



Motorcycle Handbook

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This Manual was originally written and distributed by Mr. Richard Ryer in 1993. His efforts have done much to enhance the sport of cycling and the use of motorcycles to further the sport. The manual has been updated, with his permission, to include developments in international and domestic cycling.

GENDER NEUTRAL DISCLAIMER

The authors would like to acknowledge the contribution women motorcycle drivers make to the sport of bicycle racing. Their job performance is equal to that of their male counterparts. In no way is the use of “he,” “his,” and “him” meant to trivialize the role of women. For simplification, male terms (e.g. “he” and “him”) appear throughout the handbook and the reader is welcome to substitute “she” for “he,” “hers” for “his,” and “her” for “him” when gender can be implied.

GENERAL HANDBOOK ORGANIZATION

This handbook is organized the way the authors thought new people would become involved in support of bicycle racing with motorcycles. Generally, the initial exposure is as a motorcycle marshal, so we cover motorcycle marshalling first. This is followed by coverage of the motorcycle referee duties, responsibilities and skills. We understand that many riders may progress from being a motorcycle marshal into a non-official specialty. We cover those special support positions in the in the third major section (Neutral Support, Medical, and Media motors). We finish with several general reference topics (Drivers Meeting and Radio Communications). A list of useful web sites, and a glossary of bicycling terms is included at the end.

INTRODUCTION

THE PAST

In the late 1800's, bicycles and bicycle racing were the craze. On both the European and North American continents, bicycles were the fastest form of personal transportation and one of the biggest draws in spectator sports. In fact, until the 1920's, bicycle racing in velodromes was the number one spectator sport in America.

It's hard to believe today, but at the turn of the century American cyclists were the best in the world. They shut out the foreign competition whenever there was an international meet. European promoters spent big money to bring the Americans to the old country and increase the interest in bicycle racing on the continent.

Shortly after the turn of the century, reciprocating gasoline engines were fitted to bicycle frames and the forerunner to the modern motorcycle was born. These motor powered bicycles were quickly adapted to the sport and began appearing in riders' training routines, on the road courses, and on the track.

Riders quickly took advantage of the benefits to be gained from motor pacing. Their training became more effective and the quality of competition rose even higher. Motorbikes were brought to the velodrome and novel events were created to combine the bicycle and motorbike in competition. Riders used motorbikes on the road to set new and faster speed records.

The 1930's saw a rapid decline in popularity for bicycle racing in the United States. On the other side of the ocean, the sport continued to grow and flourish. The sport saw the bicycles leave the velodromes and short tracks and take to the roads across the countryside.

Classic races were created that pitted man against man. Riders rode hundreds of miles on terrible roads with no support, and spent hours upon hours in every conceivable type of weather. These men were the Spartans of the sport. They gave it the flavor and character that remains today in the Spring Classics. They gave it the color and excitement we witness all summer in the major tours.

Today the major tours attract millions of spectators. Television coverage broadcasts the action live, to hundreds of countries around the world. And, happily, through it all, the motorcycle has continued to be a part of the sport.

In the early days, the motorcycles provided reliable transportation as races traversed the rough and unforgiving roads of Europe. As cars bogged down in the mud, the motorcycles kept moving, carrying the mechanics, photographers, and officials who followed the action.

Looking back through the documentation that has been amassed over the decades, who can forget the vivid images captured as riders struggled over high mountain passes on roads no better than ox cart paths? Riders splattered with mud as they fought their way across the cobbles, trying to reach the finish in Roubaix? Riders with their tires wrapped around their bodies, dirty faces grimacing with effort as they fight the elements and the competition?

And all the while, the motorcycle has been there. Look in the background of these classic photographs and you will see the motorcycles, their drivers and passengers, enduring the same conditions as the riders. It was a glorious era filled with legends and heroes.

THE PRESENT

Bicycle racing is still the major sport on the European continent. As we have professional baseball and football teams here in the US, with all the heroes, the same system exists in Europe with cycling teams and cyclists. Today we have CSC, Telekom, and US Postal, just to name a few. The names of Armstrong, Ulrich, Hamilton, Hinault, LeMond, Merckx, Anquetil, and Bobet are familiar to even the casual enthusiast.

Bicycle racing is returning to the US, but is still in its infancy. We have only a few major races that compare to their European counterparts. And our professional ranks are thin. Only a few American riders are recognized by the throngs of European spectators.

As racing is beginning to grow in America, so is the use of the motorcycle. The motorcycle is an integral part of European racing. You see BMW, Moto Guzzi, Duccati, and Kawasaki motorcycles working the crowds, the caravan, and the peloton. There is no lack of qualified, experienced drivers with years of experience at the highest levels of competition.

The same cannot be said of the US. We have a small core of motorcyclists who dedicate a significant amount of their time and energy to the sport of bicycle racing. Additional motorcycle drivers must be developed across the country. There are a few drivers with extensive experience, but for the most part, US motorcycle drivers have very little experience in European style bicycle racing. There are currently no motorcycle manufacturers involved with bicycle racing in the US. The US is basically starting over. It will be a long process since US motorcycle drivers currently have only a few races a year to work.

INSTRUCTIONAL COURSES

Motorcycle safety courses are offered through private individuals and continuing education programs. High performance driving schools teach motorcyclists how to become excellent motorcycle handlers. However, it is not a guarantee that a person taking and passing these classes will be a good motorcycle driver in a bicycle race; seeing these courses and experiences listed on a resume, or included with credentials, can be misleading.

Schools can teach a motorcycle driver how to start and stop and pick the best line through a corner, but these aren't the only skills needed to drive a motorcycle in a bicycle race. The most important trait a motorcycle driver can have is to be predictable. The driver must learn to drive a "straight line" whether the road is straight or curving. A "straight line" means the motorcycle should always be the same distance from the shoulder of the road, regardless of the terrain. Anyone passing a motorcycle must be confident they will not be unexpectedly run off the road by a erratic driver.

LEARNING AND PRACTICAL EXPERIENCE

It is obvious that trained and experienced motorcycle drivers are needed to help the sport of bicycle racing grow in the US. There is a core group of experienced drivers, but more are needed. For every Category A stage race in the US, there are hundreds of smaller, local stage races that also need the support of proficient motorcycle drivers. This handbook has been created to assist anyone who has an interest in becoming involved with bicycle racing as a motorcycle driver.

A motorcycle driver who has the desire can work in a bicycle race every weekend throughout the spring, summer, and fall. The majority of these opportunities will be at the local and regional level. It takes a tremendous amount of dedication to do this, but it is the only way most drivers can gain the experience needed to become a top level motorcycle driver for professional cycling events. There is no better classroom to learn in than the Category D and E races promoted every weekend in Smallville, USA.

This handbook will provide the student with some basic guidance as to what is involved with becoming a successful motorcycle driver. This handbook is not intended to be the definitive word on motorcycles and bicycle racing. The sport of bicycle racing relies on the motorcycle driver to be a free thinking individual. To see the complete picture, the motorcycle driver must go out and get hand-on experience with bicycle racing and, very importantly, talk to other motorcycle drivers who have more experience in the sport. In this way the driver can attain a well-rounded education.

The motorcycle has proven to be a valuable tool when used in the execution of a bicycle race. For the official's application, the motorcycle's small size and maneuverability make

the perfect platform from which to observe a bicycle race. A great deal of information can be gathered and dispensed when an official is next to the peloton on a motorcycle.

For the journalist, the motorcycle allows access to cyclists that cannot be gained from the side of the road or from an enclosed vehicle. Dramatic photos and video enhance the presentation of the event to the public.

For support applications, the motorcycle allows mechanics to stay close to the action and provide immediate support when needed. It allows the neutral support organization to deploy their resources in a more effective and efficient manner.

For medical personnel, assistance can be provided very easily from a motorcycle. There are many injuries and ailments during the event that need medical attention. The less severe cases can be adequately handled by the motorcycle medical personnel.

For safety, the motorcycle marshal provides advanced warning to the public that a bicycle race is approaching. The motorcycle marshal can also provide warnings of hazards that exist before the bicycle race encounters them. The motorcycle marshal is instrumental in assuring the safety of the event.

This handbook will discuss the five applications introduced above. You will be exposed to the details that make up the job of each type of motorcycle driver. After reading the material you should have a better understanding of how motorcycles can be used to promote the sport of bicycle racing. You will learn that competition can be fair and safe and that journalistic coverage can be improved to give the public greater insight as to what is occurring during an event.

TRAITS OF THE MOTORCYCLE DRIVER

The motorcycle driver involved with bicycle racing is a trained, skilled rider. He:

- is an experienced motorcycle driver who has developed specific and superior driving skills
- must be fully confident in his skills on the motorcycle
- understands the structure of a bicycle race and knows his exact role within that structure
- knows how bicycle racers think and anticipates what will happen in race situations
- knows how the public thinks and anticipates problems that arise when a race and the public meet
- understands he is one part of a larger organization
- understands exactly what his role is within the organization.

The successful execution of the bicycle race is why the motorcycle driver is there. Combining superior driving skills and a complete understanding of the sport, the proficient motorcycle driver is an asset to the successful production of a bicycle race.

The experienced motorcycle driver understands that the bicycle racers are the show. Watching the athletes strain and battle against one another in competition is the reason the spectators are there. The skilled motorcycle driver does his job while blending into the background, without being a distraction.

A motorcycle enthusiast or bicycle enthusiast usually does not measure up as a proficient bike race motorcycle driver. The enthusiast lacks the knowledge that comes from years of experience working within the structure of a bicycle race. This lack of knowledge and experience does not necessarily mean the enthusiast is not dedicated to the success of the event, but he can be a liability when given a role in the bicycle race. The enthusiast does not know how to do the job.

The inexperienced driver is a risk and should never be given a critical job. The chances are too great the driver will make a mistake that will have an adverse effect on the outcome of the event, or worse yet, cause an injury to a competitor, spectator, or civilian. Learning a job while under pressure is not an effective way to be trained. Inevitable problems are avoided when inexperienced drivers are assigned jobs where they cannot easily affect the event.

Another difference between an enthusiast and a skilled bicycle race motorcycle driver can be attitude. The enthusiast may want to be part of a bicycle race because he has an over-inflated ego. He wants to be the center of attention in front of a large crowd. The enthusiast may be on a power trip and like to control other people.

The public develops a negative image of the sport when confronted with this attitude. The competitor develops animosity toward motorcycle drivers. Negative reactions to this attitude make the enthusiast a liability. Such an enthusiast can destroy the credibility of the event.

The ideal bicycle race motorcycle driver has developed a professional attitude. He has put his self interest behind him. Personal glory and power are not his motivating factors for being in the sport of bicycle racing. He participates because his presence contributes to the success of the sport.

Proficient motorcycle drivers, suited to bicycle racing, don't just appear. They have to be developed. Some drivers new to the sport have natural abilities that let them fit into the role more easily than others. "Naturals" have that special combination of personality, understanding, adaptability, and driving skill that help them fit into their roles very quickly. Other drivers have potential. They have excellent driving skills, but need time, training, and experience to develop into top professionals. Their desire to learn is what allows them to succeed.

GENERAL RACE ORGANIZATION

We need to establish a mental picture of what a road race is like to help you understand what you are about to read. In all cases, except an Individual Time Trial, the main field, or peloton, centers the race. There are officials in front and behind the peloton. Normally, the first official behind the peloton is referred to as Com 1, and he is in charge of the race. Working with Com 1 is Moto 1 (Motorcycle Referee or Motoref), a Neutral Support vehicle (or motorcycle), and perhaps a Medical Motor and TV Motor. The names for all of the Com 1 Team contain the number ONE. The Com 1 Team manages what happens behind the peloton.

Com 2 anchors the team in front of the event. He is normally supported by Moto 2, Neutral Support 2, a Time Board Motor, and perhaps a TV Motor. The Com 2 team manages the front of the race, but is still responsible to Com 1.

The back of the caravan is managed by Com 3. His team includes Moto 3, additional neutral support vehicles, and general support vehicles (ambulance, sag wagon, etc.). As the race develops, Com 3 may be moved from the back of the caravan by Com 1.

In addition to the officials' teams, the race is also supported by Marshals and specialists including media motors. Figure 2, as well as subsequent figures, graphically show the race organization as it evolves during the course of an event. Table 1 provides you with an early reference for the general duties that each motor referee position will involve.

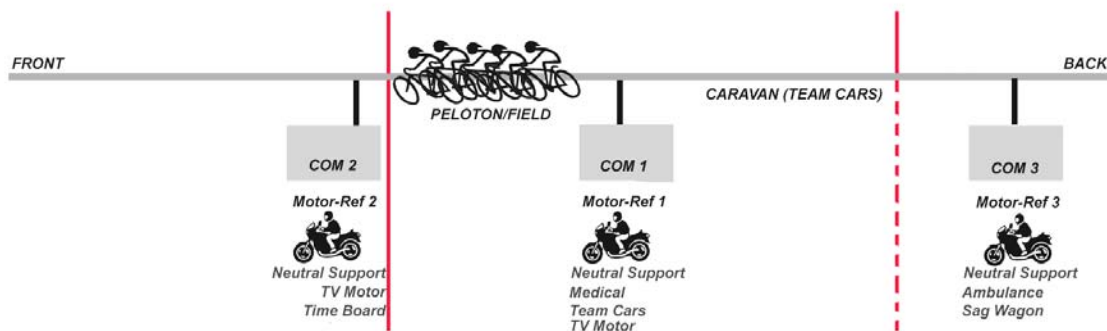


Figure 1 – General Race Organization

Table 1 – General Duties of Motor Referees

Duties	Position			
	<i>Moto 1</i>	<i>Moto 2</i>	<i>Moto 3</i>	<i>Moto 4</i>
Barrage control	X		X	X
Center line control	X	X		
Controlling field passing field	X	X	X	X
General rule enforcement	X	X	X	X
General <i>Schnaurzer</i>	X	X		
Information		X		
K/QOM judge	X	X		
Last 5k <i>Schnaurzer</i>	XX	XX	X	X
Marshalling	X	X	X	X
Message delivery	X		X	X
Peloton management	X	X		
Rider service administration	X	X	X	X
Servicing radios	X		X	X
Sprint line judge	X	X		
Time Splits	X	X		

LEGEND OF FUNCTIONS	
Primary	X
Secondary	X
Aggressive	XX

SHARING A SPACE

Take a moment and think about what is going to happen. You and a few different people, with varying skills, are going to try to control and operate within a bicycle race. Unless you have worked with the same people time after time you will need to “feel out” each other and discover how well each of you operate under racing conditions. The following are things you should consider before mounting your motor and proceeding to the race:

- If there is a drivers meeting or not try and make contact with the principal drivers of the vehicles in your race
- Introduce yourself and explain what you will be doing and how you will be conducting yourself during the race
- Get feedback from the person on their prior driving jobs and races they have worked
- Come to a mutual ground where they do not feel threatened by your presence but can understand that what you have to do must be in harmony with what they must do
- Go over the concept of “holding your line.”

The race starts and you have duties that must normally be done immediately. Your next item is to understand, in real situations, how the drivers operate their vehicles and their true understanding of “sharing a space.” To accomplish this:

- Start by driving up alongside someone that will be primarily sharing the same area, giving yourself enough space, and try to communicate with the other driver
 - Take note how relaxed they are at trying to hold a conversation
 - Notice if they are able to multifunction by driving and responding without driving erratically
 - When you feel that they can handle a closer conversation, move toward them slowly and watch for reactions by the vehicle and person
 - Repeat this with as many drivers as possible during the race when there are small idle periods. This will help in the future if this person is someone that will be “sharing a space” at another event.
- We always have plenty of turns and this is the next area where we should be concerned:
 - Prior to a left hand corner drive to a position about 3 meters in front of the vehicle you want to check
 - Take note of how close the driver comes to inside apex of the turn using your rearview mirror
 - After repeated turns begin to take a position closer to the other vehicle
 - If needed take time to have a conversation with the driver and re-emphasize the need to hold a line when going through turns.

COURTESY ON THE ROAD

The team of professionals supporting a bicycle race are very busy people on the road. They are concentrating on many things at once. Being surprised by a motorcycle speeding by is an unpleasant experience. This surprise is easily avoided. If you notice a vehicle approaching, a quick hand wave, indicating the side on which you would like the vehicle to pass, acknowledges that you are aware. If you are approaching a vehicle, and you don't see a hand signal, a brief “toot” on the horn will make the driver or rider aware that you are about to pass. This level of courtesy helps keep the race team informed of vehicle movements.

Motor Tip 1

Acknowledge traffic in your mirrors with a wave. Notify traffic you are approaching with a short “toot” if they haven't “waved”.

OVERALL GOAL OF THE MOTORCYCLE DRIVER

The goal for all motorcycle drivers involved with bicycle racing is the same: To develop into a proficient motorcycle driver who contributes to the growth and success of bicycle racing. You experience great satisfaction when you attain your goal, whether it is to be an official, a marshal, a support driver; a medical driver, or a press driver. The sport needs trained, skilled drivers, but to be one takes hard work and dedication.

Good luck as you pursue your individual goals in bicycle racing.

MOTORCYCLE ATTIRE

The professional motorcycle driver is always dressed in such a manner as to present the image of safety. The race motorcycle is never operated unless all safety equipment is worn. The public must perceive the race event and its staff members as the model of safety conscious participants. By the very nature of his job, the motorcycle driver will have a lot of exposure to the public eye. A good image is a major key to the success of bicycle racing in the US.

MOTORCYCLE HELMETS

United States Cycling Federation [USCF] rules require that the driver and passenger on a motorcycle must wear helmets that meet US Department of Transportation (DOT) standards. This is an insurance regulation that must be adhered to in order for an event to get liability coverage. The public must never see a race motorcycle being operated by a driver without a helmet on his head.

Approved helmets come in a variety of styles. The choice of helmet used is left up to the individual taste of the driver and passenger. However, non-full face helmets help the rider communicate. Communication is one of our most important elements of the driver's tasks; no matter what the assignment is, communicating with the riders is one of our most important jobs.

PROTECTIVE APPAREL

When selecting outer wear for a bicycle race, the driver must remember that accidents are possible – you are still riding a motorcycle. Clothing considerations are the same as on the road. Two things are considered when selecting motorcycle apparel. First, for visibility and added safety, the colors should be light and bright. Second, for comfort, the material should be heavy and tight fitting. Pants, jackets, and shirts should not be prone to flapping in the breeze. Constant flapping can be very fatiguing and annoying.

Clothing worn by drivers and passengers should include long pants, long sleeves, sturdy shoes that cover the ankles, eye protection, and gloves (at least for the driver). The fabric and construction are personal choices, but clothing designed for use on a motorcycle is recommended.

In larger races with big budgets, motorcycle drivers are provided with race apparel. In this case, due to sponsorship agreements, the driver should wear these garments during all race-related activities. The motorcycle referee will wear black and white stripes.

FOUL WEATHER GEAR

When the weather turns rainy, it is advisable to wear a rain suit. There are many styles at different costs, but the more expensive suits designed specifically for motorcycle applications are best. Select a rain suit that is highly visible and fits you properly. Rain gear should include rain gloves and rain boots. There is no more miserable experience than working in a bicycle race, in a driving rain, cold, and soaked to the bone.

ACCESSORY ITEMS

A few other things that are commonly overlooked are sun block, fluids, and race food. These are required to ensure that you can function comfortably for the duration of the event. They are frequently NOT provided by the race organizer.

There are other items the motorcycle driver and passenger may wish to use, but these are additional items of personal taste that go above and beyond what is required. The motorcycle driver and passenger should take what they feel is necessary to remain happy and comfortable during an eight hour bicycle race.

The bottom line is to dress in a manner that:

- affords the most protection in the event of a mishap
- maximizes comfort to avoid the problems caused by fatigue
- maximize safety at all times.

The motorcyclist must present an image of safety when in a position to be viewed by the public.

THE MOTORCYCLE

The motorcycle used in bicycle racing must be safe and mechanically sound. It must be meticulously maintained with service provided by competent, qualified mechanics. If the owner is doing the service, he should be very well-versed in his machine and what needs to be done to keep it in optimum operating condition.

The size of the motorcycle and engine are not too important. In selecting a motorcycle you should remember that lightweight machines are more easily maneuvered. Engine size is not crucial, but 400 cc's or greater is a good rule of thumb. Fuel capacity is also important. The full tank range should be more than 150 miles. Room to store spare clothing (such as rain gear) and equipment required to work the event is also essential. Rider comfort is one of the more critical considerations since you will be on the bike for a very long time.

The condition of the motorcycle is extremely important – you can't do your job if you are broken down on the side of the road. Prior to any event, you must ensure that your machine has adequate tires, good brakes, suspension adjusted for your job, and NO LEAKS.

All lights on the motorcycle must be working. Emergency (4-way) flashers will help make the motorcycle more visible. The horn must work and be very loud.

Remember, you are representing the sport. When starting the race, the motorcycle should be cleaned and polished to make it presentable to the public. The overall image the driver tries to create is professionalism. Pride in the appearance of the motorcycle is part of the image. It takes a lot of time, work, and money to keep everything clean and in working order, but the event benefits from the effort. This is part of being a professional motorcycle driver.

MOTORCYCLE MARSHAL

EQUIPMENT FOR THE MOTORCYCLE MARSHAL

Whether the motorcycle marshal is a freelancer or a member of a select group, there are certain items he has to have in order to do the job. The tools of the motorcycle marshal include red, green, and yellow flags, a loud whistle, and when provided by the promoter, a radio for communications. The motorcycle marshal should also carry a pen and pad of paper for making notes. These small items can be stored in an accessible area such as a tank bag or side pocket.

IMAGE OF THE MOTORCYCLE MARSHAL

The motorcycle marshal is often the first representative many spectators encounter when attending a bicycle race. He needs to project an image of safety and class. Spectators need to perceive him positively. Motorcycle marshals are highly visible and are easily associated with an event. He must conduct himself in a professional manner and do nothing that will damage the image of the event. It is difficult to be fresh and presentable after 8 hours in the heat, but the motorcycle marshal must be charming right up to the time he parks his machine and takes off his uniform.

The image presented by the motorcycle is equally important. The motorcycle should be clean and shiny as it pulls up to the line for the start of the race. That means washing off the bugs and road grime and tar that accumulates after every race. This is especially important when the motorcycles are being provided for the marshals by a race sponsor. Presentation is everything when dealing with the public and trying to sell the sponsor's product.

The job of the motorcycle marshal is not as simple as it may appear on the surface. A great deal of time and energy go into doing the job necessary to protect the competitors and present a positive image for bicycle racing. Motorcycle marshals must continually work to improve their skills and takes pride in their accomplishments.

THE MOTORCYCLE MARSHAL

Safety is the most important concern for the promoter of a bicycle race. Everything possible must be done to ensure that all potential hazards are identified and minimized. Many hazards, such as cattle guards, railroad crossings, and steel grate bridges are identified months in advance, during the planning stages of an event. Other hazards must be dealt with as the event progresses. Recognizing and dealing with unforeseen hazards is the role of the motorcycle marshal.

It is not a well known fact, but most motorcycle marshals see very little of the bicycle race. Upon closer examination, the perceived glamour of the job begins to disappear. Motorcycle marshals leave before the riders start and cross the finish line well in advance of the leaders.

The motorcycle marshal's time is spent almost exclusively in front of the first lead vehicle making sure it is safe for the fleet to proceed. If the motorcycle marshals are close enough to see action in the peloton then they are too close to be an effective safeguard against the unexpected hazard. There will not be enough time for them to neutralize any hazards that the race encounters.

Motorcycle marshals proceed well in advance of the race so that they have time to locate and eliminate hazards to the competitors. If a hazard cannot be eliminated, then the motorcycle marshal must communicate to the race that a hazard exists and cannot be removed. He stays with that hazard. The racers are informed and make the necessary adjustments to safely navigate through or around the hazard.

Oncoming traffic poses the greatest threat to competitors of a bicycle race. If there is only one motorcycle marshal, he should position himself so that oncoming vehicles will see the motorcycle and then the race behind. This may be all the warning a civilian driver gets about the race. This position in front of the race also limits the amount of hazard identification a motorcycle marshal can do. However, the safety of the competitors is most important and the motorcycle marshal deals with oncoming vehicles first.

It is very important to understand that a motorcycle marshal has no legal authority. He can be held liable for any damages that arise from his activities. The motorcycle marshal must be very careful when performing his duties during a race. He must not do anything that puts the public in danger. Remember, if the motorcycle marshal deals with a situation, and damages result, the motorcycle marshal could be held liable. This fact alone is enough to discourage many people from pursuing roles as motorcycle marshals.

VERBAL COMMUNICATION SKILLS

Communication skills are as important to the motorcycle marshal as driving skills. Spectators and civilians usually have no idea what occurs in a bicycle race. In a few seconds, the motorcycle marshal must educate the people affected by the race. The desired result of this education process is that spectators will behave in a way that allows the race to pass safely.

It is difficult to educate someone when the race is preventing them from getting where they want to go. A person who is inconvenienced and irritated may stop listening and

block out what he should hear. The motorcycle marshal must get through the block and educate that person through spoken words or gestures, depending on the situation.

The motorcycle marshal must talk to the public in a way that conveys he understands their problems. He must make them believe everything has been done to minimize their inconvenience. Many times, the motorcycle marshal is the only official contact the public has with the bicycle race. It is important that the motorcycle marshal be a courteous representative of the race organization. He must leave a positive impression with the public as well as get his job done.

In the face of open hostility, the motorcycle marshal must maintain his "cool" and be a diplomat. Everything must be done in a way to encourage cooperation from the public, including enlisting help from other spectators who are sympathetic to his cause.

If all diplomatic efforts fail and the public will not cooperate, then the situation must be treated as a non-removable hazard and the race warned of its location. The motorcycle marshal must stay with the hazard until the race passes safely by. Remember, if possible, the best solution to the problem is to gain the public's cooperation.

MOVING VEHICLES

The motoring public presents special problems for the motorcycle marshal. The closure rate between cars and the motorcycle marshal leave very little time to communicate with the driver, who may have no idea a bicycle race is in progress.

When encountering moving vehicles coming toward the race, the motorcycle marshal loses the advantage of verbal communication and has to rely on equipment and physical gestures to communicate what is needed. At the very least, the motorcycle marshal must make the driver aware that something out of the ordinary is coming.

In dealing with oncoming traffic, the motorcycle marshals sometimes takes a position on the centerline, but only as long as he has excellent forward visibility and can safely get back into his own lane. The motorcycle marshal must never compromise his own safety or the safety of civilian traffic.

Drivers do not expect to find a motorcycle approaching on the centerline and this technique quickly gets their attention. If the motorcycle has flashers, they should also be operating. The motorcycle marshal should be prepared to move quickly to the right if the situation warrants it.

When a vehicle is approaching, the motorcycle marshal flashes his head lamp to get the driver's attention. As the vehicle gets closer, the motorcycle marshal waves his left arm over his head, then changes to a "slow down" motion, moving his left hand up and down. The palm is held down during this motion. These actions should attract the driver's attention.

Hopefully, the driver will slow down and pull to his right. If the driver is cooperative, the motorcycle marshal can sometimes get the car to pull to the side of the road by pointing at the shoulder with his left hand. If the driver does stop, the motorcycle marshal acknowledges the courtesy and expresses gratitude with a smile and a wave.

If there is a lot of oncoming traffic and the motorcycle marshal succeeds in getting one vehicle to slow down and pull off onto the shoulder, the next vehicle in line will do the same. In these cases large numbers of vehicles can be neutralized because of the actions of the first vehicle. The good motorcycle marshal uses this to his advantage for the safety of the riders.

PAST EXPERIENCE AND SKILL LEVELS

The organizer and motorcycle marshal captain must take a close look at the motorcycle marshals and their past experiences. Some motorcycle marshals work one big stage race, but are basically have not experience with the complex situations they will see at the local level. In a big race, traffic problems are dealt with by the state patrol and sheriff's departments working the race. Most vehicles the motorcycle marshal encounters have already been alerted to the fact that something is coming towards them. The motorcycle marshal in big races usually only has to deal with a small part of the total problem.

The problem in a small race is that these motorcycle marshals lack the basic skills and experience needed to deal with complex race situations. In addition, the motorcycle marshals do not have the training or legal authority of the state patrolmen or sheriff's personnel. Cars encountered by a motorcycle marshal in a small race are much more dangerous than those encountered by a motorcycle marshal in a major stage race. In a small race the motorcycle marshal must always be in the right position on the road and know what to do to ensure the safety of the riders.

It is not surprising that the motorcycle marshal who started out with small races, and worked his way up to the larger stage races, is more skillful than those motorcycle marshals that only work one major race a year. Do not let a big name race on a resume give a misrepresentation of the motorcycle marshal's true abilities. The motorcycle marshal must be able to get the general public to give the race safe passage when no law enforcement agency is there to help.

Remember, the motorcycle marshal has no legal authority out on the road and the motoring public does not have to pay attention to him or heed his warnings; if the motoring public and spectators choose to cooperate, so much the better. If the motorcycle marshal does not get cooperation, he has to turn his energy toward warning the competitors of approaching danger.

ROAD SURFACE HAZARDS

Motorcycle marshals face many challenges along the race course such as dogs, cattle, horses, children, walkers, and joggers. Another aspect of being a motorcycle marshal is making sure that the road surface presents no hazards to the competitors. The motorcycle marshal has the responsibility of removing road hazards or, at the very least, warning the competitors that a hazard is in their path.

The motorcycle marshal deals with broken glass, branches, trash bags, rocks, stalled cars, blocked intersections, cattle guards, paving crews, and the like. Months of planning by the promoter and the highway department cannot eliminate these problems. If the motorcycle marshal is far enough ahead of the race, most of these problems can be resolved, making the race course clear for the competitors.

This can be a challenge, depending on how many motorcycle marshals are working the race. Several motorcycle marshals can travel a great distance in front of the race and spend time clearing up problems. These motorcycle marshals can leapfrog each other as they deal with problems on the road surface.

A single motorcycle marshal can't lose sight of the front of the race, so if he comes upon a hazard, his best hope is to stop quickly and kick or throw it out of the way. If it is a serious problem he has to park the motorcycle **off the race course**, go back in the direction of the race and warn the riders with a flag, a whistle, hand signals, or verbal warnings.

The speed of the race also determines how much can be done. On climbs, where the pace is slow, nearly every problem can be resolved. On high-speed descents, the riders must depend on their own skills to avoid hazards. The motorcycle marshal does all he can, but must keep his own safety in mind, as well as that of the competitors.

CIVILIAN TRAFFIC BEHIND THE CARAVAN

Civilian traffic overtaking the race and stacking up behind the peloton and caravan is another problem. This can be a dangerous situation as impatient drivers try to get around the race and on their way down the road. Impatient drivers may choose an unsafe time to pass the race and endanger themselves, the competitors, and other drivers. The motorcycle marshal may be called upon by the race officials or law enforcement agency to go to the back of the field and bring the traffic around when it is safe. This can be accomplished only under some very specific conditions:

- The road must be wide enough so that the passing traffic can be accommodated
- The field size should be small so that the pass can be quickly completed
- The race speeds should be slow (recommend less than 15 mph)
- The group of passing cars should be limited to a small number so that the maneuver is completed quickly.

Moving traffic around the peloton is no problem when conditions are right. The motorcycle marshal must wait with the traffic until the signal to pass is given by the Chief Commissaire (normally located in the first car behind the peloton). As the motorcycle passes the peloton with civilian traffic in tow, he honks his horn in short, rapid bursts. The peloton recognizes this signal (because it is the same signal used by the team cars when they move forward) as the warning they are being passed, and should stay to the right. Rider safety is always the top priority and, if safety cannot be guaranteed, then cars cannot be allowed to pass the peloton.

The motorcycle marshal is responsible for making sure the race is a safe environment, both in front and behind the peloton and caravan. This seems like an impossible task when the motorcycle marshal has no legal authority to direct traffic and pedestrians. The motorcycle marshal must rely on the willingness of the public to cooperate with him. It is a thankless job, but for the right individuals, it is a satisfying and rewarding experience.

LARGE RACES

In larger Category A or international races the promoting staff may have to work with law enforcement agencies and highway departments to coordinate road usage. These agencies coordinate safe passage of the competitors through cities and towns and over state roads. By law, these agencies have been given legal authority to direct traffic and close roads.

Law enforcement agencies are responsible for all traffic control and safety of the competitors. The law enforcement agencies will warn and stop oncoming traffic. The highway department makes sure the roads are passable as well as provide a lead vehicle with a large sign warning of a bicycle race approaching. However, no matter how large the agency crews are, they can always use the help of qualified, skilled motorcycle marshals.

Motorcycle Marshal Corps

Large races usually have a motorcycle marshal corps. There is a captain, several lieutenants, and the corps of motorcycle marshals themselves. At this level of competition, all motorcycle marshals must be trained and skilled riders. They are there because they have proven their ability to do the job. The captain and lieutenants will coordinate the corps' efforts with the law enforcement agencies.

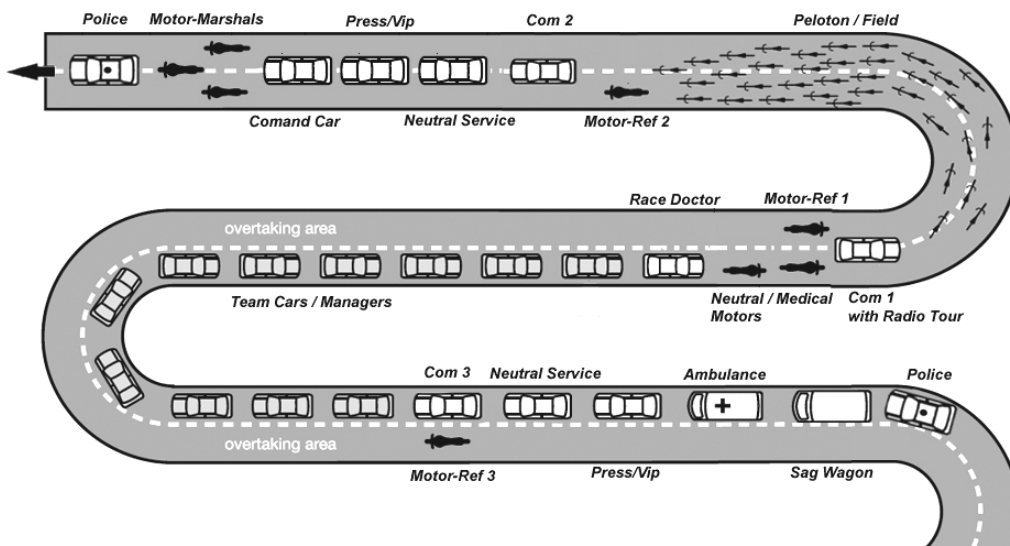


Figure 2 – General Caravan Organization, Early in a Major Event

Race day meetings between the captains and lieutenants of the motorcycle marshal corps and representatives of the police and highway departments are conducted every morning. Plans are made concerning the race. Last minute, special situations are also addressed.

Pre-race meetings are very important to the motorcycle marshal corps. The following items are addressed at this meeting:

- the race route trip log is reviewed;
- special assignments are made;
- all marshals are informed of any special concerns or issues regarding the day's race;
- special concerns are addressed regarding course conditions and traffic; and
- routine assignments are made.

Every motorcycle marshal needs to know exactly what to expect during the course of the event and what he is expected to do.



Figure 3 – Pre-race Motor Meeting, Trenton, NJ

The motorcycle marshal must understand all aspects of the race, because when the race begins, he may not see the captain or a lieutenant for many hours. He will essentially be working on his own, without supervision. Although there are radio communications, he may not be able to contact anyone for advice.

Police And Highway Department Responsibilities

On the road, all of the traffic control responsibility falls on the law enforcement agency that is conducting the race through its jurisdiction. Law enforcement officers precede the race. They ensure that traffic has been stopped and that the race can proceed smoothly. Major intersections with heavy traffic will have an officer present ready to stop traffic and allow the race to proceed. These activities, however, do not guarantee safe passage for the competitors.

The highway department makes sure there are no major problems with the road surface such as slides or washouts. If there are unexpected road problems, the highway department will make these sections of road surface passable by the race. The highway department also provides a lead vehicle with a warning sign and flashing lights.

Filling the Gaps

Road conditions exist that the police or highway department don't consider their responsibility, but that still pose a threat to competitors. Situations are simply overlooked, such as a four way intersection with no foot marshals present or a vehicle that has not been contacted by the police. In these cases, the role of the motorcycle marshal becomes very clear: deal with these oversights in such a way as to preserve the safety of the competitors.

The motorcycle marshal's responsibility is to fill the gap between the highway department and police and the front of the race. The motorcycle marshal also has the responsibility to ensure the road surface can be ridden safely. The motorcycle marshal falls into that gray area between the police department and the highway department.

Advance Motorcycle Marshals

The role of the motorcycle marshal falls into three areas when working with a large race. Some motorcycle marshals are positioned in front of the law enforcement and highway department personnel and are responsible for making sure the road surface is free from hazards. These motorcycle marshals make first contact with the public and seldom see any bicycle racing.

These motorcycle marshals resolve situations before they become problems, such as:

- Chasing animals.
- Talking to pedestrians, foot marshals and motorists.
- Informing the race caravan of any unforeseen problems that have developed since the course was set.
- Cleaning up trash and debris that can cause riders to crash or puncture.

They are the first warning that motorists receive that something is approaching and the more alert the motorist is the safer the racers will be.

The advance motorcycle marshal may be far enough in front of the race so that they might never use their radios. They may be out of range to talk to anyone. They are the race's first line of defense when it comes to safety. This is an important job, but a thankless one.

Peloton Motorcycle Marshals

Some motorcycle marshals are positioned between the lead police vehicle and the pace car of the peloton. These motorcycle marshals are responsible for contacting any cars approaching the peloton and dealing with any road hazards that still pose a safety hazard to the riders.

Frequently, a car will pull back onto the road after the police have pulled them off. There are cars that pull out of the driveway, not even knowing that the police vehicles went by. The motorcycle marshal is responsible for contacting these vehicles in a gracious and polite manner and making sure they are stopped before the race arrives.

New hazards appear on the road surface after the lead motorcycle marshals have gone by. A branch may fall down or disgruntled civilians may commit acts of sabotage. The intermediate motorcycle marshals will deal with these problems before the peloton arrives. The motorcycle marshal in the middle is the second line of defense in making sure the race has safe passage.



Figure 4 – Marshals Leading the Peloton, Tour of Georgia

As the race progresses and riders break away from the peloton, some of these marshals will be moved into the gap between the breakaway and the peloton. The time gap is normally greater than 30 seconds before marshals are redeployed. As marshals drop behind Com 2, it is important they position themselves to avoid blocking Com 2's view of the race.

Follow Motorcycle Marshals

The remaining motorcycles marshals are at the disposal of the officials and work behind the caravan. These motorcycle marshals run errands and escort both race-related and non-race-related traffic up the road, past the peloton. These marshals may also be assigned to escort a group of riders who have fallen off the pace and are out of the protective envelope of the caravan.

Many motorcycle marshals are not suited for work with the peloton, mainly because they lack experience riding in close proximity with riders and caravan vehicles. The

motorcycle marshal may be excellent at working with cars approaching the race, but he cannot predict what will happen with the peloton and caravan in a race situation. The Chief Commissaire must not hesitate to have a motorcycle marshal replaced that presents a hazard to the field and the caravan vehicles.

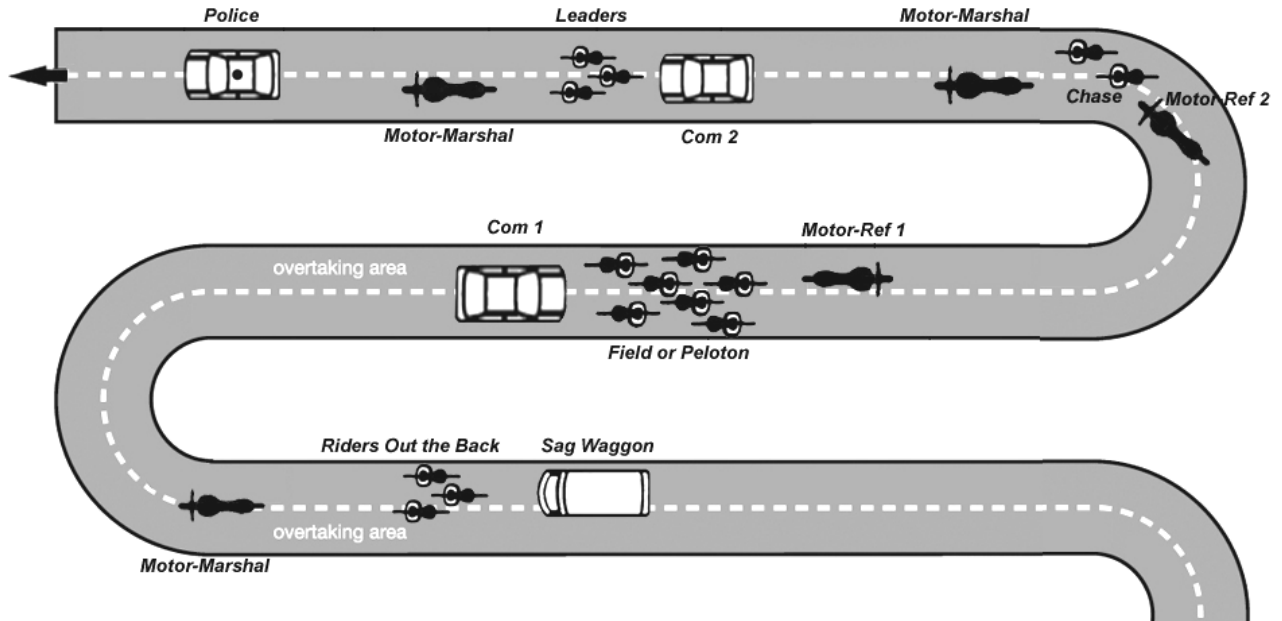


Figure 5 – Race without Team Car Caravan

RACE SPEED

The speed of a race is almost never constant. The speed increases and decreases depending on many factors. Marshals, as well as other lead vehicles, must ensure that there is room in front of the race so that the riders have room to attack – a sudden increase in speed. The race speed will also increase dramatically as a sprint line is approached and in the final kilometers of the event.

ADDITIONAL ASSIGNMENTS FOR MARSHALS

Promoters may assign a photographer to ride with the motorcycle marshal. This is acceptable when the motorcycle marshal has no responsibility for protecting the race from hazards and traffic. It is not acceptable to assign a motorcycle marshal to a photographer and expect the driver to also marshal the race.

The result of a dual-purpose motorcycle marshal assignment is a motorcycle marshal that can do only half of each job. This jeopardizes rider safety. The motorcycle marshal will be watching the race, something he seldom gets to do, and not paying attention to

oncoming traffic. Cars can easily slip through and endanger riders. Motorcycle marshals should not be given dual-purpose roles in the bicycle race.

ESCORTING TIME TRIALS

When there is a time trial event in the bicycle race, the motorcycle marshal may be given the job of escorting single riders. As the motorcycle marshal waits for his turn to leave the start area, he leaves the engine off. Exhaust fumes from idling engines are irritating to the riders. The motorcycle marshal pushes his motorcycle until he reaches the head of the line.

When escorting riders in a time trial, two things become important. First, the motorcycle marshal must stay far enough in front of the rider to prevent giving the rider an unfair advantage from drafting. The motorcycle moves a lot of air, and if the rider can find the slipstream, he doesn't have to work as hard as a rider does with no assistance. Even if there is no slipstream, the presence of the motorcycle marshal can give the rider something to chase and that provides a psychological advantage another rider might not have.

Second, the motorcycle marshal must know the course. There are rules that require the rider to know the course and exonerate the organizer from any blame should a rider leave the course. However, great controversy can arise when a motorcycle marshal makes a wrong turn and the rider follows. So it's a good idea for the motorcycle marshal to go out on the course prior to the start of the event, and familiarize himself with confusing intersections and course changes.

VIP RIDES

The demand on marshals is less during closed course races because there are no traffic worries. The organizer will frequently ask some of the marshal team to help sell his "product" by providing VIP rides to sponsors or potential sponsors.

Normally, everyone going for a VIP ride must sign a release of liability in case of an accident. This is for the protection of the promoter and the marshal. The marshal must explain the protocol for a passenger on the motorcycle. Every new passenger must be provided with information on mounting, dismounting, where to keep hands and feet, etc.

Passengers on these rides are required to wear approved helmets. This usually means the pit for the ride must have a selection of helmets and possibly apparel for passengers to wear. This is for the passenger's safety. The motorcycle marshal and his passenger need to project an image of safety to the public.

These VIP rides usually start and stop at a designated motorcycle pit area. When the motorcycle marshal stops to make his passenger exchange, it is very important that he stop clear of the course. It can be very dangerous on the course when the peloton goes by, and it would be a tragedy if a sponsor or competitors were injured in an accident. Therefore, the motorcycle marshal captain must work with the finish line crew to make sure a space large enough for passenger exchange is created. Safety here is of as much concern as safety on the road.

These rides are very important to securing future sponsorship for the event. It is necessary for the motorcycle marshal to get the passenger into a position to view the action in the peloton. The passenger needs to experience the thrill of the event. However, it is equally important that the motorcycle marshal keep his motorcycle out of the way of other race vehicles. Officials and support personnel have a greater need to be in close proximity to the action than the motorcycle marshal and his passenger. The passengers are normally allowed only quick views of the race. If the motorcycle is in front of the race, the rider drops back so that the leaders are in view and then moves back well in front of the leaders. From the back, after getting permission from the commissaires, the motorcycle can move to the back of the peloton, but not in front of the Commissaire #1 car. Again, after a brief look, the VIP will be moved to the back of the caravan. The VIP "rules" frequently change from one event to the next. This information should be covered in the Drivers Meeting.



Figure 6 -- San Francisco Mayor Seeing the Race

MOTORCYCLE REFEREE

There are two ways to carry out motorcycle refereeing:

- The US
- The rest of the world

We in the United States have gravitated to the Motor Referee (Motor Commissaire or Motoref), a single person, the driver as the referee. The rest of the world uses a two person team (driver and passenger) with the passenger concentrating on referee duties. The US Motoref becomes a specialist in the field of officiating. The real reason for the single person method is that there are not sufficient numbers of trained driver/rider combinations in the US. Our pool of trained people needs to be widened so that we could consider changing to the other method some day. Out of necessity, we have developed this method of the one-up Motoref that works quite nicely. So, how do interested people become US Motorefs? They:

- First become accomplished motorcycle drivers
- Then take the test and become a USCF official
- Finally, merge the two aspects together to become the Motoref.

The rest of the world uses the two-up method where a motorcycle driver is used to chauffeur the referee or commissaire during the race. The official is the critical part of the team and almost anyone that is an average or above average driver, with the ability to follow directions, can fill the driver role. This should not leave you with the impression that this style does not work or is dangerous. The referee or commissaire will be someone who has knowledge of races, caravans, and riders movements during the event. In most cases the driver is someone who has been trained by either OJT (on the job training) or who is actually an official and is driving instead of officiating. This method of two-up teams works well and is a standard outside the US.

Which system is the best? Depending on the level of the race each has their positives and negatives. In the smaller, more local race, the Motoref style is better because the experience gained allows the person to get prepared for larger races. There is more time for the Motoref to make decisions and get the practical training needed to do larger races. The Motoref is in charge both of what happens with the motorcycle and of officiating decisions.

When the official is a passenger he must give directions to the driver to be in position to effectively referee. As the driver and passenger become more of a team they start to understand what the other wants and things happen as though they were only one person. This takes time, money, and patience on both the parts of the two-up team and the promoter who is paying for the event.

In larger races (some domestic and usually outside the US), the task of providing information is given to a dedicated information motor. This leaves the two-up team or the individual to handle only officiating tasks. Just imagine the situation where three riders started a time trial one minute apart and the faster riders joined the slower. You had a total of nine cars, three neutral motors, three TV motorcycles and only three officials to keep everything in order. If you had to handle information along with everything else something would have to give. This happened at the 2003 World Road Championship and no one got fouled nor got an advantage.

So, whether you are two-up team or a single person the information in this manual will help you. You now understand that all countries do the same thing with officials on motorcycles although some drive themselves and some get driven. Let us now go into the art of motorcycling refereeing.

The motorcycle provides the ideal platform from which to observe a bicycle race. Its small size and high maneuverability provide the Motorcycle Referee with the opportunity to get close to the riders. The Motorcycle Referee can observe infractions that might be missed at the distance a car must maintain from the riders. The small and maneuverable motorcycle allows the Motorcycle Referee to exchange information with other officials, team personnel, and the riders. The Motoref has an excellent vantage point without sacrificing rider safety.

In general, the Motorcycle Referee has three areas of concentration:

- Safety (the riders and his own)
- Observations and enforcement of rules
- Communication (with other commissaires and riders).

The emphasis placed on each of these will vary depending on the type of race, the size of the event and the position the referee is assigned. Throughout this section, we will use a triangle to emphasize this point. The darkened words – either Safety, Comms (short for Communication), and Rules -- will be the concentration for the situation being discussed. In this example to the right, all the words are darkened.



Motorefs come from varied backgrounds: most are officials who have a background in motorcycles. There are motorcycle marshals who crossover, learn the rules of bicycle racing, and become licensed Motorefs. And there are bicycle racers who get past their prime and become Motorefs in order to put back something into a sport that gave them so much.

Motorcycle referees develop over a period of time. Above average driving skills are minimum requirements. The Motoref must be a keen observer with a long attention span. He must be fair and objective, even in the face of verbal abuse by riders and team

managers. All these traits are developed by the Motoref working dozens of local and regional bicycle races.

EQUIPMENT FOR THE MOTORCYCLE REFEREE

The motorcycle being used must be quiet, maneuverable, and capable of going at least 150 miles on one tank of fuel. The motorcycle must have good tires, and be in excellent mechanical condition. The motorcycle should be comfortable since a Motoref's day requires more than six hours of continuous riding. There must be adequate storage space for equipment and severe weather gear. The rider's helmet should be open-faced to facilitate communication. The motorcycle referee race kit should also include:

- Whistle
- Stopwatch (two watches recommended)
- Paper and pencil
- Recorder (digital or tape)
- Tank bag (recommended)
- "Zebra" stripes (Black and White)



The Motoref also needs a high quality tooth guard and neck strap for their whistle. The nickel plated, brass, *Acme Thunderer*® with a cork ball will offer years of service at a reasonable price. The Motoref should consider investing in two whistles. Uniform supply stores and sporting goods shops are good sources for whistles.

The stopwatches are used to accurately measure time gaps. They should be mounted on the motorcycle or tank bag so that you can use them with minimum effort while keeping your eyes on the road.



Figure 7 – Scuba Diver Slate and Digital Recorder

The Motoref must have some method of recording observations. The cheapest, simplest way is a tablet that straps to the knee, gas tank, or tank bag. The problem with a tablet is that rain can make it impossible to record information and destroy the information that has already been gathered. Solutions currently being used vary from waterproof paper to slates used by scuba divers. The motorcycle official also needs pens, pencils, and paper. Three by five index cards are also very handy for making notes that are durable and fit neatly in a pocket. A clip board makes a handy writing surface for transcribing the race report after the conclusion of the event.

A more efficient way to record information is with a hand-held tape recorder with either a record button or a voice activated microphone. The Motoref simply holds the recorder to his mouth to record information.

More elaborate systems are available with tape recorders in the tank bag, remote switches on the handle bars, and condenser microphones in the helmet or on the throat. With this system, to record observations, the Motoref depresses the button on the handle bars and begins speaking.

The hand-held recorder offers simplicity in operation, except when the weather turns foul and the Motoref has to put on bulky gloves. It can be very difficult to use a recorder in cold, wet weather. The elaborate system offers all weather ease of operation, but the cost is higher and setup takes longer. The hand-held recorder can be hung around the neck or placed in a pocket or tank bag.

The best recorder practice is to never record over a previous race. It is not unusual to need vital information after an event has been finished for a week or more. This is especially true in stage races and championship events. You never know how far back you may have to go to get information. Each event gets its own space on the tape, with the beginning and end of the race clearly identified. Big races may require more than one tape.

Last, the motorcycle referee should have a good supply of batteries for all watches and tape recorders. Batteries should be checked daily during important stage races and the tape recorder checked before the start of each event. Weak batteries should be discarded to prevent tape recorder failure and loss of valuable observations.

TIME TRIAL

The time trial [TT] is the simplest road event to observe, but the Motoref must be careful not to influence the event by providing draft when overtaking and passing a rider. The Motoref must also be aware that he will cause a head wind when passing a rider coming head on. The position of the motorcycle on the road and its effects on riders is very important to understand.

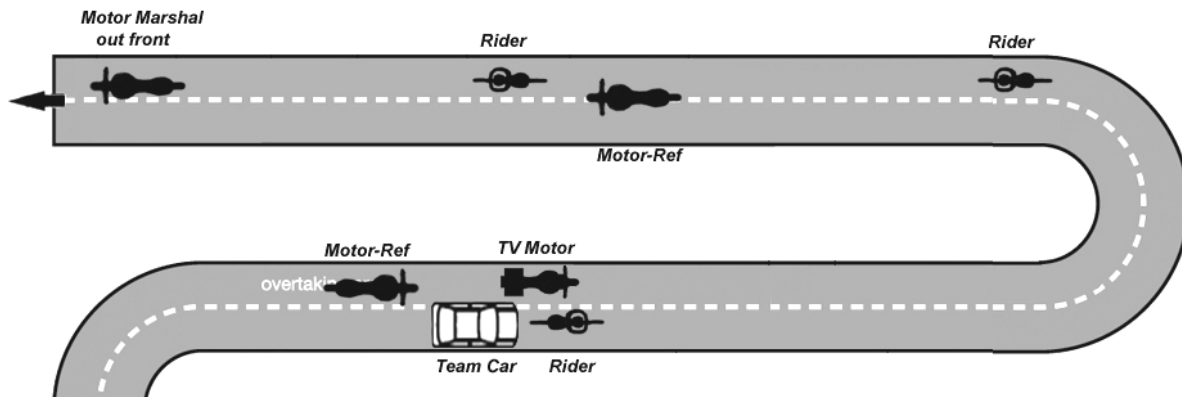


Figure 8 – Individual Time Trial

Time trials are run in the following manner. Individual riders are given start times, normally at either 30 second or one minute intervals. The course can be point to point, single loop, multiple loops, or out and back. The rider with the fastest time wins. Riders are usually seeded with the slowest riders going first and the fastest riders going last



Referees are positioned to observe any infractions that give the rider an unfair advantage. The unfair advantage can be gained as a faster rider passes a slower rider too closely or seeks relief from the wind behind a motor vehicle, such as civilian cars, team cars, motor marshals, press motors, etc.

The Motoref should be ready to recommend the best course coverage to the Chief Commissaire. The style of coverage will depend on the level of the event and the course being used. Typical coverage patterns include:

- **Zone Coverage:** The course is divided into sectors. One Motoref is assigned to each sector for a period of time. The referee patrols this sector, observing the event.
- **Group assignment:** The referee is assigned to several riders with consecutive start time. The first rider is followed for a period of time. The referee then waits for the second rider in the series, and follows him for some time. The process is repeated until the referee follows the final rider in the group to the finish.
- **Follow Key Riders:** The referee is assigned to follow specific riders and stay with them from start to finish. The Chief Commissaire normally assigns his crew to closely observe riders who have a chance of winning the event and/or draw significant public and press interest.

The first and last riders of the event receive start to finish coverage. Motor marshals can be used for this coverage, however, the motorcycle referees should ensure that the riders are covered to officially start and finish the event.

Motoref Tip 1

Judges depend on seeing a vehicle with the first and last rider. Motorefs should ensure that these riders are covered by a vehicle for quick recognition.

The Motoref must record anything he sees that is out of the ordinary. This includes riders on the side of the road needing mechanical assistance or abandoning the race. If pacing or drafting is observed, the vehicle, the rider, the length of time and the speed need to be recorded. Appropriate penalties will be calculated and assessed after the event.

The motorcycle referee gathers his information by driving up and down the length of the course, slowing down to observe any situation that may lead to a rule infraction. Riders need to see that referees are on the course watching them. When he observes a situation developing that could result in a penalty, he can issue a quick reminder (e.g. a whistle blast, toot on the horn, or hand signal) to refocus the riders. At times, he may stop on the side of the road and observe from a stationary location.

Motoref Tip 2

Motorcycles must never influence the TT. Be mindful of the wind created by the motorcycle when passing riders.

While driving on the road, the Motoref must be aware that the motorcycle is pushing a lot of air. When passing a rider going the same direction, the motorcycle can give the rider a push with the air being moved by the motorcycle. This creates an advantage for the rider. When meeting a rider head on, the air being pushed by the motorcycle will give the rider a brief head wind. This creates a disadvantage for the rider.

When passing, the motorcycle needs to stay as far away from the riders as possible. That may mean crossing the centerline or hugging the white line on the shoulder. The speed of the motorcycle may need to be reduced to lessen the effect of the pushed air when a rider is in the vicinity.

While observing a time trial, the Motoref cannot become a negative influence in the race. He must be fully aware that he can have a profound influence on the outcome of the event. So, while the race is fairly simple in execution, he must pay close attention to the subtle details concerning the position of the motorcycle. The positioning of the motorcycle applies to motorcycle marshals, press motorcycles, and technical support motorcycles.

MASS START ROAD RACES

Road racing is the most interesting event for the Motoref. It is also the most difficult event to work. These mobile referees will spend a great part of the race positioned next to the peloton. The Motoref must learn how to observe and gather information from this position without getting caught up with the riders.

Avoiding getting caught up with the riders is the most difficult aspect of motor refereeing to master. The process starts with being aware that the riders will try to use the motorcycle for tactical advantage if the motorcycle driver is not paying attention. He

must also be aware that when a mishap occurs, it happens without any warning. Riders will be on the ground in front of the motorcycle instantly, and an inexperienced motorcycle driver can cause a minor spill to turn into a major catastrophe.

Observing A Bicycle Race

The most important job the Motoref has is to observe, watch the bicycle race unfold and document what occurs. From his notes, the race can be reconstructed from his viewpoint. A complete picture of the race can be developed when all officials' notes are brought together. Without the eyes of the Motoref being right there with the action, small, but important details could be missed that ultimately affect the outcome of a stage or event.



The motorcycle referee must have an educated eye that allows him to see the subtle details of what is really happening in the middle of a field of riders. Good referees, with thorough training and experience, can see through the clutter and identify actions and reactions that are influencing the outcome of the race.

The Motoref looks for rider contact that is not incidental. Physical riding styles can intimidate and can cause a timid rider to back off from a tactical move, giving an advantage to the more physical rider. Aggressive riders block and force competitors off the road by intentionally crowding, elbowing, touching handle bars, and bumping hips.

To neutralize a tactical move one rider will hold onto another rider's clothing or bicycle. An aggressive rider may use hooking to make a rider get off a wheel or cause another rider to crash. It is difficult to detect these activities in a peloton of 100 plus riders.

If activities in the peloton escalate to the point where a rider may be injured, the Motoref needs to intervene. In most cases, the Motoref can stop the contact by making his presence known to the riders. The Motoref pulls the motorcycle even with the riders and stays there. The Motoref makes it very obvious that he is watching the rider activities. Rider attention can be focused by pretending to talk into the tape recorder. A short blast on the whistle will help to get the attention of non-English speaking riders.

Race Report

While observing the race, the Motorcycle Referee makes notes for future use. The Motorcycle Referee will compile a report of all he observed and submit it to the Chief Commissaires immediately following the race. This is extremely important if the report contains information that could alter the results. If this is the case, the Chief Commissaire needs to understand that you have a significant report as early as possible. However, the report details are never passed on the radio.

The format of the report is simple: the highlights and important details are listed on the front page and the chronology of the race on the pages that follow. Race times and mileages accompany the observations. If nothing was observed, a report is still filed that states "Nothing to Report."

Responsibility During The Race

In small races, with limited numbers of motorcycle marshals, the Motorcycle Referee will have to double as a Motoref and motorcycle marshal. In addition to officiating, it becomes the Motoref's responsibility to warn oncoming traffic that it is about to encounter a bicycle race. The Motorcycle Referee must be very experienced in traffic control and be able to make cars slow down and pass the race safely.

In larger races the Motorcycle Referee is under the same control as every other member of the race caravan; he answers directly to the Chief Commissaire. The Motoref will do the job assigned by the Chief Commissaire. At times it may be appropriate to make a suggestion to reposition, but the majority of the time will be spent in a position dictated by the Chief Commissaire.

The referee on the motorcycle must resist temptation to control the race from his position. The race must develop of its own accord. If a rule infraction is observed a note is made documenting the infraction. The note must include the type of infraction, the mileage, the time, and the rider-numbers involved. No attempt is made to stop the infraction from occurring.

There will be exceptions to this guideline. The Motoref may intervene in situations that endanger the safety of the riders, or the integrity of the race promotion.

At the beginning of the race the Motorefs are usually found next to their assigned commissaire: Moto 1 is near the Chief Commissaire (Com 1), Moto 2 near Com 2, etc. From this location the referees can be dispatched to gather information or perform a task without the need to transmit instructions over the radio. This keeps the race channel clean and does not publicize sensitive information. These positions and responsibilities will be covered in more detail as the various race formats are discussed.

Time Splits

As races develop, some of the riders will break away from the peloton. The time gap between the breakaway riders and the peloton is key information for the riders and their teams. One of the key responsibilities of the Motoref is to generate this information.



Figure 9 - Dual Stopwatches, Mounted for Easy Reading

Time splits can be developed in one of two ways. The simplest is to drive ahead of the break and stop on the side of the road. Start the watch when the break passes by. Members of the break are documented on the timing board. When the field passes by, stop the watch. The Motorcycle Referee transmits the split to the Chief Commissaire. If required, the numbers of the riders in the break are



also transmitted.

Another method of giving time splits is more complicated, but works well with limited resources. The commissaire car or other vehicle with the break will radio a countdown to the Chief Commissaire. For example, the commissaire with the leaders will say "Standby for a mark: three, two, one, MARK". Watches are started on the mark. Then, the landmark on which the watches were started is described, such as a mile post or billboard. When the peloton reaches the landmark, the arrival is announced. The watches are stopped, and the split is relayed back to the commissaire with the break. The information is given verbally to the members of the break and chase group.

The time split information is provided to the riders verbally or using a Time Board. If a Time Board is used, the official needs to be a passenger on the motorcycle. The timing board itself is normally about 18" by 24" and made of a material that can be written and erased very easily. Chalk or dry erase markers are both suitable. The board has a sling so it can be hung over the shoulder and stabilized in windy conditions. The referee must be very careful that the Time Board does not get away in the wind during high speed transfers, or while showing it to the break and peloton.



Figure 10 – Time Board Illustration w/ Chasing Riders

The required information on the Time Board includes the numbers of the riders in the breakaway and chase groups, the gaps (in minutes and seconds) and the distance into the race where the split was taken.

Time splits need to be given to the field, the chase and the break. When the time split information is provided to the peloton, it is normally only shown or announced to the leaders to avoid spending too much time riding beside the peloton.

Special Assignments

Motor Referees, including Time Board teams, are frequently assigned the duties of picking sprints on the road. These assignments include mountain top sprints (KOM/QOM) where the rider speeds are low and intermediate sprints where the riders are traveling at extremely high speeds. Because of these assignments, a Motor Referee must also be a good judge, which requires significant practice. You should assume that you need practice on the finish line to be a quality Motor Referee!

CRI TERI UMS

The criterium is a short course race (800 meters to 5 kilometers). The USCF rules require that the course is CLOSED to vehicular and pedestrian traffic. Motorefs are normally assigned to lead and/or follow the riders. The job of lead motorcycle may also be performed by someone who is not an official.

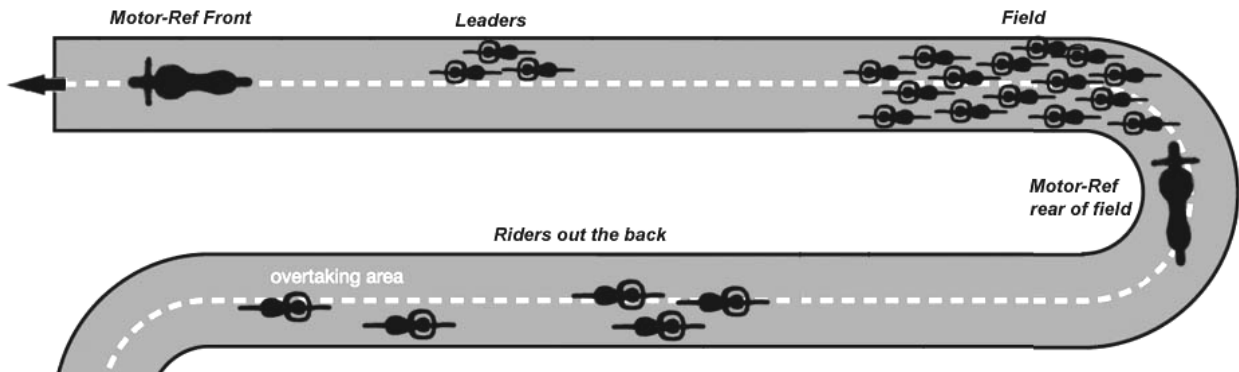


Figure 11 - Criteriums

Course Setup

As with all events a lot of planning goes on well before race day. What happens on that day is a result of many people working to have:

- the safest event
- that is free of problems
- a winner without outside influences.

Planning is normally done by the Chief Referee of the event along with the promoting staff.

On the day of the event the Chief Referee (CR) normally enlists the help of his officiating team to see that the event is set up properly. In most cases, the Motoref will gravitate to duties concerning the course and that setup. The Chief Referee will normally explain what happened at prior meetings and what was agreed to about the course. From this point on the Motoref becomes very important to the event starting on time. He makes sure that everything that was agreed to or that is required for the safety of the event is taken care of.

After being assigned to course setup the Motorcycle Referee:

- drives the course at the same speed the riders will be going
- uses the same line through the corners the riders will take.

The following list gives an idea of some things to look for::

- smooth manhole covers in turns
- rain drainage grates in the gutter
- paint stripes in the comers for cross walks and stop signs
- wide cracks and broken pavement
- in hot weather, oil coming to the surface of the asphalt
- what barricades will be used for pedestrian traffic
- what egress areas have been set up
- sufficient course marshal locations
- a course free of vehicles
- driveways marked or barricaded
- anything else that could affect the riders' safety.

Problems with the course are noted and recommendations how to make the course secure and safe for the riders are given to the CR. Please remember that your level of expertise will be considered when you talk with the CR. You might be questioned why something needs to be changed or modified. DO NOT take this as an insult but more of a check of your reasoning. The overall conduct of the race rests squarely on the CR and he has total control if the race is to continue or shut down. Use your best interpersonal skills and connect the problem of today with one that you both know about from another event.

A criterium race should not be started until the Motoref takes a lap and determines that the course setup is complete. After the race has started, there may need to be further adjustments to the course or crowd control materials that are in place. This situation is relayed to the CR so that modifications can be made before any problems arise.

Leading The Criterium

After the race has started, the lead Motoref will spend the majority of his time at the front of the field. The distance from the leaders to the lead Motoref should be 75 to 100 meters so they can deal with problems before the riders get there. Another task at the front of the field is to warn everyone along the course that the peloton is coming.

Being the lead Motoref is a high profile job. Everyone is looking at the motorcycle and driver. Remember, the bicycle race is the show. The motorcycle and driver are only there to draw attention to the peloton, not to the motorcycle itself. The motorcycle should be driven at a constant speed, subtly braking into and accelerating out of corners.



Another reason the Motoref is at the front of the race is to mark the leader. From this position the Motoref warns the chief judge and scoring crew on the finish line that the leader of the race is coming through. Many times, the race will break up into smaller groups. It is nearly impossible to tell where the leader is when many single riders and small groups keep coming across the line. It is helpful for scoring if the Motoref stays in

front of the leaders, or else the scoring crew may get confused and post finish results with placing errors.

Sprint Laps

The criterium may have several races within the race. These are in the form of prime laps. In a prime lap, a sprint within the race, the first rider across the line wins the prime, usually money or merchandise. A prime lap is always signified by the ringing of a bell. It is a good practice for the Motoref to talk to the judges and remind them to ring the bell for the lead motor as well as the lead riders.

It is easy for the Motoref to lose concentration during a criterium. The Motoref must be aware that a sprint lap is coming to a conclusion. Riders sprinting for a prime accelerate very rapidly and a napping Motoref can be overtaken by the peloton.

Riders Lapped Or That Remain In The Race

During the race any number of riders could be lapped and their disposition during the race is totally under the control of the CR. Normally at a meeting prior to the race officials decide how lapped riders will be handled. Depending on that meeting the Motoref could be very busy or only a communication person in regard to lapping riders. Normally the start/finish line is where the riders are removed and the Motoref is only used in special circumstances. If the rider is pulled by the Motoref the following procedure should be followed:

- Communication should take place between the Motoref and the S/F line as to whether the rider(s) should be pulled
- If they are to be pulled the Motoref moves up alongside the rider(s) and makes sure they understand they must withdraw from the race because the peloton is approaching. One of the following methods is used:
 - a whistle and gesture, one loud blast on the whistle to get the rider's attention and pointing to the side of the course
 - a whistle and gesture with a flat handed slash across the driver's throat with fingertips to signify "All done"
 - in either case you must note the rider number and when pulled
- After a rider is pulled from the race you must monitor whether they have removed themselves from the race during succeeding laps and take further actions if needed.

If the riders are allowed to stay in the race the Motoref should:

- indicate that the peloton is approaching
- give the lapped rider some type of signal to keep racing, such as a thumbs up sign
- keep communication during a race between a noisy motorcycle and riders to a minimum
- record the rider(s) number and lap or time they are lapped
 - This information is important when trying to



recreate the event after the fact incase there are problems – YOU CAN NEVER HAVE ENOUGH INFORMATION

- No matter what the disposition of the rider(s) you must communicate the information to the S/F line.

The follow Motoref performs a similar function by recording the numbers of the riders as they come off the back of the peloton. It is actually much easier for the follow Motoref to get numbers than the lead Motoref. The follow Motoref has the luxury of slowing down and staying with the dropped riders without concern of being overtaken by faster riders

A lapped rider report is turned in by the lead Motoref and an off the back rider report is turned in by the follow Motoref. The combination of both reports confirms information that has been gathered by all officials at the race.

Motorefs should keep track of time or distance to go during each race. Record the information on a tape recorder lap by lap or mark milestones in the race in writing. This needs to be done because:

- They are a backup to the laps/bell person to make sure the race is on the correct lap
- If free laps are given during the race the Motoref must know when they are over to inform riders with mishaps when the free laps are done.

Following The Criterium

The position of the following Motoref must be decided by the CR and is normally done during the pre-event officials meeting. The two styles are:

- The Motoref follows directly behind the peloton
- The Motoref follows the absolute last rider on the course.

Each style has merits and problems. Staying close allows rapid report of problems off the back or people dropping out. Staying with the last rider provides an “end of race” mark. Whichever is used, the CR will know the limitations of each and should have contingencies to cover problems.



The follow motor is normally first at a crash scene and his first duty is to assess the condition of the riders involved in the crash. If everyone gets to their feet quickly, the only responsibility is to report the riders' numbers to the pit, normally by radio. A crash is considered a mishap and the riders might receive a free lap (more on free laps in next section). However, if some of the riders are injured and not getting up, the official must call for medical support. He must also assess the course conditions. If the injured rider is blocking the path of travel, he must notify the Chief Commissaire that it is unsafe to continue the event until the rider can be moved. The referee's responsibility is NOT to

treat the downed rider, but to direct race traffic around the injured rider. The referee must be part of the solution and not do anything to make the situation worse.

In all cases, the motor referee should ensure that he has recorded:

- the race numbers of the riders involved in the crash
- the time or lap that the crash happened, and
- any names of witnesses.

This information on the crash will be included in the CR race report and assist in filling out the accident report.

The following Motoref should also watch for riders leaving the course. These riders normally have decided not to finish the event. Recording and communicating their numbers will assist the Chief Judge in determining who actually crosses the finish line at the end of the event.

Free Laps

Free laps may be granted during a race or not allowed at all. If granted, there is a specific distance toward the end of the race when they will not be allowed. Free Laps are defined in the USCF rule book under the section for criteriums. In general we grant free lap(s) for a rider that has had a mishap. Mishaps are also defined in the USCF rulebook. They cover a variety of things that happen to riders which allow them to benefit from sitting out of the race while their bicycle gets repaired or fixed. A rider who suffers a mishap goes to the pit where he gets repairs and checks in with the pit referee. The rider is put back in the event in after repairs have been done and will be placed at specified places according to the rule book. Knowledge of what problems are headed for the pit helps the mechanics and the pit referee do their jobs smoothly.

Feeding During A Criterium

Feeding is not normally permitted during a criterium; however, special rules may be in effect that might allow this to happen. If feeding is allowed by the CR, it will be in a marked area on the course, called the feed zone, and allowed only after a set time in to the event. Feeding is not allowed on any other part of the course and may not be given earlier than decided.

The Motoref monitors the feeding situation during the race. If feeding is allowed, the Motoref watches to see if any feeding are given outside the feed zone and if the handups are given too early. If feeding is not allowed during the event the motorcycle referee looks for handups being given anywhere on the course.

Illegal feeding is recorded for the race report. The Motoref must record the rider number, the time and distance into the race, type of handup, and the person giving the handup. This information is included in the race report given to the Chief Commissaire following the conclusion of the event.

Illegal Tactics

Riders off the back of the peloton can cause a problem when a criterium race gets tactical. Riders drop back to help a team mate who is about to lap the field. This is an illegal tactic. Riders cannot drop back to assist the leader in reaching the back of the peloton.

If the Motoref is staying with the leader, he will be able to observe the riders dropping back. The Motoref records the numbers of the riders and watches to make sure they do not provide the leader with a draft. If the riders begin to assist the leader, the Motoref will instruct them to stop.



The illegal tactic develops in the following manner:

- The leader solos off the front of the peloton
- A teammate or two "get tired" and drop of the back of the peloton
- The dropped riders slowly lose contact with the back of the peloton as the leader pulls away from the front
- The dropped teammates and the leader make contact behind the field
 - The dropped riders have now been lapped
 - The lapped riders suddenly recover to get their "second wind"
- All the riders in this new group work together, increasing the leaders' gap to the field.

The Chief Commissaire or chief judge may instruct the Motoref to stay with the leader during this part of the race. When the leader makes contact with the teammates who are dropping back:

- The Motoref makes sure that the now lapped teammates do not work with the leader
- If the lapped riders begin taking pulls the Chief Commissaire and Chief Judge are notified immediately
- The lapped riders are told to stop working with the leader
- The occurrence is recorded and a note is made on the first page of the race report.

Breaking The Rules By Sitting Out

Sitting out happens in criteriums. A rider stops for a number of laps and then jumps back into the race, usually in the peloton. These offending riders are usually observed sitting on a curb, hence the term "sitting out." Depending on the skill of the offending rider, sitting out may or may not be easy to detect.

From the front of the peloton, the front Motoref cannot observe a rider dropping off the back of the field and stopping. However, the follow Motoref may be able to see something going on with riders leaving the race course. For this reason every time a rider leaves the race course either Motoref should make a notation and/or communicate the information to the finish line. Smart riders go off the course and cannot be seen by

the Motoref even as he goes around with the peloton. The Motoref has no idea there is a rider sitting out.

If the Motoref is lucky, he will observe the offending rider re-entering the course and sprinting to rejoin the field. In these situations the Motoref can be certain the rider was sitting out. A fair penalty can be assessed following the conclusion of the race.

It is very important the Motoref is sure of what he is observing. He must be absolutely sure that the rider was indeed sitting out and jumping in.

Lapping The Field

A rider or group of riders who have broken away may actually lap the peloton during a criterium. Before these riders actually merge with the peloton, their numbers should be recorded. The actual time or lap the rider gained should be recorded and/or communicated with the finish line. As the lapping is about to happen, the officials on the course must be repositioned to ensure that race is properly covered; this is normally accomplished by direction of the CR. Officials, who are being repositioned from the back of the peloton to the front, will normally pull to the side of the road and wait until the race comes to them. Waiting is usually safer and results in more complete coverage than attempting to accelerate pass the field.

CIRCUIT AND ROAD RACES

There are three general methods of handling a race:

- total road closure
- rolling enclosure
- the centerline rule.

Totally closed roads allow the officials to concentrate on officiating rather than other issues. Road race courses that are not closed to traffic result in a new set of issues for the on-road officials.

Rolling Enclosure

Full road usage in a bicycle race is accomplished by a rolling enclosure. This simple concept works very well in practice, but has other implications. The rolling enclosure works this way:

- The first vehicle in the race is normally a police car
- Traffic is stopped by this vehicle and moved off the road surface as much as possible while the race proceeds passed them on the course
- This technique gives the riders a secured space in which to conduct the race
- The stopped traffic is required to stay parked until permission to proceed is given by the very last car in the race, normally another police car

- The peloton should not meet any moving traffic between the lead and follow police cars or lead cars.

Think of a rolling enclosure as a continuous pipe that has a mass flowing through it. The size and length of the mass can be variable, but when an area is needed the mass takes precedence. Other things trying to occupy the same area must get out of the way. As the mass moves along the pipe and passes out of the way, the normal pipe flow continues.

As the race continues and separates into small groups, the vehicles that have been stopped may have to wait for some time before they can proceed. This makes rolling enclosures unpopular. You must think of a road race as a living and continually changing entity. Cars, motor marshals, and officials take different positions during the event depending on what is happening within a two to five minute window. When a gap (separation of riders) occurs other vehicles should be put into place to make sure that parked vehicles will normally always see something coming toward them. Without this happening those parked along the side of the road during the rolling enclosure will think that everything has passed and the conditions are all right to move again. .

The crucial question for to any jurisdiction is how long the vehicles are going to be waiting before they are allowed to proceed. The time period a vehicle is stopped is called the “caravan envelope.” Another way to determine the caravan envelope is by starting a time when the lead race vehicle passes a certain point along the race route. The time is stopped when the last vehicle in the race caravan reaches the same point. The smaller the race the shorter period of time is required (under two minutes). A larger race requires more time because of the volume of vehicles and what can occur within the race (three to seven or more minutes). A person sitting on the side of the road will feel like the world has come to an end and their patience will be tested. For these reasons the follow vehicles only give a certain amount of time to riders dropping off the back of the race before they pass them. After the rider is passed they are to obey the “rules of the road” and must obey all local traffic laws. This allows traffic to proceed that has been waiting and minimizes negative feedback to local jurisdictions.



The Centerline Rule

The centerline rule requires that all riders stay to the right of the center of the road for part or the entire event. After you have officiated at a few of these centerline events, you will understand the obvious: that the Motoref could spend large amounts of time over the centerline. This action cannot be done without the local jurisdiction giving approval since you will be in violation of the traffic codes in almost every state. Enforcing the centerline rule can also place the Motoref at significant risk. When you are assigned to a centerline event you should always discuss the centerline issue with your Chief Commissaire before accepting the assignment.

Centerline Enforcement

When the local police are well educated in bicycle racing and understand the centerline rule, they are less inclined to get excited when they observe a centerline violation.

When police officers see race officials doing what they said would be done in the case of centerline infractions, the police relax and the event will go smoothly. In an effort to avoid these reactions to centerline violations two things must be done:

- First, the race officials (normally the CR prior to race day and on race day) must explain very clearly to the police what will happen during the course of the race in regard to centerline infractions and how they will be handled
- Second, the Motoref must be very active in enforcing the centerline, particularly when a police officer is watching.

The most understanding police official will lose his optimism and sense of cooperation when faced by an unexpected event that is not being taken care of by the race officials.

All the riders must be aware of where or when the centerline rule will be enforced. During the officials meeting prior to start of the event, the CR goes over all issues that pertain to the race along with assignments. From this time forward, all the officials will talk and deal with the centerline issue in the same manner. Prior to the start of the race all riders will receive instructions on how the race will be conducted along with centerline enforcement.

In general, when enforcing the centerline there should not be any hesitation on the part of a Motoref. This sends the wrong signal to the riders and teams that sometimes you will enforce and sometimes you will not. To take care of a centerline situation you move across the line and start moving up alongside of the peloton. If there is a crash within the peloton, riders will cross over the centerline because there might not be enough room. If the Motoref is in the wrong place at the wrong time, someone can get seriously hurt, so they must always have an escape route planned. There must be an instinctive reaction to a crash. There are many choices of action but thinking about your choices prior to the incident will minimize your reaction time and maximize everyone's safety.

☒ At the beginning the degree of enforcement is progressive. There will be times when riders come out over the centerline due to expansion of the field. This is normal but cannot be tolerated. Usually the rider will go back over the line when the field stretches out enough and there is room to move back in safety. A friendly word or two with the offending rider will usually suffice.

☒☒ If the field expands and the riders take too much time getting back over the centerline, then the Motoref begins blowing a whistle or, in more severe cases, the motorcycle horn. The Motoref also pulls up next to the offenders and gives a warning. Usually, this takes care of the immediate problem. Constant vigilance and action by the Motoref will minimize the amount of extra time that riders spend

in the left lane. If they get lax, the riders will begin to spend more time over the line and it will be more difficult to move them back.

☠☠☠ The next step in the deterioration of centerline control is the rider who comes out over the line just to look up the road and see what's happening at the front of the peloton. He comes out for a few seconds then goes back into the peloton. This rider needs a stern warning and if he persists in coming out over the centerline he is removed to the rear of the field.

☠☠☠☠ Progressing to the next level of seriousness is the rider who comes out over the centerline and advances toward the front of the field. When a rider is observed doing this, the Motoref's response must be swift and deliberate. The penalty for this action should have been discussed prior to the race in the officials meeting and that is what should be enforced. Normally this would get you the most severe penalty up to disqualification.

Herding the Riders Back Over the Centerline. If the peloton begins to come out over the centerline due to a crosswind, they can sometimes be herded back over the line by positioning the motorcycle on the centerline and moving slightly slower than the peloton. As riders approach from behind, they are forced to get back over the centerline or ride around the motorcycle on the left. The second choice is a sure penalty. The key to this maneuver is to go SLIGHTLY slower than the field. Riders must have a chance to make room for them to get back over the centerline and safely into the peloton. If they are forced in too quickly, a crash is sure to occur.



Figure 12- Centerline Issues

The danger increases exponentially as the crosswind increases in strength. Echelons form very quickly and come across the centerline. Chances are good that if the motorcycle referee lets the situation get out of hand just once then all is lost and control will never be regained.

Herding the riders back over the centerline by driving slower than the peloton, only works while the Motoref is there. The riders will all be squeezed dangerously into a confined space. As soon as the Motoref leaves, the peloton will come back out across the centerline. It is nearly hopeless to enforce centerline when there is more than one echelon. And the Motoref, in trying to do his job, will almost certainly cause a crash, even though at the rider's own hands.

Unfortunately, penalties are the only way the officials, through the Motoref, can demonstrate to the local jurisdictions that riders can be controlled and the full race environment kept safe. A bad situation is created when police officers observe riders committing centerline violations in front of officials but no action is taken against those offending riders. The police officials feel they have been misled and may take action themselves by stopping the race at that point, or not allowing the race to return at a future date.

Tactical Use of Wind. Smart riders will try to use the wind to a tactical advantage. If there is a crosswind coming from the left, riders go to the right shoulder. The only way another rider can get a draft is to ride in the dirt. So the peloton strings out and no one gets the advantage of a draft from following a rider.

If the crosswind comes from the right, the smart rider goes to the centerline and rides there. The only way a following rider can get a draft is to be over the centerline and in violation of the rules. In the heat of competition, riders become oblivious to where the center of the road is and fight for the draft.

Cross Wind Echelons. A crosswind will always undo the best laid plans of the promoter and officials. When a strong wind blows from either side of the peloton, an echelon will probably form. Riders seek shelter from the wind by lining up behind and to the left or right of the riders in front of them. A typical traffic lane will tolerate six to seven riders angled back across the road in an echelon formation.

The problem becomes clear when one additional rider is added to the formation. There isn't enough room in the right traffic lane and the additional rider will be on the left side of the centerline. If the single line echelon rotates properly, every rider in the echelon will be guilty of a centerline violation.

Twelve to fourteen riders can form a double rotating echelon and not violate the centerline rule. Sometimes team tactics in the echelon will force unwanted riders across the centerline. Riders from behind can bridge up to the lead echelon. This puts too many riders in the lead group. Someone will always be forced over the centerline.

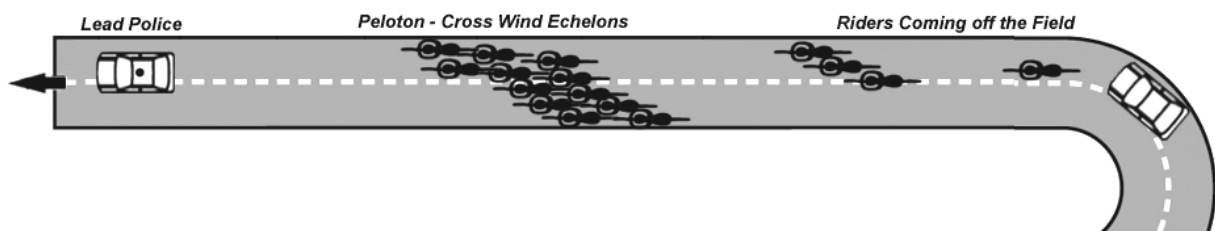


Figure 13 – Echelons, wind from riders' right

When the echelon crosses the centerline, nearly everything the Motoref says will fall on deaf ears. The riders shift into a survival mode and will do anything, including crossing the centerline and risking bodily harm, not to get dropped from the echelon. If you add 80 additional riders to this scenario, you have several echelons with total road blockage

and chaos. Common sense tells the Motoref that more echelons should be used, but tactics and instinct overpower common sense. The riders will find listening to the official very difficult and might not hear.

When seeing full road echelons develop, a police officer's jaw might tighten up and you can visualize his eyes narrowing behind the mirrored sunglasses. The police do not perceive the echelon as a pretty picture but as a centerline control issue. If the race is to continue, something must be done immediately to get the riders back to the right side of the centerline.

When All Else Fails. It is easy for the Motorcycle Referee to document which riders are crossing the centerline. The Motoref's attempt to enforce centerline will be obvious to the police officers. But this activity may not get the riders to move back over to the right side of the centerline. There are two worst case scenarios in this situation.

1. The police becoming involved, stopping the race, ticketing the offenders, and sending everyone home. If the race is stopped by the police it will never be promoted again. If the race is going to be stopped for centerline violations, the police will usually spell it out in the pre-race meeting with officials. It will not come as a surprise.
2. The motorcycle referee begins disqualifying riders that cross the centerline and removes them from the race. If the centerline problem does not rectify itself, then the officials will stop the race. A short meeting with riders and managers is held to explain centerline rules. The race is restarted, and if centerline problems reoccur, the race or stage is cancelled.

Both courses of action could cause the riders to become unjustifiably hostile toward the police, officials, Motorcycle Referee, and promoters. Overall the Motorcycle Referee will take more verbal abuse over centerline enforcement from the riders and police than any other aspect of bicycle racing. The general consensus remains that the Motoref is solely responsible for centerline activity. Dealing with the abuse is very trying. The bicycle racers must accept responsibility for their actions and understand that their best interests are at issue and safety for all concerned must be a priority.

The best way to prevent either of the above scenarios is to clamp down on violations from the very start and never let up. Make the riders aware that any centerline infraction will not be tolerated and punishment will be immediate. The riders must never get the sense that the Motoref is not watching. The Motorcycle Referee must continually patrol up and down the length of the peloton. Infractions are dealt with immediately. The Motoref must be vigilant. In being vigilant, the Motoref will always be next to the riders.

The Pre-Race Road Use Plan

When having a road race, the police are responsible for public safety. It is up to the promoter, the Chief Referee, and the police to work out the details of road use. The meeting needs to be open, thorough, and completely honest. Nothing should be

omitted concerning what the police are going to allow in road usage. There can be no surprises. All the cards must be on the table and a mutually satisfactory arrangement negotiated.

Prior to the start of the race the Motoref needs to be informed about the road use plan. The Motoref commits himself to the officers in charge of road safety to doing everything possible to make the road use plan work.

The riders and team managers are told of the road use plan and what will be expected of them. The plan is outlined very thoroughly and then is adhered to throughout the event. There will be no deviation from the plan. The plan needs to be consistent from start to finish.

Once on the road, rules will be enforced firmly and without hesitation. If the situation deteriorates, rule enforcement becomes more animated, demonstrating to the competitors that the race is going to be run the way it was described and that the rules will not be changed because the direction of the wind does. Consistency and uniformity will make the situation work for everyone.

Circuit And Road Races – Without Team Car Caravan

Road races that are set up using multiple laps of a course that is more than five km in length are referred to as circuit races. In some cases, shorter courses are also conducted using circuit race rules because of road closure issues (if the road cannot be closed, they cannot be criteriums). The difference between a true road race and a circuit race is only the fact that we cover the same ground multiple times in a circuit race. If you unwind the circuit road race course it becomes a point-to-point event. If you think about the rules using the point-to-point image, problems that occur on a circuit course, such as lapped riders, become much easier to understand. If it can't happen in a point-to-point event, it is probably illegal in a circuit race.

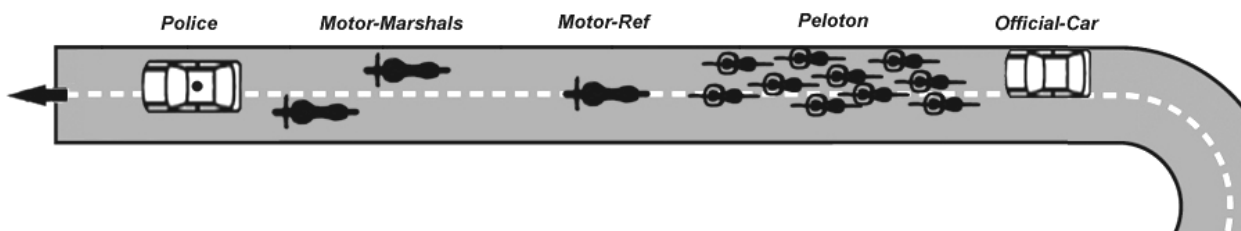


Figure 14 – Local Race Organization

Motorefs may be assigned to positions ahead of the peloton (i.e., Moto 2) or behind the peloton (i.e., Moto 1). In local races, there may, or may not be a Commissaire assigned for the Motoref to work with. In these cases, the Motoref assumes the responsibilities and duties of the Commissaire. One of these referees needs to assume the responsibility for the race, including deciding when to reposition vehicles. This can be effectively accomplished from either position.

There may also be more than one Motoref assigned to the front of the peloton. This is done when the course characteristics do not permit moving resources past the peloton. One of these referees, normally Moto 2, is positioned in front of the peloton and reports on attacking riders. The second referee (usually referred to as Moto 4) escorts bridging riders up to the Com 2 position and keeps Com 2 informed of the time splits to the chase group. These forward referees' primary duty is information flow.



The Com 2/Moto 2 position is responsible for monitoring the front of the event to ensure that the marshals are properly positioned, the peloton is protected and the media motors do not interfere with the race. Once the race begins to break up, and sufficient time gaps have developed, the Com 2/Moto 2 position can shift from in front of the riders to behind the leaders. A gap of more than 30 seconds is normally required before this move is made. Once the gap between the leaders and the break away begins to grow, Moto 2 normally moves to the front of the field to monitor counterattacks and provide time split information to Com 2. If there is no Com 2 assigned, Moto 2 may elect to leave the leaders to be escorted by a motor marshal.

Behind the peloton, the Com 1/Moto 1 is monitoring the field and traffic. This includes centerline enforcement, if required by the event. There will normally be some level of wheel support traveling behind Com 1. Com 1 is responsible for repositioning the wheel support to cover the race. Again, at the local level, the assigned officials may all be on motorcycles and have all of the official responsibilities. One of the on-road officials needs to be responsible for deciding when to change the motorcycles' positions to ensure the safety of the field. Any or all of them, may need to shift to ensure rider coverage.

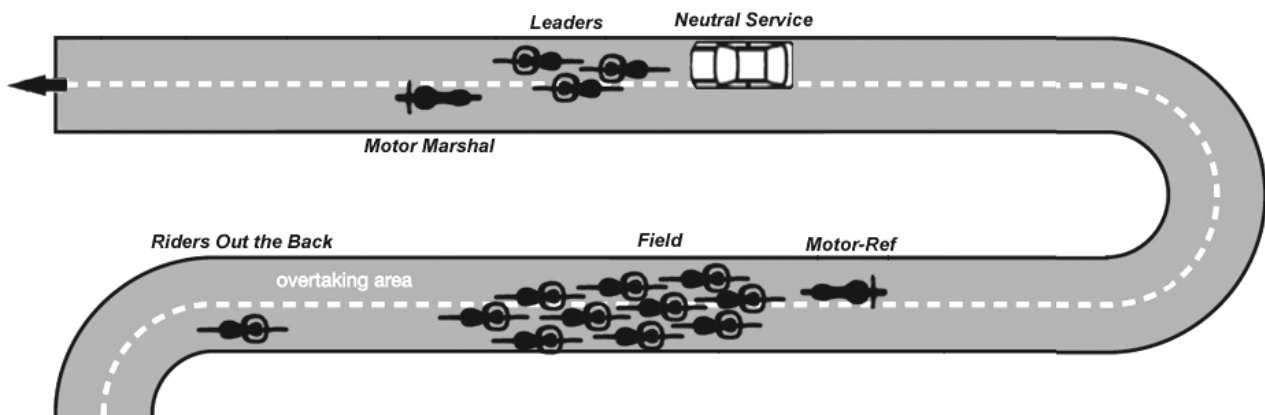


Figure 15 – Late in a Local Race, Resources Redeployed for Safety

Races Passing Races

When the organizer places two races on the course at the same time, the possibility of one field catching the other field exists. This can become an extremely dangerous situation if the fields are allowed to mix, especially if the racers must comply with the

centerline rule. The key to solving this situation is to solve it quickly. If the fields are permitted to mix, the pass can require many miles, if it can be successfully completed at all. One solution which can work is to slow or stop the field that is being caught. The field must be held until there is a significant gap; you don't want the situation to repeat itself.

Circuit And Road Races – With Team Car Caravan

These events are among the largest in the country. They normally have three or four Commissaires assigned, an equal number of Motorefs, and a Time Board official. The Motoref positions will be decided by the Chief Commissaire. Two Motor Referees forward of the peloton have been used frequently. Their efforts are similar to those described above.



The officials behind the peloton (Moto 1 and Moto 3) are kept busy working with the team vehicles and monitoring riders who require service. As the race gets underway, they will immediately check with the team vehicles to ensure that they are hearing Radio Tour. The Radio Tour radio check is one of the first actions for the Radio Tour announcer after the race is started. The referees start at opposite ends of the caravan and check with each team car. If there are radio issues, the referees will assist the team cars if solving the problems. Radio Tour is a key information link between Com 1 and the team managers.

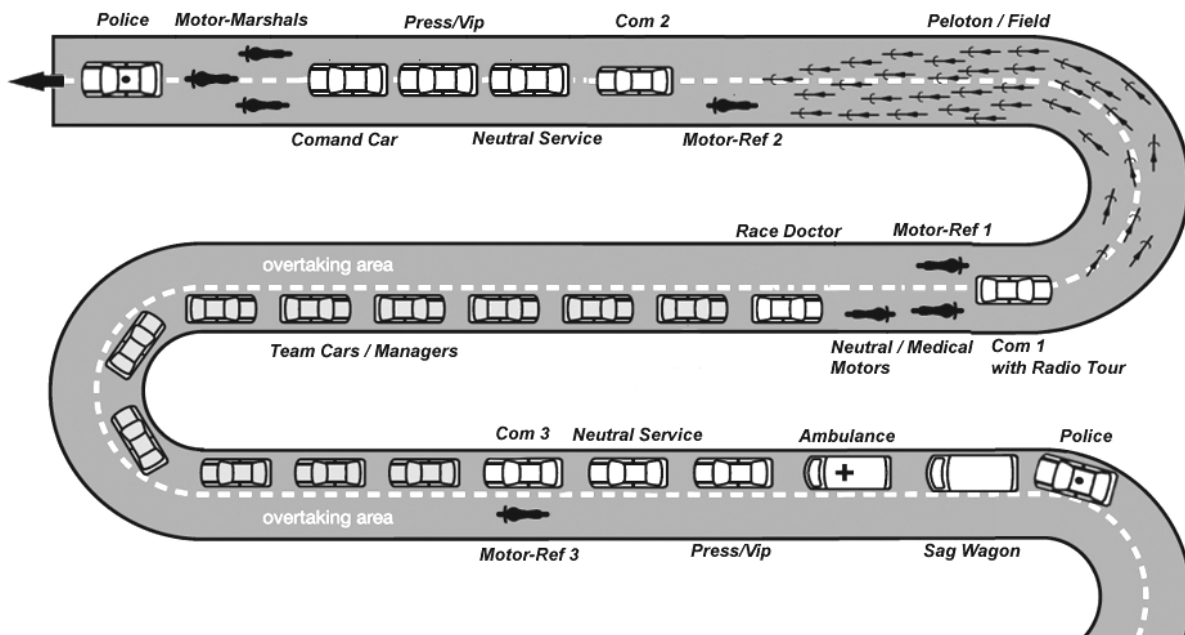


Figure 16 – Caravan Lineup, Early Race

Moto 1 will also assist Com 1 in monitoring the peloton for riders requiring service. All riders needing service pull to the right shoulder. The neutral support vehicle, and/or the

team car, pulls to the right shoulder behind the rider. Moto 1 pulls over on the left shoulder and monitors the service until he is relieved by Moto 3 or Com 3. It is important to ensure that Moto 1's position on the road doesn't impede the caravan traffic: care should be taken not to stop directly across the road from the rider receiving service. If Moto 3 or Com 3 signals Moto 1, he can return to the back of the peloton. When the service is complete, the referee monitors the rider's return to the peloton. If the service is done quickly, the rider is back on his bike and returning before the caravan has passed him. Riders are permitted to use the caravan of vehicles to work their way back from service. If the service is not completed until after the caravan has passed, the team car will probably attempt to help the rider return to the caravan – this is not allowed. Any prolonged drafting or towing (physically holding onto the team car) must be reported (including the time, distance and speeds obtained). There will be much more discussion of managing the caravan vehicles in subsequent sections.

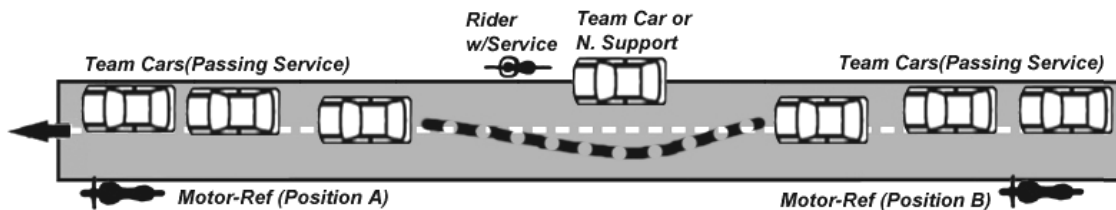


Figure 17 – Motoref Position for Observing Service

The Feed Zone. The feed zone is an area where the motorcycle referee needs to be very alert and observant for rule infractions and unsportsmanlike conduct. Feed zones are the only part of the course where feeding can occur from the side of the road. These areas are selected for safety. Feeding is normally done from the right side of the road. The feed zone is usually a long, flat or slightly uphill stretch that has plenty of room for support personnel to hand musettes and bottles up to the riders. The pace is usually very slow in the feed zone, although there is always the chance for an attack.

Accidents are also likely to occur in the feed zone. The Motoref needs to watch support personnel to make sure they feed from the right side of the road. If a team feeds from the left, the infraction is noted for penalty assessment at a later time. Support personnel may cause another rider to crash while trying to hand up to their own rider. This occurrence is also noted for inclusion in the race report. Another rider may try to prevent a competitor from feeding by blocking him out or knocking the feed from the support personnel's grasp. These actions are also noted for the race report.

Towing and Drafting. When feeding is allowed from team cars, the Motoref needs to be alert to the possibility of towing and receiving hand slings. What typically occurs is this: the rider drops back to the team car to get a bottle. Instead of



taking the bottle immediately, the rider holds on to the bottle at the same time as the manager. The rider is towed up the road for 10 to 20 seconds. This form of helping a rider is referred to as “Turbo Bottle.” The rider may pick up as many as 8 bottles this way. The last bottle may be given with a tow, followed by a hand sling. These activities are noted as to duration and number of times they occur. This information is included in the race report.

While riders are back with the team cars in the caravan, the Motoref must be alert for towing and drafting. Riders may hold on to the door handle of a car for several miles before moving back up through the caravan to the field. Riders may stay in the draft of a team vehicle for miles instead of working their way back up to the field. Holding onto the car is a rule infraction and the Motoref needs to document how long the infraction occurred. Drafting is more of a judgment call.

A rider working up through the caravan may sit for a few seconds in the draft of a team car before going around and up to the next car. A note is made when the rider is obviously sitting in and making no attempt to move back up to the field. The Motoref must make a note of how much time was spent drafting. In cases of drafting and towing an estimation of the speed needs to be made. Penalties will be calculated and assessed following the race.

Barrage And Controlling The Caravan¹

What is a Barrage and why would we do one? A barrage is a technique used by officials to impede the progress of vehicles at times when they would affect the outcome of the race, specifically when they would allow dropped riders to regain a group they were dropped from. While the concept might appear simple, it is full of subtleties and complexities that require study and experience. One often hears an official speaking of “barraging a rider,” but always remember that it is the team cars that are being barraged, not the riders. The riders are always free to go where they can. It is our job as officials to keep the cars and motorcycles out of their way and from helping dropped riders rejoin.

There are two considerations with respect to barrages. On the one hand, a barrage is good as it keeps the riders who were dropped from using the caravan to rejoin. On the other hand, any time you initiate a barrage, you are disrupting the caravan and putting the team cars farther away from their riders. Team managers don't like this very much as they worry that their riders may have a mishap while a barrage is going on, and then their riders will be the ones dropped because they were not nearby to effect repairs.

For these reasons, officials will need to have a philosophy of when and how they will do a barrage. A barrage done poorly during a crucial portion of the race can be disastrous

¹ The basis for the Barrage and Caravan Control section was provided by Mr. Shawn Farrell

to the event. On the other hand, a barrage done too seriously at a time when it is not important is seen as silly and causes the managers to lose respect for the officials.

Basic Concepts of Barrages. The following are some of the basic concepts and philosophies involved in all decisions regarding barrages. As you will note, some of these are in conflict with others, so good judgment, experience, and a deep understanding of the flow of the caravan are essential to making the correct decision.

- **Riders who have mishaps should not have to cross a gap caused by a barrage.** Riders who suffer legitimate mishaps are entitled to use the existing caravan to rejoin the field. This is not the same as motorpacing behind one's own vehicle or another vehicle outside of the caravan. It is important that Commissaires and Motorefs are aware of who has had mishaps and who has not, so that they can make the correct decision regarding whether a barrage is warranted or not.

- **Barrages should not be done when riders are dropped decisively and are going out the back without a fight.** Many times, especially at the end of a long race, the domestiques will have done their jobs and they will sit up and go out the back. With experience, an official will know the riders and the look of someone who is conceding their fate. One big change in the caravan in the last five years is that fewer and fewer barrages are needed or seen near the end of the race. One reason is that managers are telling their riders to not play around in the caravan if they are going to be dropped. The commissaires have responded by avoiding the silly barrages of the "laughing group" that is not threatening to use the caravan to rejoin anyway.

- **Barrages are not normally done on uphills.** Unless a caravan is moving in excess of 15 mph, there is little benefit of a draft. Thus, it makes little sense to initiate a barrage on a climb, since the speed will be slow enough that the cars are no advantage. In fact, they are more often a disadvantage as the riders have to breathe exhaust and the vehicles take away their line through the curves.

- **The later in the race and the farther forward the situation is, the more serious the barrage.** Often, a single rider may be dropped early in a race. Usually such a rider is also not one of the top riders or a likely contender. The officials then have to decide what to do about him. Normally, a barrage will not be done in this situation. The logic is that any rider who is dropped early will certainly be dropped again later. He may get back into the caravan once or twice if you do not do a barrage, but in the end, he will go away. On the other hand, if you were to do a barrage for this rider, it would take quite awhile as all the team cars are together early on, and there would be a long disruption in the caravan. Nowadays, the disruption

to the caravan is not seen as worth it under those circumstances. Later in the race, a single rider being dropped may be very significant, especially if it is a top rider, or a rider high up on GC in a stage race. Under those circumstances, the officials would set up a barrage.

- **Sometimes, the concepts above are in conflict and the officials must use their best judgment.** Here is an example: you are with a group of 30 riders late in the race and you have the majority of the team cars with you. A rider has a mishap, and is near the back of the caravan working his way back up. While he is still near the back of the caravan, a group of ten riders is dropped by an attack at the front. The dropped riders are trying desperately to catch up, but the gap is widening. In this case, as the official in charge you have to choose between the rights of the rider with the mishap, and the rights of the 19 riders who survived the attack. In this case, you would maintain the barrage. The rider with the mishap will make it back up to the dropped group, but no farther unless he can bridge the gap by himself.

Mechanics Of Doing Barrages

- **Signaling the team vehicles**

With a motorcycle, there are two ways to signal a team car to not pass you. The most common is to use a red paddle.

The other way is to just use a hand signal. The one recognized in this country is simply holding your hand out with your palm facing the team car. Whether you use a paddle or your hand, the confidence with which you give the signal will determine how well the managers respect it. You want to avoid having to write up a manager for passing without permission if your signals were tentative or unclear.

- **Positioning of vehicles**

Two types of officials do barrages – Commissaires and Motorefs. Both will find themselves in a position to start a barrage. Sometimes the one who starts it will finish it. Other times, the one who starts it will pass it off to someone else after a certain number of vehicles have been allowed to pass. Early in a race, if a significant group is dropped, the officials most likely to be involved in a barrage will be Com 1, Com 3, and Moto 1. Figure 20 shows the situation immediately following a group being dropped from the main pack.

The fact that Com 1 has not passed the dropped riders is a nonverbal cue to the Commissaires and Motorefs that Com 1 intends to take some action with respect to this dropped



Figure 18 – Referee Paddle

Motoref Tip 3

If you are working with a Com 3 that you are unfamiliar with, you should not start the event without finding out how far back in the caravan he will be positioned, how he will advance to do barrages on the flat, and how he will be positioned on climbs.

group. This action might be any of the following:

- Com 1 waits a little while and then decides not to set up a barrage. He passes the dropped group bringing the team cars with him. Note that if Com 1 wanted a barrage, he needed to communicate with Com 3 or the Motoref and let them get into position before he moved forward. Once Com 1 starts passing the dropped riders, it is too late to expect you as a Motoref to clean up the mess.

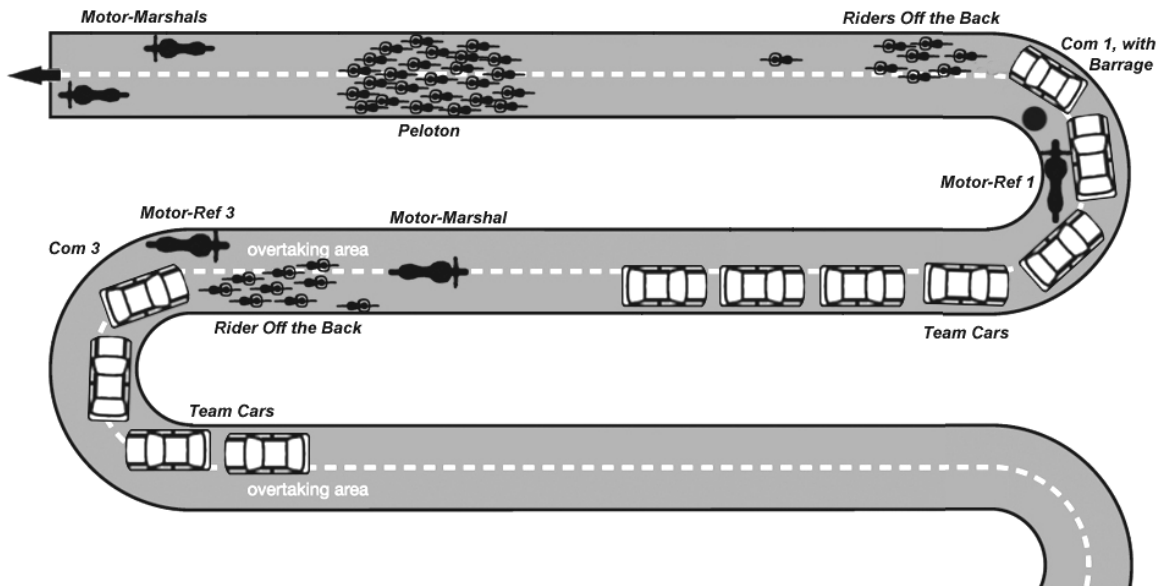


Figure 19 – Com 1 Initiates the Barrage

- Com 1 calls Com 3 up to his position and has Com 3 begin a barrage. Com 1 then moves up to the back of the main group. Com 3 waits until the gap is sufficient and then begins to send team vehicles forward, one by one. Com 3 may wait behind the dropped group until all of the team cars have passed, or he may turn the barrage over to Moto 3 at some point, and then go forward himself. This would be the classical barrage system.

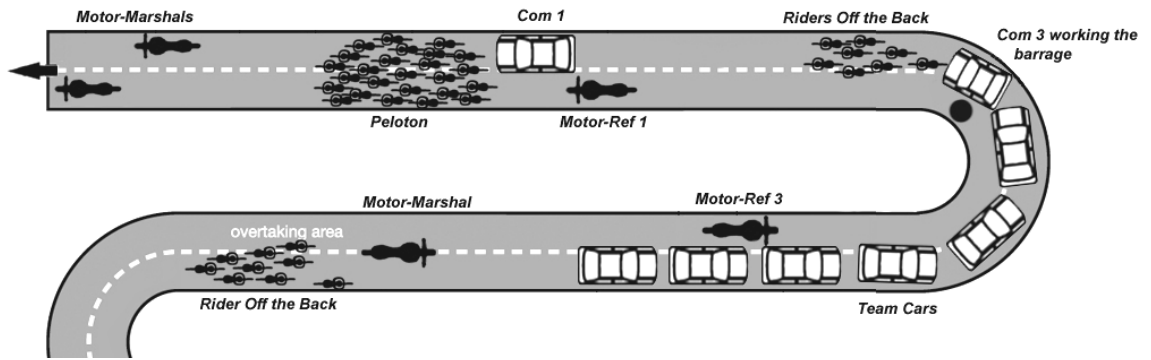


Figure 20 – Com 3 Maintains the Barrage, Com 1/Moto 1 Ready for next Barrage

- Com 1 has Moto 1 begin the barrage, and then he moves forward to the back of the main group. Moto 1 will continue the barrage until replaced by Com 3 or Moto 3.

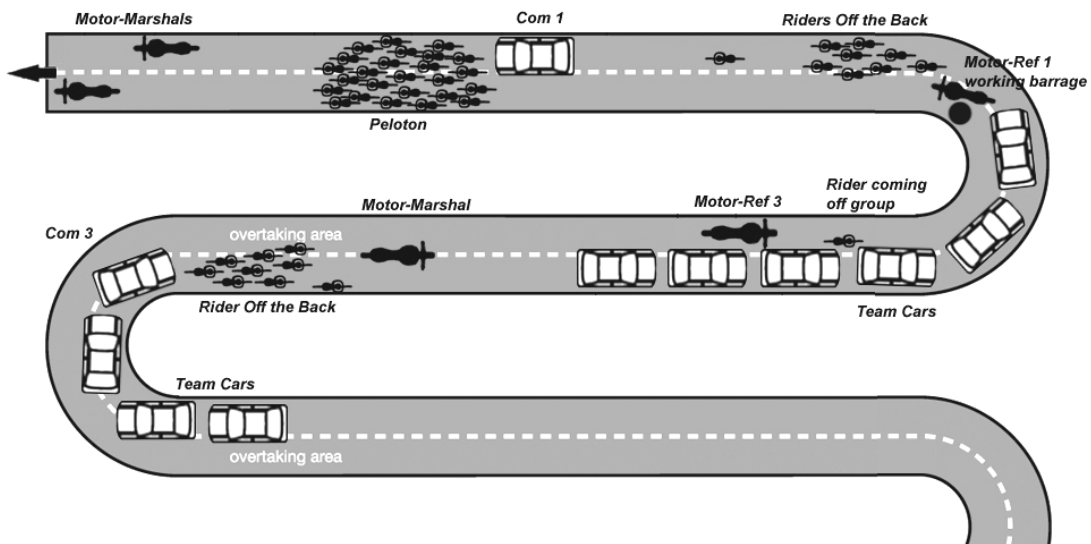


Figure 21 – Moto 1 Barrages the Caravan

While the titles may change, and the number of vehicles involved may differ, this situation will be seen in lots of different guises during an event. If the commissaires and Motorefs all understand the principles, everyone will be in the right place at the right time.

• **Communication between Commissaires and Motorefs**

Commissaires and Motorefs must be in constant communication. The more unfamiliar the two are with each other, the more important this becomes. When you have worked

with the same Commissaire for a long time, sometimes the communication may be just a nod or a look. Other times it will be more direct signals or verbal communication.

- **Hand Signals** are a common way for officials to communicate in a caravan. They are often faster than waiting for a radio communication. While there are not too many that are recognized universally, each crew of officials usually adopts a set that they all recognize. One that is common in all caravans is a signal to advance, simply indicated by pointing forward vehemently. Another important one is a signal the Commissaire uses to indicate to a Motoref what type of barrage he is to do. If the Commissaire gets the attention of a Motoref and then simply points at a rider or group of riders, this indicates to stay with that group and keep an eye on things. If the Commissaire wanted a serious barrage set up behind that group, he would make a vertical chopping motion with his hand, the vehemence of which would indicate how seriously to take the barrage.
- **Radio usage is critical in races.** While races ran for decades without radios, modern races depend on them, and radio blackouts during an event can wreak havoc on the caravan. All caravan officials must know how the radios work, what channels are being used for which functions, and whether it is a simplex or repeater system. Motorefs usually do not carry two radios and would not be able to effectively listen to both of them if they did. Thus, they have the choice of listening to the Radio Tour channel or to the Commissaires channel. Normally they listen to the Commissaires channel. You should always make sure that you know who is on which channel. Radio chatter during critical times in a race, such as when barrages are taking place, must be short and clear. Common things that need to be communicated include when it is time to send vehicles forward and when other officials need to advance to replace someone who is doing a barrage.
- **Following the radio communication** is important for everyone in the caravan, but doubly so for Motorefs. Your job is often compounded by the fact that you don't have Radio Tour, so you don't hear the teams called up for service and don't hear when they are told that the breakaway has sufficient time that team cars can move forward. However, if you have been paying attention to the time splits coming from the other motors, then you will know when a breakaway has the traditional oneminute gap so that team vehicles will be sent forward.
- **Acting independently** is also very important for a Motoref. Consider the following common situation: There is a breakaway of three riders up the

Motoref Tip 4

Somebody has got to remember to ask the organizer to provide for speaker mics. Hopefully the CR will have done that!

road by four minutes. Com 2 is with this breakaway. There is a chase group of five riders that is two minutes ahead of the main field, putting them right in between the leaders and the pack. Moto 2 is with this group. Moto 1 probably will have moved to the front of the pack to help with time splits and to watch counterattacks. Moto 3 hopefully will have moved up to take Moto 1's place. Com 1 will be busy managing the team cars that want to go forward, the riders dropping back for food, the constant nature breaks, and possible mishaps. Radio communication may be sketchy. What if you are Moto 3 and Com 1 has not specifically called you up to replace Moto 1? Do you sit at the back of the caravan, do you move, or do you call on the radio? If you were paying attention and heard or saw that Moto 1 had passed the peloton and was now at the front of it, you should automatically move up and take his place unless you were occupied with a duty at the moment. As a moto, you can move up to the Com 1 position quicker than you can get on the radio, plus it saves radio communication for those who are too far away to talk face to face.

Now, the chase group of five breaks apart and Moto 2 has team cars that want to be with each part of the split. Moto 2 hopefully does not need to request permission from a Commissaire to affect the necessary barrage. However, this now puts him in the awkward position of having to stay with the second part of the group and let the team cars go forward alone. Who will cover the newly developed group? One likely candidate could temporarily be the Time Board Moto. In the USA, the Time Board Moto is always an official, unlike in Europe. Sometimes the duties as a referee must take precedence over duties as a time board. If communications are bad, the Time Board, who is always moving up and back, may be the only one on the road that recognizes that a situation is unfolding.

One of the biggest compliments that a commissaire can pay a motoref is to say, "It's as if he was reading my mind. I was just about to ask him to do something and he was already doing it." On the other hand, the thing you don't want to hear is, "Where the hell was Moto 3? Every time I needed him he was gone."

- **Advancing when things are breaking up**

The most interesting barrage situations occur when the pack dynamics are changing quickly. It is a rare barrage where Com 3 starts it and successfully sends 20 team cars up the road one by one and then calmly takes his place back in the caravan. More often, Com 3 may start a barrage, but after a few cars have passed, more riders go out the back of the main pack. Com 1

Motoref Tip 5

If you are Moto 3 and Com 3 leaves a group to you to finish a barrage for him, make sure you know if he wants you to move back up once it is finished. You may lose radio communications and you should find out before that happens.

will need to set up a second barrage, which he may leave to Moto 1. At some point however, he will be calling for Com 3 to move back up to his position. That is when Com 3 will leave his current barrage with Moto 3. The situations are never stable for long, and Commissaires and Motorefs alike must always be moving forward.

Motorefs rarely are left to follow a group of dropped riders for the duration of the race. Once the situation is stabilized behind, even Moto 3 usually moves back up. This is not always true, however, and if you are Moto 3, you need to know whether you are expected to stay with a dropped group after you have let the team cars go past, or return to the caravan. Remember that the real race is at the front, and that is where most of the officials need to be.

- **Collection of dropped riders into fewer groups**

Eventually you will find yourself in a situation where there just aren't any more officials to handle the number of groups of dropped riders. You may be the only official left with a dropped group and you are holding the team cars back. Up ahead you see the end of the main pack, but then even more riders drop off the back. Now what do you do? If you stay with the group you are with, eventually you will have to send the cars by. At that point the riders, who most recently were dropped from the main pack, will get back in by using the caravan. At the same time, you will have prevented the riders you were with from doing so using the cars.

The best thing to do at that point is to move forward to the next group up the road and re-establish a barrage there. This will give the original group you were with the opportunity to move up a bit, but they will make it no further than another dropped group. By so doing, you will have collected all the dropped riders into one homogeneous bunch, but that will protect the sanctity of the main pack and nobody that was dropped will get back into it.

- **Abandoning the barrage**

On occasion, you will be doing a barrage and then the situation will change in a way that will cause you to abandon it. The main reason would be if someone has a mishap. For example, you may be Moto 1, called upon to do a barrage of a few riders who were dropped from the main pack. Com 1 is in front of the dropped riders and behind the main pack. Things seem to be going well, and perhaps you have already sent a team car or two forward. Then a rider in the pack has a flat. You might see it or hear about it on the radio. Com 1 may then call for you to abort the barrage so that the team cars can all come forward. This will serve the purpose of letting the team car of the rider with the flat get to his rider and will put the caravan back together for the rider to use to get back. As mentioned previously, the group of dropped riders may be so great that you don't abandon the barrage just for one rider with a mishap. That is the type of decision that can only be made at the time, but might be one you have to defend later.

- **When barrages fail**

Despite your best efforts, barrages often fail. Fail, in this case, means that riders who were dropped managed to get back in. If you are the one doing a barrage, you hate it

when that happens on your shift. There are a few reasons that barrages fail, some of which you can prevent and some you cannot:

- **The barrage was never set up correctly.** Sometimes a Commissaire will move forward too soon, leaving the poor Motoref with riders mixed in the caravan. In this case, there really wasn't a barrage. It is hard to impossible to get riders out of the caravan once they are in. The only way to do it is to go to a car far ahead of the riders mixed into the caravan and put out the paddle and slow them down. This opens a gap in the caravan and does set up a barrage, although it was not an ideal way to set it up.
- **The barrage was abandoned due to a mishap in the field.** This was discussed above and doesn't really count as a barrage failure.
- **The person doing the barrage let too many team cars go through.** The cars filled in the gap too quickly and the dropped riders found themselves in the caravan again. This is the situation that you want to avoid if you were doing the barrage. It means that riders are back in the field that should be gone and it probably means that you have to buy the beer for the Commissaires that evening.
- **The main pack slowed down.** Suddenly the dropped riders are gaining on the pack again. If some team cars had been sent by, then the dropped riders will ride into the back of them and use them to get back to the pack. This is a particularly annoying situation that can be handled two ways. The first is to just let them ride through the caravan. The second is to make the caravan behind the pack pull to the right and stop, let the dropped riders ride by, and pull in behind them. Com 1 will normally make that choice, but he must know that it is happening. The Commissaires are usually looking forward. If the barrage was established, they will assume that the dropped riders are gone and will not be seen again. Nothing is more annoying to a Commissaire than to have a group of dropped riders appear out of nowhere and ride through the caravan, especially if they had a Commissaire or Motoref with them. The last thing the Commissaire wants to hear at that moment is, "oh, I thought you knew." The Commissaire won't know unless you tell him.

Motoref Tip 6

Anytime you are with a dropped group that is approaching the back of a caravan, you must make contact with the commissaire with that caravan so that he can decide to stop the caravan if it is necessary.

- **Controlling the Caravan on Climbs.** Uphills present special challenges to caravan management. Much of what will be described below would not really be called a barrage, as the same procedure of holding team cars back is not done the same way on an ascent.

- **Short Climbs.** Short climbs are probably the most difficult for caravan managers. On short and steep ones, a few riders may lose contact, but you go over the top before they have a chance to be truly dropped. This leaves the Commissaires and Motorefs with many decisions to make. If a single rider comes off on a short climb early in the race, usually everyone just goes by him. He may very well reappear once the caravan starts going down the other side. If there are many short steep hills, and the same rider keeps doing this, then he is playing with you. At that point, Com 1 will ask Moto 1 to do a quick barrage. That means he would hold the team cars, but he would let them go by rather quickly. Sometimes, a rider like that will suddenly become a lot stronger when he sees what will happen to him if he doesn't stay in the pack.

A classic example of the problems associated with short climbs is the famous Manyunk Wall at the USPRO road championships. The hill is short, but wickedly steep. The problem is compounded by a very short and fast descent just after passing the top. When riders come off the back on this climb, if no barrage is initiated, then they are very likely to be mixed in with the vehicles on the descent. On that descent, it is a very dangerous place to be, so the officials must always balance safety versus the disruption of the caravan. The caravan is significantly disrupted because a very small gap at the top of the climb turns into a huge one by the time you get to the bottom. It takes several attempts at managing the caravan on Manyunk before you will figure it out. The process used today is that Com 1 will leave Moto 1 or Com 3 in charge of the caravan while he goes forward to the back of the main pack taking a neutral support vehicle with him. The Barrage Commissaire does not send vehicles by him in the classical sense; rather he leads them forward when the space permits. This is similar to a common technique used on long climbs, which we will look at next.

- **Long climbs.** When long climbs are part of a race, a different caravan management procedure is used. It helps if you know the course well. Someone in the race needs to, and all of the officials should know who that person is. When the race approaches the base of a long climb, Com 1 will ask neutral support and Com 3 to move up behind him. As the race strings out, Com 1 will pick his moment to pass straggling riders, trying not to hinder their climb too much. Neutral support will try to stay on his bumper. Com 3 and Com 4 (if assigned), will play "accordion" with the team cars. When space is

Motoref Tip 7

Make sure to ask the Commissaires you will be working with whether they want you to send team cars up at your discretion during a barrage or whether they are going to tell you when to do it.

available, Com 3 will lead the team cars through. Sometimes, a Motoref will also be involved. The basic goal is to try to get the team cars spread out and send them forward when there is enough space to do so, but we don't really worry about drafting, so the barrage is not done in the standard way. The basic flow is that every Commissaire or Moto that has a group of team vehicles behind will keep moving forward when there is space, usually stopping their advancement behind a group when they see that just up ahead of that group is an official with a group of team cars. Everyone moves forward, but everyone uses the visual cue of the cars ahead to know when to stop moving forward.

On climbs, the Motorefs are also watching for riders hanging onto vehicles. Moto 1 and 3 may spend more time going back through the caravan and then returning to the front, always watching for misbehavior on the part of riders that were passed by caravan vehicles.

Long climbs are frequently complicated by short sections of downhill. Many times you are getting the caravan vehicles spread out but suddenly discover a downhill you did not know about. At that moment, there will be many riders using the caravan vehicles. However, there is nothing you can do about it, and if those riders were dropped once on the first part of a climb, they will be dropped again when the climb resumes.

On long climbs, we usually err on the side of letting the team cars go forward earlier rather than later. This is because opportunities to advance may be few, and things always get more strung out later. One second you will have a few team cars behind you and the last car of the caravan ahead of you is a few meters up the road, and suddenly they are gone. Radio communication becomes critical in these situations. All official vehicles should be doing time splits with each other to figure out where up the hill everyone is.

- **Procedure at the top.** On long climbs, everyone needs to know where the top is. Usually there is a KOM or something at the top in a stage race, so the mile markers indicating the approach of the KOM can be helpful. While we try to let the team cars pass quickly early in the climb, when we get near the top things get trickier. The Motorefs become very important in monitoring the position of riders and groups of riders with respect to the team cars. A particular Motoref or Commissaire is often sent to the top and this person acts as the gatekeeper. When team cars approach, they are either allowed to pass and continue down the hill, or they are pulled off and told to wait. The team cars are usually held when the gatekeeper sees that a group riders is about to catch the cars immediately before a descent.

Final Comments. Doing an effective barrage is one of the most interesting aspects of participating in a caravan. You always have to make decisions, and the situation is never stable. You always have to weigh the pros and cons of the barrage on

the possibilities of the race. You don't want dropped riders drafting off cars, but you also don't want riders with mishaps to lose ground because their team cars were too far behind. It is always a gamble either way. If you don't do a barrage and somebody gets back using the caravan, you may well get an earful from a team manager. On the other hand, if you keep the team cars back too long and it costs a rider the race when he flats, you will really get an earful then. Here are three last things to keep in the back of your mind:

- Always use common sense and keep the point of a barrage in mind.
- Remember that riders have been getting to the finish line without us for over 100 years. If you really don't know what to do in a situation, one good choice is to get out of the way.
- All issues of safety take precedence over anything having to do with sporting ethics. You can do 100 excellent barrages, but all you have to do is knock down one rider and your balance sheet is in the red.

THE MEDIA MOTORCYCLE

The media motorcycle driver is instrumental to the continued success and growth of bicycle racing. His knowledge and driving skills enable millions of racing enthusiasts to experience the thrill of bicycle racing from a different perspective. From the media motorcycle, words of writers and radio announcers, pictures from photographers and television cameras, make their way to enthusiasts who can't be present for the action.

Media motorcycles are ideal for gathering material that is newsworthy. Results from one-day races and daily coverage of major stage races are of interest to a wide audience. With the assistance of the media motorcycle, journalists provide dramatic photographs for newspapers and magazines, television cameras take the viewers into the middle of the competition, and announcers tell the listeners what is happening. Sportswriters in the middle of the competition can capture the excitement and pass it on to readers.

VALUE OF MEDIA MOTORCYCLES

Media motorcycles give race sponsors the opportunity to get coverage of their products in association with the event. Contract photographers concentrate on gathering pictures that contain sponsor logos and show sponsor products in use. In addition to being newsworthy, the material is excellent for advertising. Material gathered from media motorcycles can be used in future advertising campaigns.

Media motorcycles gather material the promoter can use to advertise the event and attract new sponsors for future participation. Possible sponsors look at current materials to determine if a particular event will suit their advertising goals. The better the material provided by the media motor, the better the chances of a new sponsor signing a contract.

The media motorcycle gathers material that is current and newsworthy. The public can find out what is happening with an event as it progresses. The material provides immediate advertising for the sponsors. Photographs and videos can also be used later to improve advertising campaigns. The promoter can use spectacular media releases to attract new sponsors to the event. Without the media motorcycle, good photographs and videos would be unattainable and the sport would suffer from a lack of coverage and sponsorship.

DRI VER RESPONSIB I L I T Y

Experienced drivers know how to get the passenger into position to document the best action and get the best shots **without** influencing the outcome of the race. The media

motorcycle driver must never forget their primary role is the safety of competitors and the event. Do nothing that endangers a rider. The most common driving mistake is to try to stay next to the riders during descents, corners, and strong crosswinds.

The media motorcycle driver will also try to pass riders in these conditions. These are driving errors that should never be made. The driver needs to wait until a safe place to pass appears and the driver can get past the riders without putting them in danger.

During the race there are times the media motorcycle driver is left next to the riders with no supervision from motorcycle marshals or officials. It is the responsibility of the media motorcycle driver to behave in a safe manner, to not jeopardize the rider's safety or influence the outcome of the event. The driver must have the experience necessary to prevent him from making simple mistakes.

A media motorcycle driver must never endanger the riders through his driving. Good driving skills come from years of working with the peloton and allow the experienced driver to read what is happening and get into position before the expected occurs. The media motorcycle driver also has the skill and reflexes to get out of the way when something unexpected happens.

It is important to note that the media motorcycle **does not** have the freedom to move through the caravan at will. Its movements are under control of the commissaires at all times. The most important consideration is always safety. If a spectacular shot cannot be taken safely, it will have to be lost. The media motorcycle must **never** endanger the riders when positioning for photos, videotape, or stories. The media motorcycle rider must always remember that the DRIVER is responsible for the safe operation of the motorcycle, not the photographer.

DI RECTI NG AND CONTROLLI NG THE MEDIA MOTORCYCLE

The individual responsible for keeping the event safe is the Chief Commissaire. The media motorcycle driver never goes anywhere near the peloton without permission from the commissaires. They may not go next to the peloton without permission from the individual in charge. The safety of the riders is the main reason a media motorcycle may not go next to the peloton without permission

A tactical development in the field is another reason the media motorcycles will be kept away from the peloton. If there are attacks and blocking taking place, the motorcycle will interfere with these tactics. Riders and teams will use the motorcycle to gain a technical advantage by drafting or cutting another rider off. The media motorcycle is never allowed to influence a race in this manner.

Different media motorcycle drivers have different driving abilities. The Commissaire cannot treat all the media motorcycle drivers the same. Experienced, skilled drivers get

greater access to the peloton than less experienced motorcycle drivers. As the media motorcycle drivers gain experience and exposure, their opportunities improve.

The decision of where the media motorcycle driver goes is decided by the individual coordinating them. His decision of where the motorcycle driver goes is based on the ability level of the driver and developments in the race.

COMMUNICATIONS FOR ACCESS TO PELOTON

A communications system should be available for coordinating media motorcycles. In ideal situations, every motorcycle driver has a radio with a media channel. It is important to note that the media channel should be separate from the officials' channel. When there are insufficient radios for all caravan and motorcycle drivers, a coordinator is designated to interact with all drivers who do not have radios. Media personnel never talk on the officials' channel; they can, however, monitor the officials' channel if they have that capability.

When access is limited and only one media motorcycle can safely be next to the field, then the commissaires will only allow one media motorcycle access to the peloton at a time. When the one media motorcycle next to the field has gotten his shots it move on and the next motorcycle will be sent up, when appropriate, by the commissaires.

If the media motorcycle next to the peloton creates, or gets caught in an unsafe situation, it should move out of the way. When conditions allow, more media motorcycles are sent up to the peloton. The waiting group of media congregates just outside the service lane at the rear portion of the caravan.

Normally there are no radios available and the media motorcycle driver must move alongside the individual in charge of access (commissaries) and get permission to go next to the peloton. When permission is given, the media motorcycle moves into position next to the field. The Media motorcycle driver must stay alert to what is happening all around him.

While moving through the caravan toward the back of the peloton, the media motorcycle must be aware of the big picture. If there are a number of other motorcycles in the caravan waiting for permission to move forward, the waiting should be done at the back of the caravan. The left lane beside the caravan is referred to as the "service lane" and is used by the team cars to rapidly get to the back of the peloton. The teams own the "service lane" and motorcycles use it only when they don't need it to service the cyclists. Whenever you are in this area you must always be aware of what is going on around you and especially behind you.

This is normally how service is handled:

- The cyclists raise their hands as high as possible or there is a crash

- The commissaire with that group uses a radio to notify the team car that service is required
- The team does not answer but pulls out of their spot in the caravan and moves quickly to a position behind the peloton
- Once they have completed the service they pull off to the right side of the road and the other caravan cars move to the left of the retreating team car
- This continues until the retreating team car takes their place in the caravan.

With the proliferation of cycling team radios one important element of the service procedure is getting lost, that when a cyclist raises a hand, the gesture indicates the need for service. Normally at the managers meeting or through a communiqué the teams are now reminded that the cyclist needing service must also raise their hand, but there is no guarantee that this procedure will be followed.

A honk of the Commissaire's car horn may be the signal it is time for the media motorcycle to move away from the peloton. Once the signal to move is issued the driver of the media motorcycle must move on regardless of what the passenger wants. It is very important the media motorcycle driver is alert to what the peloton is doing and what the Commissaire wants. Normally you do not want to be told to leave but move out of the way as soon as possible on your own. The number of times you are told to move by a commissaire has an inverse relationship to the number of times you are going to be allowed to move around. If they have to tell you to move many times, that means that you will not be allowed to be in those prime locations, which in turn will reduce the amount of media activity for your passenger.

No matter how or when access is granted to the peloton, and no matter what communication system is in place, the media motorcycle may have to leave due to conditions that jeopardize the riders' safety. The media motorcycle driver must have the ability to recognize these conditions and react accordingly.

An experienced media motorcycle driver will leave an unsafe situation long before being told. The road may narrow unexpectedly and get winding, or start down a steep descent. The media motorcycle driver must leave when conditions get dangerous. Rider safety must never be compromised by the presence of a motorcycle.

INTERACTION WITH THE PELOTON

Interaction with the peloton is where knowledge and experience are most important. Experienced media motorcycle drivers are able to recognize and avoid dangerous situations before they develop. When an unexpected mishap occurs, the proficient motorcycle driver relies on his reflexes, skills, and experience to avoid injuring any riders. The media motorcycle driver accepts the responsibility to ensure safety when next to the riders.

The media motorcycle driver needs to be very experienced with bicycle racing. The driver knows how the peloton behaves when faced with different aspects of the race, such as terrain changes, miles left to the finish, team tactics, and changes in general classification.

No other race vehicle spends as much time next to the peloton as the media motorcycle. The passenger wants to be close to the action for as long as possible, and that means being right next to the riders in competitive conditions. It is important the presence of the motorcycle not influence the outcome of the event. A single wrong move by the motorcycle driver can ruin the race for the competitors, the promoter, and the spectators.

ADVERSE AFFECTS FROM THE MEDIA MOTORCYCLE

The presence of the media motorcycle can be the catalyst that makes something occur, either tactical or hazardous. A young Soviet rider used a mistake by a media motorcycle driver to launch his famous attack in the Tour De Trump, and a Canadian rider mugging for a television camera caused a huge crash the next year during the Tour DuPont. In the interest of fair and safe competition, the media motorcycle driver has to be aware of the profound effect he can have on an event. He must do all he can to minimize his influence.

The motorcycle can be a major distraction or obstacle in the execution of a smooth event. An experienced media motorcycle driver will have a minimal impact on the race while positioning his passenger to take photographs and shoot videotape.

FOLLOWING INSTRUCTIONS

The media motorcycle driver understands the job and knows how to follow instructions. Regardless of the passenger, the media motorcycle driver listens only to the person who controls his access to the peloton. The passenger behind the media motorcycle driver has no authority to tell the motorcycle driver where to go or when. The media motorcycle's position in relation to the peloton is left entirely up to the commissaires first, the driver second, and the passenger, a distant third. The passenger wants to have the most control, but a good media motorcycle driver will keep the passenger in his place. The passenger has the least to say when rider safety is in doubt.

RADIO ANNOUNCER AND MEDIA SPOTTER

The radio announcer is probably the least demanding passenger for a media motorcycle driver. In most cases, the announcer will only give reports on the hour and half hour during the event. The remainder of the time is spent in front of, or behind, the caravan monitoring the race's progress.

When broadcast time approaches, the reporter usually wants to be next to the peloton so he can recap the action and give a current report to the listeners. The media motorcycle driver must stay aware of when a broadcast is due and arrange to get his passenger into position for the next report. The media motorcycle driver contacts the Chief Commissaire or caravan coordinator to ask permission to go next to the peloton. If permission is granted, the media motorcycle driver positions himself and the reporter. Once in position, the media motorcycle driver is always prepared to move ahead if something unexpected happens, regardless of what the passenger is doing.

Many times, the radio reporter will not even be granted permission to station himself next to the peloton. Radio reports can be made just as easily from the side of the road, as from inside, in front of, or behind the caravan.

The media spotter, on the other hand, will be very busy moving around and giving updates to the program director or producer. In most cases they must not sit in one spot for long periods of time and need to have great access to the entire race. However, they are still under the direction of the commissaries when they do move. They must also be very cognizant of what is happening when they are close to the peloton and must be ready to act on a moments notice.

PRINT REPORTER

Another passenger that does not require close access to the peloton is the print reporter. The media motorcycle with the print reporter is located in front of or behind the peloton and caravan. The print reporter is seldom positioned next to the peloton. It is important the reporter have a radio with the media channel so he can monitor the progress of the event. The only time the reporter finds himself next to the peloton is when the media motorcycle moves from the rear of the caravan to the front.

The print reporter is in the caravan to get the feel of the race so he can incorporate that energy into the article. Most of the information is gathered from the radio or talking to others around him. The radio reporter and the print reporter have low profile positions within the race caravan. They play an important role in publicizing the race, but they do not require close proximity to the peloton to do their jobs.

PHOTOJOURNALIST AND PHOTOGRAPHERS

Photojournalists are critical to the success of publicizing the bicycle race. The photojournalist must be in position to get exciting photographs of the competitors. It is the job of the media motorcycle driver to get the photographer into that position, in direct contact with the peloton. In case of a mishap, the position of the motorcycle can be very dangerous for the riders. The media driver's job is one of the most demanding positions in a race.

In addition to the safety concerns, tactical matters involve the media motorcycle and its position. Riders are very good at what they do. They are capable of taking tactical advantage over their competitors by using an unsuspecting media motorcycle. The media motorcycle driver must be alert and not affect the outcome of a race by his position. Tactics are another reason the media motorcycle may be denied access to the peloton.

The media motorcycle carrying a photographer must get permission from Commissaire in charge before going next to the peloton. The Commissaire decides when it will be appropriate for a motorcycle to take position next to the peloton for a period of time. It must not be where riders are likely to attack, or where speeds are high. The best times are when sections of road are wide and straight, where the speeds are low, and sometimes on steep climbs.

If the media motorcycle does have a rider trying to use it to their advantage, the motorcycle should maintain its position but slightly lower its speed to force the rider to break contact. Another tactic is to increase your speed to get away from the rider if they are not within 10 to 15 feet of your motorcycle. Never use your brakes in this situation -- just change your speed to a point that either forces the riders around you or you prevent their drafting off you. After they have ceased using you for an advantage, reconsider your position and fallback or move forward. There will always be another chance for a great shot later.

PLANNING THE SHOOT

An experienced photojournalist/photographer does not go into an event without a plan. He knows what type of an event he will be shooting and brings the appropriate equipment. He might be familiar with the course and know where he wants to be to get the shots he needs. He knows who is in the race and what companies are interested in photographs.

The professional photojournalist/photographer will have a meeting with his media motorcycle driver and detail his plan for the day's shoot. The media motorcycle driver cooperates with his passenger's plans. Together they act as a coordinated team capable of working alongside the peloton to get the required photographs without having an effect on the race. You are in charge of the operation of the motorcycle and so have the most influence on potential problems for race integrity and safety.

During the shooting process, the media motorcycle driver has to recognize what conditions will not allow a safe or interference-free shot and get out of the way. The photographer has to recognize when the shot is not there and tell the driver to move out. Of course, when the Commissaire gives instructions to move on, the media motorcycle driver goes immediately. Everyone has to work together to make sure the race is safe and the outcome is not affected by interference from a media motorcycle.

SHOOTING THE START OF THE RACE

The photojournalist needs photos at the start of the race and must coordinate the start with his media motorcycle driver. The professional photographer will normally shoot the start from the ground. The media motorcycle is not required and must be parked out of the way. After the peloton has departed, the photographer leaves the start area and finds the media motorcycle at a predetermined location. The meeting can be dangerous if it occurs in the flow of traffic; the pickup spot should well off to the side of the road. It usually occurs after the major part of the caravan passes the passenger's position. The driver must be alert when picking up the passenger. The starting area is very active with race personnel and spectators moving around, and race vehicles departing.

With permission from the commissaires, the media motorcycle may park in the middle of the course for the photographer to take photos prior to the start. However, at a predetermined time before the race starts, the photographer must be on the media motorcycle and on his way down the course. There is not enough room for an extra media motorcycle in the middle of the caravan lead vehicles. And in all cases, the media motorcycle driver is on the motorcycle and ready to go. He does not leave his machine.

SHOOTING FROM THE SIDE OF THE ROAD

When the race is in progress there are two types of photo opportunities: pictures taken from the media motorcycle and those taken from the side of the road. The photograph taken from the side of the road is easier. The cycle for taking pictures from the side of the road follows:

- The media motorcycle drives ahead of the race and the photographer tells the driver where to stop
- The motorcycle pulls entirely off the road surface and parks
- The driver stays with the motorcycle
- The photographer takes photos as the race goes by
- After shooting the photographer gets back on the motorcycle
- For safety reasons, the media motorcycle must wait until the last support cars have gone by or there is a sufficient break in the stream of cars after the rear commissaire
- Then the motorcycle driver carefully pulls back onto the road surface.

Once moving:

- The driver gets into the queue of marshals that need to move forward past the last commissaire
- The driver waits for permission to go ahead
 - Under no circumstances does a media motorcycle driver have permission to drive straight up the road past the support vehicles.
- The motorcycle moves beside the next commissaire and gets permission to move forward past the peloton
- The photographer takes advantage of the peloton pass and takes additional shots

- The driver moves to the next commissaire and get permission to move forward
- The media motorcycle takes position forward of the race and starts the process again or changes to another shooting routine.

SHOOTING NEXT TO THE PELOTON

The commissaire determines when it is safe for the media motorcycles to go and take pictures of the peloton. Only when permission has been given will the media motorcycles proceed. How many are allowed to take photographs depends on maintaining the safety of the competitors and fairness of the race.

There are two general methods to take photographs alongside of the peloton. One is coming from the front and the other from behind. A description of each of the procedures follows:

FRONT

- The motorcycles line up to the left and 15 meters forward of the front commissaire
- The motorcycle closest to the commissaire is the first one to be allowed back toward the peloton for photographs
- When the media motorcycle is ready to move back it moves to a position alongside the commissaire and gets permission
- It drops back and gets shots from the front third of the peloton
- After completing its shots, it moves forward to a position behind the commissaire
 - If there is room it moves to right side of the road forward past the commissaire and gets back into the queue of motorcycles from the front
 - Or else it continues forward to the queue without impeding the next motorcycle trying to move back to get a shot.

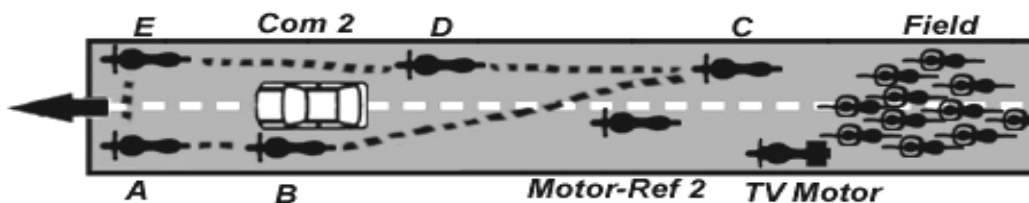


Figure 22 – Press Motor Rotation, Access Controlled by Com 2

REAR

- The motorcycles get into a queue alongside the last commissaire directly behind the caravan
- When space is available alongside the commissaire the driver then requests permission to move forward

- The motorcycle then gets into a much smaller queue alongside the next commissaire behind the peloton
 - This queue is short and usually is kept moving
 - The driver must watch for team car services and crashes in the peloton
 - Staying too long in this position could mean you will never be allowed back to this position again
 - When your turn comes to move forward, you move or lose your ability to ever come back
- The driver moves forward in the direction of the rider the photographer wants to shoot. Moving slightly faster than the riders, the motorcycle smoothly passes the peloton while the photojournalist takes his pictures. The media motorcycle must never provide draft or pace for riders while stationed next to the peloton.
- Remember to watch for actions within the peloton. Beware of cyclists trying to take to draft or pace off you - use maneuvers such as slowing slightly to quickly remove the advantage
- Once the pictures are taken move up to the forward commissaire and get permission to move forward
- Either takes a position in the forward queue, or move forward and park alongside the road for stationary photographs or to wait for the caravan to pass so you can get into the rear queue.

It is important to note that all participants in a bicycle race only move in the direction of the race. Under no circumstances does anyone drive on the race course in the opposite direction of the peloton. The media motorcycle will only pass the peloton from back to front when on the road and moving.

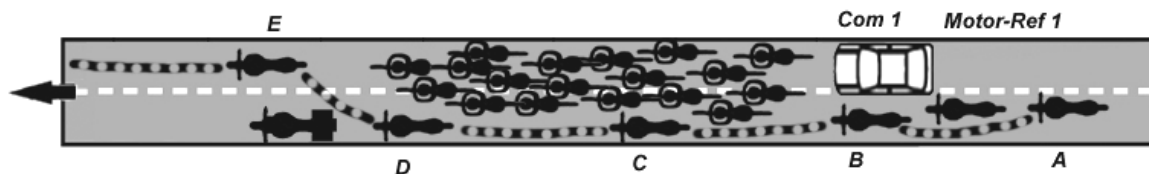


Figure 23 – Press Motors, Access Controlled by Com 1

SHOOTING THE END OF THE RACE

The end of the race is also important for the photographer. The media motorcycle driver must get the photographer to the finish line with enough time to set up and get his shots. Stopping on the finish line to drop off the photographer is unacceptable. In big races, the organizer will provide a deviation for all support vehicles. Only the commissaire vehicles are allowed to continue past the deviation. If a deviation is not provided, the media motorcycle driver must proceed to a position predetermined for drop-offs. Then the photographer walks to the finish line area.

If the race is using a deviation, the media motorcycle driver must go to the end of the deviation area before stopping. Other vehicles will be using the same deviation. It is critical this area not be blocked by a media motorcycle driver dropping off a photographer. The media motorcycle driver and passenger must allow themselves time to park and get to the finish line for the final sprint.

TELEVISION MEDIA MOTORCYCLE

The activities of the television motorcycle is historically one of the most important, time consuming, and problematic jobs at a bicycle race. We are caught between the desire to make the race available to the public and the need to get sponsor time which really pays the bill for the sport we all love. You can call this a love-hate relationship, but without the coverage our sport would still be in the micro-stages of development.

The driver carrying the TV camera has the most difficult job with the potential for the biggest problems. Due to the importance of TV coverage the television media motorcycle should be assigned to the best driver. He must understand exactly how and where he can affect a race, and avoid those situations. He must be an excellent driver, able to react quickly and maneuver a heavily loaded motorcycle. In most cases, the TV drivers are professional drivers hired by the production company.



Figure 24 – TV Motor Shooting the Peloton²

The TV motorcycle driver is responsible for getting the live shots that are broadcast during the race or used in a composite program for post race viewing. There may be two or three TV motorcycles doing these feeds to the studio or taping the action. One or more of these TV motorcycles always has to be in a position to provide interesting shots that can be broadcast.

Interesting shots are close to the action. The audience wants to see straining muscles and sweat. They want to see faces contorted with pain and effort. This requires the TV motorcycle to be part of the peloton. Nevertheless, while being part of the peloton, the TV motorcycle cannot influence the outcome of the race or pose a hazard to the riders.

² Photo by the Beckley Herald, Beckley, West Virginia

It is extremely difficult to obtain this balance. The job requires the skills of the best professional drivers available.

EXPERIENCE AND ABILITY OF THE TV MOTORCYCLE DRIVER

While working with the peloton, the TV motorcycle driver must always be alert to what is happening in the race and must react quickly when attacks occur. The motorcycle could cause a crash or unfairly influence the outcome of the race if not positioned correctly.

If caught off guard, the TV motorcycle driver must make the motorcycle undesirable as a tactical weapon for the peloton. The riders must not be able to gain advantage by drafting. This tactic is neutralized when the TV motorcycle driver moves sideways and reduces speed slowly. Riders are given room to pass safely to the TV motorcycle's opposite side.

An inexperienced TV motorcycle driver will make the mistake of accelerating smoothly to get away. This motorcycle driver has not had the experiences that tell him a rider can pace off a motorcycle at speeds over 50 mph. As the TV motorcycle driver accelerates away, he takes the attacking rider with him, opening a gap very quickly. With this advantage gained, the break may stay away and the outcome of the race unfairly influenced.

POSITIONING THE TELEVISION MOTORCYCLE

The TV motorcycle is normally placed either at the front or back of the peloton. The only times the TV motorcycle is placed next to the peloton is when the riders are sitting up and parading or there is not much activity going on. If the TV motorcycle is next to the peloton, the motorcycle is moving steadily forward to take a position in front.

SHOOTING SCHEDULE

As with still photographers it is necessary for the TV crew to make a list of desired shots. Producers make a list of shots that can be used in newscasts, such as sprints, feed zones, and climbs. TV journalists look at the course map and mark locations where they want to get stationary shots. The start and finish also need to be included in the shooting schedule. It is up to the TV motorcycle driver and camera operator to coordinate their activities in order to get their assigned shots.

AT THE START

Besides the Motorcycle Marshal and Motoref, the TV camera motorcycle is the only other motorcycle allowed directly in front of the peloton at the start of the race. The TV motorcycle, with camera operator on board, is ready to drive away on the sound of the pistol. At the start, the camera operator continues filming the riders. To get a good shot of the start, the TV motorcycle needs to accelerate smoothly. Disaster is assured if the driver stalls the motorcycle. Filming this part of the race successfully depends on the expertise of the driver.

DURING THE RACE

As the race unfolds, the TV motorcycle driver and camera operator provide live feeds of the action. When the schedule calls for a stationary shot and the TV motorcycle is behind the peloton, the driver must ask permission to pass. When it is safe, the TV motorcycle driver will pass the peloton and go up the road to the location for the stationary shot. The TV motorcycle driver must plan to allow time for the camera operator to set up his shot.

Live shots on the road get easier as the peloton thins out or breaks up. With smaller groups on the road, the TV motorcycle can get closer to the riders and provide more exciting shots. Breakaways are ideal when they have 15 or fewer riders. The TV motorcycle driver can stay in close contact with the riders and the cameraman can video the entire group at one time. In this situation, it safe for the TV motorcycle driver to cruise up and down the length of a small group.

Later in the race, if there is a break away, the TV motorcycle will spend most of its time next to the riders. While spending time there, the TV motorcycle driver must make sure he does not influence the break by providing draft to the riders. Normally side shots or shots slightly to the rear of the lead rider are used and will allow good viewing while not allowing an advantage. The TV motorcycle driver is always aware which way the wind is blowing and makes sure he does not block it for the riders. When the road is winding, he makes sure he does not get in the way when riders go from side to side in the corners. When a large enough gap develops, another placement for the TV motorcycle is behind the riders. This must be closely monitored by the commissaires and when required they must move out of the area.

The TV motorcycle positioned in front of the break or peloton can be the object of rider tactics. The TV motorcycle driver must be aware of riders attacking and taking draft from the motorcycle. When riders attack and catch the TV motorcycle, the motorcycle driver must resist the urge to accelerate. The TV motorcycle driver will slow slightly to neutralize any advantage. This forces the riders to go around and not get any advantage from the draft. The key to these attacks is for the TV motorcycle driver to monitor what is going on in his mirrors and react in the proper way by going slightly slower.

It is very important to remember that riders can be drafted away from the peloton when the TV motorcycle driver is caught off guard. The unprepared motorcycle driver reacts incorrectly and tries to accelerate away. This mistake gives the rider draft and an unfair advantage. Drafting during an important attack can have an influence on the outcome race. A simple mistake like this is the trademark of an inexperienced TV motorcycle driver.

At times during the race, the riders will sit up and the pace will drop significantly. Side shots of the riders can be obtained easily, but the TV motorcycle driver must be careful not to position next to one rider and stay there. The camera operator should not try to get the attention of any individual rider when the race slows down. In this situation, the

riders are not concentrating and paying close attention to those around them. The TV motorcycle driver must stay alert and not distract any riders in the peloton. A large percentage of crashes in the peloton occur immediately after the race slows down and riders are sitting up. The fewer distractions there are, the safer the race will be.

The media motorcycle with a TV camera is never used for interviews during a race. Distractions like this pose a great hazard to the riders in the peloton. A rider mugging for the camera is not concentrating on his surroundings. A wrong move can take dozens of riders down. During the first Tour DuPont, a Canadian rider was responsible for taking down a quarter of the peloton after mugging for the camera. Interviews are not to be done and mugging shots are to be avoided.

The TV motorcycle driver understands the adverse effect a running camera has on a rider. It is the motorcycle driver's responsibility to prevent this situation from developing into a serious accident. The driver must not allow the camera to stay near one rider for an extended period. The rider being filmed may stay in control, but others around him may try to get into the picture. The chaos that follows provides an opportunity for a mishap. The TV motorcycle driver must not allow this situation to develop. It will not happen if the camera continues to move up the road past the peloton.

AT THE FINISH

The finish of the race is not filmed from a mobile camera on the back of a motorcycle, but from a ground position. There is not enough room in the run-out area past the finish line for the field and official vehicles, let alone unnecessary media motorcycles. If the TV production crew does not have a camera at the finish line, the TV motorcycle driver must get to the finish line early and drop off his passenger.

The drop-off technique used by the TV motorcycle driver is very important. The drop-off area needs to be decided prior to the race by the TV production crew and the commissaires. If the camera operator is to be used past or on the finish line the TV motorcycle driver must use the deviation or drive through the finish area and stop at least 100 meters down the road. The TV motorcycle is unloaded there and the equipment hand carried back to the desired area. If the TV motorcycle driver were to stop on the finish line to drop off his passenger, the finish area could be blocked for several minutes while the camera operator unloaded all his gear. The only time this sort of drop-off is allowed is if everyone knows in advance and there is ample time to unload and get the motor out of the way. Without such prearrangement, the camera operator is not dropped off on the finish line. The finish area is simply too busy and congested.

If activities are well coordinated between the commissaires, driver, camera operator, and TV producers, all aspects of the bicycle race can be covered. The TV motorcycle can provide the TV audience with thrilling race coverage from start to finish. A professional motorcycle driver plays an integral role in bringing the audience an exciting and fair race.

TECHNICAL SUPPORT MOTORCYCLE

Another type of motorcycle in the caravan is the neutral technical support motorcycle. These small and highly maneuverable support vehicles fill the void created by a single rider, or small groups of riders, trying to escape and stay away from the main peloton. Team managers do not want to commit all their technical resources to one rider and leave the rest of the team unsupported in the peloton. In this situation, the Chief Commissaire will send the neutral technical support motorcycle to cover the riders in the break.

During active racing the support resources are limited and must be utilized wisely. A single rider does not require a full complement of equipment, mechanics, and manager. A technical support motorcycle can meet the single rider's needs as far as wheels and technical assistance.

The technical support motorcycle typically carries the driver and mechanic, two sets of wheels, and the basic tools the mechanic needs to make simple adjustments and repairs. If repairs cannot be made by the technical support motorcycle, a request will be made to have the team car or neutral support car come to the rider's assistance.

A radio keeps the technical support motorcycle in contact with the Chief Commissaire or head of the neutral technical support team. Instructions from the Chief Commissaire or head of neutral support are radioed to the mechanic on the neutral technical support motorcycle. The mechanic tells the neutral technical support motorcycle driver where they need to be.

In ideal situations, both driver and mechanic are members of the neutral technical support company team. They become well known to riders and their managers. Therefore, team managers have confidence in the neutral technical support personnel and their technical expertise.

POSITIONING THE TECHNICAL SUPPORT MOTORCYCLE

The technical support motorcycle usually starts the race positioned in front of the peloton and/or behind Com 1. The neutral technical support motorcycle will stay in its position until directed to a new position determined by race developments.

When a breakaway gains a lead of 30 seconds or more over the peloton, the neutral technical support motorcycle may be dispatched to cover the lead rider, or riders, in the breakaway. When in position, the neutral technical support motorcycle is under the control of the official with the lead riders. The neutral technical support motorcycle does nothing without permission from the officials.

As long as there is a break away, team cars may come up to their riders, talk tactics, and give handups. At those times, the technical support motorcycle driver will drop back out of the way. If there have been repair problems the technical support mechanic will update the manager on the problems.

DRI VI NG TECHNI QUES

The technical support motorcycle driver must watch his mirrors as much as he watches the riders in front of him. There will be times when riders bridge up to the leaders and the technical support motorcycle driver must be prepared to get out of the way. The same holds true for when the team support cars come up to the leaders. The neutral technical support motorcycle driver must be driving his line and driving predictably.

When there is a breakaway, the Chief Commissaire will have the neutral technical support motorcycle positioned behind the leading riders. The motorcycle driver must not devote all his attention to the riders directly in front of him. He must keep checking his rearview mirrors and be aware of any riders bridging up to the break.

If a rider does succeed in bridging up to the leaders, the neutral technical support motorcycle driver must make sure the bridging rider is not helped or hindered in his efforts to make contact. If possible, the neutral technical support motorcycle driver should get out of the way in plenty of time to let the chasing rider catch. The neutral technical support motorcycle driver may move ahead of the riders, or pull off the side of the road and stop.

It cannot be said enough: the neutral technical support motorcycle must stay aware of what is happening around him, and especially behind him. He must be alert, watch his mirrors, be predictable, and anticipate the unexpected. He is there to provide service for the riders and cannot be a problem during the race.

PROVI DI NG TECHNI CAL SUPPORT

When technical support is required and the neutral technical support motorcycle is in a position to provide the service, the same rules apply as if the motorcycle were a team car. All support is given from the right. It is the responsibility of the neutral technical support motorcycle driver to deliver the mechanic directly behind the rider needing support and to park the support motorcycle as close to the right side of the road as possible. The entire service lane and as much of the right lane as possible must be kept open for caravan traffic. If this simple maneuver cannot be performed, the neutral technical support motorcycle driver will soon find himself out of a job.

AT THE FINISH

When a solo rider is able to stay away to the end of the race, the neutral technical support motorcycle driver and mechanic must not draw attention to themselves as the rider crosses the line. Celebrating is for the winner. If allowed by the Chief Commissaire, the neutral technical support motorcycle should follow the rider across the line at a discreet distance and continue to roll as far forward as possible. Room must be available in the finish area for all the other vehicles that will accompany the field when the race ends. Normally, the neutral technical support motorcycle will follow the deviation procedures and leave the course prior to the finish line in a special pullout lane set up by the promoter.

THE ONE-KILOMETER RULE

Stage racing has a one-kilometer rule. It states that if a rider suffers a mishap within the last kilometer to the finish, the rider will be credited with the time he would have gotten if the mishap had not occurred. In case of a mishap, the neutral technical support motorcycle mechanic will get the rider going as quickly as possible.

The rider who has stayed away on a long breakaway wants to finish in front of the field, even if there is a mishap. In case of a mishap, the rider will be on an uncontrollable adrenaline rush, making repairs difficult. The rider will be very appreciative if the neutral technical support mechanic can get him across the finish line before the arrival of a hard-charging peloton.

MEDICAL SUPPORT MOTORCYCLE

Another motorcycle found in the caravan is the medical support motorcycle. The medical support motorcycle carries a race staff EMT/Paramedic, at the very least, and a race doctor, if possible. The medical support motorcycle is an extension of the medical services and provides the riders with a highly mobile platform from which to obtain minimal medical assistance.

A medical support motorcycle driver should have a medical background, or at least advanced first aid training. A motorcycle driver with this kind of background will complement the skills of the medical doctor carried on the motorcycle. The medical support motorcycle driver should also have a basic understanding of bicycle racing. At the very least the driver must have some concept of caravan driving.

POSITION OF THE MEDICAL MOTORCYCLE

The medical support motorcycle is normally positioned behind the Chief Commissaire's car. This position is ideal in case of a mishap causing injuries. The medical personnel can be on the site of the crash and render medical assistance immediately. If the medical support motorcycle team assessment of injuries calls for more advanced medical attention, they can radio for additional help. Information can also be relayed to the team manager of the injured rider.

MEDICAL MOTORCYCLE AND RIDER ASSISTANCE

Crashes are not the only situation the medical support motorcycle team handles. The position of the medical support motorcycle allows riders to receive first aid at the back of the peloton. Riders will not have to drop back through the caravan to find a race doctor. If the medical support motorcycle lacks what the rider needs, the motorcycle can quickly get the items and bring them back to the rider.

The medical support motorcycle can also relay information from the rider to the medical car or to the rider's support car. Either way, the rider can get the assistance he needs without having to drop back into the caravan and then expend a lot of energy trying to get back up to the field.

DIRECTING THE MEDICAL MOTORCYCLE

The driver of the medical support motorcycle gets his instructions from the Chief Commissaire or the person given the responsibility of directing medical support. The medical support motorcycle driver, his passenger, or the race doctor may ask to have the medical support motorcycle moved. It is up to the person in charge of directing the

motorcycles to make the final decision to have the medical support motorcycle moved and where it is moved.

ASSISTING A RIDER

When rendering medical assistance that requires the medical support motorcycle to stop, the driver must pull as far to the right side of the road as possible. The service lane and most of the right lane must remain open for use by the caravan.

DRIVER RESPONSIBILITY

The medical support motorcycle is an integral part of the race caravan and will be present at the start of the race, in the caravan during the race, and in the run-out area following the conclusion of the event. The driver of the medical support motorcycle is responsible for staying alert. He must check his rear view mirrors regularly to look for bridging riders, press vehicles, and team cars. The medical support motorcycle driver must not allow himself to become fully engrossed in the racing and "fall asleep at the wheel."

DRIVERS MEETING

The Chief Commissaire may call upon subordinate officials to attend the different meetings that take place prior to a stage race. Many times the referee will be called upon to attend or even run the drivers meeting. The Chief Commissaire is taking advantage of the driving experiences of the Motoref.

The drivers meeting is attended by everyone who will be driving a vehicle in connection with the race. This includes the drivers of cars, vans, trucks, and motorcycles. The following information must be covered in the meeting. There may be other considerations that are peculiar to a particular event but the following information must always be covered.

DRIVER'S LICENSE

Everyone must have a valid driver's license in their possession prior to driving in the race. Drivers from foreign federations must have an international driver's license and present it for verification when requested to do so. All drivers must have a valid driver's license in their possession.

This is a state law and a rule that must be adhered to in order for the sanctioning body to maintain liability insurance.

INSURANCE

Vehicles used in bicycle racing must have auto insurance. Large races often obtain vehicle sponsorship from car manufacturers, dealerships, or rental companies. When the race is provided with these vehicles, the auto insurance is usually in place. The existence of auto insurance should be verified by the driver when assigned a vehicle. If a driver is providing his own vehicle, proof of insurance must be provided. No vehicle may be used in a race if it does not carry auto insurance coverage.

CONDITION OF THE VEHICLE

All vehicles used in the race must be in good working condition. This includes the brakes, suspension, lights, horn, and tires. During the course of an event the vehicle will be subjected to severe operating conditions. If a vehicle cannot pass a safety inspection, the vehicle will not be used in the event until repaired and made safe.

When a vehicle is on the course in connection with the race, it will have its head lights on and the emergency flashers flashing. All vehicles will remain in the right lane, leaving

the service lane open for technical support and oncoming vehicles. The vehicles will be operated in a safe manner and obey all traffic regulations, unless law enforcement agencies allow otherwise. Drivers operating their vehicles in an unsafe manner will be removed from the race at the discretion of the Chief Commissaire or law enforcement agencies.

DRI VER ATT I RE

All drivers in the race must meet minimum dress requirements. In all states and all USCF sanctioned events, the driver of a vehicle must wear something on his feet. This can include sandals and aqua socks at the minimum. The driver must also wear some type of shirt.

In the case of the motorcycle driver and motorcycle passenger, approved helmets must be worn. The motorcycle driver and his passenger should wear long pants. At the minimum, tennis shoes must be worn, but heavier foot protection is recommended.

PASSI NG THE RACE

Any vehicle not allowed in the immediate vicinity of the peloton must stay in front of the race. Under no circumstances will traffic be allowed to stay behind the race. No vehicles will be allowed to leapfrog, or pass, the race unless permission has been given by the Chief Commissaire. This applies to the press and publicity cars, as well as civilian and spectator traffic.

In the case of the food vehicles, they must use the alternate route to the feed zone and finish line. They will not normally be allowed to pass the race.

RADI O COMMUNI CATI ONS

Every vehicle in the caravan should have a radio for race communication. But that does not mean the radio will be in use all the time. The Chief Commissaire will use the radio to control the activities of the caravan, normally over the Radio Tour channel. Most communications will be official information to the caravan. The radio channels must be kept clear for important communications.

The press and organizer's channels, if provided, can be used as much necessary. In order for the press to keep track of what is happening there must be a free and continuous flow of information. It is important to note that the press channel and the official's channel are separate.

The official's channel will only be used by officials and will only be used for communication of official information. The press may monitor the official's channel, but they may not communicate on it.

The organizer normally distributes radios to the drivers during the Driver's meeting.

DRI VER RESPONSI BI LI TI ES

All drivers in the race must understand exactly their responsibilities. The person making the driver assignments must make sure the driver knows what he is supposed to be doing. The drivers must be given tasks that they are capable of performing. A driver must not be afraid to turn down an important job for one of less responsibility. No driver should try to do something beyond his capabilities. The person conducting the meeting should stress this point to the drivers.

CARAVAN MARKI NG

Caravan vehicles, including marshal, support and official motorcycles, may require specific markings by the race security force. These markings should be provided during the drivers' meeting.

CONCLUSI ON

The goal of the drivers meeting is to give out information that will make the race safe and fair. Drivers must understand what their role will be once the gun fires and racing begins. The roles of individual drivers may have to be explained during the meeting. It may be up to the motorcycle referee to make sure that goal is achieved during the drivers meeting.

RADIOS AND COMMUNICATIONS

Throughout this handbook we have talked about radio communications. But very little was said about the mechanics and materials involved in effectively using a radio communications system. In small, local races, radios may be unavailable, or limited to citizen band (CB), Family Radio Service (FRS) transceivers and occasionally, FM business band radios. Larger races may have thousands of dollars budgeted to pay for radios, repeaters, airplanes and helicopters, spare parts, and servicemen.

It doesn't matter how big or how small the radio communications system is. Improper use of radios can destroy the effectiveness of the communications system and impede the progress of the event. This section will cover the use of the radio and how it applies to the motorcycle driver.

COST

Radios cost from \$25 for inexpensive FRS or CB's, to \$1,500 for FM business band radios. While the motorcycle driver is never expected to provide his own radio, many now own field programmable radios that can be programmed to work in either the FRS or FM business bands. In all race events, when a radio is issued to the motorcycle driver, he is responsible for the radio's condition when it is returned, regardless of the unit's price. Under no circumstances should a motorcycle driver take responsibility for a radio that will be used by another person. That can be a very expensive risk to take.

CB VS. FM

Commonly used FM radios are either in the business band or FRS band. The CB or citizen band radio does not work well when applied to bicycle racing. They are line of sight effective only to one-quarter to one-half mile and maybe 200 yards in mountainous terrain with winding roads. FRS radios are commonly available, but have very low power output. Therefore, they suffer from some of the same range limitations as the CB radio. The FM business band radio is superior.

Two way telephones (e.g., service provided by NEXTEL and other providers) have become popular with big race promoters. The service provides good coverage in urban areas. The mechanics of using the radio can be bothersome until the user has practiced with them. While these telephone-sized radios work well in cars, motorcycle-helmeted riders can have significant difficulty hearing their low audio output.

RACE FREQUENCIES

Radio frequencies are regulated and monitored by the FCC. The radio rental company normally does the frequency assignment for a bicycle race. If you are going to use a field programmable radio, you must first know the frequencies and privacy codes, assigned to the race radios – this can be a significant issue.

Federal guidelines apply to the use of these frequencies, including those that address foul and offensive language and safety concerns. A race can be subject to hefty fines if the people operating the radios do not work within these guidelines. With language, keep the airwaves clean and inoffensive. If there is a safety problem, stay off the frequency unless you can provide useful information.

Channel assignments run the full spectrum from small races where everyone uses the same channel to major tours where every department of the organization has its own channel. Radio usage is very simple in small races and can become very confusing in the big events. It gets worse in the big events when channels are changed on a daily basis.

After channels have been assigned to different groups, it is important to make sure everyone with a radio knows who gets to use these different channels. Labels can be printed and applied to the backs of the radios. The motorcycle driver should write down the channels that affect him.

The following channels are common in a large event: officials, Radio Tour, promoter, utility, police, marshals, medical, technical support, media, and construction. The communications coordinator is responsible for coordinating all the different frequencies.

The most important thing to remember about the use of the radio is to keep unnecessary chatter to a minimum. The channel(s) must be kept open so that important communications won't be delayed by unnecessary talk. Offenders will find their radio privileges withdrawn or curtailed.

BATTERY EXCHANGE

The user of a radio needs to develop a daily ritual and follow it. First thing in the morning, find the battery man and put a fresh battery on the radio. Next, go off by yourself and do a radio check (the battery man will usually have a radio on his person that will cause feedback if you don't move away from him). At the conclusion of the event, check with your superior to get approval to turn your radio off.

MI CROPHONES

When issued an FM radio the motorcycle driver should also get a collar microphone (also known as a speaker mic). All FM radios have a microphone built into the case near the speaker. To use a radio without a collar microphone, you have to pick the radio up, hold it to your mouth and speak while keying the microphone switch on the side of the radio case. This can be difficult and dangerous in many situations, such as descending or riding next to the peloton.

With a collar microphone, the radio can be hung on a belt or chest pack, or placed in a tank bag. To speak, the motorcycle driver holds the microphone to his mouth and presses the microphone switch. The microphone can remain clipped to the collar, and in the event of an emergency requiring both hands on the handlebars, the microphone can be released without dropping it.

The biggest problem motorcycle drivers have with most radio microphones is wind noise. At low speeds, the motorcycle driver can speak and be clearly understood. At speeds above 25 mph, wind noise is a problem. Even with a fairing, swirling wind can garble what is being said. One effective technique is to pick the microphone up so that your gloved hand covers it, leaving a small hole near your index finger and thumb. Then speak into the hole. The motorcycle driver must speak slowly, using simple words in short sentences.

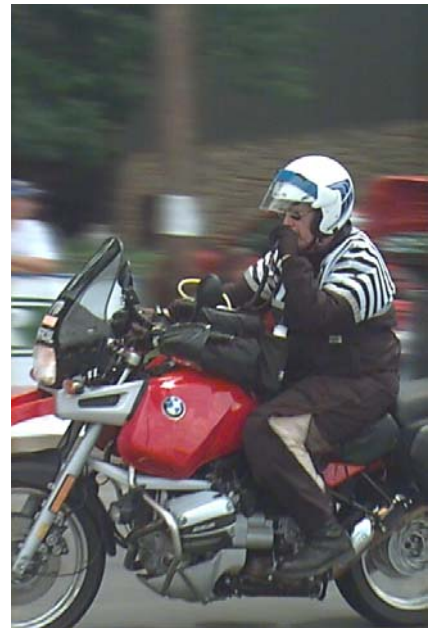


Figure 25 – Motoref using a Radio

If the motorcycle driver cannot be understood, he must not get frustrated, but consider the wind noise problem. He must repeat himself. If necessary, he will have to reduce speed to eliminate the wind noise problem. The motorcycle driver should plan when a transmission is necessary, finding a stretch of road where he can reduce his speed without getting in the way of the bicycle race.

SOLVING THE HEARING PROBLEM

Hearing, and understanding, radio traffic, can be a significant problem for anyone on a motorcycle. One solution is a custom made ear piece, similar to those used by TV announcers. Since more than 80% of the radios used at big races are equipped with a jack for an external speaker, this is a good investment for a rider who is going to work many races. One possible source of this equipment is Audio Implements

(<http://www.audioimplements.com/>). Your ear piece kit needs to include connections for both 1/8" and 3/32" connections and a high impedance receiver is recommended.

ANTENNA PROBLEMS

The motorcycle driver will also have a broadcast range problem with his radio. He cannot place his radio antennae in an optimum position on the motorcycle. Cars have the advantage with more permanent setups. The motorcycle driver's radio antennae will be horizontal in a tank bag or chest harness, or on one side of the motorcycle on the driver's waist. These are not optimum radio antennae positions. The motorcycle driver must expect his radio's effective range to be reduced.

When finding a place to carry the radio, the driver should remember that radio waves don't go through water well. As your body is mostly water, the radio and antenna should be kept away from your body to maximize effective range.

If the motorcycle driver is within range of a repeater, there will not be a problem and he should be able to talk to everyone. If he cannot go through the repeater, he may have to get another nearby radio to relay his messages. When all else fails, the motorcycle driver will have pull next to the person he wants to talk with and forget using the radio.

BROADCAST TOPICS

Before an event starts, the motorcycle driver's supervisor may list some sensitive topics not to be discussed on the radio, such as potential rule infractions. In these cases, the driver will have to speak in person with the appropriate personnel. If that cannot be done, the driver can always write a note and hand it off.

WEATHER PROTECTION

Radios are not completely weatherproof. Some care must be taken by the motorcycle driver to protect his radio from the elements. The motorcycle driver can lose much of his effectiveness if his radio fails. A plastic bag can offer adequate protection in the event of rain. Placing the radio inside a coat or inside a tank bag will also help keep the radio dry and functioning properly.

RADIO FAILURE

If the radio fails during the event, the motorcycle driver needs to let someone know as soon as possible. A new radio may be available or, at the least, it will be known that you cannot be reached by the radio communications system. The motorcycle driver needs to see the service man as soon as possible after the race to get the problem

fixed. If you are assigned to a position where communicating is important (e.g., Moto 2) you will probably be replaced while you resolve the radio problem.

BENEFITS OF THE RADIO

If the motorcycle driver exercises courtesy and restraint while using the radio, the radio's effectiveness will be greatly enhanced. Races run on the flow of information; the better the flow of information, the better the race. The FM radio is a valuable tool when it comes to achieving a smooth, effective flow of information.

USEFUL REFERENCES

USAC Website (USCF Rules available) – <http://www.usacycling.org>

UCI Website (UCI Rules available) -- <http://www.uci.ch/english/index.htm>

Commissaire.net (topical information for race officials) --
<http://www.commissaire.net/english/index.html>

Commissaire forum -- <http://forum.commissaire.net/index.php>

Motorcycle Reference Materials -- <http://www.skooterrefs.com/>

GLOSSARY

ANSI: American National Standards Institute, a group that creates standards such as the safety standard for motorcycle helmets.

Attack: tactical move where one or more riders accelerate off the front of the peloton and try to stay away until the finish of the race.

Barrage: technique used by officials in the caravan to prevent the team cars from affecting the outcome of the race as the peloton begins to come apart.

Block: tactical move to prevent a rider from getting past the blockers and up the road. Aggressor may be blocked off the road surface or boxed in by other riders.

Bonk: the feeling of running out of energy. For the rider it means he is not eating or drinking enough, and the muscles cannot work efficiently.

Box in: tactical move preventing a rider from advancing by surrounding him with other riders and not leaving room for him to move up. Edge of road may be part of the box.

Break or breakaway: riders who have escaped from the peloton and have established a time advantage over it, also called the leaders.

Bridging: a tactical move where one or more riders accelerate from the front of the peloton and try to catch the break. This group is also referred to as the chase group, or simply chase.

Caravan: all vehicles and riders that make up the race, including pace, com 2, peloton, com 1, neutral support, team support, com 3, and sag.

Caravan staging: team support cars are staged and marked in the order derived from individual general classification. This order is maintained on the road.

Category, race: A through E, with A being big money, national tours, and E being local, no money races of little importance. Sanctioned by USCF. Pro races are just big money and sanctioned by USPro.

Centerline: the middle of the road. In races where centerline is in effect, riders may not use the road surface to the left of the centerline. If no yellow line is present, centerline is a judgment call by the officials. Centerline is the same as the yellow line.

Chase: tactical move where the riders in the front of the peloton accelerate to reduce the time advantage gained by the break. Also referred to as reeling in.

Chief Commissaire: the official in charge of the execution of the bicycle race. In the caravan, referred to as Com 1.

Chief Judge: official responsible for determining the order of finish for a race.

Circuit race: a race of two or more laps run on a course that is five kilometers or more in length.

Citizen: any person along the race course who has no interest in the bicycle race.

Civilian: see citizen.

Civilian traffic: vehicles driven by people who have no knowledge of a bicycle race. These vehicles pose extreme hazard to the race.

Clean channels: radio channels whose transmissions are restricted to race execution only. Idle chatter is not allowed. Officials channel is a clean channel.

Climb: uphill section of the race course where riders ascend for a long distance. Usually strings the riders out leaving only the climbing specialists in the front.

Clincher: bicycle tire that uses a wire bead for mounting.

Closing the door: tactical move where a rider moves to the side of the course (either barricades or curb) to trap a rider behind him and not allow him to pass. If this move is not done smoothly and safely, a penalty may be assessed to the rider closing the door.

College of commissaires: all officials involved with running the race. May be divided into groups with different tasks.

Com One: commissaire in back of the peloton.

Com Three: commissaire who maintains the last position in the caravan.

Com Two: commissaire who stays with the leader on the road.

Commissaire: official in charge of the bicycle race and his subordinates. Also referred to as an official, a referee or a judge.

Communications system: system that allows communication of information throughout the race. May include channels for officials, Radio Tour, press, medical, police, and marshals.

Criterion course: circuit race course that is shorter than two miles in length. Course is completely closed to traffic.

Criterion race: race run over time or distance on a criterium course. Races are typically between 30 and 90 minutes .

Descend: to go down a long incline at high speed. Riders use the entire road to get the best line.

Descent: long downhill section of the race course.

Director Sportif: manager of a cycling team, who acts as liaison for team to college of commissaires.

Disqualification: penalty where rider is removed from the race and not allowed to compete in the remainder of the event.

Domestique: a rider on the team designated to work for the stronger riders.

DOT: Department of Transportation, federal government department that created a standard for motorcycle helmet safety.

Draft: the vacuum created directly behind a moving object such as a rider, motorcycle, or team car. Draft increases with size and speed of object.

Drafting: a rider sitting in the vacuum directly behind a moving object. The rider in the draft expends less energy.

Drop off or dropping off: in a criterium, an illegal tactic where one or more riders drop back to join a rider trying to lap the field and pull him up to the back of the field.

Echelon: technique used to ride in strong cross winds. Riders overlap wheels and form a line across the road at the same angle as the wind. Only the lead rider blocks the wind, all others are in a draft.

EMT: emergency medical technician. Person with basic medical training in very specific areas of patient stabilization in life threatening situations.

Feed: to hand food and water to a rider. Also the contents of the rider's feed bag. Feeding process is referred to as a handup. See handup.

Feed vehicle: team vehicle designated to go to the feed zone to give team riders handups.

Feed zone: designated place along the race course where riders can legally receive food and water from team support personnel.

Field: main group of riders on the road. Also referred to as the peloton.

Five laps to go: in a criterium, the final five laps of the race, after which there are no more primes or free laps given. (This is a rule of thumb and there may be races where free laps and primes are allowed up to three laps to go.)

Free lap: in the event of a mishap in a criterium, the affected riders are entitled to one free lap to repair any damages and go back into the race. Riders go back into the same position where they came out.

GC: see general classification.

Gap: opening, either time or distance, between groups of riders on the road. Gaps of 45 seconds or less are usually insignificant.

General classification: rider order determined by overall cumulative time. The rider with the shortest elapsed time is the leader.

Hammer: to pedal the bicycle with speed and power to catch leaders or escape chasers.

Hand sling: illegally propel a rider forward by pulling on another person's arm. Hand slings are only legal on the track during Madisons. See Madison and Sling.

Handup: anything given to a rider by someone from a team vehicle or on the side of the road. Usually food or water, but can refer to clothing, glasses, etc.

Helmet: approved head protection device for riders and motorcyclists. Riders wear SNELL approved hard-shell helmets. Motorcyclists wear open-face or full-face DOT, SNELL, or ANSI approved helmets.

High speed wobble: dangerous and uncontrollable steering condition where the motorcycle wobbles rapidly to the left and right. Caused by loose bearings, worn shocks, loose frame, and under-inflated tires.

Hit the wall: the rider runs completely out of energy and cannot continue. Literally falls off the bicycle and has to be carried away. See "bonk."

Hooking: an illegal maneuver where rider in front moves side-to-side erratically, attempting to make his back wheel hit the front wheel of the rider directly behind him. When a rider's front wheel is hit, a crash usually results.

Hot lap: specially designated laps within a criterium where the riders try to ride the fastest lap. First rider across the line wins the hot lap.

Individual GC: rider's overall standing in the race based on his total accumulated time. Shortest time is the leader.

Interval: period of time where the pace is increased in order to drop weaker riders from the peloton or break.

Jumping In: a rider illegally enters, or reenters, a race with the intent of not covering the entire distance of the event.

Jury of commissaires: at a stage race, composed of the Chief Commissaire and two other commissaires or officials. Each member of the jury has equal power ; the president of the jury is the Chief Commissaire.

Knobbies: type of tire tread design where there are cleats or knobs for gripping in soft soil or loose dirt. Not for road use.

KOM: King of the Mountain, a race within the race where the best climbers compete for the climber's jersey and prize money. First rider across the KOM line gets the most points.

Lap: one complete circuit of the criterium or circuit course.

Lapped riders: slower riders in a criterium that have been overtaken by the leaders one or more times.

Lead out: tactical move where a rider follows a teammate's wheel, drafting toward the finish line to save energy. At the last moment, the following rider pulls around the teammate.

Leapfrog: practice of repeatedly passing the race, stopping to allow the race to pass, and again passing the race. Hazardous when being done by spectator vehicles. When motorcycle marshals leapfrog, one stops to work on a problem while the rest pass him and go up the road to find other problems.

Leathers: a tight fitting suit made of leather used by the motorcycle driver for safety in the event of a crash.

Liability: anyone involved with a bicycle race is liable for their actions. As there is no insurance, those involved must be self insuring.

Line: most efficient path taken by riders on the course. Usually refers to the way a rider goes through a corner.

Live feed: video signals from the television motorcycle broadcast live to the network.

Madison: A Madison is a points race between teams of two or three riders who really each other for a specified distance or time on a velodrome track.

Manager: person in charge of a racing team and liaison between team and college of commissaires. See director sportif,

Mark: tactical move where a defending rider stays on the wheel and in the draft of a rider trying to organize a chase. Rider marking the wheel does not pull through. See timing mark.

Mechanical accident: a mishap where a piece of equipment critical to the operation of the bicycle breaks.

Mishap: a crash by the rider or the breakage of some part of the rider's equipment which is not due to the rider's negligence. A crash caused by an improperly glued tire is not considered a mishap; improperly tightened fasteners is not a mishap.

Moto: any motorcycle in a bicycle race: technical, press, medical, official, or marshal.

Moto One: designation given to the Motorcycle Referee. Additional Motorcycle Referees will be Moto two, Moto three, etc. Designation does not indicate importance.

Motorcycle Marshal: member of race staff responsible for making sure the course is safe in front of the riders.

Motorcycle Referee: official who observes the race from a motorcycle. Reports to the Chief Commissaire. Sometimes referred to as Moto One, Moto Two, etc.

Motor pacing: riding in the draft directly behind a moving vehicle. This technique allows the riders to move quickly up the road with very little expenditure of energy.

Mussette bag: cloth bag with cloth or cord handle that contains the rider's food and drinks for the feed zone.

Neutral technical support: technical support team providing support for any rider of any team. Usually provided by a components manufacturer such as Mavic or Shimano.

Neutralize: to stop racing for a period of time to correct a problem. The pace is slowed down or stopped and everyone keeps their relative positions.

Numbers: hip, shoulder, and frame numbers used by the rider to aid in scoring. Usually black numbers on a white background.

Pace line: technique where riders are positioned one after the other so that only the lead rider is pushing against the wind. All other riders are in a draft.

Pacing: assisting a rider by providing a draft (see drafting) or assisting a rider by staying in close proximity and being a "psychological carrot" (a rider will tend to ride faster when there is someone or something to chase).

Peloton: the name given to the large group of riders in the race directly in front of the caravan. Also referred to as the field.

Permit: legal document showing proof of insurance and sanctioning by a federation or government agency. Can also refer to race permit or road use permit.

Pit: designated location on the criterium course for repairs where a rider receives a free lap for a crash or mechanical mishap.

Point: position taken by the lead motorcycle or car in the front of a bicycle race. Point driver warns cars and spectators the bicycle race has arrived.

Prime (preme): prizes awarded for winning a sprint or prime lap.

Prologue: opening event of a stage race, usually a short time trial where the winner is given the leader's jersey.

Promoter: person or organization that plans and puts the bicycle race together.

Pull through: rider who is in a draft moves through to the front to break the wind for the others behind him. Commonly done in pace lines and echelons.

Pulling lapped riders: in a criterium, removing slower riders about to be overtaken by the leaders. Pulled riders receive a pro-rated time.

Puncture: mishap where rider's tire loses air pressure. In criterium, rider is entitled to a free lap under certain conditions.

Pushing off: an illegal method of passing a slower object. Rider may push off door jamb or fender of a vehicle, or another rider.

QOM: Queen of the Mountain. See KOM.

Race director: person responsible for organizing the race. See promoter.

Race report: a report filed by an official following an event where anything unusual is documented for the Chief Commissaire.

Race time: amount of time that has elapsed since the start of a race.

Relegation: penalty where rider is moved down in the standings either by placing or time penalty.

Road race: race run point to point or over one lap on a single, large circuit.

Road rash: scrapes and abrasions suffered by a rider when he falls and slides along the road surface.

Rollers: race terrain where the course goes up and down on gently undulating hills.

Rolling enclosure: technique employed by police to stop traffic as the race approaches and release the traffic when the last race vehicle has gone by. Provides race with an environment where there are no non-race-related cars moving.

Rotation: technique where each rider in a pace line or echelon takes their turn at the front to ride into the wind.

Sag: the very last vehicle in the race. Sag stays behind the last rider in the race and does not pass him. In the event of a time cut the sag may be required to pick the rider up. Also referred to as the sag wagon.

Service lane: left lane of the road race course which is kept clear of all traffic so that team cars can get to the front of the caravan to service riders.

Sew-up: type of bicycle tire that must be glued onto the bicycle rim. See tubular.

Shelter: the point at which a rider overtaking the field or another rider can benefit from the overtaken riders' draft.

Sitting in: a rider sits in another rider's draft and does not contribute to the work. Also referred to as wheel sucking.

Sifting out: cheating in a criterium by dropping out of the race for a period of time, hiding off course to avoid detection, and then jumping back in to finish with the field.

Sling: rider is accelerated forward by a hand sling. Most commonly seen when rider accepts a water bottle from manager in a team car. Also seen when rider is handing off gloves, booties, capes, etc. Manager may accelerate car when giving a sling. See Turbo Bottle, Sling and Madison.

SNELL Foundation: a certification group that tests and approves motorcycle helmets. See ANSI and DOT.

Solo: a single rider, either on a bicycle or a motorcycle. In terms of the bicycle, solo usually refers to a single rider attacking off the front of the peloton or break.

Spectator: any individual along the race course who is there to see the race.

Split: time interval between groups of riders on the road.

Sponsor: individual or organization that provides the resources to support a race or a team.

Stack: slang term describing a large crash involving many riders, usually the main body of the peloton.

Staging: assembling of the caravan and riders prior to the race. Team cars are parked in their general classification order. All other cars are placed in their proper position, either before or after the team cars.

Straight Line: for both motorcycles and bicycles, the line taken through corners, as well as on straight sections which stays the same distance from the edge of the road surface. Overtaking riders and drivers can predict if there will be room to pass on either the left or right.

Suspension: most severe penalty where rider is not allowed to compete in any type of race for a specified period of time.

Team: group of five to ten riders all riding together for a sponsor with the intent to place their members high in GC and win team GC. Teams have a manager, mechanic, and team car.

Team general classification: based on the team's three fastest riders' times added together; the team with the shortest elapsed time is the leader.

Team time trial: members of the team ride together over a set distance to try and get the best time.

Technical director: person in the race staff responsible for setting up the courses.

Technical support: support given to riders to repair broken parts of the bicycle so that they may continue the race. Teams provide support for their own riders.

Thumbs up / down: hand signals used by Chief Judge and Motorcycle Referee to determine whether lapped riders will be pulled or left in the race.

Time bonus: time deducted from overall general classification, which is awarded to riders winning special sprints or designated laps.

Time penalty: penalty assessed a rider where time is added onto the rider's overall accumulated time moving him further back from the leader.

Time splits: time gap information given to the break, chasers, and peloton. Time split is the amount of time between groups of riders on the road.

Time trial: individual riders race, one at a time, over a set distance. The rider getting the shortest time wins.

Timing board: 18" by 24" rectangular board where the Motorcycle Referee writes rider numbers and time splits. This written information is shown to riders and vehicles in caravan.

Timing mark: when using radios to generate time splits, official with the leaders gives a mark on a landmark, and then describes the object. Watches are started on the mark and stopped when the next vehicle reaches the mark. In practice the official with the leaders will count down to saying "mark," then describe the landmark where the watches will be stopped.

Towing: illegal method of moving up the road while the rider holds on to a moving object. Team car may accelerate while rider is holding on.

Tubular: bicycle tire that must be glued on to the rim of the bicycle wheel.

Turbo Bottle: The rider is pulled along for 10 to 20 seconds by the accelerating team car during an extended bottle exchange. See Sling.

UCI : world sanctioning body for all cycling.

United States Cycling Federation (USCF): governing body for amateur cycling in the United States.

Warning: communication with a rider to let him know that the next offense committed will result in a penalty.

Working through or working up through: riders behind the caravan or in the caravan moving from vehicle to vehicle as they regain the peloton. Riders are not drafting or towing.

Yellow line: the yellow line painted down the middle of the road. In races where centerline is being enforced, riders may not cross over the yellow line into the left lane. Centerline is the same as the yellow line.