

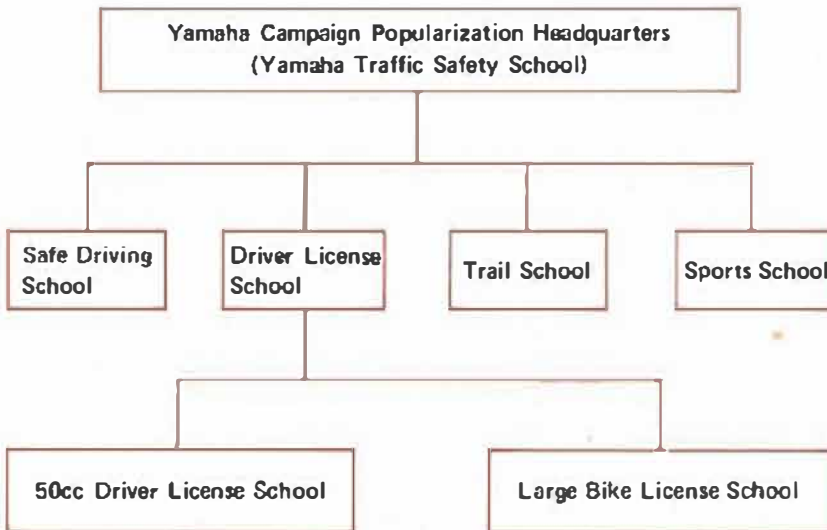


## More Efforts Will Be Directed toward 'Safe and Pleasurable Motorcycling'; Yamaha - Original Rider Education Program Attracts Particular Public Interest

Yamaha has been long keen to promote its unique original rider education program designed to provide motorcyclists with correct driving techniques and far-reaching knowledge of traffic rules under the motto 'Safe and Pleasurable Motorcycling'. The said program of Yamaha which has been carried forward on a nationwide scale in Japan, is now steadily winning high public appraisal, as it proves to render tremendous service to traffic safety in general. Yamaha Campaign Popularization Headquarters which has been established within Main Office is taking the initiative in every aspect of the program. The organizational function of the program is shown as below:



(See Inside Pages for Details)



### Make Use of It as Guideline for Your Own Program

Yamaha's rider education program is summarized as above, and it may be of some use for you as a guideline in case you want to set your own program of this kind just intended for your own territories.



# Yamaha Course



## For Perfection of Motorcycles

The Yamaha Course which is located at Fukuroi near the Main Factory at Iwata has taken a very important role as a test facility for the perfection of Yamaha motorcycles since it was constructed early in 1969 at a total cost of 1,000 mil. yen.

It is now claimed to be one of the best courses of its kind in the world in scale and in function alike. Shaped in transformed 8, and extending 5,245m incorporating various bends, the course is complete with pits, paddocks maintenance shop and many other auxiliary accommodations essential to the exertion of flawless tests conducted on machines day and night under every conceivable condition. First of all, the course must be kept in the best operational condition at any times.

Yamaha staff's sheer efforts put in administration, security and observation works for the course should be rated high in connection with worldwide reputation enjoyed by Yamaha motorcycles for their flawless quality and performance.



## Ultra-Modern Facility

The course features a lot of bends including an R-20 hairpin curve. The surface is finished overall in special anti-skip asphalt containing synthetic rubber to ensure excellent safety for high speed tests in rainy weather. It is 9 - 15m in width and 20 - 40m wide including the width of green belts established all along the course. The straight section extending 1.4km enables a rider to accelerate his machine up to 250 km/h. The course are divided into two parts, north and south by two short cuts, and both are designed to be used at the same time. Longitudinal slope is 7.9% at its maximum.

Installed at every key point signals and buffer nets to ensure safety for test riders at any times. A center line on the course is used as a lane mark when tests for normal road runs are conducted. Besides, a 4-kil. rough surfaced course is established along the high speed test course. It is used for endurance tests on standard models.



Observation post



Information room



Well kept and maintained



Safe and pleasurable cycling

## Kept in the best condition



Machine maintenance shop

The staff of the Yamaha Course can not exercise too much care for flawless administration and maintenance of this gigantic testing facility covering some 330,000 m<sup>2</sup> in area. Particular efforts must be exerted to keep the course in the best operational condition at any times. Any bit of negligence on the part of maintenance staff might lead to a serious accident. For example, specially treated asphalt surface is vulnerable to deterioration by oil or gasoline. Thus, the staff must be keen to see that every inch of vast course surface is kept in the safest condition for any high speed test to be attempted thereon. Surrounded by grassy hills, grass hoppers happen to invade the course sometimes. Even such small objects may prove fatal to a rider while conducting an ultra-high speed test. A 7t class tankrolley is daily used to sprinkle insecticide to prevent accidents. Installed at all key points of the course are 7 observation posts which keep pit personnel well informed of every progress of test. Any minor happening must be reported for immediate countermeasures.

## Paradise for Kids

The Yamaha Course has been made open to cycling by children once a month since May this year. Yamaha has set first Sunday each month as Children's Cycling Day. Children can fully enjoy safe accident-free cycling during hours from 9:30 to 16:00. They ride their cycles anti-clockwise and cover the whole distance in 20 - 30 minutes. Thus, cycling on the course is an ideal and sound recreation for them. Both municipal authorities and general public alike very favorably receive it.

# Boat Show in Teheran



Reflecting high enthusiasm to motorization on the water, for recreation or for utility, the boat show which was organized recently in Teheran, Iran was very favorably received by people. The show was sponsored by Sherkate Sahami Taivij Sanayeh Rooz, distributors for Yamaha, in close cooperation with Messrs. Zereh Co. A full line of Yamaha outboard motors and some motorcycles models together with rubber boats were exhibited at the poolside of International Trade Fair site. An FRP boat mounted with a Yamaha P-450 was on the pool for free ride by enthusiasts. The show proved a big success, and bore a very good impression on all of visitors.



## Yamaha Business Information

# ESM Development Plan

As already reported by this journal, Mr. D.W. Toms, Administrator of National Highway Traffic Safety Administration of the United States sounded the Ministry of International Trade and Industry on the possibility of ESM (experimental safety motorcycles) development plan in March when he visited Japan. Mr. Toms had also talks with the senior technical staff of Yamaha to take the initiative in promoting this plan. MITI has recently reached an agreement with the Japan Automobile Manufacturers Association for aggressive promotion of this plan designed to be in pursuit of the ultimate in safety with a motorcycle.

Accordingly, JAMA is slated to organize an expert sub-committee to take the initiative in carrying out every detail of research and development program. The committee is designed to study every concrete measures and system for the improvement of safety, and to lay out specifications by 1975. It will entirely depend on the judgement of the committee whether the ESM development plan should be carried out by JAMA, or by individual motorcycle makers. Yamaha has been long keen to push forward its own program in developing motorcycles with the best conceivable safety for riders in mind.

# Yamaha Traffic Safety School

## Some 9 Million Motorcycles in Japan

Motorcycles amounting to some 9 million units in Japan are absolutely indispensable to people's daily life as unique handy and economized means of transport for leisure, and for utility alike even at the time when 4-wheeler motorization is fast going on. Moreover, this number is expected to increase at a constantly steady rate toward the future, too.

In line with evergrowing popularity and soaring sales of motorcycles, the issue of traffic safety is inevitably becoming the focus of public attention. Thus, Yamaha's traffic safety school program is just designed to teach all motorcyclists including prospective ones how to use motorcycles properly, intending to convert potential danger, if any, into great personal benefit.



Japan is a motorcycle kingdom.

## Instructors Trained First

The program is divided into 4 parts, namely, safe driving school, driver license school, trail school and sports school, each of which is carried out by individual dealers throughout Japan in close cooperation with, and under far-reaching guidance or assistance by Yamaha or regional branches. Prior to the execution of program, Yamaha has trained approx. 2,000 instructors to take a very active role throughout the said program. In addition, all materials necessary for the execution of school sessions, or PR purpose, such as texts, manuals, application forms, wall maps, banners, posters, pamphlets, handbills, direct mails, and so on for distribution or lending purpose.



Instructors are taking a very important role in rider education program.

## Teaching and PR Material



Prospectus for School Sessions



Model Answers for Sham Test Questions



PR Poster



Sham Test Paper



Instructor's License



PR Handbill

# Safe Driving School

As aforementioned, motorcycle registrations in Japan have already reached a level of 9 million.

Yamaha's safe driving school is intended for helping such an enormous number of motorcycle licencees brush up their own knowledge of traffic rules, and train their riding techniques, thereby making motorcycle ride safer and more pleasurable.



[www.legends-yamaha-enduros.com](http://www.legends-yamaha-enduros.com)



# Driver License School

This is designed to provide prospective motorcycle licencees with correct traffic rules and driving techniques, helping them pass tests given by the traffic authorities concerned.

The school is divided into two categories, 50cc driver license and large bike license. Each session is promoted by individual Yamaha dealers around Japan, fully aided by Yamaha and its regional branches.



## Open to Motorcyclists in General

School sessions are wide open to licensed motorcyclists whether their machines are Yamaha-made or not. Yamaha is now directing particular PR efforts toward schools, plants, various organizations and government's agencies which form a considerably large portion of motorcycle market in Japan by means of posters, handbills, direct mails or verbal communication. Those licencees wishing to attend school sessions are to send application forms to Yamaha through the said organizations or Yamaha dealers in their own regions.

Upon the request of promoting dealer, Yamaha dispatches an approved instructor who is due to take an active role in promoting sessions consisting of lectures and practices on traffic rules and safe driving techniques.

## Special Sessions

Those licencees wishing to know their own driving skills, can attend special sessions. After they have finished a given course, they are tested for driving skills which are rated from 1st to 9th grade in accordance with the results.



# 50cc Driver License School for Old or Young



## Closer Communication Growing

50cc utility or business models of Yamaha are winning high popularity especially among so-called ride-to-work motorcyclists in Japan. Compact in size, but reliable in performance, people now find those models indispensable to their daily life, as handy transport to school or workplace, or as ideal companion for shopping and short distance touring.

It is Yamaha's target that all older than 16 years, male or female, should have an opportunity to learn correct knowledge of traffic rules, basic mechanism of motorcycle, and safe driving techniques under proper instruction and guidance of Yamaha-approved instructors. Those who have finished the full course can instantly have license tests given by local traffic authorities concerned. They pass those tests at a very favorable rate each time. Communication between prospective motorcycle users and Yamaha dealing people is now growing better through those school sessions.

## Large Bike License School for Action-Loving Motorcyclists

Action-loving young motorcyclists are usually in favor of larger displacement machines which ensure exciting power and steadfast performance. To be a licensed driver, anybody has to get through rather strict tests needing high-level techniques, and flawless knowledge of traffic rules and motorcycle mechanism. Much to regret, now, considerable portion of motorcycle traffic accidents results in illegal driving by unlicensed motorcyclists.

The primary objectives of this school are to provide prospective licencees with a chance to train their basic techniques and knowledge of traffic rules and motorcycle mechanism for accident-free driving, and to extinguish such illegal motorcycle driving as might be the case otherwise. Systematically trained or acquired techniques or knowledge must do good after they have obtained driving licenses. PR efforts are concentrating on high school students and young workers.



# Sports School

The action-loving young motorcyclists are always aggressive to fully enjoy motorcycling. Yamaha is also keen to let them enjoy motorcycling to the bottom of heart in a safe and pleasurable way.

Accordingly, Yamaha is now carrying out its nationwide program of sports school which has such varied courses as rally, touring, trial, road race, auto camping, trail run, motocross, gymkhana and motorcycle mechanism. Motorcyclists are grouped together by dealer, and sport instructors teach them how to properly and safely enjoy or organize sport events by taking the initiative in those events whenever promoted, or using manuals, texts, films or slides prepared for each particular category.

Dealers around Japan receive this program very favorably, as closer link with younger motorcyclists greatly benefits their business.

Some 400,000 motorcyclists have already attended this school for the last three years.

# Safe & Pleasurable Yamaha Sports School



## Trail School

Trail riding is an entirely new off-the-road motorcycling which has been pioneered by Yamaha. It is a free ride over terrains by making full use of motorcycle's exclusive advantages such as unobstructed visibility, excellent maneuverability, quick response, and unique mobility.

Intending to let trail beginners acquire correct techniques, Yamaha has already established 45 trail lands where they can freely ride their trail machines under proper instructions of Yamaha-approved expert instructors. Off-the-road conditions are varied, and trail enthusiasts have to negotiate each variation in a safe and efficient way. Yamaha's trail land incorporates every conceivable terrain condition that they meet in actual trail riding. The session begins with non-operational handling of trail bikes, and ends in mini motocross competitions which are run on a specially prepared circuit at a trail land. The session includes techniques for riding on hills, riding through curves, negotiating steep hills, riding across slanting grades, riding on gravelled, muddy or sandy surfaces, and so on.



### Dealers Take Active Part Here, Too

Those wishing to attend the session are grouped together by dealer. All materials and implements necessary for PR or execution of trail school are supplied by Yamaha through regional branches. Dealers are keen to organize spot shows of new models, and mobile store of parts and accessories together with the school sessions. Here again dealers are taking a very active part in successfully promoting the program.

## Yamaha Racing Highlights

### Yamaha & Saarinen Win Titles

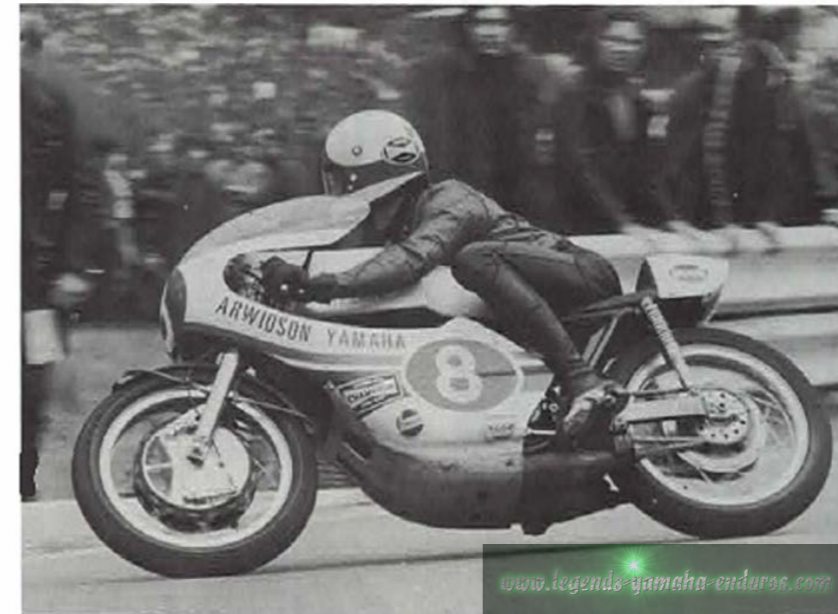
Riding a water-cooled twin Yamaha racer, Finnish ace J. Saarinen won the 250 cc class race of the East German GP, 9th round of this year's world championship series held on July 9. Thus, he brought Yamaha 6th win following Belgium GP's victory on July 2. It vitally counted for this year's 250 cc maker championship, though there remained 4 rounds to be contested. Yamaha captured the 250 cc title for three years running.

Saarinen again rode his Yamaha to victory in the Czech. GP on July 16, but his team-mate and archrival R. Gould hit back in the Swedish GP on July 23. The rider crown deciding race was fought between them at the Finnish GP on July 30. Saarinen convincingly won this race at his home ground, and became the 250 cc class champion for the first time in his racing career.



Best day in his life! Flying Finn J. Saarinen captures '72 rider crown at his home ground.

*...riding skills are flawless, and water-cooled Yamaha is amazingly fast and reliable.*



#### Race results

Belgian GP		
1st	J. Saarinen	Yamaha
2nd	R. Gould	Yamaha
3rd	P. Read	Yamaha
East German GP		
1st	J. Saarinen	Yamaha
2nd	R. Pasolini	Aermacchi
3rd	R. Gould	Yamaha
Czech. GP		
1st	J. Saarinen	Yamaha
2nd	R. Pasolini	Aermacchi
3rd	P. Read	Yamaha
Swedish GP		
1st	R. Gould	Yamaha
2nd	J. Saarinen	Yamaha
3rd	R. Pasolini	Aermacchi
Finnish GP		
1st	J. Saarinen	Yamaha
2nd	S. Grassetti	MZ
3rd	K. Andersson	Yamaha

### S. Hideaki Scores Again

7th round of '72 All Japan MX Championship Series took place near Aomori, northernmost Japan on July 2. The meeting attracted some 400 entries, and approx. 20,000 spectators in the finest weather. S. Hideaki riding a Yamaha specially prepared MX machine displayed his wonderful skills in the most important 250cc senior class event. The event was contested by all of top class Japanese riders riding works machines of various brands including a newly developed Honda's 2-cycle motocrosser. Hideaki closely followed by his younger brother Torao on another Yamaha consolidated his lead lap by lap. After all, Hideaki and Torao completed impressive Yamaha one-two.



## YAMAHA Topics

The Yamaha 50cc V5 has established a world-wide reputation for its outstanding economy and excellent maneuverability. On the other hand, this compact utility model proves itself to be an amazingly fast runner in competitions, if it is race-converted.

In a speed event recently organized in the Republic of Dominica, the race-converted 50cc V5 ridden by L. Franco finished first by big margins over others. Riding the 100cc LIM, he monopolized 100cc and 125cc wins, too.

## Miss Yamaha Trail

A glamor girl coupled with a big Yamaha trail is rather an attractive object to see. 21 Year's Vivian Botterill in Melbourne, Australia, owns and expertly rides a 360 RT1. She is slated to be an entrant in Miss Australia Beauty Quest under the sponsorship of Milledge Bros., distributors for Yamaha. The Quest is organized to raise money for aid of the Spastic Childrens Society.



## Amazingly Fast, Too



## Big Tour on Big Yamaha



The Yamaha 650 XSI has many a fan among young Australian motorcyclists. Here introduced are the members of a 650 XSI club called Elizabeth M.C. in Adelaide, Southern Australia. Each riding his favorite 650 Yamaha, they enjoy holiday tourings attempted over a long distance through the vast Australian continent. A big tour on a big bike gives the action-loving youth the ultimate in thrill and fun. Yamaha's troublefree performance adds extra pleasure to their attempts at any times.

## Service School in Portugal

Yamaha motorcycles are now fast expanding the market in Portugal, and market share has recently boosted to some 50%. The service school sessions were recently given for the first time in this country, attended by 25 dealers who were keen to have correct and extensive knowledge of maintenance and service for Yamaha motorcycles. The program was carried out very successfully by the technical staff of Yamaha in close cooperation with Moto Peças, distributors for Yamaha in this country.



## Brisbane Motor Show

This year's Brisbane Motor Show in Australia proved a big success for Yamaha. The booth was arranged by Annand & Thompson Pty. Ltd., distributors for Yamaha in such an attractive way.

Yamaha display was positively most impressive to spectators, and public interest created from the show will never fail to help Yamaha dealing people attain high sales in the future.



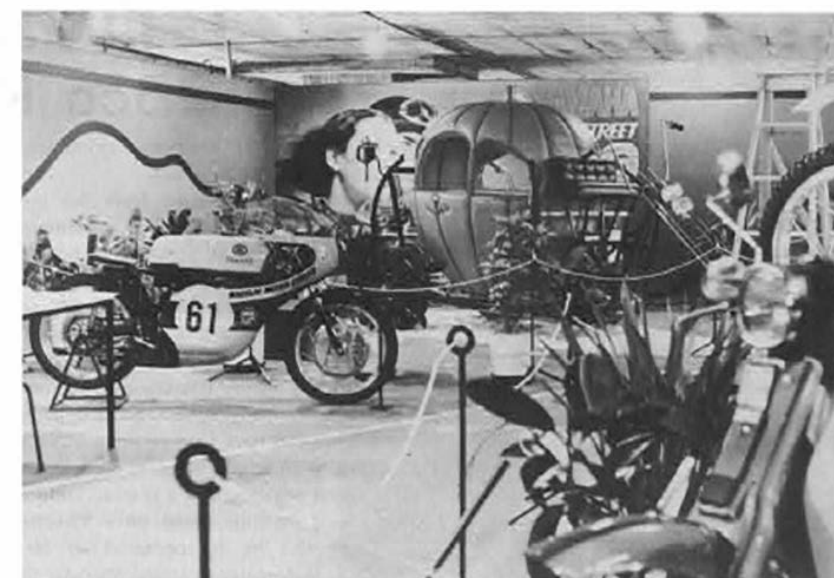
## Baseball Team

A baseball team formed by Venemotos in Caracas, Venezuela is one of the most successful teams in this region.

It is also playing a very active role in publicizing the brand image of Yamaha widely and efficiently. Yamaha motorcycles are steadily extending their market share thanks to sheer efforts by Yamaha dealing people.

## Sydney Motor Show

Another big show of Australia took place in Sydney, recently, in a large shopping center called Roslands. The Yamaha corner was established and arranged by McCulloch of Australia Pty. Ltd. A full line of Yamaha models provided an absolute highlight of the show, and attracted lots of favorable comments from visitors. Displayed at the show was a unique three wheeler called the Cinderella Pumpkin Coach which was powered by a Yamaha Trail RT2 engine.



# Be Familiar with Them, Now

## Cylinder

One of the most important engine components. In a word, it has a function to generate energy to drive a machine. Combustion of mixed gas takes place inside, and output generating therefrom is transmitted to a piston. Inside wall is precisely engineered against piston's continuous reciprocal action.

Cylinder must be cooled by air, or by water from outside, as inside wall is always exposed to extremely high combustion temperature.

## Cylinderhead

One of the major portions to form a combustion chamber together with a piston and cylinder barrel. It is bolted to a cylinder barrel through gasket. In most of cases, an ignition plug is mounted on it.

## Piston

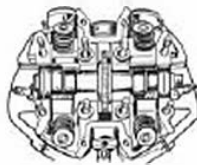
Housed and reciprocally moving inside a cylinder. It accepts energy generating from mixed gas combustion, and transmits it to a crank through a connecting rod. At the same time, it has a function to take in and compress fresh mixed gas, and then drive out burnt gas after combustion.

## Piston slit

Slim cutting on piston wall. Piston wall is not even overall in thickness, therefore, a slit prevents a wall from distortion by heat.



Cylinder



Cylinderhead



Piston slit

## Small end

One end of connecting rod which directly combines with a piston. Smaller than another end which combines with a crank.

## Big end

Another end of connecting rod which directly combines with a crank.

## Flywheel

Large cast-iron disc designed to rotate in unit with a crank. It has a function to reserve generated energy for a while, and keep a crank incessantly and smoothly rotate until next combustion takes place.

## Top dead center

One extreme position of piston in reciprocal motion. In this case, piston comes nearest a cylinderhead, and goes farthest from a crank.

## Bottom dead center

Another extreme position of piston in reciprocal motion. In this case, a piston comes nearest a crank.

## Compression ratio

The extent to which mixed gas is compressed in a cylinder. To take it more concretely, ratio between mixed gas volumes with a piston at its top and bottom dead centers, respectively,

# Fastest Privateer C.V. Dongen Makes 125cc Racing Yamaha

Apart from Yamaha's fabulous water-cooled twin 125cc works machines, Dutch veteran C.V. Dongen's race-converted 125cc AS1 aroused a big sensation at the Dutch TT. It proved to be the fastest privately entered machine by far. 11-times Dutch road race champion V. Dongen converted a

standard 125cc AS1 into such a sensational racing machine all by himself.

Equipped with carburetors from the old Yamaha 4-cylinder 124cc racer, maximum power is achieved at some 33.5 hp. It features very wide powerband (15,500 rpm), and power does not drop off so sharply.

A 6-speed gearbox and dry clutch have been specially made, but standard pistons together with many other standard parts and components have been retained.

V. Dongen, an expert rider as well as an experienced engineer, has a plan to build a 50cc racing machine based on a Yamaha FS1. For this he is sponsored by Mr. Moerkerk, Motorpaleis, Yamaha importer in

Holland.

He is in service with Motorpaleis as chief mechanic in the workshop. He had a very bad accident last year (complicated leg fracture), but is now recovering. He will definitely go on racing, riding those machines built and developed by himself.



[www.icgenus-yamaha-enduros.com](http://www.icgenus-yamaha-enduros.com)

