

Yamaha Motor Monthly Newsletter



The "FJR1300AS" Motorcycle

Spotlight: Motorcycles

April 15, 2013 (Issue No. 4)

Motorcycles

By people, for people - motorcycle R&D



The first Yamaha motorcycle was the "YA-1" (1955) powered by a 2-stroke, single-cylinder 125cc engine.

It was nicknamed the "Red Dragonfly" by its fans for the delicate lines of its silhouette and the reddish brown of its elegant exterior design. From this beginning, Yamaha Motor has continued for more than half a century to expand its lineup of models and market. In the process, Yamaha motorcycles have become the beloved partners for leisure recreation and an irreplaceable means of transportation in the daily lives and work of countless customers around the world. In this issue, we look at Yamaha's motorcycle business, from its very beginnings to the present day.

Start of the motorcycle business and the founding of YMC

The first Yamaha motorcycle, the YA-1, was developed and manufactured by musical instrument maker Nippon Gakki, Co., Ltd. (now Yamaha Corporation) and released for sale by the company in January 1955 (the motorcycle division was separated from Nippon Gakki and established as Yamaha Motor Co., Ltd. in July of that year). At the time, there were about 200 companies making motorcycles in Japan, and an industry shakedown that saw the less competitive of them drop out one after another had already begun. As one of the last of the latecomers to the scene, Yamaha's chances of survival looked slim, and many asked, "Why would a musical instrument maker try building motorcycles?"

Having no previous experience in motorcycle development, Yamaha used the German DKW RT125 as a model when developing the YA-1. Because of the technological excellence of the RT125 at the time and the fact that, as the product of one of the defeated countries of WWII, it could be replicated without license, it was known as "the most copied motorcycle in the world." In developing the YA-1, Yamaha used the RT125

as the basis for much of the design, but also tried developing some new mechanisms. Some of the things that could be considered YA-1 originals were the 4-speed transmission Yamaha developed (the RT125 was a 3-speed), a layout that placed the shift pedal and the kick pedal on the same shaft and the adoption of a primary type starter system. However, when we look back now for some hints of Yamaha-like essence in that first YA-1 model, they might be the fact that Yamaha chose a sport model like the RT125 to copy in the first place, and the handsome two-tone chestnut brown color scheme used in the image of a proud chestnut steed.

In this era, when Japan was still struggling to recover from the devastation of WWII, motorcycles were still just a practical means of transportation for the people and a way to transport goods. All the motorcycles in Japan at the time had bodies that clearly looked sturdy and utilitarian, and about the only color to be seen was black. Seeking to enter such a market with a model that was sporty and stylish rather than utilitarian, we can get a glimpse of the unique culture the company had as a maker of products for leisure and avocation like pianos. One could say that Yamaha's direction forward as a motorcycle maker had already been decided back then.

Racing to prove performance and reliability

However, after the release of the YA-1, the market reacted rather coldly to its high price compared to the average utility model and the company found itself in a quandary. Yamaha was very confident in the performance and reliability of its machine, but that had to be proven to the public somehow.

"Enter a big race and win it," said Yamaha Motor's founding president, Genichi Kawakami, as his solution to the problem in May of that year, 1955. For Japan's motorcycle makers at that time, races held great importance as proving grounds to showcase the technology and engineering behind their products, and as one of the latecomers to the industry, president Kawakami saw this as the way to set the company apart from the rest. The first race the Yamaha team entered was the 3rd Mt. Fuji Ascent Race held in July of that year. In that day, this race was the biggest event for the Japanese motorcycle industry, and Honda had won both of the previous two races.



In the 3rd Mt. Fuji Ascent Race in 1955, Yamaha was dominant in its first competition, with the YA-1 winning the race and placing 7 machines in the top 10 to prove its performance and durability. This was the beginning of Yamaha's race activities that continue today in competitions like MotoGP.

In the 125cc class that Yamaha entered, there were 49 machines from 16 makers competing. The course was a 1,400-meter climb up the slopes of Mt. Fuji over a 24.2 kilometer distance in a time-trial format. When the event was over, the YA-1 had dominated its first race, not only winning the competition but also placing seven of its machines in the top ten. Then, in the 4th holding of the race in 1956, the YA-1 swept 1st to 8th place in the 125cc class and the YD-1 claimed 1st to 5th place in the 250cc class. In 1957, race-modified versions of the YA-1 and YD-1 won their respective classes in the Asama Highlands Race (2nd All Japan Endurance Race). These victories spread the Yamaha brand name throughout Japan.

Yamaha went on to deliver top performances in one major race after another and proved the superiority of its products, and together with these successes came strong sales. After selling originally at a rate of about 2,000 units a year, YA-1 sales soared to about 16,000 units in 1957, the same year it won the Asama Highlands Race.

Today, Yamaha teams compete in race competitions around the world, including the pinnacle class of motorcycle road racing - MotoGP. This is both a reflection of Yamaha

Motor's corporate mission of being a "Kando Creating Company" and a continuation of the Yamaha "Spirit of Challenge," a proud tradition that has been an integral part of our motorcycle development, manufacturing and marketing since the company's earliest days.

The process of *Monozukuri* tuned to "human sensibilities"

After the success of Yamaha Motor's race activities in its early years helped the company gain a foothold in the motorcycle industry and build a foundation for its business, the next step the company took to propel its growth was establishing full-fledged R&D operations.

President Kawakami firmly believed that profits should be funneled back into research and development. This policy accelerated the establishment of a potent R&D environment by actively seeking out and bringing in technicians from various fields and building research laboratories and the Tenryugawa Test Course in 1959.

Later in 1969, the Fukuroi Test Course was completed and it still plays a central role in Yamaha's motorcycle development today.

In developing a Yamaha motorcycle, there are a number of time-honored traditions in the work process that have been handed down from engineer to engineer and still live on today. One representative example is the respect for and value of the test riders' perceptions and input from actual track tests in the *Monozukuri* process. For Yamaha Motor, track tests are not merely for verifying the results of the design and engineering. The primary purpose of track testing is to implant the results of the perceptions and sensibilities of an actual rider in the prototype and thus guide the development process. A fundamental principle of Yamaha motorcycle development is a belief in people-oriented *Monozukuri* that places top priority on human perceptions and sensibilities rather than spec numbers. And, this priority is one of the most important factors that lead to various kinds of "Yamaha-ness" like the often acclaimed "Yamaha handling" in our motorcycles.



The Fukuroi Test Course where many historic Yamaha motorcycles have been developed over the years was completed in 1969. Built on 370,000 m² of land, the 5.24 km long course has an underpass, a 1.4 km long straight, a 7.9% incline and more. This layout was chosen to allow for testing a wide variety of conditions.

Epoch-making models creating new demand



The FZ750 (1985) marked the origin of Yamaha's exclusive "GENESIS" design and engineering ideal in which the engine, chassis and all the parts they are made of are conceived as an organic and integral whole in a pursuit of total machine performance and high levels of rider-machine communication.

Yamaha won many motorcycle fans in its first 15 years by continuing to develop and refine its 2-stroke engine technology. It was in 1970 that the company developed and marketed its first 4-stroke model, the "XS-1" (vertical 2-cylinder 650cc engine). Later in 1984, Yamaha unveiled the "FZ750" model powered by the world's first DOHC 5-valve engine at IFMA (Germany), one of the world's largest motorcycle shows at the time. This model became the one that established a new development ideal and impressed the motorcycling world with Yamaha's highly unique 4-stroke engine technology. Together with these advances in technology and the growth of the market, there were also advances into new model categories and variations. While there is a wide range of motorcycles from 50cc commuter



Like the explosively popular Passol (1977) that offered Japanese women the benefits and practicality of a motorcycle, Yamaha has a history of pioneering new categories that create new demand.

For example, in Japan in the 1970s, the motorcycle was still seen as something men rode. That changed when Yamaha introduced the “Passol” in 1977. The new value it offered was an easy-to-operate commuter model that women could ride attractively and seated comfortably with their knees together. The Passol sparked explosive demand and became a best-selling model. The “CYGNUS RAY” model launched in India last year is now doing the same thing the Passol did, by serving as a means to help Indian women get out and about in society for work and daily mobility. Other epoch-making Yamaha models that have taken this approach are the “DT-1” (1968) that took the long-standing tradition of off-road trail riding in the U.S. and made it a sport enjoyed worldwide; the “TMAX” (2001) that pioneered a new category of “automatic transmission supersport scooters”; and the “Nouvo” (2002), which started a boom in automatic transmission scooters in the ASEAN region, where manual transmission moped type models had long been dominant.

In the Communication Plaza, our corporate museum located next to Yamaha Motor headquarters in Iwata, historical models from Yamaha’s past that have been restored to preserve their appeal as Yamaha cultural heritage are on display to the general public. If you come to Japan, we hope you will find the opportunity to visit it and take in the history of Yamaha’s motorcycles.

models to 1900cc cruisers in the lineup today, in all the years it took to come this far, Yamaha Motor has always sought to go beyond merely supplying products for existing categories and to propose ones that offer new value and lead to new demand; true to the words of YMC’s founding president – “Create demand through your own efforts.”

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The Communication Plaza, Yamaha Motor’s corporate museum next to YMC headquarters, exhibits historical Yamaha motorcycles that have been restored to their original form and performance.

Message from the Editor



Motorcycles are one of Yamaha Motor's core businesses and make up two-thirds of our worldwide net sales. Even among the many fields the company is involved in, motorcycles have the longest history of them all and it's simply not possible to tell the whole story in just a few pages. So, for now, we've briefly introduced the company's and the motorcycle business' beginnings. I'm planning on going into more depth about Yamaha motorcycles and their appeal in a later issue.

In this month's spotlight, we touched on Yamaha's history in racing, and now the 2013 MotoGP season has just begun. The YAMAHA FACTORY RACING team is fielding defending World Champion Jorge Lorenzo and Valentino Rossi, who makes his return to Yamaha after two seasons with a different team, and they are sure to make this MotoGP season a riveting one to watch. I hope you will join us in cheering them on as well as the many other Yamaha racing teams competing around the world.

For next month's issue, we will be introducing Yamaha's outboard motors, which recently topped a whopping 10 million units in cumulative production. Please look forward to reading about the history of our outboards that support peoples' daily lives, industries and marine leisure in some 180 countries and territories around the world.

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