

Yamaha Motor Monthly Newsletter



The "VIKING" ROV



The "YFZ450R" ATV

Spotlight: ATVs / ROVs

All-terrain Vehicles / Recreational Off-highway Vehicles

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ATVs / ROVs

Vehicles for work and play in the great outdoors



The All-terrain Vehicle (ATV) is an off-road vehicle with four low-pressure tires, straddle-type seat and handlebar steering. As the name suggests, an ATV is designed to run on all types of terrain, from unpaved roads and uneven ground to grasslands, mountain trails, sandy beaches or deserts and rock fields. The Recreational Off-highway Vehicle (ROV) is a 4-wheeled off-road vehicle that has emerged more recently as an outgrowth of the ATV. While ATV controls are similar to a motorcycle, ROV controls are similar to an automobile. An ROV also has a more roomy chassis design and is intended to provide onboard comfort for the driver and passenger(s).

Yamaha Motor began manufacturing and marketing ATVs in 1979, and currently some 76,000 Yamaha ATVs and ROVs are manufactured and shipped to markets around the world annually (2012 figure). The plan in place is to expand that volume to up to 110,000 units by 2015. In this issue, we introduce Yamaha Motor's ATV and ROV products and businesses.

A uniquely Yamaha quest for vehicles with the capability to go virtually anywhere

ATVs are also known more informally as "quads." The origins of the ATV go back to vehicles created in the late 1960s in the United States. These vehicles were essentially 3-wheeled motorcycles, equipped with extra-wide, low-pressure balloon tires for greater surface contact area to keep them from sinking or getting stuck when run on sandy ground like beaches, and two rear wheels for added stability. At first, it was a small niche market with vehicles built by a number of mid- and small-sized

manufacturers, but when a major Japanese motorcycle manufacturer entered the market in 1970, it gradually increased in scale. Eventually, it would grow into a major category contested by numerous manufacturers.

Around the same time, Yamaha Motor was working on growing the world of “fun riding” in the U.S. by introducing a full-fledged off-road motorcycle model. Yamaha had developed the “DT-1” in 1967 as a stylish, high-performance bike for off-road riding which had never been seen before, and it became a great success. After winning the hearts of off-road fun-riding enthusiasts and coming to understand their preferences with the DT-1, it could be said that it was only natural that Yamaha should want to bring the same world of fun riding into the realm of multi-wheeled vehicles.



Yamaha's ATV business began from a joint-development project with an associated company. The photo shows testing of the “YT125” prototype model at Oshima Island in 1978.

It wasn't long before Yamaha organized an ATV development project, and work on it began in 1977. Being a latecomer to this new category, Yamaha's development team ran into barriers in the initial design and prototype stages due to existing patents by other manufacturers. However, the engineers were diligent in their pursuit of a product with uniquely Yamaha features, and after extensive development, the team succeeded in completing its first product, the “YT125” in 1979. It incorporated exclusive Yamaha features and technologies such as a snorkel-style air cleaner with a high-set air intake to prevent water from entering and completely sealed brakes to keep out mud. These features were the

results of repeated testing in the deep marsh and swamp areas of the U.S. In the same way, the “TRI-MOTO 225DX” (YTM200E) released in 1982 had features appearing on an ATV for the first time that were based on mechanisms born of Yamaha's motorcycle development know-how, such as an electric starter to ensure that the machine could be quickly re-started when stuck, and a durable, maintenance-free shaft drive unit.

Ground-gripping 4-wheelers lead to utility and sports categories

The early 1980s brought new developments in the ATV industry. Because many ATV owners operated orchards, farms or ranches, when they weren't using their ATVs for trail riding or hunting, they would often use them for carrying loads or making rounds on their ranches or farms. This led to calls for advances in functions and performance that was different from what was available at the time.

The demands for such utility use were engine performance geared more toward strong torque than maximum power output, the capacity to carry large loads and stable running performance even at slow speeds. In response to these market needs, Yamaha released the “MOTO-4 YFM200” in 1983, a 4-wheeled model powered by a 4-stroke engine, equipped with a practical reverse gear and carrier racks on the front and rear of the vehicle. Furthermore, in 1986, Yamaha released the 4WD “YFM350FW BIG BEAR” with a 4-stroke engine tuned to perform well in the higher elevations and low temperatures of places like the mountainous regions of Canada. This model immediately became a big hit and its name became synonymous with a utility ATV that was well suited to a wide range of uses, from leisure riding to farm work.

As for the sport ATVs geared toward more active riding fun, the category had divided into two types, each advancing in their own direction: lightweight, high-power, high-performance machines taking advantage of the strong points of 2-stroke engines and easy-to-operate automatic transmission models designed for kids and families. By the latter half of the 1980s, there was a big boom in ATV use in the U.S. and Canada. Yamaha's “YF350Z BANSHEE” model released



Since 1986 and into the new century, the “BANSHEE” was sold worldwide and cemented Yamaha's reputation as the brand for sports models in the ATV world as well.

in 1986 became famous at the time as the representative top-of-the-line sports ATV. Powered by a 350cc liquid-cooled, 2-stroke, in-line 2-cylinder engine and sporting double wishbone type front suspension and a full array of other cutting-edge technologies, the BANSHEE was a big winner in a variety of desert races and cross-country races.

Distinctive utility features fuel the ATV boom and 4-stroke sport models are the trendsetters

From the late 1980s, annual demand for ATVs grew at a rapid rate. A demand of 150,000 units at the beginning of the 1990s had more than tripled to around 500,000 by 1999, and in the first half of the 2000s, it finally topped a million units annually. Some of the main reasons for this impressive growth were the long period of stable economic growth in the U.S., the main market for ATVs, the worldwide spread of the market from North America to Europe, Asia and Oceania and the aggressive efforts by makers to bring a continuous flow of new models to the market.

In the utility model category that constituted 70 to 80% of the total demand, Yamaha introduced models featuring many exclusive functions and technologies, such as a switch-operated 2WD/4WD selection system, an automatic transmission unit that effectively utilized engine braking and the first electric power steering system ever on an ATV. Yamaha continued to expand its lineup with new models in its "BIG BEAR," "KODIAK" and "GRIZZLY" series. In the sports model category, Yamaha was one of the first manufacturers to begin the shift to 4-stroke models out of concern for emissions and noise reduction. Models of the "YFM660R RAPTOR" series powered by a 660cc 5-valve 4-stroke engine and the "pure sport" YFZ450 series that became the successors to the BANSHEE models have kept Yamaha in a strong position as the leading sports model brand with a more than 40% share in the category. Then, in 2003, Yamaha launched the "RHINO" model that featured a steering wheel instead of handlebars and a layout that allows the driver and passenger to sit side by side. It immediately won a massive following and opened up a large new market.



The YFZ450 series of sport ATVs are top performers on closed circuits just like motocross bikes. "RAPTOR" models have won numerous victories in the Dakar Rally.

Yamaha Motor's Overseas Market Development Operations (OMDO) would also play an important role in the expansion of Yamaha's ATV business. OMDO focused efforts on the markets of Middle Eastern countries like Saudi Arabia, the UAE, Kuwait and Qatar where marketing efforts consisted of little more than putting a number of models out on the showroom floor despite the great potential of the region as an ATV market. Working with the distributors in each market, OMDO initiated a program of business and marketing reforms that involved strengthening after-sales service and running ATV riding instruction programs. These efforts resulted in unit sales growing tenfold over the five years beginning in 1999, and the BANSHEE going on to become one of the region's best-selling models. As we understand, today the BANSHEE name is synonymous with "ATV" in the Middle East.

Big expectations: ROVs as a positive complement to ATVs and the key to RV market revival

The ATV market reached its peak in 2005, and then began to decline due to a reaction to 15 years of steady growth that was only further hindered by the worldwide economic recession sparked by the Lehman Shock. In just a 3-year period from 2007, overall demand dropped to half its previous level and Yamaha wholesales didn't exceed 70,000 or 80,000 units a year. To deal with these new circumstances, Yamaha Motor

consolidated its then-divided global ATV production operations to Yamaha Motor Manufacturing Corporation of America (YMMC) in the U.S., the world's largest ATV market. This was a move that involved a reconstruction of the business model with a break-even point of 100,000 units in a way that limited the negative impact of the strong yen. Measures were also taken to strengthen R&D functions to enable speedier and more direct response to changing customer needs and the use environment in order to be well prepared for the coming opportunities as the market recovers.

One of the pillars of the business growth strategy laid down in Yamaha Motor's new medium-term management plan introduced in December 2012 is the introduction of products in the new ROV category.

Yamaha released the new "VIKING" model for the ROV category in August of this year. It has a specially developed chassis with 4WD capability, a steering wheel and foot pedals for the accelerator and brakes similar to those of an automobile, it has three separate seats for the driver and two passengers and a full-width rollbar. As a model, its main features are the enjoyable ride, the onboard comfort and great convenience in use. When the VIKING was unveiled at the Yamaha U.S. Dealer Meeting in June, it was also announced that the company would continue to release one new ROV model a year for the next five years. This commitment has helped to further boost expectations in the market as well as the sales network. It is believed that the ROV category has the potential to create position synergy in the field it shares with the ATV that will stimulate growth in the market as a whole.



The "VIKING" was unveiled at the Yamaha U.S. Dealer Meeting. Yamaha plans to introduce a new model for the ROV market every year over the next five years.

Message from the Editor



My coworker at the desk right behind me went to the Yamaha U.S. Dealer Meeting that was recently held in Las Vegas. She returned to Japan overwhelmed by not just the scale and grandeur of the MGM Grand Hotel & Casino where the meeting took place, but also the enthusiasm and drive of the many U.S. dealers that attended. She was also excited when she told me about how the unveiling of the VIKING and the announcement

of Yamaha's plan to introduce several new ROVs going forward was met with great excitement from the dealers.

There was a man-made test-drive course set up at the venue as well, and all the dealers who tried the VIKING first-hand left with big smiles on their faces. Positive comments like "It'll be tough asking customers to wait until the VIKING goes on sale in August, but it's going to be great for us!" could be heard from all corners of the event.



Lastly, as of next issue, Mariko Saito (left) will take over as Editor. It has been my pleasure delivering the first issues of the Yamaha Motor Monthly Newsletter to you all and I hope you will continue to enjoy the content it delivers every month.

Yuriko Senga



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