction / Assembly time reduced to one-fourth

### SM-TX31 • Cowling

### SM-TX32 \*1 • Analog Compass

## Cycle Computer

### SC-TX30

- Large display figures
- Analog-look/digital dual displays
- Speedometer, watch function
- EZ-cable clamp & cable length adjuster equipped

### SC-TX31 \*1

- Gear change timing indicator
- Analog-like cadence display
- EZ-cable clamp & cable length adjuster equipped

## SC-M300/SC-TX50 \*2

- Hub dynamo electric power supplies back light
- Display is possible at once in two or more data
- Easy assemble : Without sensor (Rotation signal is received from hub dynamo)
- Easy to read by a big character
- SC information is always visible by back light
- Keep back light for 10 seconds after stopping



(You can see the direction by taking it out of the bracket.)

## Lamp



LP-M300 Silver / SC-M300



LP-M300 Black SC-M300

### LP-M300 \*3

- Xenon/LED dual lamp
- Position light (LED) / It is possible for LED to light up and for a position to be shown even at low speed.
- In-switch light sensor
- No switch operation

\*1 It can be used together with existing SC-TX50/SM-TX50

\*2 Does not meet DIN standard

\*3 Cannot be used with 3.0W hub dynamo

# Comfort bike wheelsets

## ALFINE wheelsets

**WH-S501-V-3D** Front Wheel with hub dynamo (NEW)

**WH-S501-V-8D** Rear Wheel (NEW)

- **Center Lock and V-BRAKE compatible**
- **Front :** 6V-3.0W sport hub dynamo
- **Rear :** Internal 8-speed hub
- **622 X 19C (700C-28") rim**
- **Adaptable tire :** 700 x 28-47C
- **O.L.D. :** Front 100mm, Rear 135mm
- **Color options :** Black, silver



(Silver)

**WH-S501-3D** Front Wheel with hub dynamo (NEW)

**WH-S501-8D** Rear Wheel (NEW)

- **Front :** 6V-3.0W sport hub dynamo
- **Rear :** Internal 8-speed hub
- **Use with Center Lock disc brake only**
- **622 X 17C (28") rim**
- **Adaptable tire :** 700 x 25-37C
- **O.L.D. :** Front 100mm, Rear 135mm
- **Color options :** Black, silver



(Black)



WH-S501-V-3D / WH-S501-V-8D (Black)



WH-S501-3D / WH-S501-8D (Silver)



WH-S501-3D  
front wheel with hub dynamo



WH-S501-8D  
rear wheel with Internal  
8-speed hub



SHIMANO  
WHEEL  
TECHNOLOGY

**WH-S501-V** Front Wheel NEW

- Center Lock and V-BRAKE compatible
- No hub dynamo
- 622 X 19C (700C-28") rim
- Adaptable tire : 700 x 28-47C
- O.L.D. : Front 100mm, Rear 135mm
- Color options : Black, silver

(Silver)



WH-S501-V  
(Black)

SHIMANO  
*ALFINE*





## Shimano Original Functions

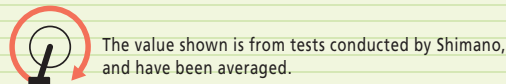
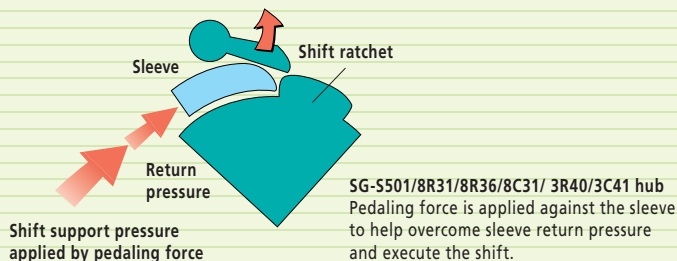
Thanks to the constant challenge to the evolution of bicycle and its functions, the bicycle has become faster, safer, and more comfortable. At Shimano, we have continued to pursue basic performances and advanced functions of bicycle components from the viewpoint of understanding the bicycle as an integrated system. Sometimes we have developed unique functions that were way beyond the bounds of common sense. At other times we have created new functions by analyzing the psychology of cyclists including the professional racers under stress. And now we are working on the further futuristic development themes such as originating products that are easy and more comfortable for everyone and also good for the ecology. The development themes are "Best Shifting Performance" and "Best Braking Performance". We have created all of Shimano original functions introduced here in search of better relationship between bicycles and people.

# Best Shifting Performance

## Shift Support Mechanism Aids Gear Change (ALFINE, Nexus)

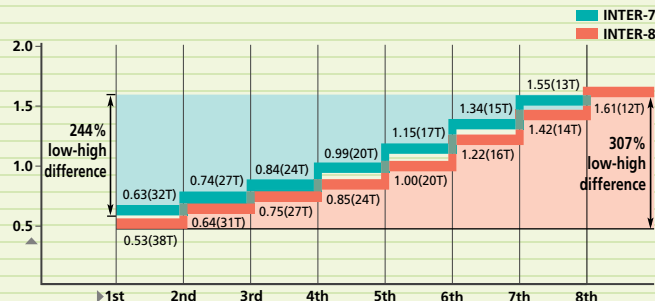
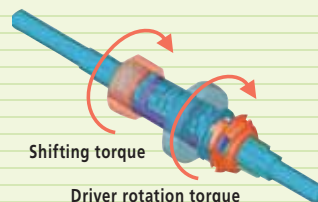
Shimano Gear Change Support Mechanism utilizes some portion of pedaling force at down shifting. The result is a quick and precise downshift with very light feeling. For the automatic shifting system, this Gear Change Support Mechanism is the key. Shifting effort is reduced to the point where the hub can be shifted through a small low-torque DC motor. Less electricity is required, so a smaller battery allows the system to be lighter and more compact.

### 40% less shifting force required



## Inter-8 Gearing (ALFINE, Cyber Nexus, Nexus Inter-8)

The Inter-8 hub has increased its gear ratio to 307%, compared to 244% of the Inter-7 hub. The Inter-8 hub also incorporates a closer gear ratio allowing a more efficient and comfortable pedaling cadence. A truly "all conditions" internal hub has arrived.



The table above shows the relative gear ratio for the Inter-7 and Inter-8 gear hubs when used with a 20T sprocket. The numbers in parenthesis show the sprocket size that each gear ratio corresponds to in a derailleur system.

## SMARTCAGE Pulley Plate (Tourney)

The use of 13 and 15-tooth pulleys allows for shorter chain cage that can still handle MEGARANGE Gearing, wide ratio gearing and 34-tooth sprockets. The SMARTCAGE pulley plate not only looks better on the bike, it provides the added benefit of more ground clearance.

## Wheel-Type Cable Guide Pulley (Tourney)

Tourney TX RD-TX71 / TX51 rear derailleurs use a rotating cable guide pulley that reduces cable friction. The result is a lighter and more responsive shifting action.



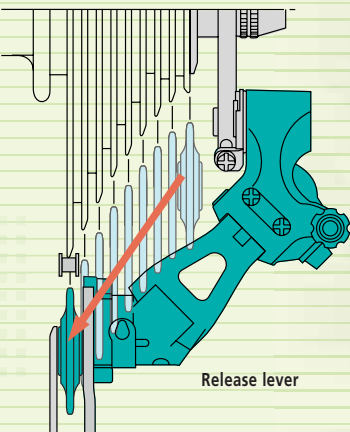
RD-TX71



# Low Normal Rear Derailleur

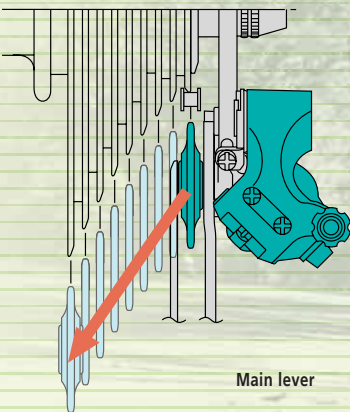
The low-normal spring allows the left and right shifters to shift up and down by the same operation to realize an intuitive shifting. The shifting to large gears done by spring tension allows shifting at an exact point, noise reduction, and less strain on gears for longer durability.

Low Normal



Release lever

Top Normal



Main lever



**By spring return force**  
Spring force makes entrance into the shifting gate smooth.



**By finger force**  
Unequal and excessive power is applied; entrance into the shifting gate is not smooth.



**Light-touch inward shifting during hill climbing**

## TAP FIRE Shifter (NEXAVE T300)

Left side shifter uses a rocker-type push-button to activate the front derailleur. Right side uses a short-throw lever and release button for the Linear Action rear derailleur and the cable-roller-guide-type rear derailleur. This NEXAVE TAP FIRE Shifter design sets a new standard in responsive low-effort gear shifting.



## Optical Gear Display

Visible indicator numbers make gear positions easier to read. Additionally indicator symbols help to understand the direction of shifting progression.



SB-8S20 / SL-8S20 / SL-7S20 / SL-3S42E

Dual-diameter shift collar allows any hand size to get a secure grip on the shift collar.

## REVOSHIFT Shifter (Nexus)

REVOSHIFT Shifter requires just twisting with thumb and index finger while keeping your hands on the handlebar. Easy and reliable shifting is good for average riders and beginners.



SL-3S41E

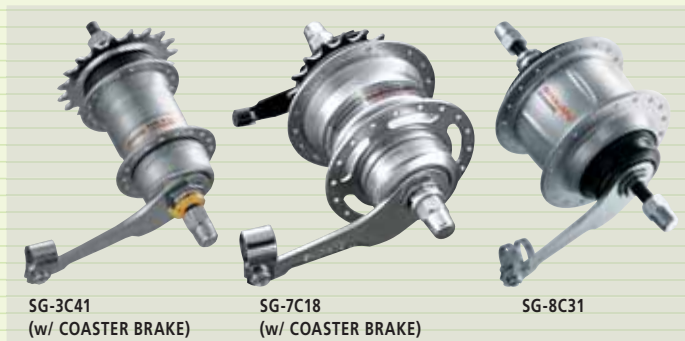
SL-3S42E



# Best Braking Performance

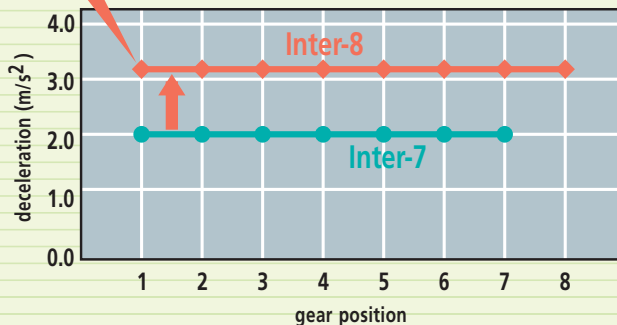
## Coaster Brake (NEXUS)

NEXUS Coaster Brake is operated by pedaling backward in a similar way as ordinary types. Its uniqueness is that braking power transmitted to the wheel directly for NEXUS internal coaster brake is independent of the gear shifting mechanism built into the hub. Also it always generates the same braking force regardless of gear position to actualize comfortable and reliable riding. For Inter-7 / Inter-3, it actualizes the braking force to meet the DIN standard. In particular, the Inter-8C is 60% power up than Inter-7C.

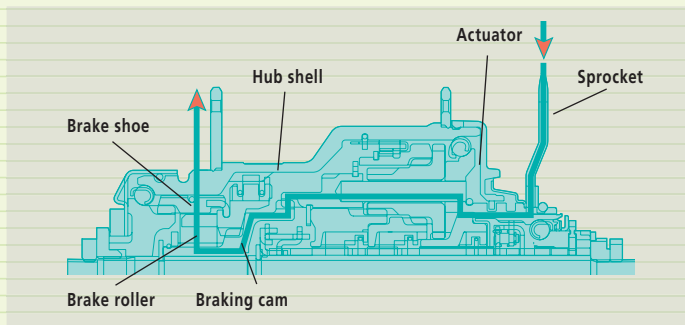


## Powerful braking force regardless of gear position

60% more powerful



## Equal braking force in each gear



## Roller Brakes

Shimano Multi-Condition roller brakes use a precision cam-and-roller design that delivers strong yet easily controllable braking power. Large disc-type radial cooling fins keep temperatures down, eliminate fade, and extend service life of the lubricant. Sealing channels keep out dirt and water to assure safe and dependable braking performance in wet or dry conditions.

### Multi-Purpose Roller Brake (IB-DR70/ BR-IM75-F/ IM70)

With the adoption of a V-shaped brake shoe, and larger cooling fins, the braking force is closer to that of a mechanical disc brake. The V-shaped brake shoes increase braking power while the large fin raises heat dissipation efficiency that allows it to brake longer and harder without fading. These upgrades make the roller brake more suitable for a wider variety of bicycles.

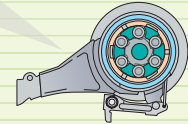
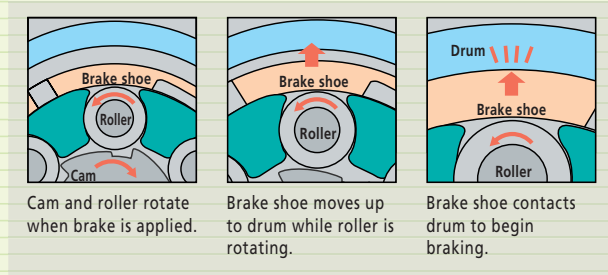


BR-IM70-F



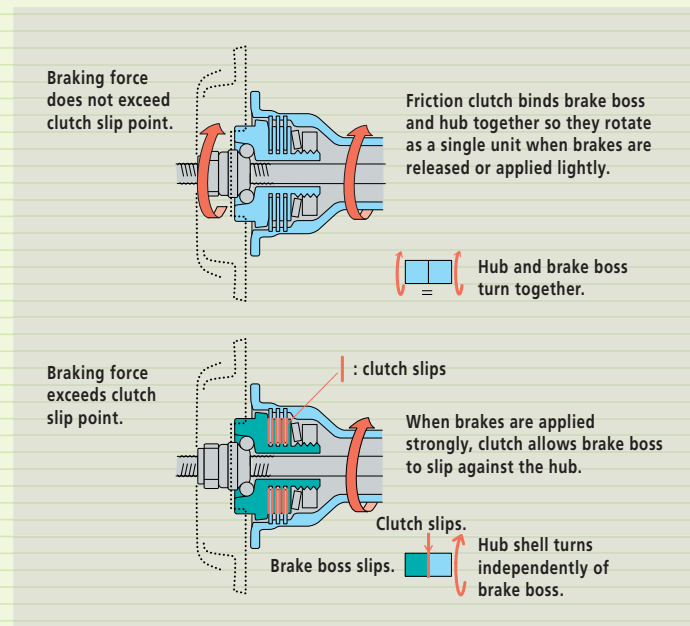
BR-IM75-F

Front roller brake for disc mount  
(International A-type)

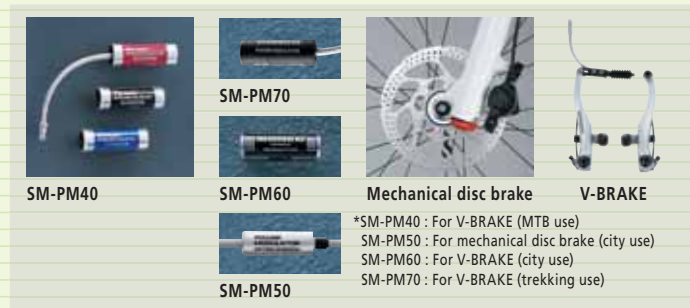


## Braking POWER MODULATOR System (Front Roller Brake)

As for the Front Roller Brake, the Braking POWER MODULATOR System is built in the hub side to ease sudden lever power input for easy and stable braking control. The braking system is especially user-friendly for beginners.



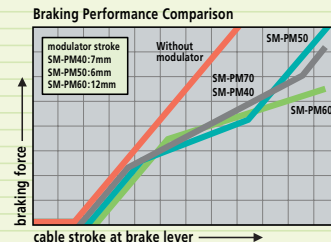
## Braking POWER MODULATOR Unit SM-PM40/ PM50/ PM60/ PM70



### ⚠ CAUTION

The POWER MODULATOR is a device that makes it easier to control braking by increasing the cable stroke at the brake lever within a certain constant range of braking force. If the effective operating range of the power modulator will be exceeded, the lever stroke and the brake will operate as a normal disc brake (sensitively and powerfully). In that case, the brakes may operate more powerfully than intended and may cause the wheel to lock up. Therefore it is essential that you fully understand and test the performance of the power modulator before use.

The POWER MODULATOR is not equipped with a function to prevent the wheel from locking up.



**BJARNE EGEDESØ A/S**

Denmark, Iceland, Greenland  
Phone 6316-8001 Fax 6316-8004

**BJARNE EGEDESØ BALTICS**

Estonia: Phone +372 (56) 41 951  
Latvia: Phone +45 6316 8001  
Lithuania: Phone +45 6316 8001

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Southeast Europe Area  
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