



# 2021 Marshals' Manual

2/25/2021



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## 1. Introduction

### 1.1. How to Use This Manual

Welcome to the CMRA, and thank you for volunteering! The role of circuit marshal is an essential one for the safety and well-being of competitors, the public, officials and everyone at the event. Every motorsport organization in the world depends on volunteers who are prepared to give up their time for the love of (what we think) is the most exciting sport in the world.

Marshals get closer to the races than anyone else except the competitors themselves, and have the best view in the house, but a great view comes a great degree of responsibility; marshals are a component of the emergency services at CMRA events, as they most often seen dealing with incidents but they also have a big role in preventing incidents occurring in the first place, and generally keeping things running smoothly, as will be seen below.

This Manual provides an introduction to marshalling at events promoted by CMRA. While it can be used as general marshaling guidance for other events, readers should be aware that the rules and regulations at non-CMRA events vary, and details for flag signals, for example, need to be checked locally for validity.

### 1.2. There is a Reason for Everything

The manual is designed as an introduction for new marshals, a reminder for the more experienced and an information document for marshal training. It is intended to be provided to all CMRA marshals. It will be revised as required and made freely available.

### 1.3. Terminology

This manual contains general guidance, and most sections contain a list of dos and don'ts. These have not been decided arbitrarily; they are recommendations borne from the experience of many marshals over a lot of years, and there is a reason for every rule and recommendation. If the reason is not apparent, then ask, *before* going on circuit. There are no penalties for asking at the right time, but the middle of an incident is not the right time!

In some sections reference is made to Flag Marshals, Track Marshals, Grid Marshals, etc. where it is helpful to indicate different people doing different jobs.

The appendix contains a glossary of terms that may be unfamiliar.

### 1.4. Your Responsibilities as a CMRA Marshal

CMRA marshals, even as volunteers, are expected to behave in a professional manner and be courteous and respectful to riders, officials, their fellow marshals and members of the public.

This manual provides specific guidance on regular tasks while on circuit, but in general it is expected that marshals will:

- Arrive at the circuit and be on post in good time. The correct time will be communicated prior to the event in question.
- Not abuse their entry to the circuit.
- Not speak to the press about any incident they may have witnessed or been involved in, especially if casualties have been involved.
- Be similarly careful about making comments on social media. As a CMRA volunteer, members of the public may regard you as an official voice.

## 1.5. Availability

Well before each event you will be asked to state your availability. This is done by visiting the [Flag and Course Marshal Information and Sign Up forum](#) on the CMRA Message Board. Please make an honest attempt to let us know which days you will be able to attend for each event. It is very important that we have a good estimate of the number of marshals that will be at an event, not just for safety purposes, but also for ordering lunches, water, organizing training sessions etc. Please don't say you will be available to "reserve a place" if you're not sure. We can cope with extra people showing up, but having someone missing that we were expecting to do a job, can be a big problem.

Of course, circumstances can change, and emergencies may arise. All that we ask is that if you find that you are not able to come to an event to which you have committed, you let us know as soon as possible.

Simply not showing up is not acceptable, except in cases of genuine emergency.

## 1.6. Arrival and Sign-in at Meetings

You will be responsible for getting yourself to the circuit. The first thing you should do at the circuit is sign in, and obtain credentials and you should not go on circuit until you have signed the official waiver. Sign in is usually at the registration building. Information on place and time of sign-in will be provided in advance.

Later, at a morning meeting, you will be assigned to a station on the circuit. Often there will be some choice of stations and the Marshal Coordinator will attempt to keep friends together, but this cannot be guaranteed. You must go to the station to which you are allocated and stay at that station unless you are officially asked to move. Obviously, we cannot leave sections of the circuit without cover.

Make sure you know exactly where your station is, what time you need to be there, and how you are going to get there. Sometimes transport will be provided, other circuits may allow you to drive to your post via service roads. You must not drive to your post via the circuit unless specifically told to do so. Make sure that that you know who you will be working with, and who is the corner captain is if they are being used at the event. If you are a Corner Captain make sure you know how many people to expect on your station.

## 1.7. Organization, and Questions

CMRA Director of Completion Walter Walker handles pre-event sign-up through the [Flag and Course Marshal Information and Sign Up forum](#) on the CMRA message Board. At CMRA events there is a Marshal Coordinator, Breana Andrews, who handles marshal briefings, station assignments, issues equipment, and coordinates lunches.

## 1.8. Camping and Accommodation

Camping is available at all circuits for corner workers. A camping space is always free to a marshal. The availability of electrical hook-ups and other facilities will vary from circuit to circuit and this may have to be paid for.

## 1.9. Your Responsibilities on Post

On arriving at the post, you should assist in setting up the station and placing the equipment in the positions where it will be during practice and racing, and make sure you know where this is. The best equipment in the world is of no use if you don't know where to find it.

If there are new marshals, less experienced than yourself, please help to make them feel welcome and part of the team. If you are one of these less experienced marshals, let people know. You will be among friends. Try to do as many different tasks as possible so you get as much experience as you can at different events. Don't be afraid to make suggestions or ask questions.

- As a trainee you may make mistakes. Do not be disheartened if during an incident someone shouts at you to do something quickly or bring something to your attention. This would primarily be for the safety of you, your team or a casualty.

## 1.10. Personal Equipment

The CMRA will issue each marshal a Marshals T-shirt. That T-shirt should be worn as the outermost layer of clothing if possible. If you are a Track Marshal, you will be required to move motorcycles, sometimes leaking fluids and usually damaged, so they may not roll easily and might have to be manhandled, so robust clothing is best. If it is wet, waterproofs are of course allowed, but please do not choose colors that could be mistaken for flags, such as yellow or red.

A strong pair of boots is strongly encouraged, preferably with steel toe caps, as you may very well be moving heavy motorcycles, and a bike with wheels locked may need to be carried. Lightweight training shoes are easy to move around in, but provide no protection against heavy weight or rain. Anything which shows your toes, is risky and not allowed.

You should also bring a good pair of gloves that will provide protection from the many sharp and/or hot parts of a motorcycle when moving it. Welders' gloves are excellent, if rather hot for wearing the whole time, but regular work gloves or gardening gloves work well. Certainly, avoid plastic (including some types of knitted glove) as it can melt and stick to your skin.

Other helpful items are a lifting strap (provided) and a good bag or box to carry everything in. It's worthwhile bringing some food and drink with you, especially water, in case you are at the end of the line for the lunch and drinks that are provided. Also mistakes and delays sometimes happen, so experienced marshals tend to bring extra snacks with them in any case.

Whistles are widely used for attracting attention and the veteran marshals will always have one. You can often hear a high-pitched whistle even over the noise of racing engines.

Binoculars are quite useful for reading bike numbers and checking the track for oil or contamination, though it is a bad idea to keep them up to your eyes for long periods, for the same reason that it is a bad idea to use a camera. See Section 2.4 *Some dos and don'ts for marshals* below.

Almost all experienced marshals bring lightweight chairs with them for resting between sessions. Pop-up canopies will be provided when needed. Please use them responsibly – see note below on standing while bikes are on circuit: Section 4.5 *While sessions are in progress*.

## 1.11. Marshalling Duties

Your duties for the day or weekend will be allocated by the Marshal Coordinator. Most marshals have a preference of doing track work or flags. Trainees are encouraged to try all of these to see where they feel most comfortable.

Whatever job you are allocated, you must not move stations, change position or swap jobs without official approval. The circuit is staffed according to a plan, and if marshals take matters into their own hands, this can throw the event into confusion. This is a very important point – you must not move, or leave your post unmanned during track activity without permission. If you have to go because of some emergency, let race control know, and backup will be provided.

## 2. Personal Safety

If motorsport were not inherently hazardous, then marshals would hardly be needed, but with care, the risk to all at the circuit can be kept to an absolute minimum.

### 2.1. Safety Fundamentals

- Your number one priority at all times is your own safety.
- Next comes the safety of your team, the public and the competitors.
- When things go wrong, it is usually something simple. People forget or ignore basic rules.
- Be aware, that at the circuit you are always at risk. The level of risk can never be reduced to zero; there are only degrees of risk varying from very low to very high.
- By prior planning and effective management, the risk can be minimized.
- Stay behind safety barriers (if present), unless you really need to do something on the other side.

### 2.2. Some Things that Increase Risk Unnecessarily

- Turning your back on the traffic. Generally, incidents should be dealt with by marshals who can move toward the traffic rather than in the same direction.
  - If you must face away from the traffic, get somebody to watch your back.
  - Remember target fixation: one faller may be followed by another.
- Crossing a live track. It should be obvious that this is highly dangerous.
- Too many people at an incident.
  - If you are not required, don't go.
  - If you were working at an incident and your job is done, withdraw to your post as soon as possible.

### 2.3. Assess the Risk

You can be well-trained, experienced, know the circuit and the station, and be with a good team, but something can still happen that can have serious consequences. Some emergency services use a system of *dynamic risk assessment*, though they may call it by another name.

This is nothing more than waiting for two or three seconds before acting and asking the questions;

- What are the risks?
- What has to be done?
- Can I actually do the job, at an acceptable level of risk?

Consider the answers and act accordingly.

### 2.4. Some Dos and Don'ts for Marshals'

- Don't use cameras. Besides looking unprofessional, while looking through that viewfinder you are not able to take in the whole track and may not see the bike that is going to hit you or your partner who was relying on you to watch his or her back.
- Don't watch the live scoring on a smartphone while you are marshaling. This distracts your attention from the track in front of you.
- Do make sure that you have the capabilities to do the job to which you are allocated. This applies especially to people who have to move crashed bikes; it is physically strenuous. If you think that this might be too hard for you to do, take on another job. If you have some restrictions in movement or strength, or if you are simply a smaller person, then being a flag marshal may be a better job.

- Do try and anticipate problems and look for solutions. Don't be afraid to discuss these with your Corner Captain or the Marshal Coordinator.
- Don't ever move your flag point, or the place where you stand as a track marshal, without permission. The emergency response plan of the circuit depends on the right number of people being where they are expected to be. If you really think that there is something wrong with your position, then stay there, and report your concerns to race control. Race management will sort it all out.
- Do work as part of a team. Good marshaling depends on each member of the team supporting the others. Help with preparation, know how the team is going to work, and look out for issues. You may be the first person to spot a problem.
- Do treat everyone with respect, and assist those who are less experienced. Shouting over the top of engine noise to communicate is acceptable. Shouting simply to get you point across forcefully is not.

### **REMEMBER**

**IN MOTORSPORT, THERE IS NO SUCH THING AS ZERO RISK.**

**YOU CANNOT ELIMINATE RISK, ONLY REDUCE IT.**

**YOUR PERSONAL SAFETY IS MOST IMPORTANT, FOLLOWED BY THAT OF YOUR TEAM, RIDERS AND SPECTATORS.**

**IT MAY BE YOU ARE THE ONLY ONE WHO HAS SPOTTED AN ISSUE, SO SPEAK UP.**

## 3. Flagging

### 3.1. The Importance of Flagging

Flagging is one of the most important jobs a marshal can do, and the Race Director relies heavily on having a team of well-disciplined and competent flag marshals.

Flags and supporting lights are used to

- Keep riders informed of track conditions;
- Warn riders of hazards and incidents in the track ahead of them;
- Give instructions to riders.

When flagging is done well, it improves safety, helps create a competitive environment, and ensures that the event runs smoothly. Conversely, mistakes in flagging cause confusion, increase risks, encourage the riders to ignore flags and could affect the outcome of a championship.

It is worth noting that when numbers of marshals are small, Race Directors will make sure that flag points are staffed first and then allocate spare marshals later. Flagging is not optional; it is essential.

The CMRA also uses strategically positioned lights to give signals to riders, in addition to the flag signals provided by marshals. The lights are centrally controlled from race control. If you have such lights near your station, you may see them go on and off. Usually marshals don't need to get involved with these lights, but if (for example) you see a light hit by a crashing bike, report it to race control. Likewise, if the light is doing something that doesn't seem right, call it in.

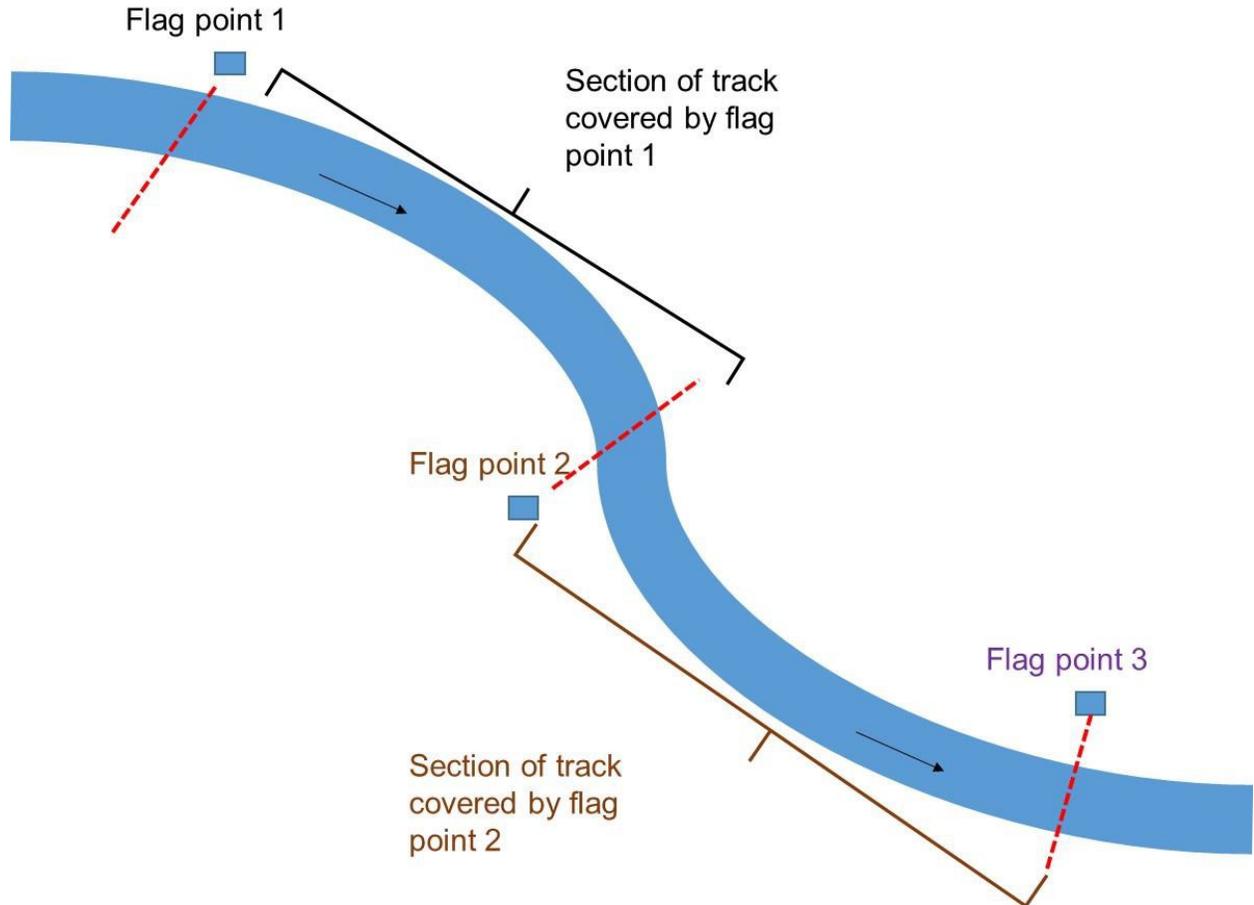
Note that:

- Flag signals are defined in the CMRA Rule Book.
- These may be different from flag signals used at other club meetings you may have worked.

### 3.2. Setting Up a Flag Position

- Check all of your equipment:
  - Verify that all the flags are present. There should be one of each of the following flags at all flag posts:
    - Yellow
    - Red
    - Green
    - Red and yellow striped (surface flag)
    - White with *diagonal* red cross
  - For CMRA events most, but not all posts will have a black, and a black and orange (meatball) flag. These flag points should also have a number board.
  - Lay the flags out unfurled, and within easy reach.
  - Sometimes you know that you are not going to need a certain flag, in which case it can be moved out of the way.
- Every flag point will have a radio. Please make sure you know how to use it – see *Communications*, below.
- Note that flag points do not move except on the instructions of the Race Director.
  - Flags are not taken out on track, moved to the position of an incident, or otherwise repositioned.
  - The only reason a flag point should be vacated during races is for reasons of safety, i.e. something coming straight at you.

- Make sure you can see the flag point before and after you.
  - This ensures complete coverage all the way around the circuit.
  - Note that the start line is also usually a flag point.
- Think about an escape route. Consider where you are going to go if something comes toward you at speed. If a rider parts company with a bike it can end up anywhere, and if it stays on its wheels it can travel a surprisingly long way.
- Stand in the best position for you to see all of the section for which you are responsible.
  - If there will be two marshals assigned to a flag point, the best position to flag is face to face, so that you can see past each other.
  - One marshal looks toward the oncoming traffic, the other person watches bikes going away from him/her. The marshal watching traffic going away uses the yellow flag, as this is the section of track they are warning riders about.
  - Each station's area of responsibility starts at the flag point and continues down track to the next flag point.
  - This is illustrated in the following diagram:



- The reason for this is simple: when riders arrive in sight of your flag point they need to be warned of things happening in front of them, not the section they have just ridden through.

### 3.3. Basics of Flagging

- For CMRA, all flags are waved, with the exception of the standing yellow – see below.
- In all motorsport disciplines, a yellow flag means danger.
- For CMRA events you use the yellow flag for incidents that happen in your own section, (and the following section), as described below, unless instructed otherwise.
- The standing yellow flag needs to be shown so that the riders can actually see it from the racing line.
  - Hold the flag at the bottom as well as the shaft so it does not flutter in the wind.
  - Hold it so that riders are looking at the face of the flag, not the edge, or it will look like a bit of yellow string to the rider, if they see it at all.
- When waving a flag, use a figure-eight pattern to avoid tangling the flag and showing the riders what is effectively a colored stick.
  
- Practice when there are no bikes around if you like. If it's windy, flagging is harder.
- Try to flag as soon as it is necessary, so riders have time to react. You are expected to use your own judgement when this is necessary for most flags – this is explained further below. As soon as you decide a flag is needed, then show it *immediately*. Late flagging is bad flagging.
- If a yellow flag needs to be waved for an incident, keep waving it until the incident is clear.
  - See more under yellow flag below.

If you can do the following correctly, you have done most of the flag marshals' work right.

- For an incident in your sector, show the yellow flag.
  - The most important flag is the yellow. If a rider or marshals are in imminent danger in your section, wave the yellow flag vigorously.
  - For a lesser hazard, a standing yellow is used.
- Observe rider behavior when the yellow flag is displayed. Riders who do not slow or who overtake a under yellow are compromising safety and race direction will want to know.
- If there is something on the track that could affect grip, show the yellow and red striped flag.
- If there is an incident in the section before yours, and no incident in your section, show the green flag.
- Watch your Corner Captain or listen to the radio for instructions to display other flags.
- Remember the object is to promote safety, not try and achieve technical precision.

### 3.4. Radio Communication

All flag marshals will be issued with a radio, so they can take instructions directly from Race Control and report back the situation at their post. Remember that some of the flags are only shown on the instruction of Race Direction.

- If you have a radio, listen to it! Know when Race Control is talking to you, e.g. "Station six only, display a surface flag for two laps". If you are not listening, or don't know that you are station six, this won't work, and riders may crash after hitting the debris that you are supposed to be warning them about.
- Have your number board handy if you are one of those posts. If someone else reports that, bike 5 is leaking fluid, set the number board up with a 5 and have it ready, but do not show it with the appropriate flag until instructed.
- Be prepared to respond quickly to Race Control; e.g. "all points show a red flag now" – make sure the red flag is handy.

## 3.5. Standard Flags and Their Meanings



**Yellow Flag: Waved = Significant danger - CMRA Rules state that *"Indicates a hazard or obstacle on the track, avoidance maneuvers may be necessary. Exercise extreme caution, slow your speed until past the situation. Passing for position under a waving yellow flag is NOT allowed and the offending rider will be assessed a penalty."***

**"On the track"** means between the white lines that mark the edge of the track, or on the curbing, but not the run off area. If the circuit has no white lines, use common sense. Partly on the track and partly off counts as on the track.

**Yellow Flag: Standing = Danger off the track - CMRA Rules state that *"Indicates a potentially dangerous situation on or near the track or a slower moving motorcycle. Passing for position under a stationary yellow flag is NOT allowed and the offending rider will be assessed a penalty."***

If an incident occurs and bike or rider is left on track, then wave the yellow. If everything goes off track, then it is a standing yellow. Keep the yellow displayed until everything has been moved to a safe location. If race direction decides that the hazard, though off-track, is significant then they may ask that post to upgrade to a waved yellow flag.

If the post after yours is showing a waved yellow flag, then you should show a standing yellow until the waved yellow has been changed to a standing yellow or withdrawn, i.e. there should be at least two flags before the incident.

Note that overtaking in the section where yellow flags are displayed is dangerous, against the rules and penalties will be imposed. If you see overtaking under yellow, report this to your corner captain or race control. Try to note the bike numbers if possible. This applies to standing yellows as well as waved. The no overtaking zone extends from the first yellow to the following green or until riders are past the incident or whichever comes first. If you can't see the numbers report the color of the bikes involved. It may be possible to get the numbers from video if available.

A common error is showing the yellow flag *after* an incident, especially when the incident is quite close to the flag point. A moment's thought will show that this is a mistake. Riders arriving at the incident at high speed need to be warned well in advance of the hazard, at the previous flag point at least, sometimes earlier. Showing a yellow flag, even shortly after the incident, indicates that there is another incident further on. If there is not, riders learn to ignore the yellow flags with possible serious consequences later.

At the start of the race there will normally be one grid marshal per wave standing in line with the first rider in each row. Cones with the row number on are used to show riders where the grid lines are as they form up. If there is a problem on that wave of the grid, the marshal will wave the yellow flag at that point, which will sometimes result in a delayed start. Grids marshals are briefed on these procedures beforehand.

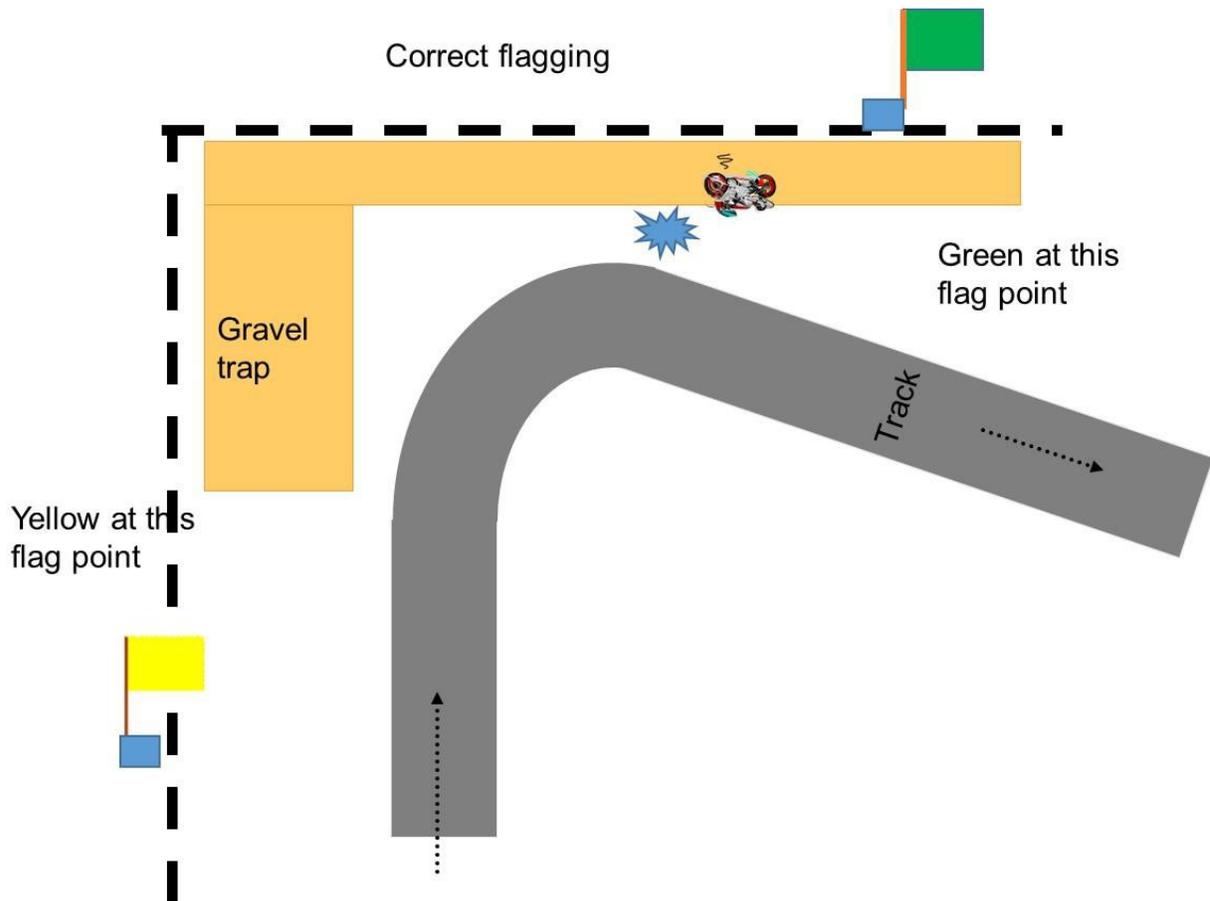


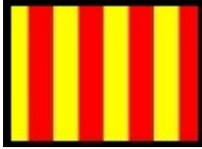
**Green Flag:** This flag is always shown waved. After an incident this marks the place at where riders may now again overtake, and is waved at that single post only.

Usually the green flag is waved at all posts at the start of each practice session, typically for 2 minutes or one complete lap. It is also shown for the warm-up laps, at all points except the last points before the grid (these points show yellow to warn the riders to be ready to stop on the grid). The green flag is not shown for the first lap of the race. The green flag is never shown at the same time as any other flag, except in the most exceptional circumstances, in which case special instructions will be given from race control.

During endurance races the green flag is waved at the pit lane exit when riders may enter the track for starts and restarts.

The following graphic shows the correct use of yellow and green flags at an off-track incident. Note that if the incident were on the track there would be a further yellow flag, up track.





Usually called the **Surface Flag, Oil Flag, Debris Flag, “Lack of Adhesion” flag, etc.** CMRA will normally use the term **Debris Flag**. This flag is always shown waved. This indicates to the riders that “the adhesion on this section of the track could be affected by any reason other than rain”, e.g. fluids, debris, grass, gravel etc.

Sometimes, for minor problems, this is displayed for a few laps until competitors are aware of the hazard.

If a bike hits the track when it crashes, bits usually fly off, so a good rule of thumb is to show the surface flag for every bike that hits the track, until it can be confirmed that there is no debris.

Use common sense when deciding whether to show the surface flag for small debris. Remember the objective is to warn riders as soon as possible of hazards that may cause their tires to lose traction. Long discussions with Race Control over whether to put a flag out or not, miss the point. Put the flag out first, and then discuss with race control.

Marshals more familiar with car racing sometimes fail to appreciate that quite small debris can unsettle a cornering motorcycle. On the other hand, new marshals sometimes put out surface flags unnecessarily, though this is less of an issue.

Some tips for deploying the Surface flag:

- If it looks like oil or some other fluid has been spilled, wave the flag.
- Debris standing more than about one inch (2 cm) above the track is likely to be a hazard and is likely to need a flag.
- Tape, cable ties and tear-off visors are not considered hazardous, and do not require flags.
- Flags indicate that there is something on the track, not the run-off area.
- Race Control may ask you to display a flag to indicate a surface issue that you cannot see from your position



**White Flag:** This flag is always shown waved. For CMRA, this is shown only at the finish line, and indicates the last lap of the race.

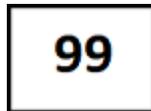
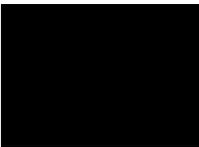


**Rain Flag:** This flag is always shown waved. This indicates that there are drops of rain falling on the track in section covered by the flag post. Usually the first few points displaying this flag will inform race control that rain is starting. When the drops join up on the ground then grip is likely to be affected and this flag should be shown alongside the surface flag.



**Red Flag:** This flag is always shown waved. Indicates a race interruption. The Starter and all flag posts will display a red flag. When riders see a red flag they must signal to riders behind them, slow their machine to a safe and controlled speed and proceed slowly to the pit area. Do not stop on the course unless it is impassable or obviously signaled to do so by course workers. Riders not proceeding cautiously will be penalized.

Note that this flag is only used on the instructions of Race Direction, which will come via the radio or the corner captain. Flag marshals never put out the red flag of their own accord. The reason is, that as soon as the red flag is shown, riders will know that there is some serious situation, and will probably slow down significantly. If only one station shows the red flag, riders may slow or even stop, while those behind them will still be travelling at racing speed.



**Black Flag:** This flag is always shown waved. CMRA rules state, *“The rider must complete the current lap and report immediately to the Event Officials on pit lane.”* This flag may be used in any other situation where Event Officials deem it necessary to have a rider brought in to inspect the rider’s machine or have a verbal discussion with the rider. In most cases, the offending rider’s number will be displayed on a board at start/finish.

This is another flag that is shown only on the instructions of Race Direction. It is normally used when a rider has committed some sort of rule infringement or has a non-dangerous technical problem.

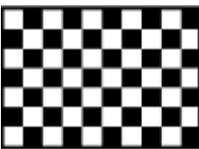
The Black Flag is always shown with a number board showing the number of the bike affected. During a race it usually means disqualification.



Often called the **“Meatball Flag”** or **“Mechanical Black”**. CMRA rules state **“Indicates a safety violation. The rider in question should pull off of the racing surface as quickly and safely as possible and inspect his/her machine or report to the nearest flag or marshals post. Failure to respond may result in disqualification.”**

In other words, when riders are shown the black and orange flag they should leave the track immediately and not even complete the lap – they may be leaking oil, for example. If riders acknowledge the flag and carry on to complete the lap, then inform race control.

The Meatball Flag is always shown with a number board showing the number of the bike affected.



**Checkered Flag:** This familiar flag is used to signal the end of the race or practice, usually shown waved at the start line.

## **FLAGGING REMINDERS:**

**WHEN FLAGS NEED TO BE SHOWN, DISPLAY THEM ALL OF THE TIME, NOT JUST WHEN BIKES ARE IN YOUR SECTION. OTHER MARSHALS AND OFFICIALS ARE WATCHING FOR YOUR FLAGS TOO.**

**PICK-UP TEAMS DEPEND ON FLAG MARSHALS TO DO THEIR JOB, AND SLOW DOWN ONCOMING TRAFFIC WHILE THEY ARE DEALING WITH AN INCIDENT.**

**PAY ATTENTION TO YOUR CORNER CAPTAIN AND/OR RADIO FOR FLAG INSTRUCTIONS FROM RACE CONTROL.**

**IF THERE IS AN INCIDENT IN YOUR SECTOR AND A RED FLAG IS CALLED, CONTINUE TO SHOW THE YELLOW FLAG UNTIL THE INCIDENT IS CLEARED. IF YOU DON'T HAVE ENOUGH HANDS, LEAVE THE RED AND SHOW THE YELLOW AS PRIORITY.**

## 4. Incident Handling

### 4.1. Be Prepared

If you are not equipped and prepared to deal with incidents you will not be effective. Make sure that you have all the personal items that you need before setting out for the track. Pay particular attention to the weather forecast. You may be out in hot, cold or wet conditions for long periods.

### 4.2. Setting up the Station

You will have been allocated to a station at signing in. Make sure you get to the section well before practice actually starts. Find out how you are going to get to your station and when you need to be there. Do not wait for everyone to arrive before setting up the section.

Check everything and place it in the correct or usual position. If you don't know where this is, ask - don't guess. The best equipment is useless if it can't be found.

- Check that fire extinguishers are full and have the correct pressure. Place them in their working positions so you can find them immediately. A flag in the box on the other side of the circuit, may as well not be there, as you can't use it.
- Check that any brooms and other clean-up equipment are serviceable.
- If you have oil-dry or other substances for cleaning up spills, check that it isn't solid.
- If there are barriers or gates that need to move or open, check that they actually can be opened.
- Protection in the form of Airfence, straw bales, etc. needs to be checked that it actually does provide that protection.
- If Airfence appears to be deflating, call it in.
- Check the track surface for the presence of any debris or contamination.
- Check the areas where you will be moving around at an incident. If you put your foot in a hole and fall over during an incident, it may give the crowd a laugh, but you risk becoming a casualty yourself.
- Decide where you are going to move fallen bikes and riders before you have any to deal with.  
It may be that you have a choice of routes depending on whereabouts in the section a bike falls.
  - It may be that there is nowhere you can get a bike through circuit protection at your station. You have to decide how this will be dealt with.

Issues with any of the above need to be reported as soon as possible. Missing equipment may have to be replaced before anything can start.

### 4.3. Incident Handling Basics

Good incident handling is the ability to deal competently and quickly with a range of different situations and problems, so that there is the minimum effect on racing. It is often said that no two incidents are the same, but in fact they tend to have very similar patterns, and you can prepare in advance for the most common, though it should be borne in mind that incidents can happen at any point on the circuit. Even the most experienced marshals with decades of experience see something unexpected every so often.

The best way to deal with this uncertainty is by careful preparation. The professional emergency services are used to this; they make meticulous preparations and practice often.

Remember that during an incident your exposure and risk levels are increased. You can minimize this risk by careful preparation that allows you to get the job done as efficiently as possible. This includes thinking about an escape route if a bike comes toward you. Plan this before it actually happens.

Make sure the team is organized, decide beforehand who will do what and in what order. The time to decide who does which job, is not when an incident has just happened.

### 4.4. When a Session is About to Start

- If you smoke, get rid of your cigarettes, e-cigarettes, or vaping equipment.
  - In particular, vaping clouds have been mistaken for a fire starting, and fire services dispatched.
- Put your gloves on and keep them on while bikes are on circuit. Rushing out while putting on gloves at the same time is awkward, and people are prone to dropping them.
- Keep your clothes fastened, preferably with the sleeves rolled down. Sometimes liquids spill or you can come into contact with hot parts.
- Take up your assigned position and stay there unless required to move.

### 4.5. While Sessions Are in Progress

- Stay behind circuit protection (if available) at all times when bikes are on circuit unless you are dealing with an incident. This includes the warm-up and cool-down laps.
- Keep your attention on your duties. Don't become distracted.
- Marshals should be standing, not sitting when bikes are on circuit. This is so you can move quickly to avoid anything that comes in your direction, usually bikes or debris from an incident.
  - Some stations are very well protected with barriers, so it is possible you are better protected in a sitting position than while standing with more of your body exposed. Use common sense and judgment. If in doubt, stand.
- Look out for and report to race control:
  - Defects on bikes such as loose fairings, dripping fluid or smoke. Reporting a smoking bike can prevent an incident before it happens.
  - Problems with riders' protective clothing, such as loose helmet straps, unzipped leathers, etc.
  - Debris or fluid on track.
  - Dubious tactics by riders.
  - Flag infringements.

Remember, somebody is the first person to spot every problem – it might be you.

### 4.6. When an Incident Happens

Don't just immediately leap into action.

- Assess the risk for a second before moving. No matter how dramatic an incident looks, it is worthwhile holding back for a couple of seconds to see how things develop.
  - Did the bike come off the circuit because of oil? If so, others may follow.
  - Has fuel spilled? Might there be a fire?
  - Did other riders take avoiding action, and are they coming toward you?
- Check that the flags are displayed to warn oncoming traffic of the hazard.
- Use the minimum number of people to deal with an incident. If you aren't needed, don't stand around by the others who are working.
- Don't turn your back on traffic if you can possibly help it. If you must, get someone to watch your back.
- Be ready to use a fire extinguisher at any incident.

### **4.7. Clearing Debris from a Live Track**

At times, debris needs to be removed from the track while bikes are still circulating. In order to make this safer you may need to ask Race Control if there is a gap in traffic.

Small debris may be picked up by hand. Larger items may be kicked off the circuit, though be aware that items that look flimsy may in fact be heavy, like the battery. This is one reason strong boots are advised.

### **4.8. Oil on the Track**

Oil or other fluids can sometimes be left on the track as the result of a technical problem or a fall. This is a very hazardous situation and marshals need to keep a close check on passing bikes and the state of the track, so it can be cleaned up quickly.

Circuits often have very specific rules about what substances may be put on the track surface, so the following is a general guide only.

- Small spills and drops of fluid on the track can often be treated with oil-dry or other absorbent dust or pads.
- Check that contamination is actually oil. It may be fuel, which will usually evaporate quickly, or brake fluid or coolant, though all of these can be slippery.

### **4.9. Major Contamination – Blow-Ups and Oil Slicks**

When engines blow up, large amounts of oil may be spilled on to the track. Sometimes these can be avoided by flagging off bikes that are smoking, which can be a warning of a bigger problem, but from time to time an entire engine will give way without warning.

These incidents need to be reported to the Race Control right away, and will usually result in them calling a red flag. The extent of the spill will often need to be assessed by personnel from Race Control, who will quickly mobilize the local plan for dealing with such events. This may include:

- Use of absorbent dust, oil-dry or similar.
- Bigger spills may need washing with water.
- Sometimes a sweeper truck will be needed.

In any case, a delay in proceedings is inevitable, and every hand that can help may be called in. If the big problem is in a section next to yours, you may be asked to go and join in the work. A large team might be needed to get the job done.

### **4.10. Picking Up a Fallen Bike**

Most incidents will involve the pickup and recovery of a crashed bike. Sometimes a rider will help with the recovery himself, but most riders, if not able to restart, will simply get themselves out of the way. Remounting after a crash is permitted in CMRA events, but if possible, check that the bike is in a fit state to continue – no pieces hanging off, broken levers, or fluids leaking. If the rider insists on restarting against the advice of marshals, do not attempt to physically prevent this; it will simply prolong the incident and increase the risk to all. Report it, and let the Race Director deal with the situation. Marshals should remind riders that they must report to pit lane to be rechecked before attempting to complete the race.

Pre-plan where you are going to put fallen bikes at the beginning of the day. Watching marshals trying to pull in opposite directions is entertaining to the crowd, but inefficient and dangerous.

If a bike has hit the track there will usually be some debris. Hazards on track need to be dealt with more urgently than those off track. If you spot something, tell your corner captain, or indicate to your flagger.

Techniques for picking up a bike will vary according to the type of bike and the damage:

- Bear in mind that many parts of the bike are hot: not just the exhaust, but also the engine gearbox, brakes and suspension. Wear your gloves.
- A very lightweight bike can be picked up and carried by two strong marshals.
- Most bikes can be wheeled away if they are on a firm surface and the damage is not too severe. Remember that you can take a bike backwards as well as forwards.
- Bikes will usually be in gear. If the clutch lever is still there, pull it in and wheel the bike. It can be taken out of gear when in a safer position. If not, use the quickest approach to get the bike moving, either getting it out of gear or lifting it which may be dictated by the number of people available. All machines are required to have a sticker on the triple clamp or fuel tank denoting the shift pattern used. Either "standard or GP shift".
  - A useful trick is to have a large zip-tie handy, which can be placed round the clutch lever and free up one hand. Keep it in a pocket with the end already inserted, but a large opening. All that is needed then is to pull it tight. Zip ties will be provided.
- If the engine is still running, look for the kill switch on the handlebar to stop it.
- If one or both wheels are not turning, then the bike will need to be dragged or carried. A lifting strap helps a lot with this job, but it will still be a team effort. Lifting straps will be provided.
- Gravel traps are highly effective in improving safety, but retrieving a large motorcycle from a gravel trap is very hard work. Lifting one wheel off the ground and dragging in that direction is usually the most effective way, but it is never easy.

Once a bike is recovered, quickly check for leaking fuel and turn off the ignition if possible. Fires have sometimes begun, well after recovery.

If you simply cannot move a bike, then report then if possible protect it with a spare bale or two, if you have them, otherwise take yourself to a position of relative safety and report the situation to race control. They might be able to send help from a mobile recovery team, or may choose to interrupt the session.

## 4.11. Manual Handling

Motorcycles are very heavy, and the use of team lifting techniques is essential to reduce manual handling risks. If you are not able to lift something by yourself, seek help rather than trying to make a superhuman effort.

Using your leg muscles to lift, with a straight back, is always desirable, but not always possible with a bike on the ground. More people may be needed to spread the load.

### **INDICIDENT HANDLING REMINDERS:**

**ALWAYS WATCH TRACK ACTIVITY AND BE PREPARED TO DROP AND RUN.**

**IF AN ENGINE IS RUNNING, USE THE KILL SWITCH.**

**LOOK FOR SPILLAGES.**

**PARTS OF THE MOTOCYCLE ARE HOT.**

**BIKES ARE HEAVY AND IF NOT ROLLING VERY DIFFICULT TO MOVE.**

**WALKING IN GRAVEL TRAPS IS AWKWARD. MOVING BIKES IS HARD. MAKE SURE THERE ARE ENOUGH PEOPLE TO DO THE JOB.**

**IF YOU HEAR A WHISTLE, LOOK OUT FOR FURTHER CRASHERS.**

## 5. Fire Fighting

### 5.1. Preparation

Most extinguishers supplied at circuits are one of these types:

- Dry powder
- Water/Foam
- Carbon Dioxide (rarely)

Some extinguishers are under pressure all the time, others use a gas cartridge that is punctured when the extinguisher is deployed.

Check that you know which extinguishers are which. If your extinguishers are of the pressurized type, confirm that the gauge indicates a good pressure. It is a good idea to turn powder extinguishers upside down at the beginning of the day to ensure the powder is loose.

Do a quick check to make sure the extinguishers are in good condition. If not, ask for new ones.

Extinguishers need to be placed strategically around the station. Usually there are standard places in each station. Use these, even if you think somewhere else is better. If you move an extinguisher, another person may not be able to find it, when it is needed.

### 5.2. Fighting Fires

- Motorcycle fires are usually caused by spilled fuel igniting. Dry powder is the most effective extinguishing medium, though foam does work quite well.
- Most fires can be contained with a 3–5 second burst of a dry powder extinguisher, but be aware that powder, unlike foam does not have a significant cooling effect and re-ignition is possible.
- Think about the wind direction – the powder is light, and though non-toxic (similar to baking soda), if it blows back in your face it may temporarily blind you and not reach the fire.
- If you see a marshal attacking a fire with an extinguisher, be ready with a backup. Sometimes one is not enough.
- If other things are set alight, such as protective fences, straw bales or grass, water or foam is often better than powder, because it can be soaked up and it can help cool things. Similarly, if there are flames threatening an injured rider, water-based foam is a good coolant.
- Have an extinguisher handy at every incident.
- If you have a CO2 extinguisher, it can be used on any fire, though they do not usually last long and make a lot of noise. Be wary of freezing your hands to the extinguisher.

### 5.3. Dos and Don'ts of Firefighting

- Do remain nearby with an extinguisher after a fire has been put out, in case of re-ignition.
- Do use the minimum amount of dry powder to extinguish a fire and preferably keep it away from injured riders, as the powder, though non-toxic, can cause breathing problems. Foam may be better in this case.
- Don't forget to check the wind direction.
- Do check all extinguishers, each day. You may not need one often, but when you do, you really need it, and quickly.

## REMEMBER:

**DO NOT PUT YOURSELF IN DANGER JUST TO EXTINGUISH A FIRE.**

## 6. Medical Matters

Marshals are not expected to be substitutes for medical professionals, who will be present at every CMRA event in reasonable numbers, but you may well be asked to assist from time to time, and there are certain things you should certainly not do.

### 6.1. Injuries

Injuries resulting from a crash can be:

- None or negligible – the rider gets up unaided.
- Minor – the rider may require some help – “walking wounded.”
- Major – Spine or head injuries, multiple injuries, unconscious

### 6.2. First Aid

If you have first aid training, so much the better, but even those with no training can assist, if they arrive first on the scene of an incident. If the rider does not get up after a few seconds:

- Call for medical help.
- Hold the casualty's head still.
- Open the visor to ensure the casualty can breathe. If it is full of debris or gravel, remove this as much as possible without moving the casualty's head.
- Talk to the rider to see if he or she is conscious and making sense. Riders usually wear earplugs, so you might have to be quite loud. The doctor will want to know whether the rider was unconscious or not.

### 6.3. Minor Injuries

If you are the first to respond to a rider who does not immediately get up, check if he or she needs assistance and offer it if required. Do not simply go and take hold of the rider. There are many cases on record of helpful marshals, eager to get riders away from the track, pulling them forcefully by an arm that they were not aware was broken (ouch!).

Medics at an incident will assess and treat rider with minor injuries at the track. Minor injuries include things as significant as small fractures, but cuts and bruises are very common. Riders with more serious injuries will be referred to the local hospital. In some cases riders will be transported by ambulance to a local hospital for treatment.

Be aware that any kind of head injury has the potential to become more serious later. If you have seen a casualty take a blow to the head, ensure that this information is passed to the medical team, even if the rider is unconcerned about it.

Make sure that the helmet of an injured rider goes with him to the medical center. The medics may want to see it to assess the position and strength of any impact.

### 6.4. Major Injuries

These include incidents that may have caused head or spinal injuries, multiple injuries and/or unconsciousness. These will normally cause the session to be stopped. You may be asked in the early stages to assist the medics, especially in casualty movement.

If you do not feel able to assist in such a situation, say so at an early stage, as the last thing the medics will want is another incapacitated person to attend to.

In major incidents extra vehicles may be involved. Look out for these arriving at the section.

- Medical cars
- Ambulances
- Safety vehicles
- Occasionally, a helicopter

### 6.5. Dos and Don'ts of Injury Handling

- Do get trained in first aid, if you can.
- Do speak to an injured rider who doesn't get up, to assess quickly what his or her condition is.
- Do observe an injured rider who has had a heavy fall, even if he or she claims to be "fine". Pass any observations on to the medics and let them make judgments.
- Don't touch a rider unnecessarily. Especially don't pull or push a rider to get him or her away from the track. Ask the rider firmly to move to a less dangerous position. Point the way.
- Do make yourself available to assist the medics with moving and handling of injured riders or equipment.

### A FINAL WORD

**By following the basic techniques contained in this manual, you will find that being a CMRA marshal is one of the most rewarding volunteer jobs you can do. You will be among friends, in a mutually supportive environment where the whole team is certainly greater than the sum of its parts.**

**Make sure you are fit enough to do your job, and never be afraid to ask for the reason behind something; there always is one, and you may have just hit on some way that we can improve.**

**If you believe there are errors in this document, please bring these to the attention of the series Chief Marshal, so corrections can be made.**

**7. Appendix A. Glossary of terms**

Term	Definition and/or references
AMA American Motorcyclists Association	The licensing organization for Circuit racing in the USA, and in the context of CMRA the delegated organization of the FIM.
Corner Captain	A senior marshal in charge of a small team at a particular section of track. Only used at some events.
Flag Marshal	A marshal whose job it is to show flags. Also known as a flagger or F&C (Flagging and Communication)
FIM Federation Internationale Motorcycliste.	The World governing body for Motorcycle sport. Organizes MotoGP, and World Superbike
Marshal	A safety worker at the circuit, either at a corner or elsewhere. Also known as: Corner worker Track worker Flagger Pickup, Runner etc.
Surface Flag	The yellow and red striped flag, indicating a lack of grip.
Track marshal	A marshal whose primary function is to clear incidents from the track. At some circuits they are referred to as <i>Catch</i> and at others as Runners
Warm up lap	The lap the riders do prior to forming up on the grid. In certain circumstances, such as bad weather or an aborted start there may be more than one warm up lap. A green flag is displayed on warm up laps, at all points except the last points before the grid, which usually display yellow.