RUPP RMX 125

America's first MX bike?

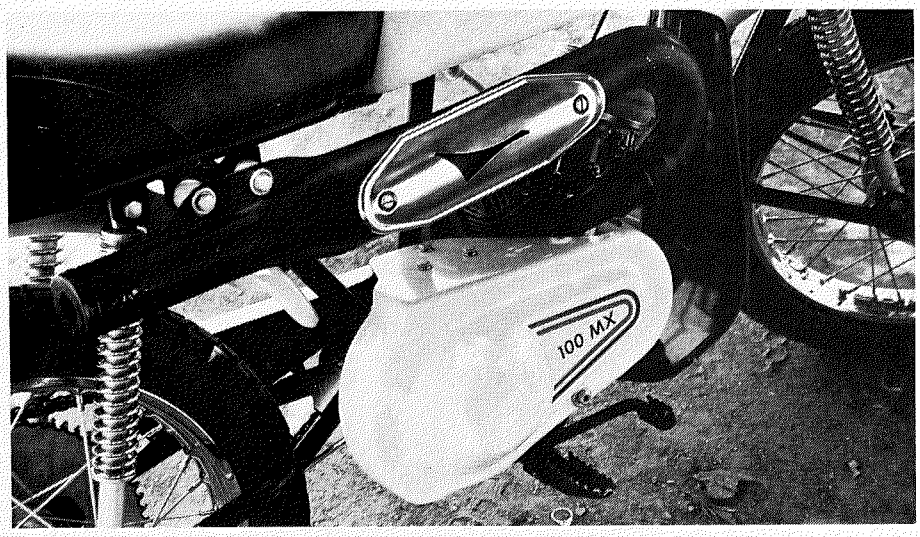
It seems as though we've had a rash of sophisticated racing bikes lately that are all hot news. We're not really complaining except that we are confused as to what to test next. Kinda like a kid in a candy store.

Rupp has taken years of experience, plus a lot of snooping, and have developed a fine racer designated the Rupp RMX 125. As you may have guessed, the displacement is 125 cc, which places the machine into that twilight zone between mini-cycle racing and the 250 class of International MX. But the size seems fine to us and is gaining recognition in all areas of racing. Along with other changes in the format, we've decided to test a racing bike in its natural habitat—a race track during a race. The thought of doing this on a regular basis is scary because we could embarrass ourselves. But, embarrassed or not we're going to do it.

The first such bike was the Steen MX. It did well but was riddled with problems causing it to dnf. The Rupp RMX is a different story altogether and reinforces our decision to compete with the racers. Rick Henricksen took the bike immediately after we had finished thrashing it and ran it virtually box stock. The only modification was a change to shorter and narrower handlebars to suit his riding style.

The bike was entered in the California Racing Club 125cc Jr. class at Indian Dunes. A total of 32 riders were entered in the three motos. In the first moto Rick jumped out in front of the pack and led until the finish. In the second moto he jumped gear and took off in last place. He went on to pass all but the top two riders for a brilliant finish in third place. During this moto he broke the rear brake actuating rod and re-welded it in the pits. This points out

BIRD



The Bird logo may look sharp but it doesn't do as good a job of dissipating heat as a screen would. The exhaust seems unduly noisy even for a racing bike.

introduction to the torque converter and the wonders that it does for an engine. Without these handy devices many of the little two-wheelers wouldn't have been able to pull their own shadows. A torque converter is a series of belts and pulleys that are always changing the power reduction ratio between the engine and the rear wheel. The newest models, like the one on the Bird, can sense the need for changes in torque as well as rpm. The advantages are many to a harried racer during a race. It all boils down to an "aim-it-and gun-it" approach to racing. All of the thinking about shift points is not necessary. The trans automatically seeks the right position for gearing down and up. Naturally there is a drawback to the scheme that the rider must get accustomed to. The power comes on instantly because the torque converter keeps the engine on the pipe all the time. The unwary rider might grab a handful of throttle, expecting it to be like any other machine with a gradual increase in speed. Not so. The rider just may loft himself over the nearest berm. The advantage of this instant and continuous power is that it gets off the line faster than a conventional bike. Wheelies are easy to do and you can keep the front wheel in the air as long as you like.

Another disadvantage is that the engine can't be used as much for braking as before. The torque converter won't allow it. It does slow the bike but not as well as a transmission. The TC rider soon learns to rely on his brakes more than usual.

Our first impression of the Bird is that it is loud and it vibrates a lot. Dave didn't seem to mind too much but we imagine that it could be fatiguing along about the middle of the third moto.

Doubletakes abound when you're riding something as unique as this. The questions come fast and furious. "Why

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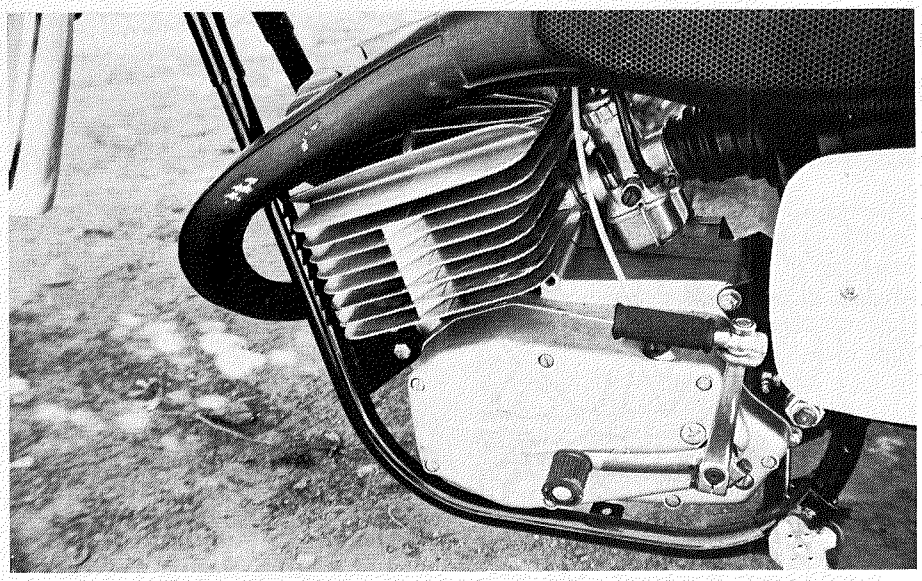


We liked the bike as a whole but hated the position of the kick starter lever. We kept getting hung up and left hand starting seems awkward.

the fact that the bike has the handling to pass other bikes in the heat of competition.

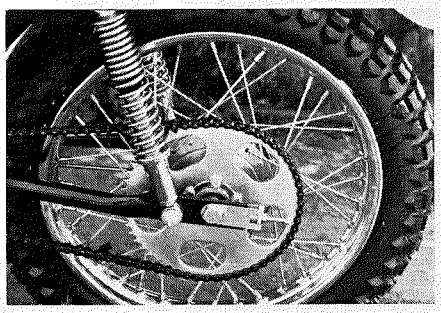
The course is called Shadow Glen which is tight and short, tending to favor good riders and handling bikes. On a longer course Rick feels that the Rupp may lack the power to do as well.

During the third moto, Rick was fourth off the line but soon caught the leaders to get out in front. Once in front of the pack he stayed there until the finish, for a first.

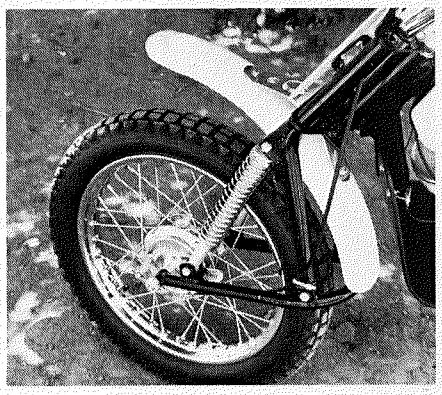
During the racing the only problems were the actuating lever, a bent brake arm and some loose spokes. This kind of performance in a stock bike is hard to imagine and speaks well of Rupp. It also points out that our evaluations are valid. In the future we will continue to test our bikes in this manner as long as we have the opportunity.

It would be unfair to evaluate a street/enduro bike in the same manner. Therefore each machine will be tested in its natural surroundings.

It has been our recent experience that a 125 in the hands of an expert can turn the tide against a strong 250. Why? Because the 125 is lighter, smaller and can be made to produce more power per cubic centimeter without self-destructing. It doesn't always ring true that given twice the displacement you'll have twice the power. Friction and heat are the power-robbing enemies as size goes up. Another advantage is that a rider can remain fresh longer, since he doesn't have to wrestle as much weight around. Even a few pounds can show on a rider after a half-hour moto. Try adding ten pounds of sand to your bike as ballast sometime.



Gearing is unreal with a 74 tooth rear sprocket. The rear shocks are adequate for some applications but a good set of Arnacos would vastly improve the handling.



The leading link front end is a good design but suffers for want of better shocks. Both fenders are unbreakable plastic.

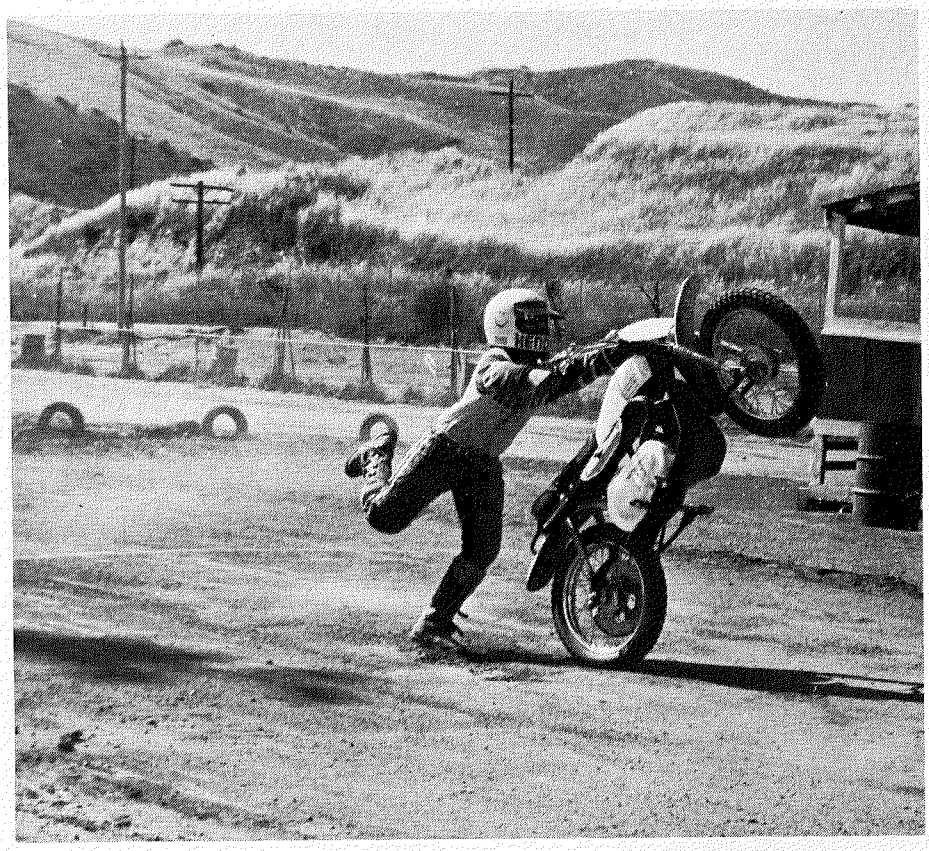
The Bird MX looks a bit unusual to the untrained eye because of the Mac engine and torque converter.

does the carb sit up front?" "Why doesn't the rider shift? Can't he tell that he's over-revving?" "What's that thing on the side?" "Isn't it geared kinda low with that big sprocket?" Of course the very things that make this bike appear to be so unusual are what make it so neat and desirable. The engine

Front forks are Ceriani type and rims are Akront type. The choice of tires are German made Metzelers. Both fenders are unbreakable plastic.

Our test bike is a great handler. Possibly the end result of private efforts made by employees of Rupp in their spare time. A few of the employees are racing on weekends and have discovered the trick things to do that only a racer would know. A good example of this Maverick testing program is a baffle to keep water out of the intake tract during crossings. Another problem was discovered with the spokes: the wheels weren't being adjusted properly and spokes were breaking. This could be distressing to someone in a race, since tightening was only good for a half-hour of solid running. The solution was to have the wheels trued by an outside expert. In this case, Sun Wheels. Our hats off to Rupp for taking this step to improve the product.

The only complaint regarding handling is that the rear wheel hops coming off a jump, the reason being that the brake is not full-floating. A modification could be made easily enough by extending the rod, holding the brake in place, forward to mount on the frame instead of the swing arm. A radical departure was made by the choice of Metzeler knobbies, front and rear. We are not



A deft hand on the throttle can result in fast starts and easily controlled wheelies. Too much throttle and the situation can get out of hand.

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is a McCulloch 100cc two-stroke single. This is the same type of engine that set the world land speed records in Bonneville. The pumper carburetor is an off-shoot from the early days of go-karting. The carb is unique because it can precisely meter the amount of fuel needed at any given time. The position makes little difference because it also has a pump like an auto. If too much fuel is fed to the carb it is routed back to the tank via a second tube. A wet-foam filter and plastic shield keep the works from getting gummed up. Kendick Engineering has done much to promote this carb in the cycle field and it is a coincidence that he also sponsors Dave Bush.

Starting is relatively easy for a rope pull type. This is partly due to a compression release. We forgot to see if it was closed during the first half of our testing. Little difference was noticed until we closed it and regained the lost compression. Power feeds from the engine through the torque converter and onto a giant 74 tooth sprocket. The size is obviously right but it looks

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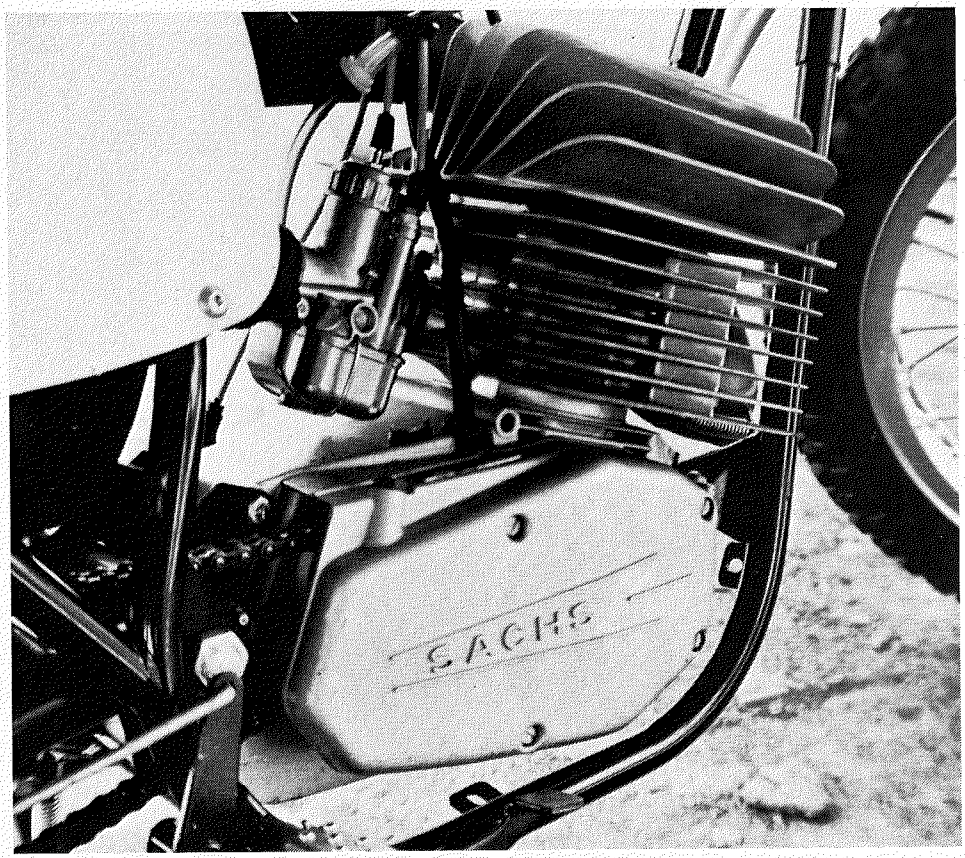
totally familiar with the tires but they do have a good reputation on European bikes. The characteristics seem to be close to that of Dunlops. It's possible to get the bike into a controlled slide and keep it there.

Rick Henricksen did most of the testing (he's big) on this bike. His favorite trick is to come high on a berm and slide by the opposition, on the outside.

In the past, Rick has complained of other machines' tendency to high side due to too much traction not so here.

The rear shocks appear to be Girlings, with three-way adjustment similar to the units used on Huskies (a good choice, considering the success of the Husky in competition). Chain adjustment is done via a bolt, similar to the type used on the new Rupp enduros. We hope they aren't made of the same material, because we broke one. Something beefier would be more in keeping to the bike's intended use and abuse. The rear hub is a very clean, strong and light magnesium casting. Stainless steel spokes are used to tie everything onto the rims. The rims look like Akronts, but we couldn't find



The powerplant is the ever popular and strong Sachs 125. The large sunburst head really helps cooling.

BIRD

breaking. The heat shield helps for the most part. A concession to styling was made by incorporating a Bird in metal stamping. We wish that a simple mesh screen had been used instead for more effective heat dissipation. The very design of the engine allows for a relatively simple pipe with few bends over its length. Fewer bends mean less back pressure and more horsepower. However, we hope for an aftermarket pipe or a remake by the factory.

In all the Bird is a bundle of engineering advances and possibly ahead of its time. We can't fault the basic premise because they've done so well in competition for such a radical departure in design. It almost reminds us of the turbine cars in auto racing. Granted, the machine is pure racer but we still can fault it in the area of rider comfort. There are a lot of pure-bred racers that are also friendly to the body and soul. We hope that Bird will make some simple improvements in their otherwise good machine. Meanwhile, the racer who wants a machine that is both fast and unusual can invest in a Bird MX and some inexpensive accessories. □

BIRD 100 MX

Manufacturer: Bird Engineering, Box J, Fremont, Nebraska 68025

ENGINE

Engine Type	Sg. two-stroke	Carb	Pumper
Bore	55mm	Ignition	Magneto
Stroke	41.5	Lubrication	Pre-mix
Displacement	99.3cc	Fuel capacity	1 gal.
Horsepower @ rpm	10 @ 8,500	Fuel requirement	20:1 reg. gas/oil
Compression ratio	9.0:1		

TRANSMISSION

Transmission Type	Torque converter	Final drive	No. 420 chain
Primary drive	Belt	Gear ratios	Constantly variable
Clutch type	None		

CHASSIS

Frame type	Sg. backbone, sg. down tube	Tires	
Wheelbase	45 inches	Front	3.00 x 16
Overall length	67½ inches	Rear	3.00 x 16
Suspension		Brake(s)	Int. expanding
Front	Leading link	Ground clearance	8 inches
Rear	Swinging arm	Seat height	28 inches
Wheels	Frt. and rear 16"	Handlebar height	37 inches
		Dry weight	135 lbs.

PRICE AS TESTED **$499.00**

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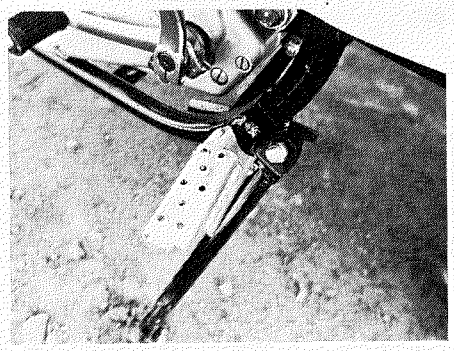

Detail items are all good and well thought out. The foot pegs are mud resisting steel.

any name on them. We were surprised to find that even though the rims are drilled for rim locks, our test machine didn't have them. During the test (not the race) the valve stem twisted out of the tube. We had hoped this was an oversight but the manufacturer claims they don't intend to use rim locks. Maybe that will change after our discussion. If it doesn't, then consider buying a pair of WM-3 rimlocks and a strap to protect the tube from the spokes. *Continued on page 57*

RUPP RMX-125

Manufacturer: Rupp Industries, Inc., 1776 Airport Road, Mansfield, Ohio 44903

ENGINE

Engine type	Sgl. cyl. two-stroke	Carb	30mm Bing
Bore	54mm	Ignition	C.D.I.
Stroke	54mm	Lubrication	Pre-mix
Displacement	123cc	Fuel capacity	1.6 gals.
Horsepower @ rpm	21.8 @ 8,800	Fuel requirement	40:1 Blendzall, ~~prem. gas~~
Compression ratio	10:1		

TRANSMISSION

Transmission type	6 speed, constant mesh	Gear ratios	
		1st	4.60:1
Primary drive	Helical gears	2nd	2.93:1
Clutch type	Wet, multi-disc	3rd	2.17:1
Final drive	No. 428 chain	4th	1.72:1
		5th	1.43:1
		6th	1.24:1

CHASSIS

Frame type	Sg. backbone, double loop	Tires	
		Front	3.00 x 21
Wheelbase	54.5 inches	Rear	4.00 x 18
Overall length	81.7 inches	Brake(s)	5.07 inch drum
Suspension		Ground clearance	9.5 inches
Front	Tele. hydraulic fork	Seat height	32 inches
Rear	Swing arm, shock	Handlebar height	42 inches
Wheels	Frt. 1.6 x 21", rear 1.9 x 18"	Dry weight	198 lbs.

PRICE AS TESTED **$995.00**

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Continued from page 38

The rear wheel also does not feature a cush hub, as it was felt none was necessary. Personally we've found that the Sachs 125 transmission will take a beating without one. A kit is available for $45 that will strengthen the Sachs Trannie. The Sachs 125 has been a popular engine for special racing bikes practically from the time of its inception. The model used here is the 125/6B with a square bore and stroke of 54mm and a compression ratio of 10:1. Horsepower is rated at 21.8 at 8,800 rpm by the manufacturer and torque of 12.0 ft. lbs. at 7,000 rpm. The torque rating seems to be low and may correspond to our test riders seat-of-the-pants feeling. The ignition system is capacitive discharge with a Bosch W260 TL spark plug. The engine feels smooth and tractable but does not have the typical racer's feeling of power. On the other hand it starts easier than almost any racing bike we've had in the past. The kick start lever is in a bothersome position, causing our foot to jam on each down stroke. The throttle is not a quarter turn type and requires grabbing a handful at the outset in order to get full throttle response.

The expansion chamber has an effective and attractive heat shield to protect the rider's leg. However, the position makes for some discomfort and chaffing. It is mounted on rubber bushes to keep the mounts from cracking in competition.

Much of the bike's handling can be attributed to the lightweight (198 lbs.) and design of the frame. Chrome moly tubing is used throughout. The welds are neat and small, typical of an expert, certified welder. The foot pegs are positioned well for rider comfort and control. We are happy to see that most manufacturers are now using steel fold-up pegs that resist mud clogging instead of the rubber type common before.

At the completion of our testing we were very pleased with the machine. It is not your average mini-cycle because of its size, but it handles well enough for the good, young rider on his way up. Young Jerry Shore took a liking to the machine even though he is barely able to reach the ground. We suspect that Rupp has a total success on their hands. The RMX 125 represents most of the things you would probably do to prepare your own racing machine. Who's to say we would have done any differently had we designed it? □