SHIMANO

Shimano holds the dominant position in groupset production and is determined to keep it. In recent years, the Japanese company has introduced Hyperglide freewheels for more rapid and exact rear shifts, Superglide chainrings to enhance the same function at the front and, more controversially, last year's STI Rapidfire underbar gear shifters.

Racers had lobbied for underbar shifters, as siting them there is more ergonomically efficient. Shimano's Rapidfire solution wasn't quite what anyone had expected.

The gear shifters and brake levers were all in one unit, limiting riders' ability to position the gear shifters exactly where they wanted them. In use the upshift and downshift buttons often seemed too close together and then there were particular problems with the front shifter. It frequently dropped the chain directly from the large outer ring to the small inner chainring without bothering to stop for the middle ring - its intended destination.

These problems have been tackled in the new 1991 groupsets. Rapidfire has been refined, though the integral gear/brake lever unit remains. Shimano say the front shift problem has been eliminated - very good news. Also, the shift buttons have been set further apart for easier use.

Still to head off criticism, several manufacturers, including Fisher, Trek and Cannondale, have specified Shimano's overbar thumbshifters and separate brake levers. Many others will be equipped with Rapidfire and, despite the criticism, it is a system that provides hassle-free cycling for most people.

Otherwise, 1991 hasn't seen the glut of innovations that we have come to expect each year from Shimano. It looks as if this is a year of consolidation and refinement rather than radical change.

Deore XT - Top of the range, designed for intensive use and competitive riding. This year, certain bikes will be specced with the SPD clipless pedal system. Other innovations include: low profile design cantilever brakes, which everyone reckons are inspired by Grafton Speed Controls, and which provide improved heel clearance at the rear.

The STI combined gear and brake lever unit also includes Shimano's new Servowave braking. This is a small cam in the brake lever that modulates braking power, making braking smoother and more effective. You can even watch it at work through a little window in the unit, though you might prefer to keep your eyes on the trail ahead.

Otherwise, there's a new Hyperglide chain, which promises to be more robust than last year's version.

Deore DX - A serious group intended for serious off-road riding. It too has a new low profile cantilever brake, which are easy to install and adjust.

Deore LX - Equally at home as a race and a touring group and more durable than the Exage groups. New feature: a 3-finger brake lever may be specced instead of a 4-finger lever.

Exage 500LX, 400LX, 300LX - economy groups for general use. These can be used off-road though the accent is on utility and ease of use rather than hardcore pounding. Like the Deore LX, they feature a new 3-finger brake lever option.

200GS and 100GS - Inexpensive general purpose utility groups. 100GS is specifically designed for the European market. Again, designed more for cruising than serious dirt.



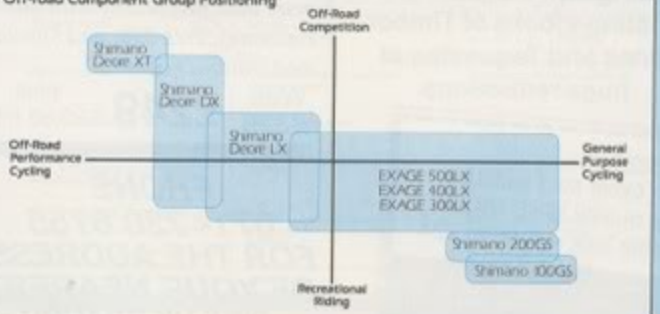
Above: Shimano Deore DX, Below Deore LX



A WORD ABOUT THE SPECIFICATIONS

These are as complete as we have been able to make them drawing on component manufacturer's published information. Many of the options listed are choices presented to bike manufacturers rather than to the public.

Off-road Component Group Positioning



SHIMANO - 1991

	Deore XT	Deore DX	Deore LX	500LX	400LX	300LX	200GS	100GS
REAR MECH	long arm, 270g. Max rear cog: 32T Total cap: 38T short arm, 250g. Max rear cog: 28T Total cap: 28T STI and SIS (6-7 sp) compatible	long arm, 320g. Max rear cog: 32T Total cap: 38T short arm, 257g. Max rear cog: 28T Total cap: 28T STI and SIS (6-7 sp) compatible	Super long arm, 320g. Max rear cog: 32T Total cap: 38T long arm, 257g. Max rear cog: 30T Total cap: 30T STI and SIS (6-7 sp) compatible	Super long arm, 329g. Max rear cog: 32T Total cap: 38T long arm, 257g. Max rear cog: 30T Total cap: 36T STI and SIS (6-7 sp) compatible	Super long arm, 330g. Max rear cog: 32T Total cap: 38T long arm, Max rear cog: 32T Total cap: 36T short arm, Max rear cog: 28T Total Cap: 28TSIS (6-7 sp) compatible	Super long arm, 319g. Max rear cog: 32T Total cap: 38T long arm, Max rear cog: 30T Total cap: 36T SIS (6-7 sp) compatible	Super long arm, 323g. Max rear cog: 32T Total cap: 38T long arm, Max rear cog: 30T Total cap: 36T SIS (6-7 sp) compatible	Long arm, Max rear cog: 30T Total cap: 36T SIS (6-7 sp) compatible
FRONT MECH	116g Cap: 24T - Biopace. 26T - Round 5 clamp diameters available	117g Cap: 24T - Biopace. 26T - Round 5 clamp diameters available	119g Cap: 24T - Biopace. 26T - Round 5 clamp diameters available	118g Cap: 24T - Biopace. 26T - Round 5 clamp diameters available	132g Cap: 24T - Biopace. 26T - Round 4 clamp diameters available	135g Cap: 24T - Biopace. 26T - Round 4 clamp diameters available	169g Cap: 24T - Biopace. 26T - Round 4 clamp diameters available	169g Cap: 20T - Biopace. 22T - Round 2 clamp diameters available
RAPID FIRE GEAR SHIFT/BRAKE LEVER	New Servo-wave cam, SLR Plus compatible 7spd SIS compatible 2 finger levers - 550g also 4 finger levers	SLR compatible 7spd SIS compatible 2 finger levers - 535g also 4 finger levers	SLR compatible 7spd SIS compatible 4 finger levers - 326g	SLR compatible 7spd SIS compatible 4 finger levers - 305g Also new 3 finger levers	Same units as Exage 500LX	Same units as Exage 500LX	7spd SIS compatible underbars not connected to brake levers	7spd SIS compatible underbars not connected to brake levers
GEAR SHIFT OPTION	SIS/Friction overbar lever. 182g.	SIS/Friction overbar lever. 232g.	SIS/Friction overbar lever. 184g.		7spd, 184g pair	7spd	6 spd SIS, 7 spd SIS	7 spd SIS
BRAKE LEVER OPTION	4 finger. 2 finger, 284g pair	4 finger. 2 finger, 274g pair	4 finger. 344g pair	4 finger. 340g pair	4 finger. 294g pair	4 finger. 362g pair	4 finger. 265g pair New 3 finger model too	3 finger model
CANTILEVER BRAKES	New Super Low Profile design. 172g pair. SLR Plus compatible	New Super Low Profile design. 199g pair. SLR compatible	216g pair. SLR compatible	216g pair. SLR compatible	227g pair. SLR compatible Also, profiled version for small frames available	235g pair. SLR compatible	SLR compatible Standard profile, also new Low profile,226g	SLR compatible Low profile,226g
'U' - BRAKE	Rear with booster 375g	Rear with booster 338g	Rear with booster 368g	Same unit as Deore LX				
CHAINSET	48/38/28T, 46/36/26T - Biopace SG 48/38/28T, 46/36/24T - Round SG Crankarm lengths: 165,170,175 or 180mm	48/38/28T, 46/36/26T - Biopace SG 48/38/28T, 46/36/24T - Round SG Crankarm lengths: 170 or175mm	48/38/28T, 46/36/26T - Biopace SG 48/38/28T, 46/36/24T - Round SG Crankarm lengths: 170 or175mm	48/38/28T, 46/36/26T - Biopace SG 48/38/28T, 46/36/24T - Round SG Crankarm lengths: 170 or175mm	48/38/28T, 46/36/26T - Biopace SG 46/36/24T - Round SG Crankarm lengths: 170 or175mm	48/38/28T, Biopace SG Crankarm lengths: 170 or175mm	48/38/28T, Biopace SG Crankarm length: 170mm	48/38/28T, Biopace SG Crankarm length: 170mm
BOTTOM BRACKET	Sealed, 295g.	Sealed, 320g.	Sealed, 339g.	Sealed, 339g.	Same as Exage 500LX	Same as Exage 500LX	Same as Exage 500LX	Same as Exage 500LX
REAR HUB/CASSETTE FREEWHEEL	7 sp. 490g, 32 or 36 Holes	7 sp. 445g, 32 or 36 Holes	7 sp. 445g, 32 or 36 Holes	7 sp. 435g, 32 or 36 Holes	Same as Exage 500LX	Same as Exage 500LX	7 sp. 425g, 36 Holes	Same as 200GS
FRONT HUB	213g, 32 or 36 Holes	231g,32 or 36 Holes	230g,32 or 36 Holes	228g,32 or 36 Holes	228g,32 or 36 Holes	228g,32 or 36 Holes	228g,36 Holes	228g,36 Holes
CASSETTE SPROCKETS	7 sp, 325g, 9 combinations from 12-21T to 13-34T available	7 sp, 325g, 9 combinations from 12-21T to 13-34T available	7 sp, 325g, 9 combinations from 12-21T to 13-34T available	7 sp, 268g, 9 combinations from 12-21T to 13-34T available	7 sp, 268g, 9 combinations from 12-21T to 13-34T available	7 sp, 268g, 9 combinations from 12-21T to 13-34T available	7 sp, 268g, 3 combinations from 14-24T to 14-32T , Also 6 spd available.	7 sp, 268g, 3 combinations from 14-24T to 14-32T , Also 6 spd available.
CHAIN	STI compatible. Silver or black	STI compatible.	STI compatible.	SIS compatible.	SIS compatible.	SIS compatible.	SIS compatible.	SIS compatible.
PEDALS	SPD, 450g pair Super Low , 295g, Low profile, 412g	Super Low profile, 385g pr, Low profile, 412g	Super Low profile, 326g pr,	Resin body, 518g pr,	Resin body, 445g pr,	Resin body, 445g pr,	Resin body, 445g pr,	Resin body, 445g pr,
HEADSET	Std, 110g, 1.125 dia, 149g 1.25 dia, 155g	Std, 121g, 1.125 dia, 149g	Std, 121g.	Std, 121g.	Std, 121g.	Std, 121g.	Std, 121g.	Std, 121g.
SEATPOST	330mm, 296g							