

Tips for Digital Photographers



Photographing Motor Sports

0004

by Norm Whyte

Introduction

There are two main areas that you can shoot motor racing from:

- In the pit lane, and
- beside the track.

The *pit lane* is where the drivers stop to refuel and where the crews make adjustments to the cars. It is a crowded, noisy place, but there is a lot of action.

At many motor racing tracks photographers are welcome to shoot from behind the team's equipment, and with a medium telephoto lens you can get some interesting shots. There are certain times that you are allowed to go "over the wall" and onto pit lane itself, but these "*Pit Walk-Throughs*" are open to amateur photographers as well. There are usually too many people milling about to allow for any good photographic opportunities.

The other excellent shooting locations are *trackside*. This is the area between the debris fence and retaining walls that line the track and the front of the grandstands. Access to these areas puts you much closer to the track but may not be available to semi-professional/amateur photographers.

Provided you can keep your viewfinder clear of the surround fencing you will also get good images at track side in the public enclosures. Bends and associated car crowding will give you better photographs.

Taking side on shots by the fence of passing cars will prove difficult and in most cases give you very little reward.

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Equipment

You'll find an opportunity to use most of the lenses in your bag.

You'll need a *200mm lens at minimum*, and 300mm or more is better for shooting at trackside. If it's bright and sunny, you won't need to shoot wide open, but some shots demand the fastest shutter speed possible.

A 300mm f2.8 with Image Stabilization is perfect. When necessary, you can open up and not lose any sharpness, and the image stabilizer will help you minimize camera shake.

Carrying a tripod isn't practical, but a *monopod is a must for any lens longer than 200mm.*

You won't be able to use it when panning, but for most other shooting it's the only way to get usable images. For shooting in the pits, a 70-200mm plus a wide angle lens will allow you to get most of the shots you want.

Another piece of gear that will help you stay comfortable is *kneepads*. Much of your shooting will be done while kneeling on concrete and asphalt.



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Equipment and Safety

If you still use film, in this digital age, use whichever film you are comfortable with and take more than you think you'll need.

It's surprisingly easy to burn through 20+ rolls of film in a day (if you are really a serious sports photographer). Such are the blessings of a digital camera..



Your Safety

Motor racing is dangerous, no two ways about it. Nobody goes to a race expecting to be injured, but it does happen. Fortunately there are things you can do to minimize your risk.

Never turn your back to a car on the track.

You can't jump out of the way of something you don't see coming. If you are shooting with a long lens, try and get a friend or colleague to "spot" for you.

With the camera up to your eye, your field of vision is extremely small and chances are you won't see an out-of-control car coming at you. Make it a habit of always knowing where you would dive if you saw a car

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Safety

careening towards you. *If the spot you are in has no escape route, find somewhere else to shoot your images.*

Never lean on or put your gear down on the concrete barriers that line the track. If a car hits the barrier, the barrier is going to move and you don't want to be leaning on it when it does. Put your gear on the ground beside you, remembering not to block your escape route.

Wear really good ear protection. Get the kind that construction workers use to protect their ears from hydraulic jackhammers. You will be just a few feet away from a few dozen high horsepower engines without mufflers, and the roar is quite literally deafening



Wear long pants, and if it isn't too hot, wear a long sleeved shirt or top. You may not be allowed into the pit lane with shorts on, and pant legs and sleeves will afford you some protection, however small, against airborne debris or fire.

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Safety and Technique

Pick your shooting locations wisely. Watch the cars on the track. If a car loses control, where will it hit? *If your location in the fence is too close to the likely impact zone for your own safety MOVE.*

And finally, be aware that the last few minutes of the practice and qualifying sessions and the closing laps of the actual race are the times that the drivers will be pushing harder than usual on the track. *Be extra vigilant at these times.*

Your Technique

When shooting cars **on the track**, it's *important that the car fills the frame.* The track and the retaining walls around the car are very uninteresting subjects.



The only exception to this rule occurs when using a wide angle lens and panning with a car. This technique will blur the background and the front and back of the car, giving the impression of tremendous speed.

If your lens is long enough, close in tight and frame the drivers head, the roll bar and the front wheel of the car

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Technique

Your image will be much stronger if you can also capture the driver's hand on the steering wheel. The driver's hand is normally only visible when they are turning, so try shooting from the outside of a corner. *As with all racing photography, for this shot to work you MUST get the Drivers helmet and the roll bar in focus.*



In the pits, anything goes. Shoot the cars from different angles . Down low works particularly well. When shooting drivers in their cars, you need to use your flash so you don't lose their eyes in the shadows created by their helmet.

Pay attention to what's going on, both in the pits and around the track.

When it comes to determining *the correct exposure*, trust your camera's built in meter to handle almost every track and pit lane situation. The only exception is shooting black cars from close range. You will have to dial in some underexposure to compensate.

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Technique

Try shooting in *aperture priority mode* using the smallest f-stop I can afford. Much of the time you will not be able to rely on your autofocus.

The cars are moving too fast for even the best hypersonic focusing motors to track. You can usually find a slow-speed corner (or the entrance to the pit lane) where your predictive-auto focus will track a car successfully, but the camera will frequently focus on the wrong part of the car.

The solution is to *pre-focus on a spot* on the track, and press the shutter release button so that the shutter opens at the precise moment the driver's head is in focus.

These cars move at speeds approaching 300 kilometres per hour, and with a 300mm lens, *depth of field will be measured in inches.*

You need to judge how far the car will travel during the lag between squeezing the shutter release and the time the exposure is made. *It's hard to do, but with practice you can obtain consistent results.*



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Technique

You will be able to use your autofocus when panning. ***A well-executed panning*** shot will keep most of the car in focus against a blurred background.

Blurred tires also help convey the sense of speed. The effect is achieved by panning with the car and gently releasing the shutter. Practice makes perfect with this technique. At their top speed of 300kph, these cars travel almost 1 metre in 1/100th of a second! Practice following the cars without shooting any frames until you feel comfortable you can keep the car in the frame while panning smoothly.

Use the fastest shutter speed you can and an Image Stabilized lens wherever possible.



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Outcome & Results

Film is cheap and digital costs little. The race may only happen once per year.

Some pros may shoot hundreds of images to get 20-50 good images, *rendering only 10 or so that are acceptable*. Not a very high success rate at all.

Motor racing is a unique form of photography, and *you shouldn't expect to achieve the same success rate you enjoy elsewhere*. The high number of spoiled frames also practically explains why Canon's 1-D digital camera has become so popular with professional sports photographers.

It takes a long time and a lot of practice to perfect your racing photography technique, but the process is very enjoyable. It's a



great way to spend a weekend enjoying a fascinating sporting event and creating some unique and exciting images.

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Some TIPS for Success

Tip #1: Plan ahead! Carefully plan where you will set up. This is probably the biggest mistake for action photographers. No matter what action you are going to shoot, *you need to predict* where you can be to capture the face of the subject.

Tip #2: Pre-focus. Use pre-focus where possible by focussing on that part of the image where you expect the action to be. Then you can either wait or pan to this point.



Tip #3: Shoot in short bursts rather than one long burst if you are shooting continuous shots. *This will prevent your buffer from filling up*, which could cost you the shot. Good practice is to shoot action in three short bursts, wait a second, then shoot another burst. To do this, turn your camera to continuous high drive mode.

Tip #4: Give the subject space to move. For fast-moving subjects, the best composition is usually to *allow some space on the side of the photo where they are traveling*. This composition will feel much more comfortable to the viewer so they don't wonder what's in front of the person.

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Some TIPS for Success

Tip #5: Get a fast memory card such as Sandisk SD Extreme with speeds of 45MB/s! This can *help prevent your camera from slowing down* if the memory card write speed is the bottleneck in your system.

Tip #6: Don't miss the face. Capturing the expression on the face of the subject will add much more drama to the photo.



Tip #7: Shoot JPEG. Action photography is one of the times when you may switch over to JPEG rather than use RAW images. Since *JPEG files are much smaller than RAW files*, most DSLRs can capture a few more frames per second on JPEG than RAW.

Tip #8: Get down low. One of the most important—and lesser-known composition tips is that *shooting from down low will make your subject look powerful*.

Look at 'good' pictures of a CEO and politicians and you'll see that they are often shot from a low angle to make the person seem like a towering giant. The same is true in action shots, where

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Some TIPS for Success

photographers generally want to make the subject look dramatic and powerful. (Drivers by their cars)

Tip #9: Shoot with two eyes open. Closing one eye lessens your ability to determine depth and hinders your eye's ability to track movement. It takes some practice, but *shooting sports and action with two eyes open will help you get the shot.*



Tip #10: Don't flog the shutter button! . The proper way to press a shutter button is to simply roll your finger back across the button. Flogging the shutter button will torque (twist) the camera at the critical moment when the photo is recording the scene and it will show movement you don't need!

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Challenge – Photographing Motor Sports

Challenge 1: Pits

- Drivers by cars

Hint: use aperture priority or manual settings and aim for f11-16 for detail. You may wish to increase the ISO for faster speeds.

- Starting Line

*Hint: use a wide angle (if you can get close) or a telephoto for distance shots. **The action start will be difficult to time**. Use a small aperture to select certain cars in the group.*

Driver close up

Hint: telephoto lens and small aperture with critical focussing (perhaps pre-focussing) to ensure driver, rollbar and front wheel in focus.

Challenge 2: Track

- Bunched cars on corner

Hint: (stop movement and separate from the background). Use a very fast shutter speed and watch your light – you may find the camera shooting on small f-stops (f2). Shoot into a curve or bend.

- Fast speed panning

Hint: Try for 'panning' effects shooting at right angles and moving camera with the direction of the cars (* blurred striated background caused by moving camera)*

NOTE: Consider showing your images at a Seminar and sharing your experiences with others.

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How you will benefit as a photographer:

You will improve your images and become a more creative photographer through -

- attendance at **FREE Digital Photography Seminars** at local library
- reading up to date issues in my monthly **Newsletter**
- asking questions in our **Lifetime Photographer's email network**.
- my regular free '**Tips for Digital Photographers**' which will help you improve your skills.
- '**Challenges**' in Tips for Digital Photographers which accompany each issue to expand your creativity.

- prepaid **Practical Photography Workshops** including Basic, Travel and Available Light photography.

- Access to **Manuals of Practice**

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