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The sky has no limits

for the engineers of Yamaha's Aeronautic Operations and the RMAX unmanned helicopter. As new Yamaha technologies expand its uses from crop dusting to aerial photography to high-precision autonomous flight, institutions like NASA and major international universities are finding exciting new uses for the RMAX.

From environmental observation to aerial photography, the world is finding a sky full of uses for

Yamaha's RMAX Series Unmanned Helicopters

A few kilometers north of the Yamaha Motor headquarters' Technical Operations center in the Mukasa district of Iwata City lies an open field surrounded by cedar groves that serves as the flight-test range for the engineers of Yamaha's Aeronautic Operations. In the lingering heat of September, the engineers were there as usual putting the Yamaha RMAX Utility-use Unmanned Helicopter through the latest barrage of tests.

An exciting world of uses for Yamaha unmanned helicopters

In the spring of 2003, Yamaha released the "RMAX Type II G" as the latest development in its RMAX series utility-use unmanned helicopters that first debuted in 1998. The "G" in the new model name stands for the Geographic Positioning System (GPS) technology it mounts and it also boasts major improvements in speed control. Since its release, the first-year target for RMAX sales of 200 units has already been reached. Presently about 1,600 unmanned helicopters are in use in Japan's farming industry for crop dusting and other countries are starting to notice the potential of these helicopters. In this growing field, Yamaha's helicopters now enjoy an 85% market share. What's more, beginning this year, Yamaha's domestic rival Yammar, has begun selling our RMAX Type II G on an OEM basis, giving the RMAX a virtual 100% market share this year.

Images from the Autonomous Flight RMAX's CCD camera appear real-time on the PC screen so the operator feels like he is in the pilot's seat

Yamaha's control technologies have also made possible an autonomous flight version of the RMAX that can fly complete flight patterns pre-programmed on a personal computer with no manual remote-control operation necessary. This "Autonomous Flight RMAX" mounts two GPS sensors and other control equipment that enable it to fly constantly within 20 or 30 centimeters of the prescribed flight course. What's more, when the flight course takes the helicopter out of visual range of the ground operator, the CCD cameras it mounts allow operators to follow the flight progress visually on the PC screen as if they were actually riding in the helicopter.

As was featured in *Yamaha News* two years ago, this autonomous flight RMAX has already been used for such missions as observation of an erupting volcano in 2000. In 2002, units of this helicopter were supplied to several organizations including the Ministry of Land, Infrastructure and Transport for jobs like river observation and disaster area surveys. And inquiries and orders for these helicopters are starting to pour in from around the world.

The RMAX is designed to be carried by two people for ease of use on the farm

Says Mr. Takafumi Itagaki, Market Development Group Leader, Aeronautic Operations, Yamaha Motor Co., Ltd. (YMC) "We are getting orders from institutions which had been using other makes of remote-control helicopters but wanted the greater reliability and control accuracy of the Yamaha RMAX. America's NASA is one organization presently using the RMAX, and others include U.S. universities like Carnegie Mellon, Georgia Institute of Technology and the University of California at Berkeley. From Europe, we have received orders from Sweden's Linkopings University and France's aeronautics and space administration ONERA. Trial orders have also come from China, South Korea, Australia, New Zealand, and Malaysia. And, in June of 2003, the U.S. Air Force has also purchased an RMAX for test purposes.

Mr. Takafumi Itagaki

The uses range widely, from environmental observation to construction site photography. Research is also underway recently into the possibilities of using the RMAX for

identification of un-detonated bombs or land mines in former war zones."

In July 2003, the outstanding performance and technologies of the Yamaha RMAX drew much attention when it was demonstrated at an unmanned aircraft exhibition in the U.S. sponsored by the U.S. Navy and the AUVSI and again at other aeronautics shows held after that in nearby cities.

Thanks to attention like this, YMC's Aeronautic Operations presently receive about 20 inquiries a month from overseas institutions. "We are getting inquiries from government and military officials, major aircraft manufacturers, private-sector research organizations, all types of groups. The world is rapidly coming to recognize the value of Yamaha's unmanned helicopters," adds Mr. Itagaki.

Developing a photography-use unmanned helicopter

One summer day in 2000, Aeronautic Operations market development staff member, Masanori Shibuya, loaded his new "Aerial RMAX" prototype in the back of a compact Toyota van and drove to a test site in the rice country of Japan's northern Akita Prefecture. The cargo space of the Toyota was just large enough to hold the RMAX, which had originally been designed to be compact enough to transport on the narrow paths between rice paddies in Japan's farm areas.

The site of that day's test was a large area of experimental farm land and the objective was not crop dusting but high-accuracy aerial photography using a still camera. "The purpose of the project was to record the growth of the rice in still photos for a crop growth study, so our task was to provide a highly accurate and reliable mobile platform and positioning for the camera. At the time,

About 10% of all Japan's rice paddies are presently being dusted by Yamaha unmanned helicopters, on an average of two sprayings per crop season

Yamaha had already supplied the Japanese farming industry with more than 1,000 unmanned helicopters for crop dusting, and we had also developed the technologies for the autonomous flight RMAX, but we were aware that the requirements for use as a photography platform were different," recalls Mr. Shibuya.

For crop dusting, the desired flight elevation is five meters off the ground and the desired cruising speed about 15~20 Km/h. What was required for the "Aerial RMAX," however was the capability for very precise hovering at heights from 50 to 100 meters. With a host of project representatives watching, Mr. Shibuya and his staff completed the day's itinerary and when it was over they were confident of the new prototype's success.

Yamaha was participating in this project at the request of BRIAN (Bio-oriented Technology Research Advancement Institute), a third-sector organization working under the auspices of the Ministry of Agriculture, Forestry and Fisheries of Japan. One of the research themes BRIAN had undertaken was the development of equipment for the quantitative analysis of information about plant growth gained from aerial observation. Using the latest ultra-red photography technology, methods had already been developed for measuring the growth of rice. What was needed next was a method for the precise positioning and movement of the aerial camera.


Mr. Masanori Shibuya


Mr. Akira Sato

It was no simple task. "For one thing there was the problem of the mount. It turned out that there were areas in the shutter speed ranges of 1/30th to 1/200th of a second where the vibration of the helicopter motor caused resonance that interfered with the photography," says Mr. Shibuya.

There was also the need to have the camera perfectly horizontal when shooting, which meant having the helicopter hover in a perfectly level position, which they do not do. In the case of the RMAX, the right-rotating rotor means that the helicopter hovers with a right-hand lean of 2 or 3 degrees. Also, measuring crop growth over a long period of time means that the photographs have to be taken each time from precisely the same position, so the helicopter must fly exactly the same course each time. These are just some of the problems the Yamaha team had to deal with. The new model that emerged at the end of this development project was named the "Aerial RMAX."

The "Aerial RMAX" takes the "RMAX Type II G" as its base helicopter and adds (1) long carbon fiber leaves capable of mounting a camera, (2) changes in the GPS system to accommodate flight with higher altitude hovering and a sub radiator to increase engine cooling capacity during hovering and (3) a down-link display system to enable constant verification of the helicopter's position on the ground control PC.

Many other details had to be worked out. "We used a shock-absorbing material called αGel to eliminate the resonance between the shutter speed and the engine vibration. We were also able to use sensor data about the flight angle of the helicopter body to develop a control mechanism to keep the camera constantly in a perfectly horizontal position facing straight down," says one of the engineers involved.

"Our development work with BRIAN actually led us to rediscover new potential in the RMAX as a platform for aerial photography and then refine that potential. Now we have succeeded in setting a new standard for aerial photography from unmanned helicopters.


The camera mount on the "Aerial RMAX"

There is plenty of business potential in aerial photography and I hope people will find the RMAX an ideal tool for it," concludes Mr. Shibuya.

A mix of unique Yamaha technologies in engines, FRP and control systems

Yamaha's development of utility-use unmanned helicopters began with a request in 1983 from the external branch of the Ministry of Agriculture, Forestry and Fisheries in charge of agricultural aviation. They wanted an unmanned helicopter for crop dusting that could help reduce labor and costs in Japan's labor-strapped rice farming industry.

After extensive research and development efforts, Yamaha completed its first utility-use unmanned helicopter, the "R-50" in 1987. It

The latest Japanese-market model "RMAX Type II G" and the development staff

was the world's first unmanned helicopter for crop dusting with a 20 kg payload. Adoption at agricultural schools around the country began in 1988, and in 1991 the Ministry of Agriculture, Forestry and Fisheries of Japan passed guidelines for training in the use of the R-50 for crop dusting of rice paddies. With this, Yamaha Motor began full-scale marketing of the R-50.

The RMAX was introduced in 1998 with dramatic improvements in functions and operability. Whereas the R-50 had been powered by a liquid-cooled, 2-stroke, 98cc, 12 hp engine, the RMAX mounted a liquid-cooled 2-stroke, 246cc, horizontally-opposed 2-cylinder, crankcase reed valve intake engine rated at 21 hp. Featuring as standard equipment the Yamaha-exclusive flight attitude control system YACS, this model is characterized by its vastly improved operability. In 2002, the addition of a GPS system brought the RMAX to its present state.

Originally, the use of unmanned helicopters was conceived as a method to reinforce manned helicopter dusting operations in areas like tight valleys or orchards near residential areas where manned helicopter use was difficult or dangerous. But, today the use of unmanned helicopters is about to surpass that of manned helicopters in terms of area dusted. Farmers say that with little increase in investment cost their workload is greatly reduced thanks to Yamaha's helicopters.

To learn about the unique Yamaha technologies that go into the RMAX, we spoke to Mr. Akira Sato, who has worked on its development. "Take the engine for example. In the case of a helicopter it is not enough just to turn the rotor as fast as possible. In fact, when the blade speed at its outer perimeter surpasses the speed of sound the lift force efficiency begins to drop and the helicopter slows down. What is necessary is a stable rotation at a given rotor speed."

In normal flight, the RMAX requires a rotor speed of 845 revolutions per minute and this is achieved by an engine that runs at 6,380 rpm. "To get the reliability we wanted, we mounted a specially developed liquid-cooled, 2-stroke, horizontally-opposed engine. To ensure excellent cooling characteristics we included a ceramic composite plated cylinder design, which is a feedback from Yamaha's motorcycle engines," he explains.

There are also feedbacks from Yamaha's FRP technology. "A variety of different types of rotors are used for helicopters, including metal ones, wooden ones and carbon fiber ones. But, the RMAX uses a rotor made of FRP. The two blades of a rotor, which weigh about 1,700 grams each, have to be made with a weight difference of less than 5 grams and they have to be extremely well balanced. To do all this, we turned to Yamaha's outstanding FRP technologies gathered over decades of boat-building experience."

Another important feature of the RMAX is the YACS control technology. "With the RMAX we have built in an attitude control function that controls the motion of the helicopter in accordance with the operator's skill level. The operator can choose between three levels of operating mode. We have achieved a level of operational ease where the average person can learn normal control skills with just five hours of training. The remote control unit may look like that of a normal remote control aircraft, but the contents are completely different," says Mr. Sato.

In this way, the RMAX represents a potent mix of Yamaha's advanced control technologies developed for a wide range of products, from the state-of-the-art road racer YZR-M1 to our PAS electro-hybrid bicycles.

This "Aerial RMAX" began use at Japan's Chiba University this summer for environmental surveys concerning agricultural crops.

RMAX also in use in tidal marsh observation

Tidal marshes are the areas of marshland that emerge at low tide and are covered with water at high tide. The sands and mudflats of these marshlands are the home for many types of crustaceans and shellfish, and they also serve as an important stop-over point for migrating birds. They are important natural ecosystems and habitats for humans and animals alike. Thanks to its capability for highly precise fixed-position aerial photography, the aerial photography spec RMAX can help scientists detect even minute changes in the marshland ecosystems.

"I want to help spread this agriculture-use know-how worldwide"

One of the major factors that has contributed to the spread of utility-use unmanned helicopters, is the fact that Yamaha has worked aggressively to spread understanding about the rules necessary for their proper use and helped organize instruction courses for operators. Already some 6,000 people have graduated from Yamaha's Sky Tech Academy operator training courses.

Also, most countries still don't have laws governing the use of these unmanned aircraft. "The four Japanese makers of unmanned aircraft are presently in the process of formulating a set of standards for the use of these craft. In the near future a new organization called the "Japan UAV Association" will be launched to complete the Japanese standards and approach international authorities with the aim of creating international standards. I want to help spread this know-how born of agriculture use in Japan on a worldwide scale," says Mr. Itagaki with a conviction that shows his confidence that the task is doable.

YMCA-"30 Years in the Making"

Since its inception in 1973, Yamaha Motor Canada Ltd. (YMCA) has been able to offer Yamaha products that hold a special place in the hearts of Canadians. Yamaha's reputation has grown and become established as a leader in motorized recreational products that consistently exceed the expectations of our customers and bring them joy for many years after their initial purchase.

Our reporter: Peter Swanton, National Manager, Motorsports YMCA

Bringing satisfaction to a wide range of customers in a vast land

Who are the Yamaha customers in Canada? In this country where people love to get out in the great outdoors in all season, they are virtually everyone. They are the youngsters whose dream is a PW50 fun bike, the couples in their "Golden Years" enjoying their F150 outboard motor on Canada's thousands of lakes. They are the competitive teenager with their first YZ motocrosser or the veteran 30-year rider enjoying the sophistication of the FJR1300 on Canada's countless get-away roads. They are the outdoorsman exploring the vast Canadian wilderness with his YFM660 Grizzly ATV and the RX-1 snowmobiler on the groomed winter trail. They are the family with their first fishing experience with their F9.9, or the established urban professional with his pride and joy, the XV17 Silverado. They are the local dairy farmer relying on his trusty Kodiak ATV to check on his stock and water enthusiasts on their FX140 WaveRunner PWC. At YMCA, our job is to help all of these customers find the right Yamaha product that will make them satisfied Yamaha customers for life.

At the Clinton Camp young PW owners learn good riding skills

ATV racing is a sport enjoyed by Canadians of all ages, in various racing classes

The history of Yamaha in Canada

On April 12, 1973, Yamaha Motor Canada's head office (and parts distribution) was established in Toronto, the business centre of Canada, to be able to meet the rapidly growing demand for quality Yamaha motorcycles and snowmobiles. Since that time, we have grown with two additional regional offices in Vancouver, British Columbia, and Montreal, Quebec, and seven unit warehouses located across the country.

At the Grand Opening of YMCA in April 12, 1973. Toronto Ontario.

In the early '80s we brought the first ATVs to Canada and they found instant demand among a growing demographic of young adults, families and utility users in Canada's vast off-road trail areas. In 1983, the first Yamaha outboard motors and generators arrived to a waiting audience of both recreational and commercial consumers looking for Yamaha's unique features and reputation for reliability. Through the late '70s and into '80s the market demographics and demand and for Yamaha products far exceeded our supply capabilities, leading us to rapidly expand our dealer network.

Marketing programs for a mature market

Entering the '90s, YMCA initiated aggressive new corporate and marketing programs aimed at both the consumer and our dealers. We began by going to the customers with a CSI customer survey program, YMCA support of professional and amateur racing teams, motorcycle and ATV demo programs, snowmobile 'Yamafest' festivals, outboard service clinics for fishing camp operators and salt/fresh water fishing tournament sponsorship. In the finance area, we initiated our YMCF retail financing, both credit card and unit programs. To cover our far-spread sales network we assigned traveling Territory Service Managers, Yamaha Genuine Accessories Sales reps, and Dealer Training Services for dealer business training.

Snowmobiles have long been a necessity of life as well as a fun way to enjoy the long Canadian winter as this classic picture from the '70s shows

One important YMCA corporate objective has been to introduce a program that identifies the Yamaha dealers that are willing to provide the best overall service to our valued customers. This objective led to our YMCA "5 Star" dealer program introduced in 2002. YMCA has adapted and progressed in creating the Yamaha brand as a leader by understanding our customers wants and needs. Advertising, Dealership Point of Purchase programs, website develop-

ment, Cross promotions with fellow industry leaders (like Toyota), all have been updated to boost consumer acceptance and promote a clear and positive brand image.

Products for every season

YMCA has supported motocross racing since the '70s and has seen its sales grow steadily

Our motorcycle division is the spiritual leader with over 40 years in Canada. Racing wins have always helped the performance image and pride for YMCA, and 2003 was a banner year with Pascal Picotte achieving the "double," road racing championships in the Pro 600 class with the YZFR6, and the Superbike title with the YZF-R1.

Where we have seen dramatic change recently has been the cruiser market. First the Virago line-up and now the Star series has created an all-new, and growing customer base for YMCA. This has driven the XVS11 series to become the best-selling motorcycle in Canada in 2003. In 2003, we introduced an annual "STAR Appreciation Day" and look to expand across the country regionally in 2004. Meanwhile, the traditional PW and TTR first-time buyer acceptance has seen dramatic growth with YMCA-sponsored training schools, and now with YZ competition schools. This has helped our first-time PW, TTR customer "step-up" buying and sales of YZ, WR competition models quadrupled over the last eight years.

If you have visited Canada and seen it's vast open areas, it is easier to see why YMCA has sold over 20,000 ATV units in the 2002/2003 season, making it the number one YMCA sales division with a 26 percent market share in Canada. We offer a full lineup of models for entry-level Raptor 50/80 riders through recreational riders of the Blaster, Warrior and Raptor 660 to the competition rider of YFZ450, and on through utility and recreational series 4x4 models of Bruin, Big Bear, Kodiak to the No. 1 selling ATV in Canada, the Grizzly 660. Utility-use customers in commercial forestry, mining and oil exploration consider ATVs a necessity and they rely on Yamaha dependability.

An ATV rally course. All Terrain Vehicles have been popular in Canada since the '70s

In Canada you are never far from a lake or the ocean. Dealers test-ride the new 4-stroke F150A outboard

The growth of clubs, and in turn acceptance and proper government legislation, has made the ATV an outdoor must for thousands of Canadians who use them for recreational trail riding all year round, including winter. Snowmobiles are in the lifeblood of all Canadians and part of the image of hardiness with which they meet some of the most extreme cold-weather conditions seen anywhere in the world during the winter months. YMCA actively supports snowmobile clubs, charity events, dealer demo rides and aggressively participates in select racing activities across the country.

YMCA supports snowmobile racing as an important promotion. The proud Newfoundland Snocross series champion

The competitive marine market

Fishing is both a national sport and an important tourist industry in Canada. In the marine market, approximately 20 percent of the outboards motors sold in Canada go to fishing camp and resort operations. Some of the larger camps have fleets of hundreds of boats and they turn their engine fleets over every two years, so this is a very important market for long term stable growth. Yamaha has faced very aggressive competition from other manufacturers, but each year the Yamaha reputation for reliability and durability continues to win more and more share of this market. In our "Camp Clinics" program, teams of YMCA and YMC specialists visit directly with the camp owners to discuss their specific needs and address any concerns. It is one of the most widely known support programs in the camp market and the envy of all competitors. Boat builder partnerships are another key to retail success in this market. YMCA has forged solid relationships with all key Canadian boat builders and we are now furthering our relationships with USA builders who ship many of their units to the Canadian market.

The Canadian consumer is very respectful of the environment and always seeks ways to leave a better place for future generations. With this in mind Canadian purchasing habits have now reached the level whereby 60 percent of all outboards in Canada are four strokes and the number grows every year. Here again, our full 4-stroke lineup and the Yamaha reputation are making us the market leader.

For YMCA, 2003 is a benchmark year. With 30 years of success to celebrate, we are now planning our "Next 30."

YMCA 30th anniversary insignia

Big cruisers are one of the growing categories in Canada. YMCA sponsors a "Star Appreciation Day" for its proud Star series owners

This Is My Country

Photos courtesy of Canada Tourism Commission

The federal capital in Ottawa, Ontario
(Photograph: 2002 Ontario Tourism)

Canada

- Country name: Canada
- Capital city: Ottawa
- Area: 9,976,140 sq. km
- Population: 31,629,000 (As of Oct. 2003)
- GDP: $923 billion (2002 est.)
- Currency: Canadian dollar

A land rich in resources and cultural variety

Canada is a country of vast distances and rich natural resources that became a self-governing dominion in 1867, while retaining ties to the British crown. Economically and technologically the nation has developed in parallel with the United States, its neighbor to the south across an unfortified border. One of the unique aspects of Canada as a nation is the presence of the French-speaking province of Quebec, which makes this a bi-cultural country.

Kluane National Park, Yukon
(Photograph: Government of Yukon)

Having lobster is a must on Prince Edward Island
(Photograph: Tourism PEI/Camera Art)

Whale watching for Beluga whales in Churchill, Manitoba
(Photograph: Travel Manitoba)

Geography and Climate

Canada is the second largest country in the world after Russia, with a land mass of 9,976,140 sq km—755,170 sq km of which is lakes—occupying the northern half of the North American continent and extending from the North Atlantic Ocean on the east to the North Pacific Ocean on the west and the Arctic Ocean on the north. Canada shares an 8,893 km border with the continental United States to the south and a 2,477 km border with Alaska to the west. In total land area it is slightly larger than the U.S. The terrain varies widely from the plains and mountains in the west to the lowlands in the southeast and the vast expanse of wilderness forest, lakes and tundra in the north. The St. Lawrence has long been Canada's most important river, serving as a trade route for products from the Great Lakes region, the world's largest freshwater lake system.

The climate of Canada also varies greatly in its different regions, from temperate in the south, to sub arctic and arctic in the north. Rain from the Pacific nourishes the rich forests of the West Coast, while storms that form east of the Rocky Mountains bring rains to the fertile plains and lake country of the central region. The continuous permafrost in cold regions north of 70 degrees latitude is a serious obstacle to development. Most of the country's population is concentrated in the southeast within 300 km of the U.S. border, a region of four distinct seasons where temperatures can reach 35 degrees C. in the summer and often dip to –25 degrees C. in winter.

The northern lights in Yellowknife, Northwest Territories
(Photographer: Donald L. Telfer)

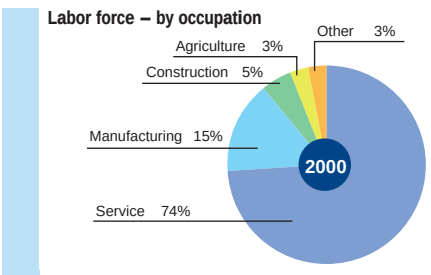
Peoples and Language

The Canada of today is a veritable melting pot of peoples and cultures from around the world, in which direct descendents of the Native Canadians (2%) and the original immigrants from the British Isles (28%) and France (23%) make up only a little more than half of today's population of 32.2 million. People of other European origin make up 15% of the population and another 6% consists of more recent immigrants from Asia, Africa and the Middle East, with the remaining quarter of the population being of mixed origin.

Due to the country's multicultural origins, Canada has two official languages: English, spoken as the first language of 59% of the population, and French, spoken by 23%. The remaining 18% of the population are bilingual or speak as their first language a wide variety of the world's tongues, including Chinese, Italian, German, Polish, Spanish, Portuguese, Punjab, Ukrainian, Arabic, Dutch, Tagalog, Greek, Vietnamese, Cree and Inuktitut. To deal with this diversity, the Canadian government promotes programs to teach English or French to citizens who do not speak one of these two official languages. And, in order to maintain the equality of these two languages, translation services are available in all official government and legal offices.

Resources and Industry

Canada's natural resources include iron ore, nickel, zinc, copper, gold, lead, molybdenum, potash, diamonds, silver, fish, timber, wildlife, coal, petroleum, natural gas and hydropower. As an affluent, high-tech industrial society, Canada today closely resembles the US in its market-oriented economic system, pattern of production, and high living standards. Since World War II, the impressive growth of the manufacturing, mining, and service sectors has transformed the nation from a largely rural economy into one primarily industrial and urban. Canada's main industries today include manufacturing of transportation equipment, chemicals, processed and unprocessed minerals, food products, wood and paper products, fish products, petroleum and natural gas. The country's main exports include motor vehicles and parts, industrial machinery, aircraft, telecommunications equipment, chemicals, plastics, fertilizers, wood pulp, timber, crude petroleum, natural gas, electricity and aluminum. A key strength in the Canadian economy is the substantial trade surplus.



(Source of figures: CIA- The World Factbook - Canada)

Canada and the World

Canada has been an active member of the United Nations since its founding and is the only country to have participated in all its peacekeeping activities around the world. In fact the U.N.'s peacekeeping activities began as a proposal by the Canadian delegation. As the initiator of this proposal, former Canadian Foreign Minister and later Prime Minister, Lester B. Pearson, received the Nobel Peace Prize in 1957. Today, Canada participates proudly in the international community as a member of the British Commonwealth and the association of francophonie states, G8 countries, the Asia-Pacific Economic Conference (APEC), the Organization of American States (OAS) and the North Atlantic Treaty Organization (NATO).

Canada is also a major presence in international sports competition. Canada's national sport is the Native Canadian game of lacrosse and ice hockey is the sport most Canadians identify with, both as a participation and spectator sport. As a people who love the outdoors and sports of all kinds, Canadians are also proud of their traditional strength in international competition in water polo, skiing (cross-country and Alpine), baseball and softball, tennis and basketball.

A nation of dynamic possibilities

Due to factors like the sheer vastness of its territory, the distances between commercial centers and the harshness of its winters, Canada has always been faced with difficult challenges in areas like communications, healthcare availability, transport, housing and food production. These challenges have long forced its people to come up with creative and often highly innovative solutions. This capacity for innovation has been a driving force that has helped make Canada a world leader in several areas of technology. A shining example is the telephone. Invented by Canadian Alexander Graham Bell, the telephone was first used successfully in Canada. Today Canada boasts the world's largest completely cellular network, the world's broadest-reaching optical fiber cable systems and among the cheapest Internet connection services to be found anywhere. To deal with the great distances separating people in the country's northern regions, Canada has also created its highly advanced "SchoolNet" system that connects all schools, libraries and communities over the Internet.

Traffic laws
Minimum age for driver's license
16
Minimum age for motorcycle license
16
Motorcycle license classes
Scooter, select provinces, 14 years of age [Quebec, New Brunswick] Motorcycle license classes, different rules by province, but all are graduated in ability to get final full m/c license

National hero/heroine
Singers: Celine Dion, Shania Twain, Bryan Adams Actors: Mike Meyers, Jim Carrey Sports: Wayne Gretzky, Mario Lemieux [hockey], Jacques Villeneuve [car racing]

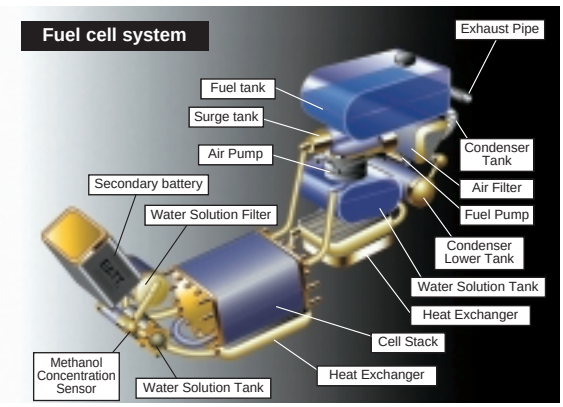
Cost of living	
Average lunch	Cdn. $7.50
Average coffee	Cdn. $1.25
Bus fare	Cdn. $2.00
Gasoline (1 liter)	75 cents

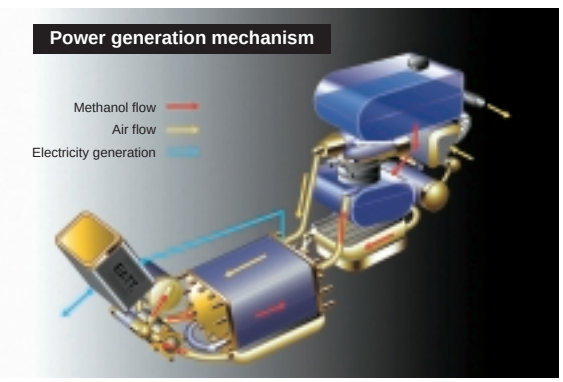
Products that come to mind with the name YAMAHA
Yamaha snowmobiles, ATV's, motorcycles, outboards, Yamaha Music

Spotlight on Yamaha fuel cell motorcycle at Tokyo Motor Show

The annual autumn Tokyo Motor Show is one of the world's premiere events for automotive industry watchers and the general public to get a preview of the things to come from both automobile and motorcycle makers, and at this year's Tokyo Motor Show, which opened on October 25, a revolutionary fuel cell-powered motorcycle prototype named the "FC06" displayed by Yamaha Motor was one of the biggest attention-getters of all.

Expectations have been high for the use of fuel cells as a clean-running, efficient power source for automobiles, and the major makers are now in a race to get viable fuel cell models on the streets. Now, research is also under way into the use of fuel cells to power small motorcycles and the unveiling of the "FC06" shows that Yamaha is pioneering this new field.





The two types of fuel cell systems now being developed for automobiles are the Polymer Electrolyte Fuel Cell (PEFC) that uses hydrogen as its fuel and a conversion type system that uses methanol as its fuel and converts it into hydrogen, which is then supplied to a PEFC. The biggest problem involved in the development of a fuel cell system for motorcycles is the weight and how to fit the system into the limited space available for a motorcycle power unit. This is because a PEFC requires large reserves of hydrogen, while a conversion type PEFC requires a converter unit to convert methanol into hydrogen.

Besides these types, there is also a direct methanol fuel cell (DMFC) that uses methanol directly as its fuel. In terms of conversion efficiency, the DMFC is inferior to a compressed hydrogen gas type fuel cell, but it has many other practical advantages, such as the fact that it can use liquefied fuel, the fact that no cooling system is required for the cell stack and the fact that it does not freeze easily in cold conditions.

What's more, based on the premise of achieving running performance equivalent to a gasoline engine 50cc scooter, which means an average consumption of several hundred Watts of electricity, a DMFC has the potential for being a lighter more compact system than a PEFC using hydrogen as fuel.

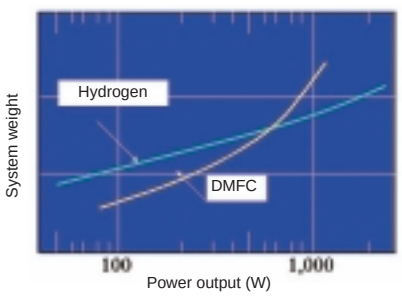
The Yamaha "FC06" takes advantage of these merits of the DMFC to create a 2-wheeled personal electric motorcycle that has a viable running performance and running distance per fueling to satisfy the needs of city commuting or business use.

Use Example and Merits

The system comprises a fuel tank (primary tank) that holds a 50% concentration methanol-water solution and another water-solution tank (secondary tank) that supplies the cell stack with a constant supply of methanol-water solution maintained at a concentration of 1 M/L.

From the cell stack, water solution containing bubbles of CO_2 gas produced by the chemical reaction in the cell stack passes through the heat exchanger and is circulated back to the secondary tank, where the gas component is separated out. A methanol sensor and controller function to maintain a constant supply of methanol at the right concentration. The exhaust, with its steam component, passes through the heat exchanger where the water component is condensed out, after which it is collected and circulated out of the system.

Although the methanol that serves as the fuel is a flammable liquid, it is widely used as a non-hazardous substance when diluted in water below a certain concentration, which means it is easier to use than gasoline or kerosene. While there are expected to be some issues involved in attaining a sufficient distribution of this form of methanol as a fuel throughout the market, the fact that there would be no need to wait for the completion of a new large-scale distribution infrastructure surely makes this a practical form of fuel. Its merits include (1) the fact that it can provide the sufficient running distance for certain types of EV use, (2) it enables quick refueling, (3) it is easy to handle because it is in liquid form (50% water mixture), (4) it is a readily available fuel and (5) it gives off no toxic exhaust substances.



WORLD TOPICS

We always welcome your contributions.
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The Gokuraku Tombo flew impressively despite the bad wind conditions

Team Aeroscepsy members and volunteer staff

Japan

Chasing the Dream

On a cloudy day in August, a rather unusual looking aircraft took flight from a beach in Shiga Prefecture for a record-breaking flight. The aircraft, called the "Gokuraku Tombo" (Happy Dragonfly) is a human powered aircraft designed, built and operated by "Team Aeroscepsy," a team of 15 Yamaha engineers with a passion for aircraft and innovation. The 100% handmade aircraft has a wingspan of 32 meters (105 feet) and a total weight of just 32 kilograms due to its construction of high-strength carbon fiber and transparent polypropylene film just 12 microns thick to cover the wings. On this day, witnessed by an official from the Japan Aeronautic Association, the Gokuraku Tombo flew for a total of 10.9 kilometers, breaking the official Japanese distance record already held by the Yamaha team. After takeoff on a makeshift runway laid down on a beach of Lake Biwa in central Japan, the flight of 25 minutes and 27 seconds tested the limits of the machine and the pilot Hironori Nakayama (Moric Co., Ltd.) to bring this distinction to the team.

This level of excellence is not new to Team Aeroscepsy. The team members are from different departments, but are all in engineering related jobs in Yamaha Motor Co., Ltd. (YMC) divisions. The venue which has led to much of their fame is the Birdman Contest, an annual human-powered flight competition which the club has won three times since they first joined the competition in 1983. In 1998, at the 22nd running of this contest, the team took first place with an unofficial flight of an amazing 23.6 kilometers, smashing the event record of 9.7 kilometers. Team Aeroscepsy is a collection of engineers with a passion for excellence, for creation and above all, for chasing the ancient dream of human-powered flight.

A Birdman's Eye View

Hironori Nakayama, Gokuraku Tombo pilot

Checking the airspeed gauge, I brought the craft up and flew past the first checkpoint. Eight meters per second, just as in the test flights. But the craft just didn't seem to be floating well. The wind must be from behind, the worst scenario for human powered flight. I knew I would have to push myself harder to maintain altitude. Soon my pulse was racing at over 185 beats per minute. This has never happened before. I've got to catch a headwind," I was thinking. In spite of all the cheers of encouragement, my legs felt like lead. I tried to squeeze out even one extra meter of distance, but the wind eventually caused the Tombo to lose speed and land in the water. I didn't reach our goal, but the support from the staff and the spectators was wonderful and made it all worthwhile. The friendships I made and the time spent with these great people are even more of a treasure for me than the new Japanese record.

South Korea

Yamaha Team Cogito Dazzles on the Water

Team Cogito after their inspiring display of speed in S. Korea

Team Cogito, a Yamaha employee club that builds and races human-powered boats, was invited to participate in a festival held at the Expo Science Park in Daejong, South Korea, on August 9 and 10. This event was organized to give students and corporate engineers a chance to show off their skills in human-powered boat design. Competing were 15 teams of university students and two company employee teams. As several-time Japanese champions, Team Cogito received a special invitation to compete against a team from S. Korea's HYUNDAI HEAVY INDUSTRIES Co., Ltd. Out on the water, the outstanding hydrofoil function and propulsion mechanism of the Team Cogito boat pedaled by two riders enabled it to skim across the water at speeds that amazed the gallery and overwhelmed the competition. The technology and fervor of the Yamaha employee team clearly inspired the young Korean engineers to further explore the possibilities of human power.

From Tokuzo Fukamachi, Pool Operations Manufacturing Div., YMC

Spain

YMES President Lasheras makes a point with President Hasegawa

European Policy Conference

The "European Policy Conference," held from July 9 to 11 in Spain, was attended by around 200 Yamaha representatives from across Europe with a special appearance by YMC President Toru Hasegawa. Hosted by Yamaha Motor España (YMES), in Sitges, located in the southern part of Barcelona, the conference was held to discuss business operation policies for all of Europe. The next day, July 10, saw several events such as a tour of the YMES factory and an unveiling ceremony for the DT125, which will go into production next year. These events gave the European group partners a chance to show off the great things happening at their companies and strengthen communication with each other. Later, an informal discussion session was held around a paella lunch. This friendly setting provided a perfect opportunity for deepening relationships between YMES and YMC and all the companies of the European Yamaha group.

From Susumu Komatsubara, YMES, Spain

France and Italy

Big '04 models debut at Paul Ricard Circuit, Milan, Paris

Yamaha Motor Europe's annual new-model press event was moved forward to the week before the big Milano Show to give the press time to stoke up interest for the unveiling of the major new Yamaha models for 2004. And what a lineup it is for 2004!

This annual gathering at the Paul Ricard circuit in southern France has become a big event that European Yamaha dealers and the press look forward to. Yamaha Motor Europe N.V. (YMENV) also looks forward to it as an opportunity to build enthusiasm for the new models among its main dealers from across Europe and to make everyone in the Yamaha family better ambassadors for the brand.

Dealers and press listen to Carlos Checa's interview at the Paul Ricard event

Unveiled at this year's event on Sept. 8, 9 were the major remakes of the supersport flagship YZF-R1, the popular European market all-round sports bike, the Fazer, which now comes in two versions (faired and naked) called the Fazer and FZ6, plus the powered-up and restyled XT660R and XT660X, which is the supermotard version.

About 250 dealers and 220 press people also saw track demonstrations and appearances by Yamaha riders, including the recently crowned motocross world champion Stefan Everts and MotoGP riders Carlos Checa and Alex Barros, plus a wide range of other attractions including vintage racer demonstrations.

The Yamaha booth at the Milano Show with its Touching Your Heart logo drew a constant stream of visitors

Attractive displays highlighted Yamaha models at the Paris Show

The Milano Show opened the following week on Sept. 16 with an exciting array of Yamaha models including not only these three but also the new Majesty 400 and MT03 show concept model, and even a fashion show-style presentation of new riding wear that Yamaha Europe will be pushing this coming season. On Sept. 25, still more models such as the WR450 2-Trac and the WR450 2-Trac Supermotard two-wheel drive concept motorcycles, and the new BW's 50cc scooter were unveiled at the Paris Motor Show.

From YMENV, the Netherlands

Canada

30 years in the making, YMCA 30th Anniversary Dealer Meeting

For Yamaha Motor Canada Ltd. (YMCA), 2003 is a benchmark year. With 30 years of past success to celebrate, we are planning our "Next 30" YMCA has a goal of reaching net sales of $500 million (CD$) by 2005. From September 20 to 23 this year, YMCA had its 30th Anniversary Dealer Show at the Deerhurst Resort in Huntsville, Ontario. This special event set an attendance record with 730 guests, made up of dealers, YMC corporate guests, YMCA business partners and YMCA staff. The event opened with a speech by YMC President Hasegawa, after which YMCA President Roy Kojima presented a report that the company's sales and profits had reached an all-time high and expressed his appreciation for the great commitment the dealers nationwide had shown. He went on to introduce the company's new "Next 30" mid-term plan and pledged to work together with the dealers to further expand sales.

YMC President Hasegawa (left) presented a commemorative 30th anniversary gift, received by YMCA President Kojima (right) and Vice President Hastings (center)

The dealers and YMCA pledged to strive for further business growth

This 2004 dealer product introduction event was meant to offer the main reason for Yamaha's success, the use of our products in the real world environment. Demonstration areas were in place for all dealers to participate, regardless of the product groups they presently retail. YMCA introduced special "30th Anniversary" edition 2004 models of the Road Star Silverado, V Star 1100 Silverado and the Grizzly 660 to very positive dealer approval. The test ride area that drew some of the greatest overall interest was that of a brand new product, the all-new Rhino 660 side-by-side offroad vehicle, that looks like an instant success. At this Dealer Show introduction we had displays by 39 YMCA business partners that we work together with professionally to enhance our brand and grow our businesses. The YMCA dealers' enthusiasm and comments confirmed that this was the best YMCA Dealer Meeting ever.

The commitment by Yamaha to offer the best product and business programs to our dealers, and in turn our end retail customers, certainly guarantees the success of our goal to create "Customers for life."

From Peter Swanton, YMCA, Canada

China

Celebration after the official signing

New company to produce Yamaha multi-purpose engines

On August 1, a three-company agreement was reached and officially signed in which YMC, Jiangsu Linhai Power Machinery Group Co., the local motorcycle engine maker in China, and Jiangsu Linhai Yamaha Motor Co., Ltd. (LYM), Yamaha's Chinese joint-venture manufacturing company, will establish a new company to produce multipurpose engines. The new company will be known as Yamaha Motor Taizhou O.P.E. Co., Ltd. Plans call for the company to produce six models of multipurpose 4-stroke engines under 12 horsepower from the autumn of 2004. Production estimates for the first year are around 30,000 units with plans to reach a production level of 400,000 units within five years. The establishment of this new company is a clear statement of Yamaha's commitment to the Chinese market.

Australia

YMA makes big splash with marine product launch

Test riding the F150A on a Cruise Craft 55

Yamaha F150A four-stroke

A New Zealand journalist tests the FX140

YMA marine product launch at Couran Cove, Queensland

Yamaha Motor Australia Pty., Ltd. (YMA) scored a first when it invited Oceania's journalists to sample the latest F150A four-stroke outboard motor on four different boats. Marine journalists were flown to Stradbroke Island, off the Queensland coast, to test this ground-breaking four cylinder, 16-valve DOHC motor mounted on popular boat models from four different brands.

In addition, YMA provided the HPDI 2-stroke model Z300A VMAX for tests on another boat. Two WaveRunners, the FX140 Cruiser and GP1300R, were also available for the journalists to test ride.

The Couran Cove marine product launch coincided with the announcement of Ally Craft, Sea Jay and Haines Hunter boat manufacturers as new Yamaha packaging partners.

Ideal weather meant that testers could put all the boats and motors through their paces in a sheltered stretch of water and all came away impressed with the quietness, smoothness and across-the-range performance of the F150A and the raw power of the Z300A VMAX.

Oceania is the only market that has chosen to brand all the HPDI motors, including offshore Bluewater models under the VMAX name. These exciting new outboards will further consolidate Yamaha's position as number one brand in the region.

From Sean Hawker, YMA, Australia

Tunisia

Next-generation Yamaha mopeds get a big launch

Expectations are high for the new Yamaha mopeds

In late July and early August, Tunisian dealers became the first in Africa to be introduced to the new generation of Yamaha 50cc mopeds, the GALAXY and SOLARIS. In order to ensure the success of these new products, SAMI company, distributor of the MBK and YAMAHA brands in Tunisia, launched an original and grand-scale marketing program. The dealer meetings were the start of this campaign and gave a full introduction to the powerful and comfortable SOLARIS and the quick and passionately sporty GALAXY. Held in Hammamet for northern Tunisia on the 28th of July and Sfax for the south on the 3rd of August, the meetings were led by top Yamaha representatives and included test-ride sessions, after which the dealers were clearly impressed by the design and the performance of the new models.

The launched campaign continued with a promotional "Caravane" that is travelling to local towns all over the country, setting up product exhibits and test-rides and showing a promotional film about the Yamaha mopeds at locations outside the prominent cafes, restaurants, etc., where Tunisian young people gather. SAMI is pouring all its available personnel and resources into this important launch to make sure it is a total success.

The distributor staff who organized the meeting with the Yamaha staff

From Sami Damergi, SAMI, Tunisia

Burkina Faso

Big launch for three new 50cc mopeds

On September 29, a grand launch ceremony was held in the West African country of Burkina Faso with some 200 industry and government representatives, dealers and members of the press in attendance. Unveiled were three new Yamaha brand 50cc mopeds manufactured in Turkey and named the "Galaxy," "Solaris" and "Zoom." While Yamaha has been well represented in Burkina Faso's 80cc market until now with the Yamaha V80, YMC's Overseas Market Development Operations (OMDO) has introduced these new models to establish a strong position in the important 50cc category. In his speech at the launch ceremony, YMC's Senior General Manager (OMDO) Mr. Shibata said, "We want to see the Yamaha technology and quality in these models contribute to greater customer satisfaction, and with the efforts of our distributors CFAO Burkina and SIFA, I know we will succeed." After the product introductions and test rides, the lively ceremony went on into the night with dancing, a mini-concert and fashion show.

The new Galaxy makes its debut at the launch ceremony amid dramatic lighting

From Kyoko Shimoishi, OMDO, YMC

China

Two new 100cc 4-stroke scooters unveiled

Beginning on September 2, Zhuzhou Nanfang Yamaha Motor Co., Ltd. (NYM) gave its dealers the first look at the two exciting new 100cc 4-stroke Yamaha scooter models "Jog" and "Force." A total of 540 representatives from about 400 dealerships and sub-dealers turned out for the introduction events in three cities to see and test ride the first 100cc scooters ever introduced by Yamaha in the Chinese market. The 4-stroke engine mounted on both of these models is built by Jiangsu Linhai Yamaha Motor Co., Ltd. (LYM) and features trademark Yamaha compactness and lightness that helps these models achieve a lightweight body and agile handling like nothing ever seen before in the 100 ~ 125cc scooter class. Needless to say, the dealers were excited at the prospect of selling these models in

Russia

Big events spread Yamaha brand recognition

Fifty-four people participated in the opening event

An address by Special Ambassador to Russia, Mr. Nomura (right)

Yamaha is increasing its presence in Russia in many different areas. A new base for market expansion in Russia was established with the opening of the Yamaha Moscow representative office on September 6. Yamaha was one of the first Japanese companies to do business in the Soviet Union, supplying bike technology and later outboard motors, generators and snowmobiles. This relationship expanded after the establishment of the Russian Republic in 96, and by 2002 Yamaha had six importers in Russia. This new office will help Yamaha take advantage of new trends in Russia, especially cosmopolitan Moscow, in which bikes and scooters are an emerging leisure and fashion trend. The office, starting with five employees, will gather market data and coordinate communication with the local importers.

In addition, Yamaha outboard motors once again showed their quality with a superior finish in a grueling 24-hour race in St. Petersburg competed by inflatable boats equipped with outboard motors. It was the fourth running of the race, and was held as part of celebrations to mark the 300th anniversary of the founding of the city of St. Petersburg. A total of 39 boats in four classes by engine size participated in the event, and capturing the honor of overall champion while winning the 2000cc class using a Z200P was the team from Petroset company, a local Yamaha importer. These events will serve to further boost Yamaha brand recognition in Russia.

The president of Petroset, Dmitry R. Sandler drove a Z200P powered Yamaran inflatable to victory at St. Petersburg

Senegal & Uganda

African distributors attend regional distributor meetings

A total of 34 Yamaha distributors and dealers gathered for two regional meetings in Africa recently, the "West & Central Africa Regional Meeting 2003" held in Dakar, Senegal, from Sept. 30 to Oct. 1, and the "Southeast Africa Regional Meeting 2003" held in Entebbe, Uganda on Oct. 6 and 7. The meetings focused on plans for the smooth introduction of new low-end motorcycle models and presentations on the unified brand strategy and the importance of VI adherence.

In response to the influx of extremely low-priced models from makers in China and other countries into the African market, Yamaha announced its plans for increased cross-trade supply of low-end products in line with YMC's "Next 50" mid-tern management plan at a meeting in Istanbul in October 2002. At that time Yamaha introduced the YAM100S, a model developed by YMC's OMDO in cooperation with a Chinese maker, and these meetings included a follow-up report on the success of launches of this model in the African markets.

Both meetings began with speeches by YMC's Senior General Manager (OMDO) Shibata, followed by presentations of marketing policy, introductions of other cross trade models and a run-through of pre-delivery product inspections (PDI). The Uganda meeting also included a study tour of the motorcycle market in the capital, Kampala, including visits to the used-bike market, construction product dealers and interviews of bike-taxi riders and customers on the street. Later, a dinner cruise on Lake Victoria and a dance served as an opportunity for bonding between members of the Yamaha family in Africa.

From Emi Ishii and Kazunori Sasaki, OMDO , YMC

The participants of the "West & Central Africa Regional Meeting 2003" (left) and the "Southeast Africa Regional Meeting 2003" (right)

Dealers gathered to get a look at the new models

what will be an entirely new category.

Despite rainy weather, most of the dealers anxiously tried out the performance of these two new models and came away with first-hand confidence that this is performance that will sell big in the Chinese market.

From Yoshikazu Nishida, NYM, China

Portugal

YMC Corporate Advisor Hasegawa visits YMPL

YMC's Corporate Advisor, Mr. Takehiko Hasegawa paid a call at the home offices of Yamaha Motor Portugal Ltda. (YMPL) on August 18. Besides meeting with YMPL executives and employees, Mr. Hasegawa joined with YMPL's Managing Director, Mr. Joao Pissarra, to unveil a new monument plaque in the company's entrance hall. Engraved on the plaque are the Chinese characters Ju An Si Wei, which also grace a monument outside the Communication Plaza of the YMC headquarters in Japan. These four characters are an old Chinese expression that can be roughly translated as "Be Prepared for Anything," and were favorite words of wisdom for Yamaha Motor's founder and first president, Mr. Genichi Kawakami. As a corporate leader, Mr. Kawakami believed that times of success were also times to be preparing for the next changes in the marketplace. In honor of the late Mr. Kawakami, YMPL will display this plaque permanently.

Mr. Hasegawa and Mr. Pissarra talked about corporate plans for the future

From YMPL, Portugal

Australia

YMA unveils 2004 R1 at Melbourne show

Yamaha Motor Australia Pty., Ltd. (YMA) was the first distributor to show the 2004 model YZF-R1 to the public when it unveiled the new model at the Melbourne Motorcycle Show on 12 September.


Yamaha ride simulator at the Melbourne Show

45,000 people flocked to the impressive Royal Exhibition Hall to witness the latest version of Australia's best selling sports bike unveiled by YMA Managing Director, Masayoshi Toyama. The Mad Max themed Yamaha stand was the busiest area for the whole weekend as enthusiasts clamoured for a view of the new R1.

"The R1 was easily the highlight of the show. People were coming back two or three times to see the display model and were amazed that the bike is new from the ground up," said Victorian sales and marketing manager Lloyd Fletcher.

"You know a model is special when all the other distributors visit the Yamaha stand to get a look," he added.

"One guy rode 150km just to see the R1 and another paid his $15 entry fee with 40 minutes of the show left when he heard the new model was on display," explained Fletcher.

Another first for Yamaha at the show was the 'Ultimate Yamaha Ride Experience' capsule. This is a ride simulator featuring Team Nikon Yamaha Australian Formula Xtreme champion Kevin Curtain racing an R1 at Eastern Creek and Ballards Yamaha Australian enduro champion Glenn Kearney riding a WR250F through the bush.


R1 on the Mad Max inspired stand


Managing Director Toyama receives a gift from Melbourne show organizers

Both rides proved very popular with the show-going public and a great introduction to the Yamaha brand.

With a huge array of bikes, ATVs, accessories and with training schools and owners club displays, the Yamaha stand was voted best in show by a panel of judges.

From Sean Hawker, YMA, Australia

USA

Yamaha YZF-R6 and Jamie Hacking win AMA 600 Supersport title!

The 600cc Supersport category is fiercely competitive both on the track and the showroom floor. For the U.S. market, factory race teams strive to develop a 600cc sport bike that wins on Sunday – and sells on Monday. And that's what the winning combination of Team Yamaha, Jamie Hacking and the all-new Yamaha YZF-R6 did this year.

Months before the YZF-R6 was released, motorcyclists were already salivating over early press reports. When it posted the fastest lap times during an early tire test, dealers reported an unusually high number of eager customers making deposits!


Team Yamaha and the YZF-R6 dominate the field

Team Yamaha's four riders dominated professional AMA (American Motorcyclist Association) Supersport races. Yamaha racing blue and white was a common sight on the podium and one memorable weekend, the results were 1-2-3-4! Not only did the Yamaha YZF-R6 win the AMA 600 Supersport Championship but it also topped the competition on the sales floor to become the best-selling 600cc supersport motorcycle in the U.S. Sales increased by nearly 50 percent and dealer inventory is nearly zero!

Yamaha USA and the 2004 YZF-R6 are ready for the 2004 racing and sales seasons. Yamaha National Communications Manager Bob Starr explains, "Our racing plans are set … and on the marketing side, we will highlight the championship in our advertising materials and continue building momentum for the winning Yamaha brand."

From Brad Banister, Public Relations Manager, YMUS

Australia

Safari success for first official Yamaha team

As you read in the last issue of *Yamaha News*, Yamaha Motor Australia (YMA) entered its first official team in one of Australia's biggest and toughest off-road events, the Australian Safari. The 30 person Yamaha Safari Team (YST) fielded six riders in this grueling eight-day 4,600km race across some of the country's roughest outback terrain. The YST led the Safari outright for the first three days over the tighter sections of the course. From seven of the moto division classes YST captured a deserved three class wins. What's more, Japanese rider Makoto Morimoto won an additional class making a total of four from seven for Yamaha. The riders reported that the performance and handling of their WR450F and WR250F machines across varied terrain was superb and that they were also a lot of fun to ride! The YST WRs were fitted with specially designed 30-liter long-range fuel tanks to provide a range of over 300km for the longer sections of the course. YMA aims to soon make these tanks available to the world market as an aftermarket accessory.


YST riders and crew

The winners were Stuart Morgan (WR450F) in the M2 over 250cc to 500cc class, Alison Parker (WR250F) in the M1 up to 250cc class, Alan Cunynghame (WR450F) in the M1 over 250cc to 500cc class and Morimoto (WR250F) in the M2 Production up to 250cc class.


Stuart Morgan (WR450F), the M2-2 Class Winner

Says YST Manager Cheryl Muldoon: "For our first attempt at one of Australia's harshest and most demanding long distance events, we threw ourselves in at the deep end by entering a six-bike team. But we were confident of proving the reliability of our championship-winning models by completing the course. We were overwhelmed by the outcome; not only did the entire team finish, but we won an incredible three classes."

From Cheryl Muldoon, Team Manager, YST, Australia

(from right) ME Company President Sato, PESCA's Claro, NAUTICA's Martins, YMBD's Giarolla and Yamaha Marine Co., Ltd., Technical Development Department Chief, Nishimura

Japan

Yamaha Outboard Motors Promoted in Marine Magazine Editors Visit

From July 19 to 25, editors from NAUTICA and PESCA companies, producers of Brazil's leading marine magazines, visited Japan as part of their coverage of Yamaha's significant contributions to the outboard motor business. Their schedule was intensely busy, but the editors took time out to share their impressions of their visits. The editors, experts in the industry, commented on the high level of technical sophistication, manufacturing capability and quality control level they observed at Yamaha. They also expressed their confidence that this visit would lead to an increase of product awareness in Brazil of Yamaha outboard motors and further boost sales in the future.

From: Takuya Nagatani, Latin America Group, ME Company, YMC

Japan

World Champion Named in Yamaha Technician GP

The 2003 winner, Mr. Richard Hair. The next World Tech GP will be held in 2005, YMC's 50th Anniversary

The finals of the "Yamaha World Technician GP 2003" were held on October 3 at the Yamaha Motor headquarters in Iwata City, Japan, and the new world grand prix winner, runner up and two third place finishers were named. This Yamaha technician grand prix program is part of YMC's "Global Service Education" program begun in 2000, and the first contests were launched in 2001. Its aim is to realize increased customer satisfaction by providing a uniformly high level of quality service that goes beyond borders and areas, while at the same time increasing the consciousness of individual service people as members of the Yamaha group.

This second holding of the World Technician GP bore the slogan "Challenge 21 – Aim to Be No. 1 in Service," and was competed by 20 finalists chosen from regional preliminary competitions who came to Japan accompanied by 18 Yamaha distributor representatives to vie for the world title. In all, 19 countries were represented and the contestants competed in the four areas of motorcycle engineering knowledge, technical skills, measurement skills and customer reception skills. When the scores were totaled from these tests, the overall champion was Mr. Richard Hair of Inskip Motorcycles in Australia, while second place went to Mr. Liu Shih- Jung of Hon Guo Motors in Taiwan and third place honors were shared by Mr. Jean Claude Durand of Moto Parushions (France) and Mr. Pharuehat Singto of Pairo Sales & Service (Thailand).

Austria

Reborn Fazer excites journalists in press debut

This year's full remake of Europe's best-selling all-rounder motorcycle, the Yamaha FZ600 Fazer, is one of the hottest topics for the 2004 season. And that excitement was clearly reflected in the turnout for the big press test ride event held in Austria from August 22 to September 4. In all, 113 journalists from 23 countries gathered at a beautiful location in the town of Seafeld on the outskirts of Innsbruck in the green foothills of the Austria's Tirolean Alps to put the reborn FZ6-S "Fazer" and the naked version FZ6-N "FZ6" through their paces on the winding mountain roads. What they discovered was powered up performance coming from the new engine, which is a direct evolution of the power unit on the YZF-R6, and sleek styling built around the new CF aluminum die-cast frame. The journalists came off the rides with comments like: "This is a model with a true feeling of quality, in the styling and the performance," or "Very good stability and handling across the entire speed range. I never felt uncertain even when pushing it hard like a supersport bike." Seeing the press reactions, the Yamaha development staff was confident that these models will be a hit across Europe.

New Fazers lined up for test rides

USA

YMUS Opens New Midwest Headquarters

The new Midwest headquarters facility

The local Chamber of Commerce present YMUS President Kato with the "Golden Key"

The 16,000 sq.m. parts warehouse is ready to supply the big Midwest market

In September, a grand opening ceremony was held for the newly opened Midwest headquarters of Yamaha Motor Corp., USA (YMUS) in Lakeview, Wisconsin. In attendance for this big event were some 100 Yamaha representatives, including YMC's President Hasegawa and YMUS's President Kato, and another 140 regional dealers, industry affiliates and community guests, including representatives of the local Chamber of Commerce who presented YMUS their "Golden Key" of welcome.

Until now YMUS has run its motorcycle and other land product operations out of its home offices in Cypress, California, and its Marine operations out of offices in Kenesaw, Georgia. The new Midwest headquarters in Wisconsin consolidates business, parts, service and snowmobile R&D centers that had existed separately in Wisconsin and Minnesota in one new facility including some 1,900 sq.m. of office space and about 16,000 sq.m. of parts warehouse space. Operations have already begun at the new facility and expectations are high that boosted marketing, parts and service functions will strengthen the Yamaha presence in the important Midwest market which is the center of the US snowmobile market in particular.

The XT Legend Reborn with Street-Smart Styling

Yamaha has just redefined the beauty of performance. One look at the new 2004 model XT660R that hits the streets and trails of Europe and other markets late this year is enough to make you want to jump on and go for a ride, on a machine build to take you anywhere.

When Yamaha engineers set out to build the next generation XT, they were out to do more than just make a good thing better. Besides boosting the engine performance and suspension specs, they were determined to make a machine with killer looks that no on-off bike lover could resist.

"We call it the 'The New Legend Crossover Trail 660,' says one of the designers. "The "crossover" concept in the body design can be seen in the way it combines an off-road model's silhouette with the kind of design spice you associate with a street bike. Our design concept combined three elements: the kind of sculptured beauty that fits the European urban scene, a sense of off-roader versatility and the exciting sense of stimulation that comes from truly original forms," he adds.

Ever since their days of dominance in the early years of the Paris-Dakar Rally, the "big-single" models of Yamaha's XT series have led a category of trail models built for on- and off-road riding that have been especially popular among adventurous European motorcycle lovers. Conceived as the successor to the popular XT600E that has led the 600cc on-off model category in Europe for ten years, this new model answers the needs of today's riders, who want not just a trail model but an easy to use city bike that can also handle high-speed expressway cruising with no sweat, and looks good doing it.

The development team started by designing an all-new liquid-cooled 4-stroke, SOHC single-cylinder, 4-valve engine. Besides boring it out to 660cc to give that extra high-speed power, they also added the first fuel injection system ever on a Yamaha big single to ensure optimum fuel economy, cleaner emissions and linear, easy to-use power development across the entire speed range. Other state-of-the-art features include a forged piston, direct plated cylinder and the first roller type rocker arm valve lift ever on a Yamaha sport bike. To accommodate this high-performance power unit, the XT660R boasts a new diamond type frame built with high-tension steel and twin tank rails for greater rigidity and running stability at higher speeds, plus upgraded suspension and brake specs.

The XT660R will be manufactured at Yamaha's French base, MBK, and customers will surely find it a model that is just as at home on the cobblestone streets of Europe's southern capitals or cruising down the highways as it is bounding up a mountain trail, and will look good wherever it goes.

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