

Street Riding Motorcycle Operation Student Booklet

I hear, and I forget; I see, and I remember, I do, and I understand!
Chinese Proverb

Contents:

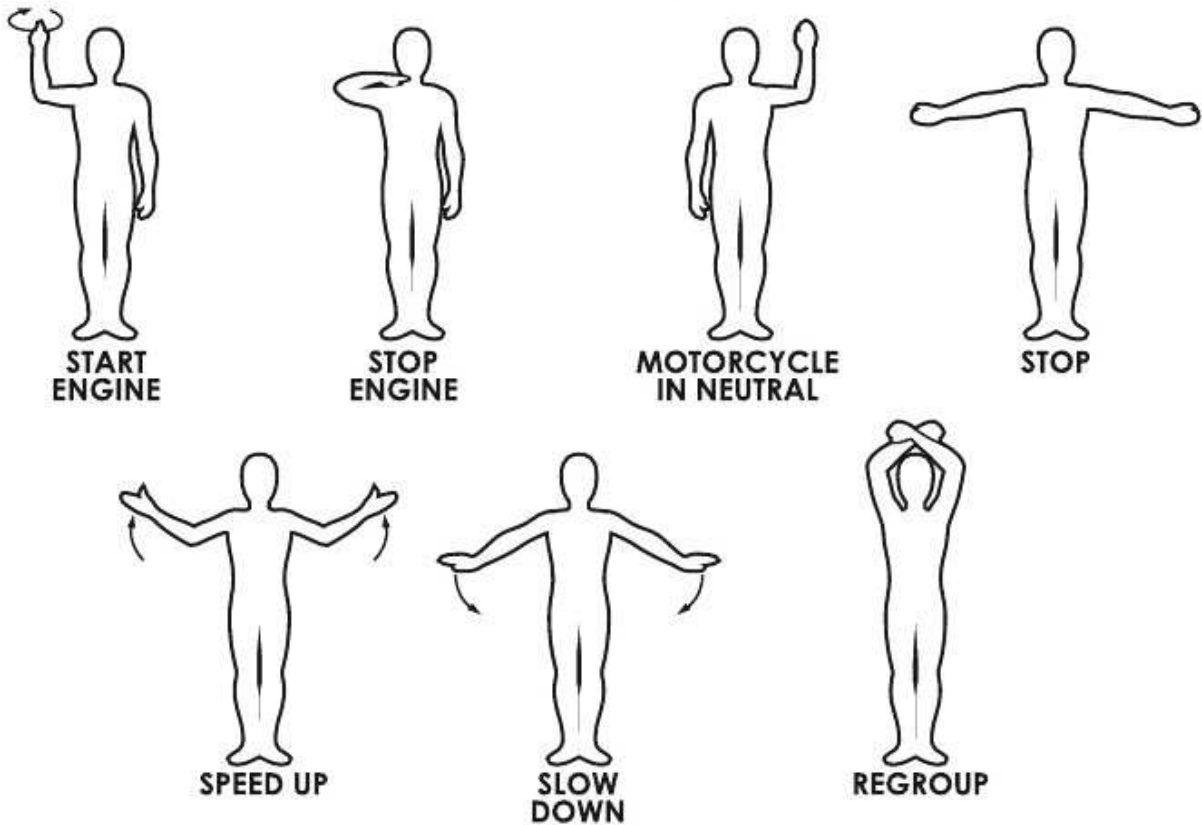
| | |
|--------|--|
| Page 1 | Instructor Signals Riding Range Rules |
| Page 2 | Being prepared for this activity General requirements for today Warm-up review |
| Page 3 | Some Comments on Risk Management Pre-Ride checks |
| Page 4 | Judgment Wrap-up. |
| Page 5 | Maximum Braking Swerving Hills and Parking |



Edited
08.23.11

© Copyright 2008-2011 National Motorcycle Training Institute
Permission is granted to copy, distribute and/or modify this document under the terms of the GNU Free Documentation License, Version 1.3 or any later version published by the Free Software Foundation; with no Invariant Sections, no Front-Cover Texts, and no Back-Cover Texts. A copy of the license is included in the section entitled "GNU Free Documentation License".

Instructor Signals



Riding Range Rules

1. Riding practice will be organized, supervised, and controlled by the instructor. Follow his/her directions.
 2. Be certain you are wearing all the required riding gear prior to mounting the motorcycle.
 3. Be careful to start with your wrist in the flat or horizontal position on the throttle.
 4. Keep a reasonable margin of space between yourself and the rider in front of you. Interact with other riders carefully and courteously, without conflict.
 5. If you have a mechanical problem with your motorcycle, immediately squeeze the clutch, and straddle-walk out of the way of the others.
 6. If an emergency arises, stop and wait for further instructions.
 7. We know you can ride fast, however, stay focussed on the techniques being learned. Do not exceed 25 mph in our exercises. Some exercises have lower speed limits, follow the directions.
 8. If you do not understand the instructors directions, ask for further explanation before attempting the exercise.
 9. Do not attempt any riding exercise if you feel uncomfortable or unsafe.
- Being prepared for this activity:

Ask yourself now, and anytime before you get on a motorcycle, “Am I prepared for the physical and mental demands this activity will require.” There is always another day to ride!

Do not attempt any exercise that makes you uncomfortable. Please inform the instructor, at any time, if you are uncomfortable, or unsure of how to continue.

General requirements for today:

1. Completion or be able to complete the requirements for the motorcycle Learner’s permit. This includes a complete familiarity with the DMV motorcycle handbook.
2. Be confident with basic motorcycle operation as defined in the Begin2ride Course. If not confident with all the techniques learned in Begin2ride Session 3, repeat Session 3 to eliminate this unnecessary risk before continuing with the Continue2ride class.
3. Riding gear required for today: Sun glasses or regular glasses, long sleeved shirt, long pants, gloves, and athletic shoes or boots. Gloves should be “full fingered” with a durable palm. Your clothes, including undergarments, should fit properly and comfortably. Riding gear is mainly used for comfort and image by riders. The collision protection aspect of riding gear is often over-emphasized to new riders to promote sales. Use good riding gear to improve your riding.
4. We can provide a helmet. However, if you have a helmet and would like to use it, please show the instructor. Your helmet (half, $\frac{3}{4}$, or full face) must meet current D.O.T. standards. The instructor may require you to use one of our helmets. Use a proper fitting and fastened helmet while participating in the sport of motorcycling. Other riding gear offers small to no collision protection. Helmets do have some effectiveness in reducing brain injury in collisions.

Warm-up Review:

Place the balls of feet on the pegs. Slide your feet forward and backward as necessary when operating the foot controls. Typically return the balls of your feet to the pegs in normal riding. Adjust how much pressure to place on the balls of your feet when practicing different maneuvers.

Keep knees in near or touching tank. Adjust knee pressure for different situations. Use your knees to hold onto the motorcycle during the more intense maneuvers. This allows your hands to be relaxed enough to smoothly operate the controls. Adjust how much pressure you place against the tank when practicing different maneuvers. Do not constantly squeeze the tank. Remember to adjust knee pressure for different situations.

Typically hands will be comfortably curled around the hand grips. Adjust grip intensity when practicing different maneuvers. However, most of the time your grip pressure should remain light and comfortable.

In anticipation of using your fingers on the clutch, the front brake, or both, it is ok to cover those levers to reduce reaction time. Reaction time here is the time it takes you to begin applying pressure to the lever after you have decided to apply pressure.

Whenever riding an unfamiliar motorcycle, start with your wrist flat (horizontal) when the throttle is closed. As you roll on the throttle in this class, keep your wrist in the down position.

Keep shoulders relaxed and elbows bent. When learning new techniques, sit forward on the saddle (slide towards the gas tank). Look where you want to go and look around you. Move eyes and turn your head and search for information that is important.

Controlling Direction: Lean (leean) and Countersteering

Control your direction by controlling lean. Do not ride a motorcycle on the street if you are not confident to lean that motorcycle, at all speeds. Countersteering works effectively at all speeds. Use countersteering to increase or decrease lean. Be able to apply pressure effectively with both hands, pushing and pulling appropriately. Motorcycle lean controls motorcycle direction. Lean the bike beneath you.

Shifting while moving:

Shifting while moving involves matching road speed and engine speed. Learn that adjusting the throttle adjusts engine speed and using the brakes slows your road speed. Knowing how to adjust engine speed and/or road speed while shifting will improve your control. Of course excellent clutch release is always necessary for smooth shifting.

Engine speed (rpm) is related to available horsepower, which effects your acceleration. Learn how to anticipate when you will need to downshift. If moving at a constant speed, choose a gear that optimizes engine performance.

Class reviews begin2ride quiz.

To the motorcycles!

Some Comments on Risk Management

We will approach street riding as a demanding sport. Street riding is critically different than driving a car. Motorcycle driving is far more physically and mentally demanding. Also, vulnerability to the environment is much greater than when inside a car. Be vigilant at recognizing and reducing vulnerabilities at all opportunities before and during your ride.

There are three general periods in any sport, the Beginner-time, the Learner-time, and the On-going-time. Enjoying and broadening your Learner-time will set the foundation of your risk management and reduce some risks during your On-Going Rider's-time. Your learner-time is a special time so be sure to take time and enjoy this part of the journey!

To be good at any sport, develop skill through study and practice. A fundamental principle used when reducing risk is to recognize times of increased risk. Learning new techniques is a time of increased risk.

Practice an aggressive technique of looking for and eliminating the unnecessary risks before and during your ride. Develop techniques to reduce and minimize the risky conditions you will face during your journey.

We cannot choose to be "safe" when operating a motorcycle; so the next best choice is to be knowledgeable and skillful!

Pre-ride checks :

If the checklist is very long and difficult for the pre-ride check, how often will you perform the check before your ride?

Instructor and students discuss the "easier" and "harder" parts of the pre-ride check before turning the page. Separate out of the list mechanic duties.

The easy checks can be done while sitting on the bike waiting for the engine to warm:
Mirrors, Fuel/Gas, Hi/Low-beam, Signals, Horn.

Checks requiring a little more effort. Do these checks before mounting the motorcycle: Rear light and brake light (check both front and rear brake levers), Tire Pressure, Oil level.

Checking the chain is the transition from pre-ride check to maintenance. The chain and all other maintenance should be done by a motorcycle mechanic before your first ride on the street, including adjusting levers.

Caution: While still in the learner's time, it is best not to begin your ride until the engine is warm enough to turn the choke "off".

Conspicuity: The single most important item for motorcyclists being seen by other roadway users is to have lighted lights! Head lamps, tail lights, brake lights, turn signals, and running lights; these are what matter most! Emphasize lights well above anything else for being seen.

Using the Signals: Most motorcycle signals do not cancel automatically. Obviously, confusion and an increase in risk occurs when the signal is not canceled after completing the turn or lane change. Learn to press the cancel button several times, even if you think you already canceled your signal.

Fuel Valve: Many motorcycles have a fuel valve and a gas reserve. Develop the skill to quickly change the valve position from on to reserve without looking down. As the motorcycle runs low on fuel, you may experience a lack of power response, or a chugging. As soon as you start experiencing this, change the fuel valve to reserve. What do you do after you change the fuel valve to reserve?

It is ok to anticipate (during pre-ride check, or by using the odometer) needing fuel and to turn the valve to reserve before any chugging occurs. Be sure to remember to get gas and then turn the valve back to on.

To the motorcycles!

Judgment:

You must aggressively search the environment for information that is important to you.

Quickly process this information and adjust speed and position to maximize space cushions and minimize any hazards. Of course practice your physical skills so you can adjust speed and position with a minimum of effort and time. This way you can execute your decisions efficiently.

Practice using good judgment to reduce, or keep out of hazardous situations.

To motivate yourself to practice good judgment, ask, "Is it better to use my excellent physical skills to get myself out of bad situations; or should I use my good judgment to keep myself from getting into bad situations?"

To the motorcycles!

Continue2ride wrap-up:

We encourage you to leave this session with the attitude that it will take effort and purposeful practice to become a skilled motorcyclist. The going2ride rental program is an excellent way to gain street riding practice since you would be able to practice on the street with the type of bike you rode today. Also check out the dealer trade-up program.

Note that there is much information, and mis-information, encountered while on your journey. Use your good judgment in sorting out what is good information and what is mis-information.

Enjoy this learner's time, this exciting time. Know that skills training increases ones skills, not ones safety. This is because as you increase your skill, you increase your intensity in this sport. So, to reduce risk, as you practice the physical skills, you must continue practicing and developing your judgment skills too!

Ride well and make us proud ...

Other Topics

Traction:

Traction is determined by how well the tire is in contact with the road surface. How much contact there is mostly depends on how much weight is pressing the tire down onto the road, and the condition of the tire surface and road surface.

When the tire starts to slide, then the available traction for the maneuver(s) has been exceeded.

Forces:

We will focus on the braking and leaning (turning) forces on the front tire. For the rear tire, in addition to the braking and leaning forces, there is also the accelerating force.

Maximum Braking:

As you travel along at steady speed, the weight on the tires is approximately evenly distributed on both tires. As you begin to brake, this weight distribution changes with more weight on the front tire and less weight on the rear tire. The harder you brake, the more weight is transferred. This is why the front brake provides more stopping power than the rear brake.

Maximum braking occurs when the tires are about to start to slide (skid). Note that a skidding tire has less traction than a rolling tire. In addition to less traction, you cannot control the direction of a skidding tire.

Maximum Turning/Leaning (a.k.a. Swerving)

Of course we know to use countersteering to quickly lean the motorcycle. To swerve, put the balls of your feet on the pegs and put some of your weight on the pegs. Be sure to look where you want to go. Keep yourself centered on the motorcycle and let the motorcycle lean beneath you.

Sharing Traction:

If you do a combination maneuver of braking and turning at the same time, you will share the traction between the two maneuvers. Hence, maximum braking can only be reach while the motorcycle has no lean, and maximum quick turns or swerves can only be achieved if there is no braking.

So, if you try to brake hard while leaning quickly, a skid is more likely since either maneuver of hard braking or quick leaning can exceed available traction. Note that skillful motorcyclists often brake while in a lean. They are just careful that the intensity of the braking and the intensity of the leaning are managed together.

Hills:

Generally, riding hills is not different than other riding. However, if you want to accelerate up hill, you must anticipate this and downshift early. Be prepared to downshift twice or more quickly if you start slowing on a hill unexpectedly.

Lugging the engine: Learn how to quickly downshift for power and acceleration.

Parking:

Motorcycles don't have a reverse. If you are parking on a hill, you typically maneuver the motorcycle so the front is pointing up-hill. You may have to back yourself into the space to achieve this.

When parking on a slanted surface, be careful when leaning the weight onto the sidestand. You may have to adjust the direction of the motorcycle so that when leaning onto the sidestand, the lean is not too much or too little.

TRADE-UP PROGRAM

500cc or Less: Motorcycle Trade-Up Program for New Riders

This promotion, endorsed by National Motorcycle Training Institute, encourages new riders to operate an appropriately sized motorcycle during their street riding learners-time. The learners-time is defined as the period starting with a new rider entering the street for the first time and covers, **at a minimum**, the first 6 months and the first 500 miles of on-street riding.

This program will include **new** and **used** motorcycles purchased from the participating dealer. Riders in the learners-time experience greater enjoyment and enhanced learning while lowering risk when using an appropriately sized motorcycle.

After the new rider completes the learners-time and is ready to **trade-up** to a larger motorcycle, the dealer agrees to accept the originally purchased motorcycle as trade-in and **will credit trade-in at the original purchase price**.

The original purchase price does not include taxes and fees. The trade-in motorcycle must be properly maintained. High wear items such as tires, if in need of replacement before dealer can resell trade-in, will be paid for by the owner. The dealer reserves the right to refuse trade-in if the trade-in motorcycle is damaged or has excessive wear, at the dealer's sole discretion.

The current 2010 models include:

| | |
|------------|-------------|
| Honda | Kawasaki |
| Rebel 250 | BN 125 |
| CRF230 | Ninja 250 |
| | Ninja EX500 |
| Yamaha | Suzuki |
| V Star 250 | DR 200 |
| TW 200 | GS 500 |
| XT 250 | TU250 |

All **used** motorcycles of **500cc** sized engine or **less** are also included.

This program is endorsed and encouraged by



Please check our dealer program page for participating dealers on our website, **nmcti.org**.

begin2ride Written Evaluation

1. Why would you start with your wrist in the flat or down position when you are about to ride an unfamiliar motorcycle?

- a. To help reduce unexpected throttle roll-on during braking.
- b. If you are experienced, you do not have to concern yourself with this when on unfamiliar motorcycles.
- c. To help reduce the chance of unexpected throttle roll-on if the motorcycle lurches.
- d. Both a and c.

2. What is the first step to risk management?

- a. Wearing a helmet and proper gear.
- b. Doing a pre-ride check every time you ride.
- c. Recognize that there is risk.
- d. Both a and b.

3. How can you reduce your reaction time in braking?

- a. Cover the brake with your fingertips.
- b. Cover the clutch with your fingertips.
- c. Be thinking fast.
- d. Both b and c.

4. Why is it useful to approach street riding as a sport?

- a. It requires coordination.
- b. It requires mental skills that need to be practiced.
- c. It requires strength and stamina.
- d. It requires purposeful practice to develop physical and mental motorcycling skills.
- e. All the above.

5. How do you know if you are prepared for your ride?

- a. Check yourself that you are mentally alert and prepared for the motorcycling demands.
- b. Check yourself that you are physically prepared for the motorcycling demands.
- c. Be sure you use only your motorcycle.
- d. Both a and b.

6. How would you use the “fun factor” to reduce risk?

- a. Recognize motorcycling is fun and exciting.
- b. If you become unsure or uncomfortable, stop and change how you are participating.
- c. Ride with large groups of riders.
- d. Both a and c.

7. What is the proper number of straddle steps to use when getting underway?

- a. Three.
- b. As many as you need to be in control for the particular situation.
- c. New riders should take many steps and skilled riders should not take any steps.
- d. It depends if you are on a hill.

8. To stop in a short distance (a quick stop):

- a. squeeze the clutch quickly so you don't stall.
- b. use an intense, progressive squeeze on the front brake and moderately press on the rear brake.
- c. use both brakes with the same pressure.
- d. All of the above.

9. How do you get a motorcycle to turn?

- a. Look and steer in the direction of the turn.
- b. Always slow to turn.
- c. By leaning the motorcycle.
- d. Always press on the grip with your hand.

10. The word countersteering:

- a. can help you remember that motorcycles do not steer.
- b. is a made up word.
- c. is confusing because it means the same as steering.
- d. Works only at high speeds.

