



Idaho *STAR*
Motorcycle Safety Program
www.idahostar.org



Precision Riding Clinic

WELCOME!

Welcome to the Idaho **STAR** Precision Riding Clinic. We couldn't be happier that you have taken this opportunity to refine your riding skills.

This two-day advanced skills development workshop will help you take your motorcycling skills to the next level and become a master of your machine.

You'll be guided in this process by Idaho **STAR** professional rider training instructors who will promote your self-discovery with lots of hands-on practice.

Many of the exercises are focused on slow-speed maneuverability and precision riding - we define that as knowing how to put your

motorcycle where you want, when you want, every time. We will also work on higher speed braking and countersteering drills.

This course is not designed to be competitive although many riders find it challenging. There is no test at the end of the course, and it is not a 'pass/fail' class. You may find that you master some of the skills quicker than others - that's OK. We do lots of repetitions for skills building.

We encourage everyone to participate in each exercise to gain the most out of the class. We are here to assist in your learning and development as a precision rider. The more you practice, the better you'll get!

SKILLS AND SKILL SETS:

- Braking – low speed and higher speed, to include maximum braking
- Swerving – countersteering at higher speeds
- Head and eye placement
- Low speed control – clutch/throttle/balance
- 'Working' the bike – turning the bars while leaning the bike
- Transitions (turning left to turning right, braking to swerving, etc.)

COURSE REQUIREMENTS

- Attendance - mandatory for all sessions
- Participate in discussions
- Participate in riding sessions

REQUIRED RIDING GEAR

- DOT approved helmet
- Eye protection – a helmet faceshield, goggles or glasses
- Sturdy, over-the-ankle footwear; low heels are preferred
- Full-fingered gloves
- Pants – full length sturdy material such as denim
- Motorcycle riding jacket, preferably with armor
- Rain gear if the weather is threatening - courses are not cancelled because of rain

MOTORCYCLE INSPECTION

To participate in the range activities, your motorcycle must be in safe working order.

At a minimum, we will check for the following:

- Tire tread
- Leaking fluids

We strongly recommend that you check for:

- Tire pressure
- Smooth control operation
- Fuel and oil

RANGE RULES

All participants must adhere to the range rules at all times or risk losing the privilege of riding on the **STAR** course. The rules are for the protection of you, fellow students, instructors, and property.

1. Don't practice without permission.
2. Stay with each exercise as it's being practiced.
3. Wear all protective gear when on the motorcycle.
4. Always check around you – front, sides, and behind – before moving.
5. Don't crowd other riders – leave plenty of space between you and them.
6. Use the engine cut-off switch to stop the engine, and then turn off the ignition.

7. If you have a problem, move out of the way and signal your instructor.
8. If your motorcycle falls over, wait for someone to assist you to pick it up - do not attempt to pick it up by yourself.
9. If you hear a referee-style whistle, stop smoothly and immediately and wait for further directions.
10. Horseplay, stunts, or showing off will not be tolerated.
11. If you don't understand an exercise, ask the instructor for clarification.
12. If you become frustrated, angry, or overwhelmed, take a break.
13. Notify your instructor if you are too uncomfortable to ride safely.
14. Report any and all injuries to an instructor immediately.

MAXIMUM BRAKING

Stopping a motorcycle quickly and safely is a skill that takes time to develop and continual practice to keep sharp. Failure to apply the brakes properly is a leading cause of motorcycle crashes.

Maximum Braking Technique

Maximum straight-line braking is accomplished by fully applying front and rear brakes without locking either wheel. To do this:

- Squeeze the front brake smoothly, firmly, and with increasing force. Do not grab the brake lever or use abrupt pressure.
- As the motorcycle's weight transfers forward, more traction becomes available at the front wheel, so the front brake can be applied harder after braking begins.

- Keep your knees against the tank and your eyes up, looking well ahead. This helps you stop the motorcycle in a straight line.
- Apply light to lighter pressure to the rear brake pedal to prevent a rear wheel skid. As weight transfers forward, less traction is available at the rear.

Stopping Distances

Skilled riders should aim to stop their motorcycles in these distances:

- 20mph – 15 feet or less
- 25mph – 25 feet or less
- 30mph – 35 feet or less

Advanced Braking Systems

Modern motorcycles are equipped with excellent braking systems and stop very quickly with a skilled rider at the controls.

Some models are equipped with braking systems that apply braking force – both front and rear – when the rear brake is activated, and some apply proportional braking forces to both brakes when either brake is applied.

Other bikes are equipped with Anti-Lock Braking Systems (ABS), which prevent wheel lock up in a maximum straight-line stop.

Some models provide a combination of linked braking and ABS.

Check your owner's manual for information about your motorcycle's braking system and become familiar with how it works.

HANDLING SKIDS

The best way to handle a skid is to avoid causing one in the first place. But we all make mistakes. Here is how to correct the problem:

Front-Wheel Skids

Front-wheel skids result in immediate loss of steering control and balance. The same loss of control can occur from applying the front brake too much as it can from applying it too fast.

If the front wheel locks, release the front brake immediately and completely. Reapply the brakes smoothly and properly.

Rear-Wheel Skids

A skidding tire is a dangerous condition that can result in a violent crash and serious injury or death.

As soon as the rear wheel locks, your ability to change direction is lost. To regain that control, immediately release the rear brake and reapply smoothly and properly.

It is important to immediately release the rear brake in the event of a skid - here's why. If the rear wheel has fishtailed out of alignment with the front, there is a risk of a high side crash.

Even slight misalignment can result in a high side crash. The farther out of alignment the rear wheel becomes, the greater the risk of a high side.

Note - ABS is designed to prevent wheel lock-ups in straight-line braking.

SWERVING

Swerving Technique

Skilled motorcyclists can swerve away from danger in less space than it takes to stop. It is critical to develop good "at-speed" swerving skills and practice these skills to keep them sharp. Here is how it's done:

- Look to your escape path (not at the obstacle you are trying to avoid!)
- Press firmly on the handgrip to initiate the swerve (press right, go right; press left, go left)
- Hold the press until the motorcycle has cleared the hazard
- Press firmly on the opposite grip to straighten the motorcycle

- Keep your body upright and allow the motorcycle to move independently of you - the motorcycle will react more quickly that way

Caution: Swerving consumes a lot of traction leaving little in reserve for braking. Therefore, never attempt to brake during a swerve.

Even the slightest braking force can induce an immediate and forceful crash. Hold a steady throttle while swerving. If braking is required, brake *before* or *after* swerving, never during!

PRC SKILLS PRACTICE GUIDE

Here are some suggestions for practicing the skills you learned in the PRC in order to keep those skills sharp. When 'the moment of truth' presents itself, there typically is not time to think "Now, how do I do that again...?" Your skills need to be sharp and at the ready – and you need to get it right the FIRST time (you probably won't get a 'do over').

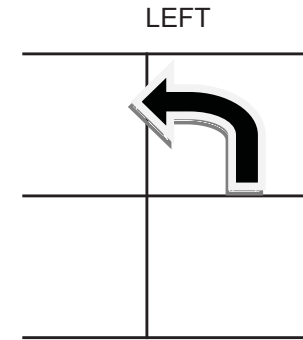
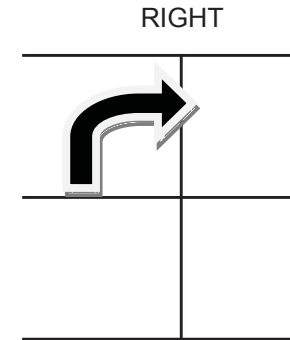
These practice drills can be done in a parking lot using the parking lot lines. NOTE: The decision to allow you to practice on that parking lot is up to the property owner/manager.

These suggestions are based on 10-foot wide parking spaces. Measure the spaces you plan to use, and if they are wider or narrower, adjust accordingly.

90 DEGREE TURNS FROM A STOP

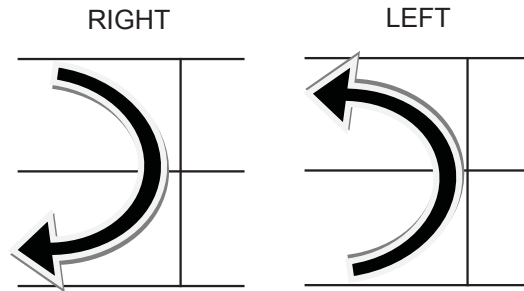
1. Place your motorcycle perpendicular to the center of the parking stall line (place your front tire on the line)
2. Turn your handlebars in the direction you want to go and place your inside foot (your right foot if you are turning right) on the ground
3. Lean the motorcycle slightly in the direction you want to go. Turn your head and look in the direction you want to go
4. Roll on the throttle and ease out the clutch to move forward
5. Keep the bars turned, keep the bike slightly leaned, and keep your head and eyes looking through the turn as you make the turn
6. When the bike has enough speed for balance, pick up your foot. (NOTE: It is

- acceptable to take a couple of steps as you gain enough speed for balance)
7. You should complete the 90-degree turn without crossing the next parking stall line



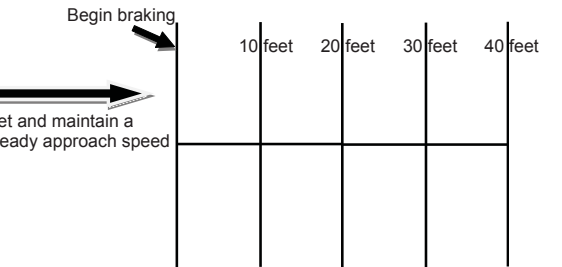
U-TURNS IN 20 FEET OR LESS

1. Enter the parking stall just to the right of one of the lines
2. Turn right to make a U-turn
3. Turn your head and look all the way to the end of the U-turn (back where you entered from)
4. Use the clutch and throttle together to control speed and balance
5. You should complete the U-turn within the second parking stall line (take two 10' parking spaces)
6. Repeat – making a left U-turn
7. You can use this same technique to practice 'Figure 8s' and circles



MAXIMUM BRAKING

1. Ride perpendicular to the parking lines (so you are crossing a line every 10 feet)
2. Accelerate to the desired speed
3. Begin braking at one of the lines (this is your 'zero' mark)
4. Use both brakes (gradually increasing pressure on the front brake) to stop and keep your head and eyes up
5. Once you are stopped, use the lines to estimate your distance (each line you crossed is 10 feet). Measure your distance using the leading edge of your front tire
6. To give yourself a good benchmark, do some research and find out the braking performance for your motorcycle. The typical performance given is a 60mph – zero stopping distance. (Motorcycle Consumer

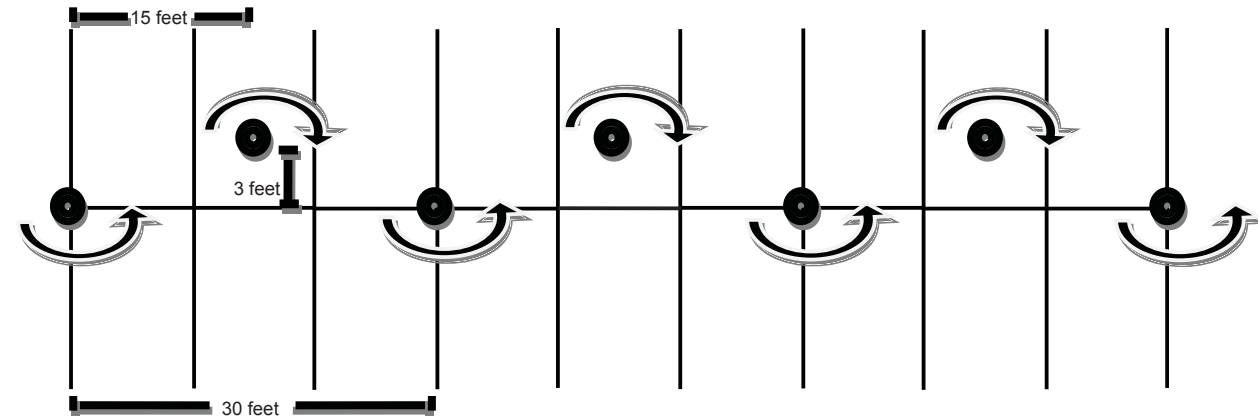


News 'Test Bike Index' is a good place to start.) You'll probably discover that your bike has a rated performance somewhere between 110 and 150 feet. Remember that this performance was achieved by a professional rider, so don't expect to get there right away

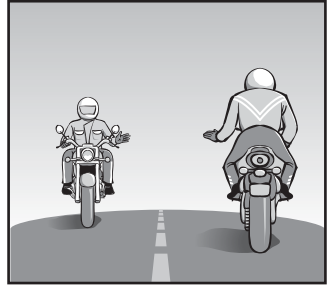
MAINTAIN VEHICLE CONTROL AT LOW SPEEDS

1. For this practice you'll need some kind of marker – we recommend tennis balls cut in half, or small cones
2. Use the intersection of the parking lines and starting at one intersection, put a marker at the first, fourth, seventh, and tenth intersections
3. This should give you a line of 4 markers that are 30 feet apart
4. Now go back and put markers in the middle of each of those 4 – now you have a line of 7 markers that are 15 feet apart
5. Finally, take the three markers you just put down and move them each 3 feet to the left – now you have a 7 marker series to create an off-set weave

6. Ride to the right of the first marker, left of the second, and so on
8. Use the clutch and throttle together to control speed and balance – remember, a little bit of speed gives the bike stability and allows it to lean (riding very slowly will make this more difficult)
9. Keep your head and eyes up, looking where you want to go next – not down at the cones
10. Once you have mastered the “15 foot by 3 foot” weave, you can challenge yourself with the “17 foot by 5 foot weave” (this is the one you did in the PRC)



NOTES



Visit our website for more rider resources:
www.idahostar.org

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