

# GSX-R1000R

## Own the Racetrack

In 1985 Suzuki revolutionized the sportbike category with the introduction of the original GSX-R750, and then created another milestone in 2001 with the introduction of the GSX-R1000. At the pinnacle of the GSX-R family of ultra-high performance supersport motorcycles, the GSX-R1000R is ideal not only for racetrack conquest, but for searching for excitement in town or freedom on a winding country road.



### Key Features

The compact 999.8cm<sup>3</sup> DOHC inline-four engine produces great top-end power with a strong low- to mid-range pull.

The broad power system combines Suzuki Racing Variable Valve Timing (SR-VVT), Suzuki Exhaust Tuning-Alpha (SET-A), and Suzuki Top Feed Injector (S-TFI), to deliver strong, linear power and enhanced acceleration throughout the engine's rpm range.

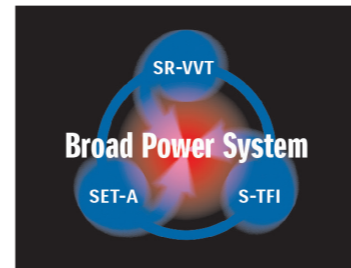
Advanced electronics include an IMU, adjustable traction control, the Suzuki Bi-directional Quick Shift System, Suzuki Drive Mode Selector, Motion Track Antilock Brake System\*, plus the GSX-R1000R-specific Launch Control System to enhance street and track-day performance.

The Bi-directional Quick Shift System permits clutchless upshifts and downshifts for faster lap times during competition and exceptional convenience on the street.

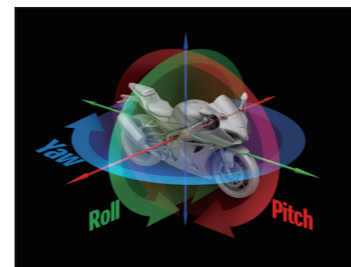
The GSX-R1000R's twin-spar aluminum frame is light and compact. The frame's adjustable swingarm pivots to help racers tune the chassis for extraordinary racetrack performance.

Advanced SHOWA Balance Free Forks (BFF) and rear suspension deliver extraordinary handling while the ABS-equipped, Brembo 4-piston, radial mount front brake calipers are fed by stainless steel brake line calipers for precise stopping performance.

The GSX-R1000R-specific, black background LCD multifunction instrument panel was inspired by racing models. The unique



Broad Power System



IMU To Track Motorcycle Motion



Swing Arm Pivot



Bi-directional Quick Shift System

GSX-R1000R logo on the tail alerts others that this motorcycle is something extraordinary.

The aerodynamic fairing houses a bright LED headlight with eyebrow position lights above the Suzuki Ram Air Direct (SRAD) ducts that feed the engine's electronic throttle bodies to boost top-end power.

\* ABS is not designed to shorten the braking distance. ABS cannot prevent wheel skidding caused by braking while cornering. Please ride carefully and do not overly rely on ABS.

### Engine Features

The compact 999.8cm<sup>3</sup> liquid-cooled, DOHC, inline-four engine is designed with a high level of top-end performance plus strong low- to mid-range power.

The short-stroke engine features a 76.0mm bore versus a 55.1mm stroke, as well as a narrow profile thanks to effective design.

The exclusive Suzuki Racing Variable Valve Timing System (SR-VVT) uses a centrifugal actuated mechanism on the intake camshaft sprocket to increase high engine rpm power without losing low- to mid-range power.

Technology adopted directly from racing development, the Suzuki Racing Finger Follower valve train weighs less than a tappet-style valve train for reduced friction and increased valve response at higher engine speeds.

Four titanium valves – two 31.5mm intake and two 24mm exhaust valves – are used in each cylinder. The lighter valves respond well to the finger follower's arms

and permit a 14,500 rpm redline that helps produce very high peak horsepower.

Suzuki Composite Electrochemical Material (SCEM)-coated cylinders are integrated into the upper crankcase to reduce friction and improve heat transfer and durability.

The high 13.2:1 compression ratio helps produce high horsepower. The cylinder head's shallow combustion chamber minimizes heat produced during operation.

The electronic fuel injection system uses Suzuki's ride-by-wire electronic throttle bodies, which use a servo motor to control the throttle valves for fast response to rider throttle grip input while delivering precise and smooth power.

Complementing the four primary fuel injectors in the throttle bodies are four Suzuki Top Feed Injectors (S-TFI) that spray fuel from the top of the airbox directly into the intake funnels. This results in higher peak power, more efficient combustion, and a higher level of fueling control.

Suzuki Ram Air Direct (SRAD) intake ducts positioned close to the center of the fairing nose, where air pressure is highest, are used to exponentially increase the volumetric flow of air amount coming in the airbox as road speed increases.

The digital ignition fires iridium-type spark plugs that increase spark strength and combustion efficiency.

The Suzuki Exhaust Tuning (SET) system valve in the mid-pipe helps control back pressure and flow to the muffler to widen power

delivery and reduce exhaust sounds without needing a larger silencer.

Suzuki Exhaust Tuning-Alpha (SET-A) butterfly valves are positioned in the balance tubes between the two outer and two inner head pipes. Actuated by a cable from the main SET-valve, the SET-A butterfly valves open at higher engine speeds and close at lower rpm to help the engine create high peak power without losing low- and mid-range horsepower.

The Suzuki Bi-Directional Quick Shift System permits clutchless upshifts and downshifts for faster lap-times during competition and exceptional rider convenience on the street.

The cassette-style, 6-speed transmission lets riders precisely match the gear ratio to the riding condition. A cassette-style transmission can be easily removed from the crankcase as an assembly with the engine still in the frame, facilitating quicker racetrack gear changes and simplified service.

A programmable shift light on the main panel provides a visual alert to the rider to shift when a certain engine rpm is reached.

The GSX-R1000R is equipped with the Suzuki Clutch Assist System (SCAS) multi-plate, wet clutch. SCAS works like a slipper clutch during downshifts while increasing clamping pressure on the plates during acceleration. This smooths engine braking and lightens the clutch lever pull.

To reduce moving mass, a 525-size drive chain is used with a 45/17 final sprocket ratio that complements the large rear tire



dimensions.

### Advanced Electronics Features

Using racing know-how, Suzuki has equipped the GSX-R1000R with an IMU (Inertial Measurement Unit). The IMU provides 6-axis motion and position information to the ECM so instantaneous adjustments can be made electronically to the engine and chassis components that influence performance.

The ride-by-wire electronic throttle bodies are precisely opened by the ECM to match the throttle grip rotation of the rider's hand and electronic systems that use input from the IMU. The result is a strong, seamless engine power delivery from idle to redline.

The 3-mode Suzuki Drive Mode Selector (SDMS) system lets the rider set the engine's power delivery characteristics to match riding ability and conditions.

The exclusive 10-mode Motion Track TCS (Traction Control System)\*, which uses input from the IMU, increases rider confidence by allowing adjustments to the amount of intervention to match riding ability and surface conditions.

Exclusive to Suzuki, the Motion Track Brake System brings additional control to antilock braking. Like a conventional ABS\*\* system, the Motion Track Brake System provides the appropriate amount of braking force for the available traction. When the IMU detects the rear wheel lifting from extreme braking forces, the ABS control module will adjust the front brake pressure to reduce rear wheel lift. If the IMU senses the motorcycle is leaning over

when the brakes are used, the ABS unit will adjust the brake pressure to an optimal amount to help maintain braking force and tire grip.

The Suzuki Easy Start System simplifies startup for the GSX-R1000R rider as the ECM automatically cranks the engine for 1.5 seconds (or until it starts) with a momentary press of the starter button.

Suzuki's innovative Low RPM Assist function smooths standing starts and reduces the chance of the rider stalling the motorcycle.

The Suzuki Launch Control System provides GSX-R1000R riders a competitive advantage when launching their motorcycle at the start of the race.

The Suzuki Bi-directional Quick Shift System lets GSX-R1000R racers shift faster than ever before. The system adjusts ignition timing on upshifts and electronic throttle body action on downshifts to enable clutchless shifting that helps deliver faster and more consistent lap times.

\* The Traction Control System is not a substitute for the rider's throttle control, and traction control cannot prevent loss of traction due to excessive speed when entering turns, or while braking, and it does not control front wheel traction.

\*\* ABS is not designed to shorten the braking distance. ABS cannot prevent wheel skidding caused by braking while cornering. Please ride carefully and do not overly rely on ABS.

### Chassis Features

Using chassis development technology from Suzuki's racing experience, the engine angle of the GSX-R1000R was rotated backward six degrees. This produced the joint effect of reducing the distance of the forks to the center of the chassis by 20mm and lengthening the swingarm length by 40mm, which in turn increases chassis stability and improves aerodynamics.

The GSX-R1000R's swingarm pivot features an adjustable location so the chassis can be better tuned for competition use. (For race use only. Please be sure to use the standard position when riding on public roads.)

The GSX-R1000R's forks and front shock absorber bodies have a gold anodized finish like the suspension components on the racing model.

Racetrack-developed links connect the single SHOWA Balance Free Rear Cushion lite (BFRC-lite) shock to the braced swingarm. The BFRC-lite's innovative design controls damping force outside of the shock body to not only control how the suspension strokes, but to also help smooth reaction over bumpy surfaces or when the chassis is pitched during braking. This produces a superb level of response in a racetrack environment and sets a new standard for rider feedback and comfort during street riding.

The SHOWA Balance Free Front (BFF) forks use race-level technology to bring excellent damping force responsiveness never before seen in a supersport motorcycle. This suspension's design controls damping force outside of the spring chamber, so the forks precisely maintain

consistent damping regardless of their stroking action. With the BFF, the rider enjoys an unparalleled level of surface feedback and ride compliance.

The GSX-R1000R is also fitted with a lightweight, race-ready upper triple clamp matched for use with the BFF forks.

Brembo radial mount brake calipers provide the rider with strong braking performance combined with superb feel as well as up front, stainless steel brake lines to improve feel and brake response.

Brembo T-drive Brake Rotors feature two methods of attaching the 320mm floating disc to the carrier. There are five conventional floating rotor spools that maintain the rotor's relationship to the caliper, and there are five new-design T-drive fasteners that enable the rotor to absorb more braking energy than a disc with conventional spools alone. As a result of the larger-diameter discs, and the energy they can absorb, the GSX-R1000R has more braking force available to the rider than ever before.

The passenger seat can be removed and replaced with an optional color-matched solo tail cowl.

The shifter and rear brake pedal are adjustable in relationship to the footpegs, and the hand controls are adjustable in relation to the grips. The front brake lever has a hole machined into the end to prevent wind pressure from applying the front brake.

### Electrical Features

The LCD multifunction instrument

panel has a black background with white digits and an adjustable intensity, white color backlight for great nighttime visibility. The LCD main panel is flanked by LED indicators that include the turn signals, high beam, traction control, and shift light, plus coolant temperature and oil pressure alerts.

The LED headlight is lightweight, bright, and distinctive. This low-electric-draw light has a narrow, stacked shape to make more room for the large SRAD ducts at the nose of the fairing.

The LED combination tail and brake light has a very low electrical draw, and the vertically stacked shape permits the tail section to be narrow for better air flow at the back of the motorcycle.

A pair of distinctive, arched LED position lights accent the top edge of the SRAD ducts in the fairing nose to increase visibility and add to the motorcycle's unique character.

### Additional Features

A variety of Genuine Suzuki Accessories are available, plus a large selection of GSX-R logo apparel.



Photo credit : YOSHIMURA SERT Motul

## The King of Sportsbikes

Own the Racetrack is more than just a slogan for the GSX-R1000R. It is a phrase earned by sustained success in the FIM Endurance World Championship (EWC) besting all other participating manufactures with 20 titles in the fabled series. The controllability, reliability, and durability of Suzuki's King of Sportsbikes truly demonstrates total performance integrated at the highest level.

### Colors



Pearl Brilliant White / Metallic Triton Blue (BQJ)



Metallic Mat Black No.2 / Glass Sparkle Black (KGL)



Glass Mat Mechanical Gray (QT7)

