

The *“Nuts and Bolts”* of Motorcycle Enduro Racing



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Forward:

In recent years the number of entries to a Motorcycle Enduro event has rapidly declined. An event that once attracted 150 racers now is only attracting 80 racers.

The sole purpose of this book is to educate and attract racers to Motorcycle Enduro Racing. Once the timekeeping mystery is lost, enduro racing is extremely mentally and physical challenging which can lead to personal pride. (Sorry folks, this is another sport that we do it for love, not money). Included in this book is excerpts from the original 1985 OCMC book called "How to Race Enduros".

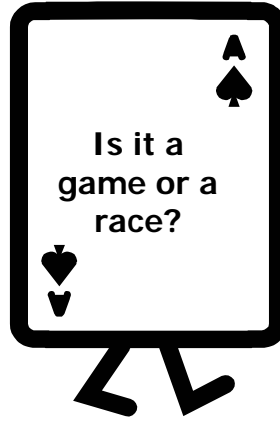
Objectives:

- Understand what enduro racing is all about
- Be aware of equipment needed for enduro racing
- How to time keep
- Be conscious of CMA enduro rules



What is an Enduro?

Motorcycle enduro racing is fun, exciting and it is the type of racing that requires constant cranial exercises. A Timekeeping Enduro is a trail event usually covering between 60 and 200 kilometres (the famous "Corduroy" is 300km over 2 days). The object of the hidden checkpoints along the course. You lose points for arriving at the checkpoints late OR early. The person who loses the fewest points (in each rider like the game of golf). One to four Riders start the race mass start. The organizing club will mark the course well with arrows and provide you with a printout of the speed averages you need to maintain in order to arrive at the checks on time. Usually fast enough to keep you riding at your fast trail pace most of the time. On some parts of the course you will find it easy to keep on time but on other parts only experts can make the pace.



competition is to arrive at course at the correct time. the checkpoint late OR early. fewest points (in each rider like the game of golf). One to each minute, there is not a club will mark the course well with a printout of the speed maintain in order to arrive at the speed averages will be riding at your fast trail pace parts of the course you will

This is what makes an Enduro both a speed event and a thinking event. The thinking part comes in when you try to anticipate where the checks are and have to decide the best pace to maintain to stay on time without "burning" the check (come in early). During the event, the only race you should be concerned with is you versus the clock.

Bike Requirements:

Your bike should be in good mechanical condition and capable of covering moderately difficult terrain at your maximum comfortable speed for at least 50 kilometres without refuelling (some events you may need more range). Various events require a spark arrester, (e.g. "Beagle Bash") and current off road or street plate licensing. In most CMA events the motorcycle must be insured, and "street legal" consisting of "DOT" tires, lights, horn, and mirrors.



Sound Test:

Please do the world of off-road motorcycling industry a favor and have a quiet bike (not greater than 94DbA). Once you find the sound test area and have them check your exhaust and mark that you passed on your score card.



Final Preparations:

Tape your score card to your to your fender.

Rider Requirements:

Similar to your bike, your body should be in good mechanical condition and capable of covering moderately difficult terrain at your maximum comfortable speed for at least 50 kilometres without refuelling. Make certain that you hydrate your body before, during and after a race. A hydration device such as the "Camel back" is an excellent way to hydrate during the race. At the scheduled gas stop (10 minute minimum) make certain that you eat, items such as an energy bar, bananas or a peanut butter and jam sandwich are a good choice. You'll need a minimum "Snell 2000" helmet, supportive boots, eye protection and gloves. In the majority of enduro events you will be required to have a valid motorcycle and CMA license.



REMEMBER KEEP YOUR EYES AND TOES UP!

What Class should I enter?

If this you're a relatively new rider and a "green" to the world of enduros, it would be suggested that the Novice B class be selected. In your infant stages of enduro racing it important to hone your timekeeping skills in order to competitive and, oh yeah, have fun doing so. Enduro classes are as follows:

1. Masters
2. Experts
3. Intermediates
4. Veteran Expert (+39yrs)
5. Veteran(+39yrs)
6. Super Veteran (+49yrs)
7. Novice A
- 8. Novice B**
9. Women's (All classes are determined only by the riders' age and/or ability).

The "Fanny Pack"

There is nothing worse than having a great ride interrupted by a mechanical failure. Most enduros racers pack the essentials to get them out of un-pleasurable situation.



Some Suggested items:

- Lightweight wrenches (10, 12, 13, and 17, 22 and 25 mm)
- Screwdriver
- Pliers
- Pocket-knife
- Medium size vice grip pliers (may be to double as a shift lever)
- Tape
- Safety wire
- Zip ties
- Spark plug and wrench
- Two chain master links
- Assorted nuts and bolts
- Bungee cord
- Tow rope
- Fuel hose (long enough to act as a siphoning device)
- Throttle cable
- Spare levers
- Spare shifter
- Tube patches
- Front tube
- Tire irons
- CO₂ cartridge or small air pump
- 2 stroke oil

Tips on riding an Enduro without timekeeping equipment:

- Latch on to a rider on your minute
- Rely on the landmarks
- Ride fast in the woods
- Ride slow on the roads

Timekeeping Equipment:

Route Chart or Route Sheet:

Near the sign-up table they will be a route chart. The route chart will be your guide to the event speed averages and possible check points. In most CMA enduro events the route chart is created on a letter size paper, therefore it will have to be cut in strips in order to fit in the route chart holder (2 1/8").

Tips on route chart assembly

- Tape all ends on both sides
- Be aware of all splits the course may be offering
- Run a strip of tape the entire length of the route chart
- Highlight Danger and stop zones;
- Highlight gas stops and suspected check areas

Route Chart Holder:

This is a plastic box with a clear face and two spools on which to roll your route chart. The Route Chart Holder attaches to your handlebars with a hose clamp. The Route Chart Holder is available at local motorcycle and accessory dealers for about \$20 to \$50.



Route Chart Legend:

BL=Bear Left

BR=Bear Right

DR=Drive

FG=Fire Guard

L=Left

R=Right

STR=Straight

TR=Trail

X=Crossing

Rd=Road

PVD=Paved

GR=Gravel

FR=Fire Road

Digital Clock:

With Timekeeping Enduros, you are going to need a timepiece. You will be reading minutes off your clock periodically as you ride so you need something easy to read with big digital numerals. The big number digital watches that have a "reverse" function work the best. Use two of the inexpensive ones, one for "key time" and one for "ride time". A fine way to mount the clocks to the bike is to glue them securely to an old crossbar pad cover. You should set them up so that you can get to the control buttons to set the clocks on race day morning. When you use the clocks in an event, tape the crossbar pad so it can't rotate. Trail test your clock setup on a good hard ride before you rely on it for an event.



Odometer:

An odometer will be needed preferable one that you can set (forwards or backwards) to an even tenth of a kilometre. The stock odometers which come on XRs, KDXs, WRs, and many KTMs are ideal. Make sure your odometer is zeroed prior to leaving. When ever you see a kilometre reading posted on the course **set your odometer** to agree with it. The next "possible" location is based off of the last posted kilometre reading, no matter how far off it may have been. Kilometres readings will be posted at each check and speed average change.



Computers

Some people think you have to buy a computer to race Enduros. This is not the case. A roll chart, a clock, an odometer, and eyes not too blurry from crashes and mud suffice. Many Enduro riders buy computers as backup and enhancements so they can concentrate a little more on the course.

If you have decided that Enduro racing is the greatest thing, you can invest in the "all in one" computer. These computers do all the computing and mileage time comparison for you and you can still continue using the roll chart, odometer, and clock system as a backup.

These small computers mount on the handlebars and they have a single display for the rider to reference during the event. The rider enters all the course information, kilometres advances, speed average changes, free times, gas stops, etc. into the computer before starting the event. A single button push on the computer during the event can switch the display from a simple "go slower, go faster, on time" display to a speedometer, an odometer, distance to the next possible checkpoint, and other features. The features of a computer depend on the manufacturer of the computer and there are several. Some brands include PACEMAKER and ICO Racing.



Enduro "Lingo"

Key Time:

This is very important! Near the sign-up table will be a clock labelled "Key Time". Your rider number is the number of minutes after the event starts that you will start. You need to set both of your clocks so that they will read earlier than Key Time by your start minute. In other words, if you are on minute 18 (rider number 18), and the Key Time clock says 7:45, you set your clocks to 7:27 (to the second). This will make it so that your clock will read 9:00:00 when your minute starts (assuming 9 AM start time). Now you will be in sync with your route chart and the course clocks.

Checkpoints:

Checkpoints will be marked by colored flag boards and will be manned by one to four people. Flip cards with times on them should be visible. You want to pass the flags while your minute is shown on the flip cards. A member of the check crew will mark on your score card your arrival time from the flip cards. The timing of the flip cards is staggered from key time such that if you are exactly on time, the flip cards will show your start time at each check. If you "zero" every check (perfect score) your time card should have your start time marked for each check.



Checkpoints con't

- If you are **late** to a Check Point, you lose one point for every minute you are late, - late is bad.
- If you are **early** to a Check Point, you lose two points for the first minute early and FIVE points for every additional minute early - early is VERY bad.
- If you are more than 60 minutes and 59 seconds late to any checkpoint, you have "**houred out**" and are DISQUALIFIED (DQ) or DNF *did not finish).
- If you are **more than 15 minutes early** to any checkpoint, you are DISQUALIFIED. And no, seeing how early you can get is not cool - everyone will think you're an idiot. Finishing without a DQ and getting a trophy even though you don't have an odometer is Way Cool.
- If you are caught **cutting the course**, you may be DISQUALIFIED.
- The check crew will score your **arrival time** as soon as you cross the line between the flags. If you are early you should ride as slowly as you can to let the clock catch up but don't stop forward motion or sit down or the crew will count you as across the line.

PLEASE THANK ALL THE CHECK WORKERS!!

Scrubbed Check:

Is a check that will not be included in your score due to an dispute (e.g. an error with the kilometre reading at that particular check)

Resets:

Resets are put into the course for two reasons:

1. Allow you to get "caught up"
2. A last minute change in the course

Example of a reset on the route chart

23.3km reset to 24.5km L DR 10:40:50am

If your on time, you have a 2 minute break.

If your 2 minutes down, your now back on time.

If your 3 minutes down, get on the pipe to make up a 1 minute

At a reset is you will move your odometer reading ahead only, **do not adjust your watch!** If you came in on time, you can rest and grab something to eat and drink.

What is Brand X on and off mean?

- Brand X "On" rules (CMA) will penalize you for going too fast and too slow. Upon arriving at a check you adjust your row number accordingly.
- Brand X "Off" rules will penalize you for too slow only. Through out the race you ride on the same minute. If you arrive at a check too early, you know have a break. After a check there is usually a rest too allow you to ride on your minute again.

What is a timed section or special test?

A timed section or special test is where you as a rider are time from one point in the course to another (to the second). It was met to break ties in the event two riders accumulate the same amount of points.



What is a free section?

E.g. At the gas and your on time (km=time); rest for 20

minutes and then ride on! (Oh

yeah, don't forget to gas!) Do not adjust your clock.

46.2km @ 11:17:00. Leave at 11:37:00 (20 minute break)

What is a free zone?

No checks!

The "Arrows" Explained



Continue riding the straight ahead position



Slow Down! Danger ahead! (E.g. road crossing, falling log, ditch, etc.)



Turn right. If the organizer feels that corner may be missed there may be multiple arrows.



Turn left. If the organizer feel that corner may be missed there may be multiple arrow



Bear right. Usually a sweeping corner.



Bear left. Usually a sweeping corner.




Wrong direction.

Note: An upside W or M placed on a motorcycle represents the course marshal.



Danger. Stop sign, road or trial crossing.

Timekeeping and Scoring exercises

	OCMC Grand National Enduro Championship	
	Rider Name: <i>Fast Eddy</i>	Key Time: <i>12:00</i>
	Riding/Start Minute: <i>10A</i>	

Instructions: Set your key time watch to key time. Now subtract your riding/start minute from your key time. In this case key time is 12:00, therefore your ride time watch should be set at 11:50.

You leave the start when your key time watch reads 12:10 and your riding/start watch reads 12:00 or when the starting board reads minute 10. If you're having a really good ride, you should enter every check on minute 10. This will result in a score of zero, which is good. While riding it is noticed that your riding/start watch is ahead of the kilometre reading on the route chart, **SPEED UP!** If while riding it is noticed that your riding/start watch is behind the kilometre reading on the route chart, **SLOW DOWN!**

Example 1: Route Chart reads: Distance: 36.0 km @ 1:00:00pm. Your riding/start watch reads 12:58:00 and your odometer reads 36km. You are 2 minutes ahead of schedule, slow down or stop and let your watch catch up to the odometer..

Example 2: Route Chart reads: Distance: 36.0 km @ 1:00:00pm. Your riding/start watch reads 1:02:00 and your odometer reads 36km. You are 2 minutes behind schedule, speed up and try to synchronize your watch and odometer once again.

Complete the exercises to reinforce your learning.

Check Number	Minute arrived:	Ride time adjustment:	Score
1.	10	None	0
2.	12	+ 2 minutes	2
3.	10	-2	7
4.	15		
5.	17		
6.	16		
7.	21		
8.	20		
		Total:	

Timekeeping and Scoring exercises

	OCMC Grand National Enduro Championship		
	Rider:		
Check Number	Key time: 9:00:00	Ride time: 17B	
Therefore at a Key time 9:00:00 my ride time watch should read: Complete the exercises to reinforce your learning.			
Check Number	Minute arrived	Ride time adjustment	Score:
1.	16		
2.	17		
3.	15		
4.	20		
5.	19		
6.	23		
7.	44		
8.	47		
9.	52		
		Total	

Exerts from the 1990 OCMC Booklet called, "How to ride Enduros"

How the Game Is Played

Now that you're all prepared to tackle this enduro, just how do you play the game and what are the important rules?

The following order of events may help a beginner enduro rider through his first day of enduro competition and he will thereafter be a fountain of advice for all his friends who have not yet tried the sport.

Plan to arrive at the starting 9:00 am therefore many travel arrive the night take a motel room.

Upon arriving at the start to locate the "SIGN IN"

Here you must be prepared



your Ontario driver's licence, proof of insurance and the ownership to the motorcycle you are going to ride. After signing the C.M.A. waiver (WHICH YOU SHOULD READ AT LEAST ONCE), the pretty sign-in girls will provide you with a route sheet, a rider score card with your starting number written on top, and information on the gas up areas on the enduro route. This gas information is primarily of interest to your wife or girlfriend or whoever else you cajoled into coming with you this weekend. If you do not have a gas crew with you it may be possible to have someone from the larger clubs, who, for a nominal fee will haul your gas can, a drink and a sandwich to the necessary stops.

Next check the rider distance between gas stops. Does this distance create a problem, if so, make alternative plans now? Before you leave the sign-in area, two things must be done. First set your backup watch (more on this later) exactly with the key time clock provided by the organizers. Second, ask if there are any corrections to be made to the route sheet.

You can now attack your route sheet with scissors and tape joining it into a long strip which is then wound into a route sheet holder. If upon completing this part of the operation you find you have started at the wrong end and have to do it again, cheer up, everyone who rides enduros has at least once, done the same thing. Of course there are still riders who let their wife or mother do the route sheet for them.

Next set your riding clock to your riding time, (see timekeeping section) and do this step yourself, don't ask the guy in the next van because his comprehension of timekeeping may be worse than yours. Now set the odometer on your bike back to zero.

Okay so far? Deliver your gas cans (WHICH HAVE YOUR NAME ON THEM) to the proper gas crew trucks. If necessary put scorecard and numbers on bike and helmet.

site early. Most enduros start at riders who have long distances to before to camp, sleep in Vans or

area the first order of business is area or organizers headquarters. to produce your C.M.A. licence,

Now comes one of the big decisions of the day. Should you get dressed or go to the porta-potty first. Because there is always a line up better go to the porta-potty 'now'.

As you are getting dressed don't forget your driver's licence, insurance slip and ownership for the bike. Pack them in a dry (plastic bag) place along with five dollars or so. You won't be able to spend it in the bush but if you were stranded near a town or service station etc. it would sure be nice to buy a cold pop and phone back to the start area to let the organizers know you need help.

Make certain that your fuel tank is full. No sense starting on an empty tank.

Now hopefully you have planned your time well enough that before your starting number comes up you will have time for one more trip to the porta-potty. And you had better take your own paper this time.

Alright it is finally starting time. You are on the line and your number is flipped. There are 3 things to check before you move:

1. Is your riding watch reading the starting time?
2. Is your odometer set to zero?
3. Is your gas tap turned on?



Now when you leave, just leave. Don't cover the riders behind with gravel and stones.

One final thing, pay special attention to the direction of the first turn out of the start area. A mistake here is very embarrassing as about 20 riders will be watching.

Since the enduro intends to test your endurance and riding ability over rough terrain, the route will naturally cover as much back country as the organizers can conveniently put together into a coherent route. So there could be everything from multilane highways to through country roads, graded dirt roads, logging roads, paths, and even no paths, just vague ways amongst the trees and over the boulders.

There could be a stream to cross, a swampy spot or two, as many tricky hills as can be found, etc. In short, you can expect to find quite a variety of country! You will be expected to ride this entire route and try to stay on a predetermined speed schedule, typically one at 36 kph. In order to be sure that you are maintaining the schedule, the organizers will have checkpoints along the route, at locations not known to you. If you are keeping on schedule, you will arrive at the checkpoint when due; if you are too fast, you'll get there early; and if you are too slow, you will be late. The time of your arrival at each checkpoint will ultimately determine your score. Your score is figured on a penalty system, for each minute that you are late you are penalized 1 point. Under the C.M.A. scoring system, which we will use in this discussion, you will also be penalized for early arrival, and more heavily too. First minute early will cost you 2 points. Thereafter, 5 points per minute, e.g. 2 minutes early = 7 points.

Now, part of the enduro planning involves location of these checkpoints. You not only must surmount the terrain offered up, but, must watch your time, carefully, because of crafty checkpoint locations. Favoured spots, of course, are immediately after any long difficult stretch where the organizers hope to catch you late, obviously. But, another favourite spot is along some easy stretch



of road where a rider may be tempted to get a bit ahead of schedule in case there is some tough going ahead. Here the early arrival penalty comes into play, and it can hurt.

The only restrictions on check location are that they must be at a mileage which works out to an even minute, that they can be no closer than 2 km to one another, and no closer than 2 km after an official gas stop. Checks are usually rather well obscured, just around a turn, or over the far side of a rise, so you cannot spot them from far off and kill time going in should you be early.

As you ride along, you find your way by following the arrows posted at all turns and other points of indecision while at the same time watch the odometer to see that it is agreeing with the distance written on your route sheet. Also note the arrival times are printed on the route sheet for each turn. Make it a point to leave each corner on time. If you arrived at a corner 20 or 30 seconds early, use up the time before you pull away.

You may notice by this time that your early morning butterflies have completely vanished.

You follow the arrows, and surmount the terrain as it comes up. Suddenly, there's a set of flip cards and some people as you round a corner. A sign proclaims this to be checkpoint #1 at 1 OAKM. The rules state that you must proceed directly into the check without swerving or stopping to kill time. You can go as slow as you are able if you think you might be early. As you roll up, a checker will reach for your score card (FRONT FENDER IS A GOOD PLACE) and write the number that appeared on the flip cards when you arrived. It is always good to check that this was done correctly because it is too late to argue after the run is over. This procedure will be repeated at every check on the route.

Some check point manners are in order. Be nice to these people. They are wives, girlfriends, uncles and cousins. They are not being paid but are simply doing this job as a favour so please make them feel appreciated.

At last you have made it to the last check point and you are a finisher. It always feels good to be a finisher. Though you will be stiff and sore tomorrow for now the most important thing is to get back to the start area for some soap, water, and a change of clothes. There will be time for a beer and some serious trail stories while the results are being tabulated.

Soon results are posted on a wall. If you have trophied; congratulations. If you have not, please stick around and offer praise and applause for those who have. Another item to consider is what to wear to award presentation. Does this sound strange? Well if you are being sponsored or helped in any way by a dealer, distributor or manufacturer you have an obligation to promote them by wearing their T-shirt, jacket, hat or whatever. This is one of the best ways of promoting your sponsor.

This is how the game is played. A word of caution is in order. "THIS SPORT CAN BE ADDICTIVE".

Timekeeping

You must carry 2 separate time pieces which read minutes and seconds. The first watch is your "backup watch" and should be synchronized "exactly" to the organizers Key Time clock and this will be known as key time. This time piece does not have to be prominently displayed; it could be carried in your pocket.



The second time piece will be known as your "riding clock" and will be reset when necessary to show your "riding time".

Your riding time is always based on the number you are riding at the time, regardless of what your starting number was.

Your riding time is calculated by subtracting your riding number from your key time or backup watch.

E.g. Your key time watch reads - 11:06 am

- Your riding number is - #6B Your riding clock should read - 11:00 am
- If back up or key time is - 11:16 am
- Your rider number is - #20C Your riding time shall be - 10:56 am
- Key time - 11:16 am
- Riding Number - #10B
- Riding Time - 11:06 am

Upon arriving at the start of an enduro go to sign-in and complete the necessary formalities then set your backup watch exactly with the organizers Key Time clock. At any time you may then set your "riding clock" to show your "riding time".



From your starting time on, keep in mind, which time adjustments are made only on your riding clock when necessary at a route check. The backup watch is never adjusted; it is only a time reference which will be explained later.

Assuming your starting number is 20A you arrive at check #1 and since you have been unable to stay on time you discover that #22 is shown on the flip cards. This means that you are 2 minutes late. Set your riding clock back exactly 2 minutes. Adjusting your time correctly allows your riding clock to always correspond with the times indicated on your route sheet for the next section.

Remember that an enduro is scored from check to check. You can never regain those lost precious points.

Becoming confused about setting your time piece ahead or back is quite normal especially the more exhausted you become. Instead of worrying about it before it happens simply write down on a label "LATE = TURN BACK, EARLY = TURN AHEAD" and place the label on the gas tank.

You will soon discover that your "backup watch" is an excellent form of reference to find out if your adjusted "riding clock" is always on your proper time or not. Let's pretend that you have passed 8 checks, adjusted your clock 8 different times, and now you are so tired that you can't remember if you had always adjusted the clock the proper way or adjusted the correct number of minutes.

Well don't worry about it. You can always check your riding time watch for accuracy by using the following method, which is the same method you used this morning to set your riding clock.

Subtract the last number written on your scorecard (which is your present riding number) from your backup watch and this is the time that should be displayed on your riding clock.

Compare your actual odometer reading to the route sheet distance at a known reference point and then by comparing the route sheet time to your adjusted riding time you will soon discover if you are running early or late.

E.g. Key time (backup watch) = 1:40 pm Last number on scorecard - #37 Riding time = 1:03 pm

Roads Aren't For Racing

A considerable portion of most enduros is made up of public roads, often dirt, but sometimes tar also. And it is a common thing for most riders who are running late to use the road to make up time. There's nothing wrong with this if some sense is used. You can easily travel on open highways at 100 kph or on good dirt roads at 70 or 80 kph, and thus make up a lot of time on the 36 kph averages.

But, some people seem to think the road is a race track, and they go far too fast. Trying to go 100 on a winding dirt road is asking for trouble, using both sides of the road, just as if there were no possibility of a car rounding the bend from the other direction, is inviting disaster.

Roads aren't for racing. A requirement that is automatically incumbent upon all enduro entrants is to observe the rules of the road. Thus, speeding is breaking not only the law, but the rules of the event too. And it is futile.

Speeding can lead to trouble even if you do not collide with another road user.

You can overdo a turn all by yourself and spend precious minutes straightening out your bent bike. You can get picked up in a radar trap if you happen to be going too fast on a piece of open highway that might be a part of the run. That ruins a good score too. You can more easily miss a corner arrow and get lost. And you CAN'T really save much time.

Here's an example of just how little time you can save by speeding. Suppose you are 8 minutes late when you come out of a tough section onto a 6 km stretch of good road. If you travel at the 36 kph average, it will take you 10 minutes to cover the 6 km. But it is a good open road so you get up around 80 kph or so, and find your average works out at the far end to about 72 kph, doubling the schedule. You've covered the 6 km in five minutes, regaining five of the eight minutes you lost in the rough.



Now, suppose you decide to chance a higher speed, and you go 100 kph for the distance, you then cover it in four minutes, and thus cut a whole extra minute off your lateness. Just one minute, that's all. Suppose you get really all hung out and go 120 kph. You're really taking some big chances now, as well as breaking the law. You the get to the other end of the 6 km section in about 3.5 minutes, saving yourself a lousy half a minute for all the danger you assume. It isn't worth it. Like I said, roads aren't for racing. It just doesn't payoff to speed.

What is nice on the roads, is riding at a comfortably fast pace, using right up to the speed limits on the open highways, and swinging the bends on those back dirt roads at a pace that allows you to stay on your own side, cope with a tighter than anticipated turn, and yet- still enjoy the freedom of rolling on without that awful panic as unexpected danger rises before you and you can't stop in time.

You will probably hear a lot of talk after an enduro about 'going 100 on that great dirt mad'. This is the same sort of talk you hear about the trails too, 'going 80 along that steep rocky path'. This is all a lot of hot air, there are those amongst us who feed their egos by bragging on super speeds. Baloney! That 100 on the road were 70, and that 50 on the trail were 20. A funny thing about the guys who talk of how fast they go is that they never seem to win any of the trophies!

Tactics for Tackling Rough Terrain

Coming to grips with the tougher terrain during an enduro is quite a different situation than facing the rough stuff on an informal trail ride. You are under the pressure of the time schedule, and are forced to make quick decisions, decisions that hopefully will not lead you into real trouble, like drowning your engine in deep water, or sinking your bike in a peat bog. It is this pressure that creates the most hardship on the novice rider, for in the interests of not wasting a single second; you sometimes make a bad move which costs you many minutes.

So, the cardinal rule you should keep in mind when you arrive at a really difficult stretch in an enduro, is don't be hasty. Analyze the hazard ahead, and if need be, stop a moment to look it over; you can do a lot more studying in a minute than you can lifting or pushing, and it doesn't hurt to let 'MICKEY GO FIRST'. Keep in mind that the organizers cannot run you all through a totally impassable place, so you have the comfort of knowing there is probably a usable way around or through anything they throw at you. With this in mind, try to quiet the anticipatory worries about what lies ahead, and face it when you get there.



The major difficulties you will face will be water crossings, bogs or swamps, jumbled rocky stretches, steep hills, up and down, or longish stretches of rutted muddy trail. In addition to these major type hazards, there will be the sheer wearing action on you of continuous twisting trails with the usual assortment of logs, gullies, rocks, etc., to keep you busy.

Another hazard will be the traffic ahead of you. At major obstacles, there often are as many as 30 or 40 riders strewn around on the trail, or in the bog, or on the hill, each trying to get through. Here you make a serious mistake if you just burst right into the traffic jam, getting untangled from other riders can be time-consuming.



So, a general rule of thumb to handle the traffic jam is to stop and have a look before moving in.

Don't necessarily take the same path as everyone else is stuck on. See if you can find an alternative. It may be less time-consuming to lift your bike over the stone wall to one side, than to get into the jam at the opening where a big mud hole has stopped those ahead of you. Should a steep hill be bottled up with riders who ran out of momentum, don't just charge up to them and stop in turn, maybe a minute or two wait until they move aside a bit and create a small opening will be the better choice.

Swamps are dreaded, for getting stuck in one can totally exhaust you. Upon arrival at a bog, check it out for a moment. Look for the best used trail through it. If nobody is stuck there, it means the guys ahead got through okay, and you probably can too. Once you move in, keep going, get up some momentum, keep your engine revs moderate, leg it as much as you need to keep underway. **DON'T STOP** if you possibly can help it, bounce over the log, or the hummock, but **KEEP MOVING**, even if you must jump off and run alongside.

Should the swamp have a number of stuck riders, take more time before plunging in. Look for unmarked sections that may be passable for the first few bikes. See if there is a way around along the edges. If not, don't get into a rut that leads to a stopped rider. Get into the tall grass, or low brush, try to get up on the hummocks, or on the matted grass, and stay away from the other guys if you want to keep going.

Should you get stuck, shut off your engine. Lift out one end of the bike at a time from the rut or low spot onto the nearest adjacent firmer ground, even if it too is soft mud. Get the bike out of the trench, it will dig before you are stuck firm. Then start it up, put it in low, and walk or run alongside, with just enough throttle to get the wheel working without digging in again. If you are REALLY STUCK BAD, consider toppling your bike sideways over and over to the far edge. Most lightweight bikes can be rolled over on their sides and flopped again. If this is too much, gather some brush or boards or whatever you can find nearby to put under the wheels before you lift it out, try to get your bike onto something that will support it and accept some moderate traction from the rear wheel. The worst thing you can do is sit on the bike and spin the rear wheel with 10,000 rpm. You'll just get in deeper.

Boney rocky sections can be a handful if they are wet, and run up or downhill.

Here again, the best move is to keep moving, get up some momentum, and just bang and bounce along, trying to pick the path with the smallest rocks. Leave the bike in low if it is very boulder-strewn, and steer along dodging the wheel stoppers. Avoid the narrow clefts between big boulders that will hang you up. Sometimes the edges of the rocky gully offer less difficulty, they haven't eroded so badly. Wet rocks with mud spread on them require careful throttle control.

Going uphill on rocks requires a lot of momentum, and throttle control, to run at the grade, and still ease up and then accelerate over the major boulders. Once you stop, you are usually in trouble, off balance, fumbling, stalled, and stuck amongst un-climbable rocks. Then you walk alongside pushing with moderate throttle in low gear.

Downhill over rocks is best handled by leaving the bike in low gear and engine running.

Concentrate on picking a good line and let gravity carry you along, don't leg it until you start to lose balance, hang on tight to the bars and concentrate on your chosen path until you get to the end.

Rutted muddy trails aren't usually stoppers, but they are tiring, especially if you give in to the impulse to start legging it along. Once you begin putting the feet down, the bike's stability gets poorer and pretty soon you're running that section, not riding it.



You get very tired. It's hard to stay in a rut unless you get going, it's better to ride it at 25 kph than at 10 kph, you have more directional stability. If the crown of the trail is wide enough, try riding on it, rather than in the rut, but a narrow crown will have you slipping off, always, it seems, with the back wheel in one rut, the front in another.

There are other things you'll have to watch out for. Those cross ditches on the trail. The smaller ones, you take by getting a big handful of throttle just as you reach them, lifting your front wheel so it hits the top of the far side, and your back wheel bangs hard into the ditch but doesn't endo you. The bigger cross gullies you slow right up for, and as soon as you drop into one, gas it so you climb out clean on the far side.

Log or plank bridges, especially when wet, are treacherous - ride them as upright as possible, leaning into a turn as you cross wet planking will put you down in an instant.

Low branches are a pain, but what's far worse is to duck under one just as your front wheel hits a log or rock. Broken nose can be the result. If you have to duck some branches, get a look ahead, and then tilt your helmet, let it hit the branch and knock it aside, then immediately look up again to cope with what's next. Very low underpasses beneath big blow downs may require you to get off the bike, and crawl beneath alongside the bike, if the bars clear but you won't. Even lower blow downs are usually removed by the organizers.

Jumping logs is best done by slowing up on the approach, down shifting and then gassing it as you lift the front wheel over. With enough momentum, the back will follow along with a jarring bump, but you'll be over. Always try to cross at right angles; watch for those tricky little diagonal logs on the path - their rotten old bark will be like grease and will direct your front wheel off to the side, toppling you over quickly. Really big logs are easier to detour if the woods are open enough nearby.



What about those feared deep water crossings? They usually are not too deep, but may have shallow and deep spots. Usually the water moves fast, and the bottom is made up of boulders and pebbles. Look for the shallowest clear path, but if it is too strewn with sizeable rocks, take a deeper but perhaps smoother path. Don't hesitate to get your feet out as stabilizers here, for a wet boulder will suddenly divert your front wheel, and if you fall over you get very wet, so does your bike, and it may not want to restart. Keep moving, and legging it until you hit the far side; pick the least vertical part of the banking and gun it up out of the water. As you continue on, check your brakes as water renders many cycle brakes useless. No brakes? Then keep a moderate pressure on your brake pedal for the next mile or so, until you feel the drag as the heat dries out the lining. Failure to do this can mean an unhappy surprise at the next panic stop.

A dry day may mean a lot of dust ahead from previous riders. Don't get too far into thick dust - you've got to be able to see what's coming up to avoid sudden crashing. A wet day renders just about all sorts of terrain slick, including those back roads that are oiled. Use more caution and try to test the traction when you have opportunity, gas it a bit quickly, or jab at the brakes, get the feel of the wet ground. If it's raining, you will be busy just trying to see; again remember a sudden blinding droplet in an eye just as an obstacle appears can create trouble. In summary, the most important skill you will need in coping with difficult terrain is in choosing the right path, and avoiding the traffic. The enduro puts a lot of other bikes on that trail, and dealing with them in difficult terrain is the greatest problem. Don't rush in too hastily - analyze the situation, and when you make your move, KEEP MOVING!

Courtesy on the Trail

Because there will be many of you riding along the trails in the enduro, in varying degrees of ability, traffic can become a problem. There is, therefore, some need for courtesy. Since you are not 'racing' with the guys just ahead or behind you, there is no need for a competitive attitude.

In brief, if you find you want to pass the rider ahead, get up as close as you can and holler at him, 'trail' or 'make way', or similar easily understood words. Then give him a chance to find a wide spot to get out of your way - don't just crowd into the same rut and elbow your way by.

Similarly, should you be the one about to be passed, don't block the guy, and don't panic. When you get the word from behind, look for some room to move over, and when you reach it, wave the man by. If you are going as fast as you wish to, why try racing him just because he wants to go faster? You'll just get into trouble.



At really bad trouble spots, there is no requirement or expectation that you help out the unfortunates already stuck. If you see a way by, go ahead, the stuck individuals are not your responsibility. But if this is a really bad scene, it may pay you to help the man or two ahead, and in turn be helped across yourself. If you are the beneficiary of another rider's assistance, don't just take off when you get out, leaving him still to contend with the obstacle. Take an extra minute to return the favour. But don't get involved with all the rest coming along too; help out your share and then get moving.

Out on the roads, don't bomb by the passing cars and get local people all torn up. Pass them if they are holding you up, but in a conventional manner. Also, if the trail does pass through a barnyard or someone's front yard, due to the courtesy of the landowner, be moderate in your passing through, don't try to show off.

If you're just wheeling along and you see the local people out watching, wave; it is a small thing but really seems to help the onlookers relate to you, and recall the enduro motorcyclists were 'good guys' in later local conversations. You can be courteous and still competitive in an enduro, so be a good guy on the trail.

2005 Canadian Motorcycle Association (CMA) Enduro Rules

Enduro

An Enduro is a contest over any course (consisting of trails and roads) where top speed is not the determining factor and a time schedule is to be followed.

Q-30 Classes

(a) Veteran, Veteran Expert, Super Veteran, Women, Masters, Expert, Intermediate, Novice A, Novice B

(b) Novice B is a progressive class for beginners. No Regional or National Champions. Reclassification of B riders will be done either annually or throughout the year according to each Region's advancement system.

(c) Veteran Expert class is comprised of current Masters or Expert ranked riders and Veteran class riders moved at season end.

Q-31 Licensing

(a) Riders must present a current CMA competition license when signing in.

(b) Age Restrictions:

Veteran - minimum 39 on the birthday of the rider
Super Veteran - minimum 49 on the birthday of the rider

All others - minimum age according to Provincial Driver's license requirements

Q-32 Equipment

All machines entered in Enduros which utilize any portion of public roads as part of the course must be equipped with all items required by the applicable Provincial Highway Traffic Act, or comparable legislation.

Q-33

(a) Competitors must wear leather boots of a minimum height of 11' from the top of the sole and overlapping the pants, and an approved racing helmet.

(b) Approved helmets must be certified by the manufacturer as meeting at least one of the following standards, and must have the original certification label(s) affixed (clearly visible/not painted over).

Accepted standards are:

- Europe:
 - ECE 22-04 and ECE 22-05 (P or J)
- Great Britain
 - BS 6658 Grade A (Road Racing) and Grade B (all other disciplines)
 - Japan
 - Jrs T 8133 : 2003
- North America
 - Snell M2000

Q-34

All machines shall be subject to a sound check as measured by the noise test procedures of the CMA. 94 DBA maximum.

Q-35 Entries

(a) Riders' starting times will be determined by a draw, conducted by the organizers. The date, time and location of the draw for pre-entries shall be announced on the entry form.

(b) The draw pool will be divided into 3 groups with start numbers distributed among them as follows: - one pool for pre-entries (1A, 1B, 2A, 2B, 3A, 3B, etc.)

- One pool for post entries (1C, 1D, 2C, 2D, 3C, 3D, etc.)
- A separate pool for Masters beginning at 14 to the end of the number allocations, assigned at 2 minute intervals (14A, 16A, 18A, 20A).

(c) After the advertised draw is conducted riders who pre-enter will be assigned a random number from the pre-entry pool.

(d) When multiple pre-entries are received in one envelope, they will be assigned consecutive start numbers (e.g. 4 entries - number drawn is 6A; the riders are assigned 6A, 6B, 7A, 7B).

(e) Numbers not issued from the pre-entry pool will be added to the post-entry pool. Riders may draw their own post-entry number at registration.

(f) No substitutions or exchanges of start positions are permitted.

(g) Riders who pre-enter and enclose a stamped, addressed envelope will be advised of their start number before the date of the event.

Q-36 Team Entries

Team entries must be composed of one Novice "A" or "B", one Intermediate, Veteran or Super Veteran; and one Expert or Masters. Substitution of lower class riders for higher is permitted.

Organization Layout

Q-37

Organizers must obtain permission from owners when any private property is used.

Q-38

When run over a secret course, the parties who layout the event are prohibited from competing.

Q-39

(a) Schedule of KPH must conform to legal limits.

(b) Average speeds must be in kilometres per hour only, and must be in multiples of 6 kph (i.e. 18, 24, 30, 36, and 42). The average speed(s) for each section of the course must be noted on the route sheet and must be expressed in kph only.

(c) Average speed changes must take place only at whole minute distances.

Q-40

When the route sheet is originally laid out in miles and then converted to kph, the following conversion must be used:

1 mile equals 1.61 km 1 km equals .621 mile.

Q-41

(a) Checks must be at whole minute distances.

(b) Distance to checks must be taken from the last point on the route sheet. If this distance is in error, the check must be scrubbed as per Rule Q-54.

(c) Each gas stop shall have a 10 minute layover or stop included in key time for that gas stop. Extra time at optional or emergency gas stops is at the discretion of the organizer.

Q-42 Operation of Checks

Check points must be identified with flags or other readily visible markers. The official timer at each check will stand in line with the markers so the exact time a rider enters the check can be determined per rule Q51 (d).

Q-43

(a) The organizers shall have an official timepiece at the start and finish of the day's run, and if possible it shall be set to a specified radio time signal.

(b) Each check shall have at least one accurate timepiece capable of discrimination to the second and of displaying minutes and seconds simultaneously.

(c) Checkers' watches shall be synchronized with the official timepiece at the start and shall be checked again at the finish to ensure reliability. If a checker's watch has varied by more than 3 seconds, that check shall be scrubbed as per Rule Q-54.

Q-44

When flip cards are used, the card "up" must be visible to the rider only after he/she has entered the check.

Q-45

(a) Checking stations shall be opened 15 minutes before the first rider is due, and shall remain open at least 60 minutes after the last rider is due at that check.

(b) Upon the close of every checking station, the official in charge shall immediately sign and send checking sheets to the place designated by the referee or organizers.

Q-46 Scoring

A complete route card or sheet shall be prepared by the organizers and one copy shall be given to each rider. These route cards or sheets must be made available to the riders with the distances listed in kilometres and with key times noted at each turn or point on the route sheet. The route sheets shall show accumulative distance at each point or turn for the entire course. This distance shall be the official distance for the run. Route sheet columns must be maximum 2-1/8" wide (standard adding machine tape).

Q-47

Each rider must be given a score card to carry. This shall be the official score.

Q-48

When the riders start at one minute intervals, the first rider must start at one minute past key time.

Q-49

(a) Each rider shall start with no points; to this score, all penalties shall be added.

(b) One penalty point shall be assessed for each minute late; two penalty points for the first minute early; and five penalty points for each additional minute early. For calculating purposes, checking officials shall record as whole minutes, any times up to one second after, to 59 seconds after, the minute (note; cards are flipped on the whole minute). A rider arriving exactly on a whole minute shall have his/her time recorded as such and his/her score calculated using the whole number either side of the time giving him the least penalty.

Q-50

(a) All riders must be scored on a check to check basis.

(b) Time lost or gained between any two consecutive checks does not affect the time required to cover any other section.

(c) Where possible to correct the scores at a checkpoint, such as when the first number is turned at the incorrect minute and every number thereafter is out of time by the same time period, all scores must be corrected, including zeros. However, scores on the next check shall be based on the number shown or the corrected number, thus giving the rider the benefit of the choice.

Q-51

(a) Riders must come into all checks from the proper direction. Riders coming into any checks from the wrong direction must check in and will be penalized 50 points over and above their arrival time penalty.

(b) Riders are not allowed to stop within the sight of a check but must continue on into the check in a reasonably straight line and must be on their machine. A rider may not sit on his/her machine and "walk" it into the check the motorcycle must be ridden. Failing to do so, the time will be taken at the point of infraction. The checker will be the sole judge as to whether a rider has violated the rule.

(c) A rider's time shall be recorded as that time when the check is entered or as in (b) above.

(d) A rider shall be considered to have entered the check when the flags or other readily visible marker which identify the check, have been passed by the front axle of the motorcycle.

(e) The check crews' responsibility is to record the arrival time or number on the competitor's cards.

It is not their responsibility to determine or advise the rider he is "houred out".

Q-52

It is the riders' responsibility to ensure the checker has recorded his/her time.

Q-53

If the last check point is voided, all riders who reach the immediately preceding check within the time limitation, and subject to other existing rules re: missed check, etc. shall be considered to have completed the event.

Q-54

In computing results, the scores from any check which is judged to be invalid due to timing error which cannot be corrected, improper location or other valid reasons, shall be disregarded.

Q-55

(a) Where a check is scrubbed, for any reason whatsoever, late minutes at that check or checks shall be included when calculating whether a rider involved has exceeded his/her time allowance.

(b) When a check is scrubbed, there shall be no penalty for the scrubbed check.

(c) Penalties for the following check will be calculated from the check preceding the invalid one, or from the invalid check (using times recorded on score card), whichever is in rider's favour.

Q-56

(a) If a rider checks in more than 15 minutes before his/her original due time, he/she shall be given credit for the distance to the preceding check.

(b) If a rider checks in later than the time allowance after his/her original due time, he/she shall be scored to the preceding check. No further checks after that will be included in his/her score.

Q-57

(a) In the case of a tie with no points lost, the result will be a tie. In the case of a tie with points lost, the most checks with no points lost will determine the winner. If still a tie, the rider with the most 1s, 2s, etc. will be the winner. The final tie breaking method will be best score the longest.

(b) Other methods of breaking ties (e.g. special tests or checks timed to the second) may be used in lieu of (a). Prior permission must be obtained from CMA Head Office and the information must be included on the entry form. Special test sections must have an exact start time and finish time per rider. If a special test check point timed to the second is used, then the rider must have his exact entry time recorded to the second at the preceding check point. This will show a rider's exact time through that section. Riders must be told what check will be timed at the riders meeting on the day of the event.

Q-58

Team finishing positions are calculated firstly on the number of finishers, secondly on the finishers' total score. A rider may not be entered on more than one team at anyone event.

Q-59

Copies of results must be mailed to all entrants within 14 days following the event. Organizers may require the rider to supply a stamped, addressed envelope in order to receive the results.

Q-60 Conduct

Rider must comply with the rules of the road and accord due respect to the rights of others.

Q-61

The use of electronic communication devices by competitors is forbidden. Penalty; disqualification.

Q-62

The event must be completed on the machine on which the rider started.

Q-63

Any CMA member who destroys route markers shall be subject to suspension or a fine not exceeding \$50.00, by the Region Sport Panel, and disqualified from the day's results.

Q-64

The course must be covered by the power of the motorcycle or the muscular energy of the entrant or other riders. Towing is forbidden; penalty disqualification.

Q-65

Riders may receive mechanical assistance where necessary, unless permission for restriction has been obtained from CMA and riders advised.

Q-66

The referee or starter may refuse to allow any rider to start whose machine, in his/her opinion, is not in a safe or legal operating condition.

Q-67

The course is to be marked clearly and properly by the organizers. However, the responsibility of keeping on the course rests with the rider.

Q-68

Organizers must sweep the course no later than the expiration of the time allowance period for the last rider due.

Closed Course Events

Any event where a repetitive lap is used and that lap is less than 40 km in length, the following regulations are in addition to the foregoing.

Q-69

Organizers must take every precaution in layout and marshalling to see that riders do not cut, or leave the course.

Q-70

(a) The course shall be marked with reference points no more than 10 km apart, with notation of same on the route sheet to provide riders with an accurate method of odometer reset.

(b) The route sheets or cards must show distances and accompanying key times with time notation not more than 5 minutes apart.

Q-71

(a) Starts shall be dead engine starts due to the fact that there may be many riders on a given number.

(b) A maximum of 10 riders per rider minute.

(c) The last rider must start at least 16 minutes before key time for the start of the second lap.

Q-72

No two way contestant traffic is permitted.

Q-73 Finishers

Finishing order is determined according to the greatest distance traveled with the least points lost, except where a rider does not reach the first check, in which case he/she is not classified.