

YOUR DAY ON TRACK

Thank you for attending a coaching day with me, Levi Day
Here is what we worked through today:
Please take some time to write your thoughts on how the day went, what you learnt, what you want to work on. This is for you to read over the next time you're at the track, to remind yourself what you want to work on:

Signed _____



ABOUT THIS BOOKLET

This booklet contains information on various areas to help improve your riding. Whether you are a track day rider or an experienced racer, I hope that you find something useful to take advantage of from reading this. The following sections are things that I constantly use in my racing. The following information is my opinion and other riders may do things differently, completely the opposite, or not at all. My only intention with this information is to provide you with some basics of how I approach track riding and racing. Every rider thinks differently so take the time to ponder the content and make each section useful in this free booklet. Track day riders may not take nutrition or fitness as serious as a racer. A racer may not need set up sheets if they or their team already do that. Each section covered is much more extensive than what's in this booklet, my goal with this is to point you in the right direction and show or remind you of the many different areas that play a role in improving and enjoying your riding. I am happy to go deeper in to any of these areas if you are after some more detailed information. Simply email me at leviday57@hotmail.com and we can work out a program to go forward with.

The areas covered in the following pages are:

- 1. Basics of preparing for a race weekend/ride day
- 2. Track Maps
- 3. Set up sheets
- 4. Suspension and Tyre Pressures
- 5. Nutrition
- 6. Physical Training
- 7. Mental Preparation

In this booklet I cover the different areas I use in preparing for a successful time on track. There are a lot of useful books out there such as Twist of the Wrist by Keith Code and Motovudu by Simon Crafar that offer great advice on riding technique. I wanted to look at different individual aspects excluding riding the bike that revolve around riding and play a huge part in your progression on track. The "riding the bike" part is where I enjoy coaching riders on track. Me riding with you gives a much more personal approach to improving your riding where you need it. This booklet will give a lasting reference to the new skills you learn and for future reference to revert back to.



BASICS FOR PREPARING FOR A RACE WEEKEND/RIDE DAY

Before each track day, test or race meeting, I make sure I'm very organised. Being prepared makes sure you aren't stressed at the track which results in productive track time. Every time you go to the track the goal is to have fun and/or to improve your skills. Doing a little preparation work before hand helps the day run significantly smoother. I have a checklist that I go through before each event:

Race weekend/Ride day checklist:

- Fuel
- Baffle (some tracks have noise restrictions)
- Valid race licence
- Good tires (wets also?)
- Tools
- Spare parts
- Tire warmers (and check they are working)
- Track maps
- Set up sheets
- Food and drink
- A schedule of my sessions. What time I'm on track so I know when to be ready
- A work schedule. What we plan to work on in each session (riding style, bike set up, electronics, tire testing etc.) This is always flexible as things change through out the day and you may go in a different direction that first intended
- Riding gear: helmet, leathers, gloves, boots, back protector, compression clothing
- Cleaning products for bike and helmet

I try and get as much of this done a few days before I am going riding. That way if something is missing or broken, I have time to sort it. A decent nights sleep the night before is more important than you think too!



TRACK MAPS

Track maps are hugely beneficial to your riding, no matter what level you're currently at. The more information you can gather on what you're doing, what the bike is doing and the characteristics of the track that help and don't help you, contributes hugely to improving your riding.

I have one track map that I use as a 'track layout and reference map'. Generally, I will have done a track walk and written down things along the way. If a track walk isn't possible, I will always use the first few laps or first couple of sessions as needed, to gather as much information as possible. I will write down all the characteristics I can see (and feel, once I've ridden the track), such as:

- The camber of the corners
- Reference points (could be the curbing, 300-200-100m boards, a tree, a fence line, a mark on the track)
- Surface changes
- Bumps
- Cracks in the tarmac
- How the corners should be ridden. Do they link into another corner? Is it important to concentrate on the entry because it's a popular overtaking spot? Or focus on the exit, as it ties in to another corner.

This map then turns into a reference on how I am riding the track. I will always read over this track map before I go back to the track next time. This helps my mind start to remember all the little characteristics of the circuit.

The other track map I use is a 'session map'. After each session I use a track map as part of a debrief. I will write things down such as:

- Gear for each corner
- How the bike is feeling in each corner, good and bad
- Where I'm confident, where I need to improve
- Lines I'm taking and lines I need to work on
- What I want to do to improve

At the top of every map I have the date, what session it was during the day, lap time(s), position (on a race weekend) and gearing. Then I can look on my set up sheet later down the track to know what set up I had in that day at that track.



TRACK LAYOUT AND REFERENCE MAP, NOV 28 2015

This corner is the only double apex corner at Mac Park. It's very important as it's driving you on to the fastest part of the track. I run into here fast, missing the first apex by half a meter. I use some rear brake to help bring the bike back into the turn. I run out about half way across the track mid turn. There are a viariety of entries, but the exit is where is important. I am on the apex for the last 1-2 meters of the inside ripples, but because of entering this 2nd apex from mid track, it allows me to stand it up and drive hard! It has positive camber and mid turn this helps a lot as you start to pick up the throttle.

Access road either side of track for reference point I brake before this but use it as my guide Slight rise on inital braking, then track drops down into turn. Lots of positive camber. A straighter line can be achieved through turn 2 if you don't run out to wide at turn 1.

I apex the left hander late, around about 2 meters of the inside curbing I run parallel up the right left. This helps me to get to the left 3 hand side of the track, creating hand side of the track to set up for the a wide entry into the left hander. right hander coming up. To help get over to left even more I slide it on the rear through the left to help tighten up the turn. It's easy to get flustered into the right. There is a gear change, a change of direction, and quite harsh braking all happening here. It has positive camber on the entry and it's important here not to tip in early, as it's another popular

spot to run off at, similar to pine tree.

the build up to the back straight.

Don't rush on the way in, it's important

to get the drive out, as this is the start of

I run parallel to the left hand side then as the track starts to go right I wait just a moment before tipping in. This stops me tipping in early which runs you wide on the exit, which screws up the entry to the following left hander.

Positive camber on entry to final turn, but can catch you out as it flattens on exit. It's important to get on gas early, to settle the bike and then drive Start/Finish progressively.

I only go out about 1/2 track width out of turn 1 and then try and bring it back to the left slightly. A few bumps on the entry to turn 2. By keeping over to the left on the entry, allows the bike to be more upright when tipping in to turn, making it safer to drive hard through here, being on the larger part of the tire. It's important to use all the track on the exit.

as this helps from transferring the weight to the front too quickly. It is a really difficult turn as there aren't any reference points. But it does rise slightly while still going straight. Then as it flattens out is when I tip in, I carry the brake in to the turn so that I don't scrub off my speed to early. The exit opens up a lot more than you think, so it's important to carry good momentum through here, If your not using all the track on exit, you can carry more corner speed and get on the throttle earlier At the top of the hill, i'm entering from around

I brake for this turn just after the surface change. I use some rear brake as well

mid track, making it a smooth transition from the right into the left. You can carry brake into the left, but the camber does go negative slightly at the top, and it can catch you out. Running it in fast works well, as you run out slightly mid way through the turn, bringing you parallel to the left hand side of the track at the bottom of the hill, setting you up well for the I'm looking up the hill last turn.

for the tree at the top. I use this as a reference to know where I need to be. There is decent positive camber here, so it holds you into the apex nicely.

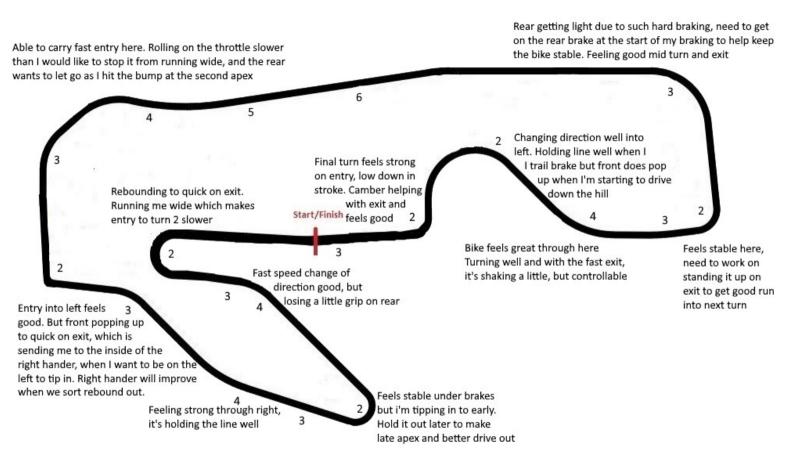
Tipping into right.

Another corner with no real reference points. But very important not to tip in early and run wide on exit. The drive out is crucial to get a good run into the final part of the track. I find there are some groove marks in the track. which I use as reference points, a good idea to walk the track to see what you can spot and use as your reference. On the exit there is patch where repair work has been done on an old bump

Difficult to find a reference point into Pine Tree hairpin. But I tend to judge it off the bumps coming up on the lefthand side of the track. I try and stay as far left as possible, as being a meter in, tends to be even bumpier. Back to 2nd and the back tends to lock up a little due to the hard braking and weight transfer to the front. The positive camber means you can really trail the brake in to here with confidence, and it helps to bring the bike back for a late apex. This is really important as its common to get sucked in to tipping in to early. This will cause you to start running wide and most likely run off track. I apex it at about a meter to the end of the inside curbing. This allows me to stand the bike up while getting on the power and makes for a strong exit.



SESSION MAP, NOV 28 2015 RIDE DAY—SESSION 3. Laptime 1:12.4 Gearing - 15:43





SET UP AND DATA INFORMATION

Setup sheets are very individual pieces of information and provide information about the set up of your bike at any given track. You can provide as little or as much information as you feel is necessary. What records you want to keep is entirely up to you based on how serious you want to take your riding. Even a track day rider can benefit hugely in keeping records of their bikes setup. A racer can take it further by measuring things like fuel consumption, track temperature, tire wear and so on.

On the following page is a basic plan of a set up sheet, with topics that you should consider recording, You can make your own spreadsheet to track information that is important to you. I start with writing the track, bike, date, weather, track temperature at the top. Then we take notes on:

- Fuel consumption. Can be measured by filling an empty tank with a desired amount, then draining it at the end of the session to see how many litres has been used in that session. If 11 litres has been used for example, we divide that by the total laps done, to give a measurement of ml per lap. More on this on the next page)
- Gearing
- Tire pressures
- Front suspension oil level in forks, spring rate, preload, rebound, compression, fork height
- Rear suspension spring rate, preload, rebound, compression, ride height
- Wheel base
- Laptime
- Laps completed

We then have columns to record changes on the same sheet for each session throughout the day, and see the progress made or lost. It's also important to keep you lap times, either from your lap timer or the timing sheets (at a race weekend).



TRACK: Mac Park	BIKE: Suzuki GSX-R 600 DATE	DATE:22/2/2015		WEATHER: 22 degrees celsius			SHEET: #1
FASTEST TIME FOR SESSION	01:11.4						
TRACK TEMP	34						
FRONT TIRE PSI	Start:	33		Finish:	34		
REAR TIRE PSI	Start:	24		Finish:	26		
GEARING	15:42						
WHEELBASE	565mm						
FUEL CONSUMPTION							
START OF SESSION	10 litres	Laps 10		Litres remaining: 3 litres	= 7L used		
Usage per lap=	7 (litres used) / 10 laps = 700ml per lap						
FRONT SUSPENSION							
FORK HEIGHT	2mm above triple clamps						
SPRING RATE	10.25						
OIL LEVEL mm	185						
PRELOAD mm	6mm	8mm	8mm				
COMPRESSION	12	14	15				
REBOUND	8	7	9				
REAR SUSPENSION							
SPRING RATE	9.5						
SHOCK LENGTH	315mm						
PRELOAD mm	10mm	12mm	13mm	13mm			
COMPRESSION	13	13	14	16			
REBOUND	12	14	14				

Comments: PLEASE NOTE: THIS IS ONLY AN EXAMPLE SET UP SHEET, NOT AN ACTUAL SHEET THAT I HAVE USED. THIS DATA IS NOT CORRECT FOR THIS BIKE OR TRACK.

The changes made in the suspension rows, are examples of coming in during a session and taking note of the changes made.



\$U\$PEN\$ION AND TYRE PRE\$\$URE\$

Tyre pressures and suspension can sometimes seem like a dark art. There is so much information (and misinformation) that someone can tell you one thing, but you could find someone else telling you the complete opposite. My best advice is listen to the experts. A suspension guy will generally have more idea about what springs and fork oil height you should be running than your local punter down the pub. Your local motorbike shop who you buy your tyres from should have or will be able to find for you, the correct tire pressure information.

First of all, let's talk about tires...

Riding on track is very different to riding on the road. You'll find road riding requires higher PSI. This is to make your tyres last longer, but with a little less grip. This is absolutely fine for the road because you aren't pushing the limits as you will on track. A higher pressure keeps the tyres rounder to stop the centre of your tyre squaring off prematurely, as a lot of riding on the road is done pretty much upright in comparison to track riding.

Each brand of tyre is different in carcass, sidewall and upper surface with one or multiple compounds. The recommended cold or hot PSI can vary quite significantly from track to track and on cold or hot days. Don't use what your mate is running on his Pirellis if you are running Dunlops.

When you first get your track tyres fitted you want to set them to a cold pressure. Cold means before you have used them or any real heat goes in them. Just at room temperature, set them around where they should be based on the tire vendors recommendations. Some people will always simply set them cold and leave them alone. If you get into a routine and keep doing it like that and you ride the same way all day, there may not be any problems. I find setting them hot is more consistent when at the track. Setting tyres for what they are on track is of most importance. After all, you are not riding on them when they are cold and you want them at their desired PSI for when they are in use on track. Your tyre warmers are a tool that will help you learn what pressure to set them at before going on track. Temperature controlled warmers are the best, but if you set a rule of having your warmers on 30-45 minutes before going on track, this should ensure that good heat has gone into the tyre, and also into the rim, which helps hold the heat in. When you remove the warmers, check the tyres with your bare hands to make sure the tyres are hot!



TYRE TALK

As an example I will talk about the Pirelli Super Corsa, as this is what I have had the most experience with on a 600. We would set the rear at around 22psi and the front at 30psi cold. We then put the tire warmers on for 45min-1hr hour before a session. 10 minutes before we go out for the session, we will check the tyre pressures. Because they are now hot, the pressures have increased. We would then set them for 24 psi in the rear and 34psi in the front (you should see a minimum gain of 4psi from the cold pressure set). Depending on the temperature that day and the temperature of the track we may change these pressures slightly. This is all written down from previous experience, as to what our pressures went up to when on track. Factor in another 2psi gain ideally.

After the session (or mid way through if we have time), I would come in and check the tire pressures as the first thing to do, and set them to our ideal working temperature, because it is on track where the tyres need to be at our known correct pressures. It is best to check and adjust them accordingly as soon as you come off the track. Then, when you put the tires back on the warmers for the next session, the pressures may change slightly due to the temperature of the warmer being different to the temperature they are getting to on track. But when you head out for your next session, they should be at your correct working temperature and pressure.

In terms of correct wear with tyres, it is important to talk to your tire manufacturer as they will be able to identify many common issues and provide informational fixes for things like cold tearing etc. However, poor tyre wear can often result from incorrect suspension settings for your weight or riding ability. A suspension tech will have a good idea about tyre wear and will be able to point you in the right direction. Also be aware that it can come down to riding style. Where you get on the throttle VS how much lean you have can alter how your tyre wears. Sliding from getting on the throttle hard, braking harsh instead of progressively braking and so on can all play a part in how your tyres wear.

When ever you are using tyres for multiple sessions, it's best to put them back on warmers as soon as you are in the pits. Having them go hot and cold in between sessions can reduce the life of the tyre and its grip level.



\$U\$PEN\$ION

Suspension is unique to each individual and what they want to feel. I've found from experience that my team mate and I could be doing similar lap times (within 1 tenth of a second of each other), but will be running a different fork height, spring rates and clicker settings. If we were to swap bikes we would both find the feeling terrible! It's all about feeling comfortable and confident with what the bike will do. Suspension is an ongoing improvement. As your pace improves, you are asking more of the bike, so you need to improve the suspension to go with your riding improvements. It's best to find a suspension technician that understands and/or learns how you ride, and helps you develop your bike and riding together. Having loads of different people telling you different things and trying to reinvent the wheel can often confuse things. I always found it beneficial to learn as much as you can about suspension yourself also, as you shouldn't be afraid to try small changes on your own. That will ensure you progress into being comfortable with setting your own bike up and having a better understanding of the changes a professional is making to your bike. Before making changes yourself, ensure you take notes of the current settings so you can always return back to that.

Setting the sag for the bike is an important step into getting the bike set up for your weight. The following goes through setting the rear and front sag, as well as a trouble shooting guide to your front and rear suspension.

Rear Suspension

The bike will need to be on a stand where the rear wheel can be suspended above the ground with the rear suspension in full extension. Foot peg stands work best where as an axle or swing arm stand doesn't work as this keeps the rear of the bike loaded.

- 1. Take a measurement from the rear axle (mark the top of the nut with a marker, or somewhere that you know you can be sure to measure exactly from again) to a marked point above on the seat unit, while the bike is on the foot peg stands.
- 2. Take the bike off the foot peg stands and hold the bike upright. Take a measurement between the same two points as in step 1.
- 3. Take off measurement two from measurement one, and this gives you your 'Static Sag'. Which is how much the bike sags from it's own weight.



\$U\$PEN\$ION

As a guide, anywhere between 5-15mm of static sag is a good setting to start with. If you have less than 5mm, decrease the preload on the rear suspension. If you have more than 15mm of static sag, increase the preload on the rear suspension.

We now want to work out the 'Rider Sag':

- 4. Having the bike held upright with no stands, bounce on the suspension lightly, to make sure it isn't sticking. Then have the rider (all suited up preferably, as this is their actual riding weight) sit on the bike, in their normal racing position.
- 5. Now measure between the same two points on the axle and the seat unit.
- 6. The difference between the measurement taken in step 1 and the measurement taken in step 5 is the 'Rider Sag'.

Anywhere between 25-35mm of rider sag is a good starting point for your rear suspension. If the measurement is less than 25mm, decrease the rear preload until the measurement becomes correct. If the ride sag is more than 35mm, increase the rear preload until the desired measurement is acquired. If you have had to adjust the preload when setting the 'Rider Sag', recheck your 'Static Sag' is still within the 5-15mm guideline. If it isn't, attempt to adjust the rear preload until both 5-15mm Static Sag settings and 25-35mm Rider Sag settings are achieved.

If this isn't possible, your spring needs to be changed to a harder or softer rate. If the static sag is zero to get the rider sag range needed, the spring is too soft. If the static sag is the same as or greater than the rider sag, the spring is too stiff.



SUSPENSION

Setting the sag for the front suspension:

The method is the same as with the rear suspension. You will need to use a stand that goes under the yoke (triple clamps) in order to allow the front suspension to be fully extended and the front wheel to be off the ground. You may have to pull the base of the forks down to ensure they are fully extended. You will also need to know and mark with a black line where the forks bottom out to get the measurements correct.

- Measure from a marked point on the axle to a marked point on the fork near the yokes.
- Let the bike stand on the ground freely, with no stands, so you will need to hold it upright. Measure between the same two
 points.
- The difference between these two measurements is the 'Static Sag' for the front suspension. 20-30mm is a good starting point. Any less than 20mm, the front preload needs decreasing. Any more than 30mm and the front preload needs increasing.
- Now have the rider sit on the bike (with gear on) and take a measurement between the same two points, on the axle and the forks.
- The difference between this measurement and the measurement taken in step 1 is the 'Rider Sag' for the front suspension
- Between 30-40mm is a good starting point. Any less than 30mm, you will need to decrease the front preload. Any more than 40mm you will need to increase the front preload.

The same principle will apply to the forks as it did with the shock in regards to spring changes. If you cannot get the static sag and the rider sag within the desired measurements, a spring change will be needed. A simple way to help measure your front suspension travel when on track is with a cable tie around the fork stanchion. After a session on track, the cable tie wants to be around 10-15mm from the bottom out mark. If it is less than this, increase your front preload. If it is greater than 15mm, you can decrease your front preload.



TROUBLE SHOOTING - FRONT SUSPENSION

Compression	To much	Bike is difficult to turn in and steers wide through the turn.	
		Front wheel is skipping on bumps	
		Front judders when braking in a straight line.	
		Front feels harsh on small bumps	
	Not enough	Forks diving to quickly, possibly bottoming out.	
		Rear end wants to come around during hard braking	
		Front end has vague feeling, mushy feeling (similar to, too little rebound)	
Rebound	To much	Front end chatters when coming out of corners	
		Forks pack down on fast bumpy tarmac	
		Front end wiggles or tank slaps on hard acceleration out of corners	
		Hard ride due to forks sitting down	
	Not enough	Excessive pogo action through chicanes	
		Front end shakes (not chatters) in corners	
		Front end shoots up too fast after braking	
		Feels comfortable when riding straight, but vague in corners and traction feels poor	
		When tipping into a corner at speed, the bike wallows before settling down	



TROUBLE SHOOTING - FRONT SUSPENSION

Fork oil level	Oil level to low	Over large bumps or during hard braking, the forks are bottoming out.		
	Oil level to high	The front wheel is skipping on bumps		
Ride height	To low	Lack of high speed stability		
		Easy to turn in to corners		
	To high	Sluggish or high effort turn in to corners		
Spring rate	To soft	Forks compressing to much		
		Forks bottom out during hard braking or large bumps		
		Creates oversteer		
		Can cause front end to tuck		
		Turns easily into corners		
	To stiff	Creates understeer		
		Losing front end on corner entry		
		Feels harsh in corners		
		Front end chatters coming out of corners		
		Bike difficult to turn in		
		Feels stable under braking		



TROUBLE SHOOTING - REAR SUSPENSION

Compression	To much	Shock rigid and harsh, but not as bad as to much rebound
		Rear wheel skips when braking on rippled tarmac
		Very little rear end squat on acceleration
	Not enough	Shock bottoms out on medium bumps
		Rear end squats on acceleration
		Possible bottoming of rear shock
		Bike steers wide exiting corners (rear to low, front to high)
Rebound	To much	Rear wheel hops in turns with small bumps
		Rear wheel skips when braking over rippled tarmac
		Rear feels harsh
		Bike steers wide when exiting corners (rear too low, front too high)
	Not enough	Rear kicking up when braking hard
		Bike wallows when exiting corners or in long rolling dips in sweepers
		Rear wheel chatters under hard acceleration over bumps
		Bike feels like a pogo stick



TROUBLE SHOOTING - REAR SUSPENSION

Ride height	To low	Bike understeers on exit of turns
		Difficult to change direction
		Low grip on front at exit of turns
	To high	Lack of high speed stability
		Poor grip from rear tire
		Unstable under heavy braking
Spring rate	To soft	Ride is soft
		Rear end squats under acceleration
		Light feeling on the front
	To stiff	Easy turn in to corners
		Ride feels harsh
		Poor rear grip



NUTRITION

I try to be quite strict with my diet, especially on race weekends. Race results and lap times are a combination of all the small things you do or don't do, and fuelling your body correctly helps keep your mind focused and your body energised, and assists with your endurance through out a race in not fatiguing too quickly. Before a race weekend, I ensure I am hydrated well. It's important to do this before the race weekend, to allow your body to adjust slightly in taking in so much fluid. I'll drink anywhere between 2.5-3.5 litres coming into a race weekend. I will also start carbing up two days before, with things like rice, sweet potato or pasta. This helps keep my energy levels optimum, as I want to make sure I stay feeling good all the way until the end of a race weekend. You don't want to burn out on the Saturday and underperform when it counts on Sunday.

I ensure that I always have breakfast. That goes for race weekends and every other day too. At race weekends I have a blend of oats, almond milk, I banana, milled flaxseed and honey. I then have a nutrition plan worked out to go in with my schedule of riding that day. This will ensure I have meals that provide me with everything I need at the right times that I need them. I take some supplements to help with lactic acid build up and muscle fatigue. During the day I have lunch which consists of chicken, rice, peppers, spinach and pecan nuts, along with a few bananas at different times and some high carb drinks to keep the glycogen stores high. I also have a protein shake twice a day, usually right after each session. Your body is doing so much work when you are on track using so many different muscles, you need to replace all the calories you've burnt off. I also carry a drink bottle around with me and drink drink! I drink around 4 litres a day on race weekends.

Nutrition is one of the most neglected areas in preparation for riding on track. Of course the track day rider isn't going to plan out his meals for the correct times before a session. But just thinking smart and ensuring you are properly hydrated (drinking water and high carb energy drinks, instead of sugary fizzy drinks like cola) can make a big difference to how you feel after a long day on track. Ensure you have a good breakfast, then a good selection of snacks and food through out the day to keep you feeling as energised as possible.



TRAINING

I have worked closely with a few different trainers throughout my racing career. All have had slightly alternative methods, but the main focus is always the same. To work on full body movements, instead of isolating particular muscles, as well as developing a good lactic acid threshold and strong heart to get a good oxygen supply when on the bike. Club racers or track day riders may feel that training is unnecessary, due to short times on track. But after you've spent all day doing sessions, or all weekend, there is no denying, everyone is worn out! Fatigue is the number one reason to be fit for racing. You want to be still able to throw the bike around at the end of the race or session as well as you could at the start. If you cant do that, then it's obvious you can be fitter! A major problem with getting fatiuge, is not only are you then lazier on the bike, not moving around as much, causing the bike to handle in a different way, but your reaction times slow down and you have a loss in judgement. As a racer, there wouldn't be many things more demoralising than getting beaten at the end of a race due to getting worn out and someone just outlasting you. You may have put in a better lap, but if they were able to stay consistent and out ride you at the end of the race, that comes down to fitness and mental fitness.

There are two kinds of fitness relating to the energy stores that our bodies use, Aerobic and Anaerobic. Aerobic fitness it the body's ability to do work over a sustained period of time when oxygen is present in the muscle. A main component of this is the health of the cardiovascular system. To improve Aerobic fitness it is all about putting in the time with cardio.

There are plenty of options to improve cardio, which include:

- Cycling
- Running
- Walking
- Rowing
- Cross Trainer
- Swimming
- Boxing (great all round training)



TRAINING

Anaerobic workouts are high intensity exercises that create a temporary oxygen deficit by consuming more oxygen at a particular moment than the cardiovascular system can supply, thereby forcing your muscles to burn glycogen instead of oxygen for energy. The anaerobic energy system kicks in for shorter, harder bursts of energy, where the muscles are operating at such a high capacity that they can no longer flush lactic acid waste from the tissues, which is that 'burn' or ache you can feel in your muscles, when you get to that point.

A basic exercise program for riding will incorporate these two kinds of training. The improvements you gain from exercising will help you fend off fatigue, finish stronger and recover faster after putting in your best lap times through out the day!

With training like cycling, you can make this aerobic as well as anaerobic training. By doing shorter rides, but higher intensity, this holds the lactic acid threshold, teaching your body to recover at the same time, by getting it used to switching from anaerobic energy production to aerobic, and back and forth. I do a mixture of short, high intensity rides, for this reason and then a few longer rides, 2.5-4 hours for long cardio sessions.

In terms of strength training, I have used various different methods and all have helped me keep fit for racing. Tabata Training is 20 seconds of an exercise with 10 seconds rest, then straight back in to 20 seconds of the exercise, and so on for 5 rotations. Tabata training plans last up to around 45-60mins of high intensity workouts. High Intensity Interval Training is similar, that you do short bursts of an exercise, 30 seconds, but high intensity (as the name describes) then a rest period, before doing another 30 second burst. These are all great ways to help with anaerobic energy production and build an all round strong body for riding, with out bulking your muscles up more than you need to.

It's important to train every part of your body. The core is the key to stability. A strong core will allow you to hang off the bike, and move your body around, over and on top of the bike. Your legs are also important for this reason. You should be pushing with your legs to move around the bike, not pulling with your arms on the bars. You use your outside leg when approaching a corner to lock into the tank. This helps keep you stable and in a good position in the turn. You then push through the pegs on the exit of the turn to take the weight off your butt and the seat.

Your arms wear out sometimes because you are holding on too tight. The problem is made worse as you start to wear out so you hold on tighter, which wears you out quicker! Strong forearms, biceps, triceps, shoulders, upper back and chest, all play a huge part in this.



MENTAL PREPARATION

What's stopping you from improving? I would say that the majority of the time, it's what goes on between your brain and right wrist that's stopping you. Mental preparation is generally neglected. It's hard to understand how much it can help until you put in to practice for your self.

All the things we have spoken about up to this point will help you improve your riding, and without realising it, they are all little things that improve your mental preparation. Getting a little fitter helps with oxygen to the brain, helping concentration and focus. Being better prepared reduces stress which helps you focus better on your riding. Keeping set up sheets makes you more confident knowing that you are keeping track of your bikes development, along with tire and suspension knowledge. Nutrition ensures you are fuelling your body with everything it needs to be in top form physically and mentally while on track. Writing notes and track maps goes a long way in mental preparation, as it makes you evaluate what you're doing on track compared to what you want to do, and putting that down on paper helps a lot. Being prepared mentally also helps to relax on the bike. Relaxation and breathing properly on the bike is so important. If you aren't relaxed on the bike, you will tense up and everything you're trying to do goes out the window because you are fighting the bike and not letting it do what it is good at.

How you feel when you get on track plays a big part in how you'll ride. The only thing you want to think about is riding the bike. Do not think about what you're having for dinner later or any personal issues. Just think about riding the bike. Being focused helps you asses everything that's going on while you are riding, and that will help with feedback when you get back in the pits. A clear mind is important for visualisation while out on track. This comes with practice. To begin with, you may find your self losing concentration toward the end of a session, so limit the number of laps you do. Quality over quantity especially when testing or gathering information. The more you think about riding on and off the track, the more your mind will adapt to focus better.

To get my self in the right fame of mind, I think about the good times I've had on a bike. I have some memories that I draw upon before I race that puts me in a very positive state of mind. Having these memories helps me remember why I ride bikes in the first place, to have fun! But it also gets me thinking 'What did I do then to ride well, that I can replicate now?' Then when I go out on track I've got these good feelings revving me up and I'm ready to go! This is especially important if I'm having a difficult day. If things aren't coming together, it's good to take a step back and try to return to just enjoying your self. This helps you to relax and ride the bike the way you know you can. It can be easy to overthink your riding sometimes, and the more you start to struggle, it can begin to snowball. Having and accessing positive memories helps draw your self away from getting down in the dumps.



MENTAL PREPARATION

If you are new to riding and haven't got many memories to draw upon, you can imagine what sort of lap you want to put together. Even getting a few corners better than the session before is a great achievement at any level, so try imagining how that will feel and the sense of accomplishment you will get from that. This leads us in to visualisation, and having a positive state of mind is important before visualising.

Being mentally strong and flexible in your thinking goes a long way for your self confidence and self belief. Visualisation is a great tool that can help make big improvements. Before each session I shut my eyes in a place where I can be left alone. Preferably quiet too, but that's hard to come by at a race track. I do laps of the track in my head and imagine every detail that I can, the more informative the better. Feeling the bumps and camber of the track, the braking and acceleration forces. I will move my body as I'm going around the track in my head, not in full movements with my knee on the ground, but enough that it helps me feel like I'm riding the track. I do around 10 laps, and at the same pace each lap. I imagine braking in the same place, getting on the throttle in the same place, and getting into a rhythm that I can maintain each lap.

This builds up the feeling that you have already successfully completed the session. Even though you have only done it in your head and not actually on the track, visualising helps tune your brain in to thinking and your body into feeling that it has done it before. This makes it feel more comfortable to then do it on track. By visualising, I have found it helps me get on to the pace much quicker, not having to take a session or two to build up. You feel much more relaxed and controlled on track and it feels easier to go through the motions. If I'm having trouble anywhere or the bike doesn't feel right, I'll come in to the pits and make some changes to the bike. I'll also visualise the changes we have made and how that will help on track. Imagining the feeling that it will give me. I can then go out and be more confident that the changes we have made will help.

When I first started visualising what I was doing on track, I could only manage a few corners at a time. I would think about corners I was having trouble with, and try and understand how to take them better. Eventually I would be doing full laps, and over time you learn to get into a rhythm of repeating lap after lap, to get your self in that correct state of mind.

Sports Phycology is used hugely in a range of sports, but it is not often spoken about. I can't stress enough the importance of a confident mind while riding a motorbike.

Written with advice from, and thanks to long time mind coach, Sally Steadman of Race Focus and Lee Spelzini - In The Fast Zone - lee@personal-evolution.net



CONTACT

Thank you for reading this booklet. I hope you've found some useful information that may help with your track riding. I wish you all the best for your future riding and if you want to work together and need any tips, please feel free to get in touch. As I mentioned at the beginning, these are only the very basics of each area covered, but they are all very individual areas. I hope this has shed some light on what you can do off track to improve your riding experience. Remember that a happy rider is a fast rider, and always ensure that the passion to have fun is there.

I owe a big thanks to many people that helped make this booklet possible. My beautiful wife Katie, for giving me the confidence to put my thoughts on paper. My Mum and Dad for their huge support, Dave Moss from feelthetrack.com for his wealth of experience and input. Lee Spelzini from 'In the Fast Zone', Sally Steadman from 'Race Focus', Stephen Mion from 'FitMoto', Gambier Print and everyone one else, who there is far to many to mention here, that have helped my racing in any way over the years. Racing is so much about the people you surround your self with, and I owe a lot to the amazing people I've had in my corner to help me grow and learn as a rider and as a person.

For more information on anything in the booklet, or any questions or feedback you may have, please send your enquiries to:

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I look forward to seeing you on track. Enjoy the ride!

Levi Day



Thanks to the following businesses who support my coaching

































