

# Tips and Practice Guide for the



# All-Terrain Vehicle Rider

It is important to carefully read and follow the instructions and warnings in the ATV's owner's manual and on its labels. ATVs handle differently from other vehicles such as motorcycles and cars. Proper instruction and practice are important.

ATVs can be hazardous to operate. For your safety, always wear a DOT-compliant helmet, goggles, long sleeves, long pants, over-the-ankle boots, and gloves. Never ride on paved roads except to cross when done safely and permitted by law – another vehicle could hit you. ATVs are designed to be operated off-highway. Never ride under the influence of alcohol or drugs. Never carry a passenger on a single-rider

ATV, and no more than one passenger on an ATV specifically designed for two people. Ride an ATV that's right for your age. Supervise riders younger than 16; ATVs are not toys. Ride only on designated trails and at a safe speed. Take a hands-on ATV *RiderCourse* and the free online E-Course. Visit [ATVSafety.org](http://ATVSafety.org) or call 800.887.2887.

The ATV Safety Institute is a division of the Specialty Vehicle Institute of America, a national not-for-profit association representing U.S. distributors of all-terrain vehicles. Supporting members are: Arctic Cat, BRP, Honda, Kawasaki, KYMCO, Polaris, Suzuki and Yamaha.



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To enroll in the ATV *RiderCourse* nearest you, visit [atvsafety.org](http://atvsafety.org) and click on "Online Enrollment" or call 800.887.2887

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# Be Cautious

ATVs are not toys. Serious injury can result from improper use of ATVs, but with preparation and practice, you can safely develop and expand your riding skills. Riding ATVs can be an enjoyable form of outdoor recreation when done properly. ATVs can also be used for agricultural or utility use.

In addition to the information provided in this booklet, it is important to read and follow the instructions and warnings contained in the ATV owner's manual and on labels.

ATVs handle differently from other vehicles, such as motorcycles and cars. Proper instruction and practice are important. The ATV *RiderCourse*<sup>SM</sup>, a half-day hands-on training program, is available nationwide. If you purchased a new ATV, you may be eligible for free training. Once training is completed, you may also be eligible to receive an incentive. To find out if you are eligible for free training and to register for classes, contact ATV Enrollment Express. To enroll in the ATV *RiderCourse* nearest

you, visit [atvsafety.org](http://atvsafety.org) and click on "Online Enrollment" or call 800.887.2887. Those not eligible for free training may take the course for a reasonable fee. We recommend you take advantage of the free training program, and perform the exercises in this booklet.

Remember that riders under 16 years of age must be supervised by an adult.

If you have a youngster who is about ready to ride an ATV, there are special considerations that you should keep in mind. Although a child may be the recommended age to ride a particular size ATV, not all youngsters have the strength, skills, or judgment needed to operate an ATV. You should supervise your youngster's operation of the ATV at all times, and should permit continued use only if you determine that your youngster has the ability and judgment to operate the ATV safely. You should read *Parents, Youngsters and All-Terrain Vehicles*, available from the ASI (see page 52 for more information).


For more information about ATV safety, call  
the Consumer Product Safety Commission at

800.638.2772 or the Distributors' ATV Safety  
Hotline at 800.852.5344.



## ALWAYS Follow the Manufacturer's Minimum Age Recommendation Warning Label on the ATV.

**⚠ WARNING**




Operation of this ATV by children under the age of 6 increases the risk of severe injury or death.

Adult supervision required for children under age 16.

**NEVER** permit children under age 6 to operate this ATV.

**⚠ WARNING**




Operation of this ATV by children under the age of 10 increases the risk of severe injury or death.

Adult supervision required for children under age 16.

**NEVER** permit children under age 10 to operate this ATV.

**⚠ WARNING**




Operation of this ATV by children under the age of 12 increases the risk of severe injury or death.

Adult supervision required for children under age 16.

**NEVER** permit children under age 12 to operate this ATV.

**⚠ WARNING**




Operation of this ATV by children under the age of 14 increases the risk of severe injury or death.

Adult supervision required for children under age 16.

**NEVER** permit children under age 14 to operate this ATV.


**⚠ WARNING**



Operating this ATV if you are under the age of 16 increases your chance of severe injury or death.

**NEVER** operate this ATV if you are under age 16.

**⚠ WARNING**



Operating this ATV if you are under the age of 16 increases the chances of severe injury or death to both operator and passenger.

**NEVER** operate this vehicle if you are under age 16.

Two-up ATVs will  
have this label

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The purpose of this booklet is to answer your questions about All-Terrain Vehicles (ATVs) and help you increase your knowledge of their operation and use. It will help you to learn and respect the capabilities of your ATV.

If you are new to ATVs, you can look forward to lots of fun and excitement. An ATV can be ridden in many types of off-road conditions, but its capabilities depend on your riding experience and ability.

All ATV riders, regardless of what type of riding they do, should read this booklet thoroughly to learn tips that may be helpful in future riding experiences.

This booklet should not be used as a replacement for a training program.

You should consider taking the hands-on *ATV RiderCourse*<sup>SM</sup>, available nationwide, and the free online E-Course. To enroll or get more information on either course, visit [atvsafety.org](http://atvsafety.org) or call 800.887.2887.

# The All-Terrain Vehicle (ATV)

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Knowing all you can about your ATV and the places you can ride is good preparation for safe and enjoyable riding.

Remember, ATVs are intended for off-road use only. Never operate an ATV on public roads, and always avoid paved surfaces. ATVs are not designed for use on public roads and other motorists may not see you. ATVs are not designed to be used on paved surfaces because pavement may seriously affect handling and control.

ATVs are different from other vehicles, as well as from one another. The following is a list of some differences among ATVs:

- Handling characteristics among ATVs vary depending upon their basic design and how they are equipped.
- Most ATVs have separate front and rear brake controls, while some may have linked brakes operated by a single control. Be sure to learn the recommended stopping techniques for your machine.
- There are ATVs with electric starters, kick-starters, and pull starters.
- There are liquid-cooled ATVs and air-cooled ATVs.
- Some ATV transmissions have automatic clutches; some have hand-operated clutches; some are foot-shifted, some are hand-shifted; some transmissions are fully automatic.
- Some ATVs have a reverse gear.
- Most ATVs have solid drive axles and some have differentials.
- Some ATVs have two-wheel drive, and some have four-wheel drive.
- Some ATVs have chain drives, others have shaft or belt drives.
- Most throttles are controlled by pushing a thumb lever next to the handgrip; others may be controlled by twisting a handgrip.
- Controls and their locations differ from one ATV model to another.
- Some ATVs are for a single rider only and some ATVs can carry a passenger.

You may be anxious to take a test run, but before you do, be sure you and your machine are ready. If you are not, the results can range from embarrassment to severe injuries.

Be sure to follow the manufacturer's minimum age recommendation warning label on the ATV (see page iii). A safety booklet called *Parents, Youngsters and All-Terrain Vehicles* is available from the ATV Safety Institute.

This easy-to-read booklet is designed to assist parents in determining whether a youngster is ready to ride an ATV. It contains readiness guidelines and checklists for parents to review with their youngsters. It also includes important safety tips and information for youngsters who are learning to ride an ATV.



# Protective Gear

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The nature of ATV riding demands that you wear protective clothing. Although complete protection is not possible, knowing what to wear and how to wear it can make you feel more comfortable when you ride and reduce the chance of injury.

Never operate an ATV or ride as a passenger without a quality motorcycle helmet, eye protection, boots, gloves, long pants, and a long-sleeved shirt or jacket.

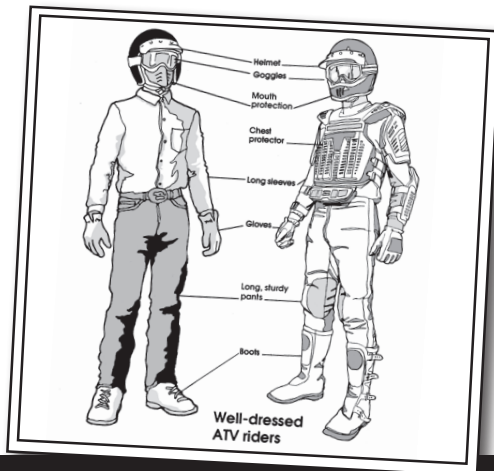
## Clothing

Good gloves can help keep your hands from getting sore, tired, or cold, as well as offer protection in the event of a spill. Off-highway style gloves, available at ATV dealerships, are padded over the knuckles to help prevent bruising, and provide the best combination of protection and comfort.

The recommended protective footwear is a pair of strong, over-the-ankle boots with low heels to help prevent your feet from slipping off the footrests. Off-highway style boots offer the best

protection for feet, ankles, and lower legs.

It is important to protect your skin from scratches. A long-sleeved shirt or jersey and long pants are minimum requirements for rider protection. Off-highway riding gear such as off-highway pants with kneepads, jersey, and chest/shoulder protectors provides better protection. You can look stylish and ready for action, and still be well protected.



## Helmets

Your helmet is the most important piece of protective gear for safe riding. A helmet can help prevent a serious head injury.

There are a few basic tips to keep in mind when selecting a helmet. Select a helmet that meets or exceeds your state's safety standards and carries either the Department of Transportation (DOT) label or the Snell Memorial Foundation label.



Your helmet should fit snugly and fasten securely. Full-face helmets help protect your face as well as your head. Open-face helmets are lighter and may be cooler, but should be used with mouth protection. Eye protection should be used with both types of helmets.

There is also a special time not to wear a helmet. When you stop to talk with landowners or other people you meet on the trails, always take your helmet off. To some people your helmet is a mask and can be intimidating.



# Protective Gear (Continued)

## Eye Protection

You must be able to see clearly to ride safely. An object such as a rock, branch, or even a bug that hits you in the face can distract you. If you are hit in the eyes without proper protection, you can be blinded. Regular sunglasses do not provide proper protection while riding an ATV. A face shield or goggles will provide you with more protection and should be:

- Free from scratches and bear the standard marking VESC8 (or V-8) or z87.1 in one corner, or should be made of a hard-coated polycarbonate
- Fastened securely
- Well ventilated to prevent fogging

In addition, you may wish to use gray tinted eye protection for riding on bright days or yellow for overcast days. Always use clear eye protection for riding at night.



Inspecting the mechanical condition of your ATV before each ride is important to minimize the chance of being injured or stranded. This also ensures long enjoyment of your ATV. Remember, you can ride farther in one hour than you can walk in a day. Your owner's manual will show you what equipment to check on your particular machine. Listed are the most common items to check:

## Tires and Wheels

**1. Air pressure** – Always maintain the recommended tire pressure. Be sure that all tires are inflated to proper pressure. Check that tires on the left side of your ATV are inflated to the same pressure as the corresponding tires on the right side. If the tire pressure on one side is higher than the other side, the vehicle may pull to one side. Under-inflated tires may also cause wheel damage when riding over bumpy terrain. Over-inflation may damage the tires. If the tires are over- or under-inflated, your ATV may not steer or handle properly. To measure

pressure accurately (usually 2 to 6 psi), you will need a low-pressure gauge; automotive tire gauges are not accurate for use on ATVs.

**2. Condition** – Check for cuts or gouges that could cause air leakage.



# Pre-Ride Inspection *(Continued)*

**3. Wheels** – To avoid loss of control or injury, make sure axle nuts are tight and secured by cotter pins, and make sure wheel nuts are tightened properly. Grasp the tire at the front and the rear and try to rock it on its axle to detect worn-out bearings or loose nuts. There should be no free play or slip as you rock the wheel.

## Controls

**1. Throttle and other cables** – Make sure the throttle moves smoothly and snaps closed with the handlebars in any position. Check throttle operation while moving the handlebars from fully left to fully right. If your ATV is equipped with an adjustable throttle limiter, check to make sure the adjustment is appropriate for the rider, and that the adjustment is securely set. Check cables and controls for damage from a spill or accumulated dirt and mud, which may restrict full operation.

**2. Brakes** – Make sure the controls operate smoothly and are adjusted according to the instructions in the owner's manual. The controls should be positioned for your easy reach. Your brakes are a crucial part of riding and they must always be in excellent working condition.

**3. Footshifter** – Make sure the footshifter is firmly attached and positioned for safe operation. It should not be so low that your toes are pointed downward at the ground or so high that shifting is awkward.

## Lights and Switches

**1. Ignition switch (if equipped)** – Check the condition of the switch and make sure it works properly by switching it off and on during your warm-up period.

**2. Engine stop switch** – Be sure it turns off the engine.

**3. Lights (if equipped)** – Be sure all lights are working.

## Oil and Fuel

1. Check oil level while the engine is off. You could get stranded because you are out of oil or fuel.
2. Always start your ride with a full tank of gasoline to give you the best chance of getting home from a long ride.
3. Check for fuel or oil leaks.

## Chain/Driveshaft and Chassis

1. **Chain** – Inspect your chain for proper adjustment and adequate lubrication. Check for wear.
2. **Driveshaft** – If your ATV is equipped with a driveshaft rather than a chain, check for oil leaks. Maintain the oil supply as outlined in your owner's manual.
3. **Nuts 'n bolts** – Rough terrain will loosen parts. Look and feel for loose parts while the engine is off. Shake handlebars, footrests, etc., before each ride, and periodically check major fasteners with a wrench.

## Tool Kit

After completing the pre-ride inspection, check to make sure you have an adequate tool kit in case you encounter any mechanical problems.

Carrying the right tools and equipment with you when you go riding is important for the safe enjoyment of your ATV riding experience. Examine the tool kit that came with your machine. You may want to add a few spare parts — a spark plug or two, perhaps some wire and tape, maybe a headlight bulb. Prepare for the unexpected, and carry what you need to handle any emergencies. Consider carrying a good strong tow rope.

Also remember that off-road riding is hard on your ATV, so it is especially important to perform periodic maintenance as outlined in your owner's manual. Do not risk injury or vehicle breakdown due to lack of proper maintenance.

# Let's Prepare to Ride

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## Riding Area

Be sure you have a large, flat, open practice area, free of obstacles and hazards, to use while you practice. Take a few minutes to review the rest of the riding tips in this booklet before you start your engine.

## Starting Procedure

Consult your owner's manual for the correct starting procedure.

- Check that the transmission is in NEUTRAL or PARK (if equipped).
- Set PARKING BRAKE.
- Turn the FUEL supply valve on.
- Check that the engine stop switch is in the RUN or ON position.
- If the engine is cold, put the CHOKE in the ON position.
- Start the engine and move the CHOKE off as engine warms.

## Posture

The correct riding posture will help you to easily operate the controls and help you react more quickly when shifting your body weight. Proper straight line riding posture includes:

- Head and eyes up, looking well ahead
- Shoulders relaxed, elbows bent slightly out, away from your body
- Hands on the handlebars
- Knees in toward the gas tank
- Feet on the footrests, toes pointing straight ahead

Always keep both hands on the handlebars and both feet on the footrests of your ATV during operation. Removing even one hand or foot can reduce your ability to control the ATV, or could cause you to lose your balance and fall off. If you remove a foot from a footrest, your foot or leg may come into contact with the rear wheels, which could injure you or cause an accident.

ATVs are rider-active; to enhance the performance capabilities of the ATV, you must shift your body weight. This is especially true in maneuvers such as turning, negotiating hills, and crossing obstacles.

When riding a two-up vehicle with a passenger, weight shift should mirror operator weight shift.





# Let's Start Riding

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## Get Moving

- Always keep your feet on the footrests while riding to help prevent injury.
- Be sure that the engine is sufficiently warmed up before you start riding.
- Apply the rear brake and shift into a forward gear.
- Release the parking brake and apply the throttle slowly as you release the rear brake.
- If the vehicle has a manual clutch, release it slowly. If the clutch is engaged too quickly, the ATV may move suddenly, causing you to lose control or fall off the ATV.

## Shifting Gears

See your owner's manual for instructions on shifting your model of ATV. There are several types of transmissions on ATVs.

Be certain you know how to operate the transmission of the ATV you are riding.

- Always close the throttle while shifting to prevent the front wheels from lifting.
- Learn the sounds of your engine so you can shift to keep the engine speed in the most efficient range.
- If your ATV has a manual clutch, learn where the engagement zone is to prevent stalling, and to allow for smooth shifting.

## Braking

Your owner's manual describes your ATV's braking system. You may have both front and rear brake controls, or linked brakes operated by a single control. Of course, your braking technique will depend upon your ATV's braking system and the type of terrain you are riding on.

Many ATVs are available with four-wheel drive. When operating in four-wheel-drive mode, keep in mind:

- Using only the front brake or the rear brake has the effect of braking both the front and rear wheels.

- Abrupt deceleration from shifting to a lower gear (engine braking) will affect both the front and rear wheels.

Consult your owner's manual for more detailed information.

### **Some tips for braking are:**

- Release the throttle.
- Shift to a lower gear to use the engine to slow the vehicle.
- Apply both front and rear brakes equally (if equipped).
- Avoid excessive braking while cornering.
- Apply the brakes lightly on slippery surfaces.
- Shift to a low gear when descending a hill and do not ride the brake for long periods of time.

### **Parking**

When parking your ATV you should:

- Stop the ATV. Place the transmission in neutral or park and apply the parking brake or engage the parking mechanism (if not already activated by placing the transmission in park). If the ATV is equipped with a parking mechanism, allow the drive train to lock.
- Avoid parking on an incline.

# Turning Basics

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Always check your owner's manual for the recommended turning technique for your ATV.

The following basic turning technique applies to ATVs being ridden at low to moderate speeds.



- Move your body weight forward and to the inside of the turn.
- When riding a two-up vehicle, passenger weight shift should mirror operator weight shift.
- Turn the handlebars while looking in the direction of the turn.

As you increase speed or turn more sharply, move your body weight farther toward the inside of the turn to maintain your balance.

If your ATV starts to tip while turning, lean your body farther into the turn while gradually reducing the throttle and making the turn wider, if possible.

## Going Up Hills

Climbing hills improperly could cause loss of control or cause the ATV to overturn. Always follow procedures described in your owner's manual. Remember:

- Some hills are too steep for your abilities. Use your common sense. If the hill you are approaching looks too steep, it probably is.
- Some hills are just too steep for your ATV, regardless of your abilities.
- Never ride past the limit of your visibility; if you cannot see what is on or over the crest of a hill, slow down until you have a clear view.
- The key to being a good hill rider is to keep your weight uphill at all times.

When approaching an uphill climb, you should:

- Keep your feet firmly on the footrests.
- Shift the ATV into a lower gear and speed up BEFORE climbing the hill so you can maintain momentum.

- When approaching the uphill climb, move up on the seat and lean forward, or stand and position your torso over the front wheels.
- When riding a two-up vehicle, passenger weight shift should mirror operator weight shift.



## Riding on Hills (Continued)

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As you are climbing, you may need to shift to a lower gear to prevent lugging the engine or stalling. To shift into a lower gear on a hill, remember:

- Keep your body weight forward as you prepare to shift gears. For steeper hills, lean forward as much as possible.
- Shift quickly while momentarily releasing the throttle; this will help keep the front wheels from lifting.

If you do not have enough power to reach the top of the hill, but still have forward momentum and enough room to turn around safely:

- Keep your weight uphill.
- Make a U-turn before you lose speed.
- Proceed downhill in a lower gear, keeping your weight to the uphill side.

If you are riding uphill and lose all forward momentum:

- Keep your weight uphill and apply the brakes to come to a stop. Never allow the ATV to roll backward.
- Apply the parking brake while keeping your weight uphill.
- Dismount on the uphill side or to a side if pointed straight uphill, and follow the procedures described in your owner's manual.

Do not attempt to ride backward down a hill. Should you begin rolling backward, do not apply the rear brake abruptly. Using the rear brake only or abruptly could cause the ATV to roll over backward.

If you begin rolling backward follow these steps:

- Keep your weight uphill and apply the front brake. If your ATV has linked brakes, or if you are in four-wheel drive, follow the procedures described in your owner's manual.

- When you have come to a complete stop, apply the rear brake. Then apply the parking brake and dismount on the uphill side. If pointed straight uphill, dismount to either side and follow the procedures described in your owner's manual.
- If the ATV continues to roll backward, dismount to the uphill side immediately.



## Going Down Hills

Always check the terrain carefully before you start down any hill. Choose a downhill path as straight as possible, with a minimum of obstacles. Shift your weight to the rear and use a low gear. Follow the procedures described in your owner's manual for the special braking techniques for going down hills.

When going downhill, remember to:

- Shift your weight to the rear (uphill).
- Keep the speed low.
- Use gradual braking.
- Use a lower gear.
- Look ahead.
- When riding a two-up vehicle with a passenger, weight shift should mirror operator weight shift.

# Riding on Hills (Continued)

## Traversing a Slope

When you go across a slope rather than directly up or down, it is called traversing. Sometimes when a hill is steep it is necessary to climb it or descend it by traversing.

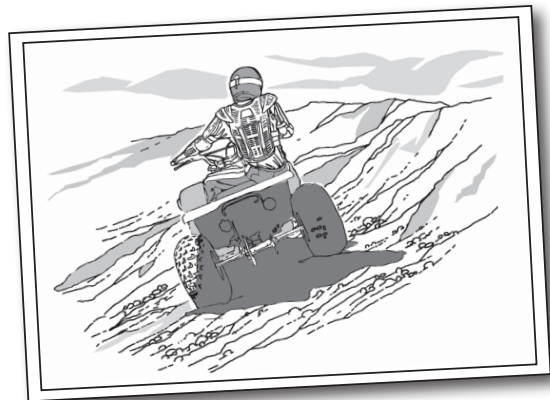
Traversing a slope requires additional attention. Avoid traversing slopes with excessively slippery, rough, or loose surfaces.

Here are some of the basic guidelines for traversing:

- Keep both feet firmly on the footrests.
- Lean your upper body uphill.
- When riding on soft terrain, you may need to turn your front wheels gently uphill to keep your ATV on a straight line across the hill.
- If your ATV begins to tip, turn the front wheels downhill if the terrain allows. If the terrain does not permit, dismount on the uphill side immediately.
- Avoid making sudden throttle changes.

## Two-Up Vehicle Operation With a Passenger

- Avoid traversing a slope with a passenger when possible.
- If traversing is unavoidable, follow the procedure described in your owner's manual.
- Never operate a two-up vehicle up, down or across hills steeper than what is recommended in your owner's manual.



## Reading Terrain

To get the most out of your ride, you have to know the land you are riding on and what your machine can do. Carefully choose the places you ride. Use existing trails. Stay away from terrain where you do not belong, such as dangerous slopes and impassable swamps. Watch carefully for sharp bumps, holes, ruts, or obstacles.

An expert rider stays out of trouble by handling the ATV well and avoiding any risky situation. Learn to read the trail as you ride. An expert rider looks well ahead on the trail. Know what is coming up; be prepared to react long before you get there. Be constantly alert for hazards. Never operate an ATV at excessive speeds. Go at a speed which is proper for the terrain, visibility, operating conditions and your experience. Always be careful when operating an ATV, especially when approaching hills, turns, and obstacles and when operating on unfamiliar terrain.

## Choosing Proper Speeds

Always look well ahead and choose a speed that is proper for the terrain, visibility, operating conditions, and your experience.

By scanning far enough down the trail, you will be able to pick the best “lines” (or safest paths of travel) around or over hazards or small obstacles. As you approach a hazard, do not fixate on it. Instead, continue to search for other clues in the environment and adjust your speed well in advance.





# Riding Different Terrain

## Sand Dunes

Dune riding offers great thrills and fun, but certain safety precautions are necessary to fully enjoy this type of terrain. Remember to:

- Use an antenna flag on your ATV.
- Be prepared for changing sand.
- Avoid wet sand.
- Avoid riding on vegetation.
- Watch for slip faces and razorbacks.
- Be careful when the sun is overhead; lack of shadows makes it difficult to see hazards.

## Mud and Water

Your ATV is equipped to ride through mud and shallow water, but you should avoid water crossings where you might damage streambeds and fish spawning grounds, or where you might cause erosion to the banks of a stream or creek. This precaution not only adds to your personal safety and fun, but it preserves the environment for others to enjoy. If you are riding through mud

or water remember:

- Footrests may become slippery.
- Determine water depth before attempting a crossing; do not exceed the water depth specified in your owner's manual.
- Avoid fast-flowing water.
- If you cross a stream, use an established ford or place where the stream banks have a gradual incline.
- Be prepared to shift your weight in any direction to maintain balance.
- Watch for submerged obstacles.
- Test brakes after leaving water.

## Snow

Riding on firm snow can be great fun. However, riding in soft snow, under the wrong conditions, can be damaging to the terrain. Ride only on firm snow or groomed trails and be sure to have the landowner's permission. Remember to:

- Keep alert to weather conditions.
- Know the weather forecasts.
- Check with local law enforcement to be sure that ATVs are allowed on snowmobile trails before using them.
- Dress appropriately for the weather conditions.

### **Crossing Roads and Highways**

ATVs are designed to be used OFF-ROAD ONLY. A leading cause of accidents and fatalities to ATV riders is riding on or crossing a road illegally or improperly. The hazards of crossing roads cannot be over-emphasized, but you may find it necessary on occasion to cross a road or highway. This is particularly true in farming areas where ATVs are used for various work purposes. If you must cross a road, use the following guidelines to reduce risk:

- Make sure you know your state's laws and regulations before you cross any road.
- Before crossing, bring your ATV to a complete stop on the shoulder of the road.
- Yield the right of way to all oncoming traffic. Look both ways.
- Ride cautiously. Your ATV will handle differently on pavement and may be difficult to maneuver, increasing the danger of collision.
- Cross the road at a 90-degree angle where there are no obstructions and your visibility is good.
- If you are riding in a group, have the first rider (leader) dismount on the shoulder before crossing and watch for traffic as he waves the group across the road. Have the last rider dismount on the shoulder after crossing and watch traffic, to help the group leader across.
- Remember, crossing roads improperly or riding illegally on the road is a major cause of serious accidents and fatalities to ATV users, so use extra caution. Always assume the drivers DO NOT SEE YOU, since most drivers look for cars, not ATVs.

# Towing a Trailer

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Before towing a trailer, read the ATV's owner's manual to make sure your ATV can be used for towing. Select a trailer that will work with your ATV and can carry the load you want to haul. Keep in mind that only experienced riders should tow a trailer, and that a trailer will affect your vehicle's handling and braking ability.

To ensure that you do not exceed your ATV's vehicle load capacity you need to consider the trailer tongue weight. Refer to your ATV's and trailer's owner's manuals for information on how to properly load your trailer and determine tongue weight.

When towing a trailer, follow these general guidelines:

- Only tow a trailer if your ATV is designed and equipped to do so.
- Ensure your trailer is securely attached to the ATV. The trailer must have a rigid tongue.
- Always attach a trailer to the hitch and not a rack or other part of the ATV not designed for towing.
- Do not overload the trailer.
- Ensure the load is balanced in the trailer, and properly secured.
- Ride at low speeds when towing a trailer and avoid quick maneuvers.
- Allow for wider turns and longer stopping distances.
- Do not tow a trailer on hills or uneven surfaces.
- Do not allow any passengers in the trailer.



## Don't Ride Alone

Always make a plan before you ride. Tell someone where you are going and when you expect to be back. Ride in a group of two or more. Each rider should be responsible for keeping track of one of the others. It's called the "buddy system" and it's good insurance on any ride.

## The Effects of Alcohol, Drugs, and Fatigue

Riding an ATV can be more demanding than driving a car. You have to be in good physical and mental condition to ride safely. Three factors that keep ATV riders from being in top shape for riding are alcohol, drugs, and fatigue. Each of these can affect your ability and your decision-making process.

### Alcohol

Drinking and riding can be fatal. Alcohol affects all the skills you need to ride safely. The amount of alcohol in your body is referred to as the

"Blood Alcohol Concentration" or "BAC." Most states consider people intoxicated at a BAC of .08 percent. Physical and mental reactions usually became impaired at a BAC of .05 percent. ALCOHOL AND ATVs DO NOT MIX.

### Other Drugs

Almost any drug puts an ATV rider at risk. Many over-the-counter medications, prescriptions and illegal drugs have side effects much like alcohol, which affect the skills you need to ride safely. Depressant drugs such as tranquilizers and barbiturates have effects similar to alcohol on the body systems. Even cold tablets and allergy pills can make you feel weak, dizzy, and drowsy as well as affecting your vision, coordination, and judgment.

Marijuana decreases your ability to see at night and recover from headlight glare. Marijuana users cannot react as quickly as usual, nor operate the ATV as well. Amphetamines or cocaine, while they may increase your attentiveness temporarily, bring on extreme

# Safe Riding Practices (Continued)

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fatigue once they wear off. Furthermore, they produce a mild euphoria, which often causes riders to take foolish risks. Never consume drugs before or while operating an ATV.

## Fatigue

Riding an ATV is more tiring than driving a car. Remember that fatigue can affect your ability to control your ATV. Here are some things you can do to keep from getting too tired:

- Protect yourself from the elements. Wind, cold, rain, and heat can make you tire quickly. Dress appropriately for the conditions.
- Limit your distance and riding time until you know your limits.
- Take frequent rest breaks. Stop and get off the ATV. No one should go more than one hour without pulling over, stopping, getting off the ATV, and walking around.

## Know the Laws

The laws and regulations that control how and

where to use your ATV are important for you to be aware of and to follow. They are established for your protection as well as everyone else's. By controlling less responsible riders, the laws and regulations allow others to enjoy the sport. They also help protect the land you ride on and the people who own it. Dealers and ATV clubs can often provide you with a summary of local laws, or direct you to park rangers, game wardens, or other sources who will be glad to help you.

## Registration

In many states the laws require that you register your ATV as part of the state's off-highway vehicle registration program. ATVs used for agricultural or utility purposes may be subject to different provisions than recreational vehicles. You should check this out when you buy your ATV—your dealer should know the law, and can often help you with registering your vehicle. Fines for riding an unregistered vehicle can be expensive, and you also take the risk of having your ATV impounded. Some states use registration fees to develop riding trails

and facilities. So by registering your ATV, you and your friends may be helping to secure and maintain places to ride.

## **You and the Rest of the World**

There is one fundamental factor that controls your riding — access to land. Developing and maintaining riding opportunities means getting along with the rest of the world — private landowners, public land managers, and people you meet on the trails. The better you get along with these people, the easier it will be to locate and preserve good riding areas.

### **TREAD Lightly!**

Riding behavior that harms the land is self-defeating and irresponsible. Learn to protect and preserve your riding areas. In other words, TREAD Lightly!

- **Respect the rights of others** including private property owners and all recreational trail users, campers and others to allow them to enjoy their recreational activities undisturbed.
  - **Educate yourself** prior to your trip by obtaining travel maps and regulations from public agencies, planning for your trip, taking recreation skills classes, and knowing how to use and operate your equipment safely.
  - **Avoid sensitive areas** such as meadows, lakeshores, wetlands and streams, unless on designated routes. This protects wildlife habitat and sensitive soils from damage.
  - **Do your part** by leaving the area better than you found it, properly disposing of waste, minimizing the use of fire, avoiding the spread of invasive species, restoring degraded areas, and joining a local enthusiast organization.
- **Travel responsibly** on designated roads and trails or in permitted areas.

# Safe Riding Practices (Continued)

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Here are some tips to help you TREAD Lightly!

- Obtain a travel map from the Forest Service or from other public land agencies. Learn the rules and follow them.
- Keep your ATV quiet. Do not make your exhaust system noisier — there is nothing people dislike more than a loud off-highway vehicle. Do not tamper with the spark arrester.
- Avoid running over young trees, shrubs, and grasses. You will damage or kill them.
- Stay off soft, wet roads and trails readily torn up by vehicles (particularly during hunting seasons). Repairing the damage is expensive.
- Travel around meadows, steep hillsides, stream banks, and lakeshores. They are easily scarred by spinning wheels.
- Resist the urge to blaze a new road or trail, or to cut across switchbacks.
- Be courteous when you meet others on the trail. Pull to the side and yield to horseback

riders and hikers. It is best to shut off the engine whenever you are near horses — a panicked horse is a danger to you and its rider.

- Stay away from wild animals that are rearing their young or suffering from food shortage.
- Obey gate closures and regulatory signs. Remember, vandalism is costly.
- Stay out of designated wilderness areas. They are closed to all vehicles, even bicycles. Know where your boundaries are.
- Get permission to travel across private land and respect the rights of the landowners.

Future opportunities for exciting travel with your ATV are in your hands, so — TREAD Lightly!

## Expanding Your Horizons

How do you find good places to ride? You can start by talking to your dealer and asking questions such as:

- Where do other customers ride?

- Who owns riding land?
- What are the regulations for use?

ATV clubs provide a way of working together to find good riding areas.

If you are working on your own, topographic maps can be a good way to find open land with suitable trails.

Find out who owns the land and whether they will let you ride there.

In this way, you can develop a network of good riding areas.

### **Let Your Voice Be Heard**

So that you can experience and enjoy public lands for years to come, ASI encourages you to learn about two organizations that exist to help protect the rights of off-highway recreation enthusiasts: Americans for Responsible Recreational Access (ARRA) and National Off-Highway Vehicle Conservation Council (NOHVCC).

ARRA focuses on the entire spectrum of issues surrounding land-use designations and closures. ARRA works with government agencies, Congress, and most importantly, the citizens who care about maintaining access to public lands and waterways for outdoor recreational activities. ARRA seeks responsible consideration of competing activities, based on sound environmental principles. Please visit [arra-access.com](http://arra-access.com)

NOHVCC is a national body of OHV recreation enthusiasts that develops and provides a wide spectrum of programs, materials and information to promote a positive future for OHV recreation. NOHVCC helps establish and strengthen clubs and state associations, and emphasizes the benefits of responsible recreation behavior. Please visit [nohvcc.org](http://nohvcc.org)



# Introduction Part 2

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This Practice Guide has several exercises that will help you develop the fundamental skills you need to safely and enjoyably operate your ATV. However, you will need many additional hours of riding before you consider yourself an experienced ATV rider.

Do not attempt these exercises until you have read your owner's manual and "Part 1 - Tips for the ATV Rider" portion of this booklet thoroughly. These exercises are designed for unmodified machines with low-pressure knobby tires. Read this guide completely before you start practicing.

This guide contains exercises which should be done by only one rider at a time. Keep practicing until you can do each exercise at least five times in a row without a problem. Be sure to take a break when you get tired. Do not push yourself; when you get tired you can make mistakes. These exercises should take about three to four hours to complete.

When riding a two-up vehicle, the operator should first become familiar with the operation of the vehicle before riding with a passenger. Carry no more than one passenger. The passenger must be able to reach the handholds and place feet on footrests from a seated position in the designated passenger's seat.

# About Your ATV and Skills Exercises

Handling characteristics of ATVs vary depending upon basic design and how they are equipped. The exercises in this Practice Guide apply to most ATVs with one exception: ATVs with unlocked differentials. If your ATV has a differential, be sure to lock the rear axle before practicing the exercises in this guide. Refer to your owner's manual for instructions.

ATVs with solid rear axles (and those with locked differentials) turn both rear wheels at the same speed. The technique to use when turning is described on page 14 under "Turning Basics." ATVs with unlocked differentials allow the rear wheels to turn at different speeds. If a rear wheel leaves the ground, it will spin freely. Then when it touches the ground again, it may grab and cause you to lose some control.

Some ATVs are equipped with four-wheel drive. When operating in a four-wheel-drive mode, keep in mind:

- Use of only the front brake or only the rear brake has the effect of braking both the front and rear wheels.
- Abrupt deceleration from shifting to a lower gear (engine braking) will affect both the front and rear wheels.

Consult your owner's manual for more detailed information.

# Preparation

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## Choosing a Practice Area

Choose an open, off-road area (about 100 feet x 200 feet) away from other riders and free of obstructions. The terrain should be flat for Exercises 1, 2, 3, 4, 5, 6, and 9. For Exercises 7 and 8 you will need a hill. The hill should not be very steep and should be easy to climb on foot! Practicing on a hard dirt surface will make it easier for you to learn the basic maneuvers. If you are riding on private property, be sure you have permission from the owner. Do not do these exercises on public roads or paved surfaces. ATVs are designed for off-road use only.

## What to Bring

Bring five objects that you can use as markers. Milk cartons or plastic bottles with sand in them work well. Do not use glass bottles or other breakable items. You should also bring a tape measure to mark distances; or at least measure your stride so you can pace off the distances. (One hundred feet is approximately 35 to 40 paces.)

## Safety Rules

The practice exercises in this guide can be hazardous if you do not follow the instructions provided. Also follow these safety rules:

- Wear proper protective clothing. This includes an approved motorcycle helmet, eye protection, over-the-ankle boots, gloves, a long-sleeved shirt, and long pants.
- Inspect your ATV before you begin. Consult your owner's manual.
- Check the practice area for potential hazards.
- Bring an experienced friend along to help if anything goes wrong, and to critique your progress.
- Do not mix alcohol or other drugs with ATV riding.
- DO NOT carry passengers on a single-rider ATV.
- Pay attention to additional safety tips found throughout this guide.

This guide is divided into three levels:

## **Level 1 – Basics of ATV Riding**

## **Level 2 – Elementary Maneuvers**

## **Level 3 – Intermediate Maneuvers**

Even if you have been an ATV rider for more than three months, be sure you have mastered the Level 1 drills before you move on to the other levels.

### **Level 1 Drills**

Level 1 drills cover the basics of ATV riding. (If the terrain you are riding on has ruts or other obstacles, do Exercise 9 following Exercise 3.)

#### **Exercise 1 – Controls**

- Location and operation

#### **Exercise 2 – Braking**

- Straight path
- In a turn

#### **Exercise 3 – Turning**

- Large oval
- Small circles
- Figure 8

### **Level 2 Drills**

Level 2 drills are for practicing elementary maneuvers. All ATV riders should practice these drills before going on to Level 3.

#### **Exercise 4 – Sharp Turns**

#### **Exercise 5 – Quicker Turns**

#### **Exercise 6 – Quick Stops**

- Straight path
- In a turn

#### **Exercise 7 – Hills**

- Climbing, turning, and descending
- Stopping while descending

### **Level 3 Drills**

Level 3 drills are for practicing intermediate maneuvers.

#### **Exercise 8 – Traversing Hills**

#### **Exercise 9 – Riding Over Obstacles**

# Exercise 1 – Controls

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**Objective:** To mount and sit on the ATV correctly, locate and operate the controls, and dismount.

**Skills:** Familiarization and operation of controls.

## Directions

**Drill 1:** Take out your owner's manual and locate your ATV's parking brake. Set the parking brake (if equipped). ATV controls may vary from vehicle to vehicle.

Your ATV may not have all of the following controls, but familiarize yourself with the controls it does have. Locate the following controls as you consult your owner's manual:

- Parking brake
- Throttle (full, half, quarter)
- Engine stop switch
- Choke
- Reverse gear lever (if equipped)
- Hand brake, foot brake

- Ignition switch
- Fuel supply valve
- Transmission hi/lo lever (if equipped)
- Starter (pull, kick, electric)
- Clutch lever
- Shift lever

**Drill 2:** Mount the ATV, taking care not to step on the shifter. Maintain proper posture and identify and operate each control. Without looking down, try mounting your ATV while remembering to keep your head and eyes looking straight ahead. Be sure you learn the shift pattern for your ATV. Consult your owner's manual.

## Passenger Mounting Two-Up Vehicle

- Properly mount after the operator is seated and has engaged the parking brake.
- Always keep hands firmly on the handholds and feet planted on the footrests.

## Tips

- Make sure all the controls work properly. Use your owner's manual and the Pre-Ride Inspection section in this booklet to help you check out your ATV.
- Remember that controls may vary from model to model and you should do this exercise whenever you ride a different ATV.

### Watch For

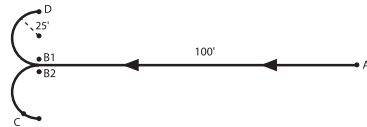
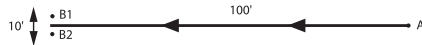
- Using the left brake lever as a clutch.
- Shifting to a lower gear instead of to a higher gear and vice versa.
- Trouble changing the hi/lo lever or finding reverse.
- Awkwardness in reaching controls.

### Suggestions

- Motorcyclists must modify old reflexes for controls and turning.
- Shift patterns vary among ATVs. Be sure you know the shift pattern of your ATV.
- Consult the owner's manual. Try rocking the ATV slightly while moving the lever.
- Reposition handlebars or controls for ease of operation and check adjustment as stated in the owner's manual.

## Exercise 2 – Braking

34



**Objective:** To use the brakes properly to bring your ATV to a smooth, safe stop.

**Skills:** Starting out, shifting, stopping, turning.

### Directions

#### Drill 1: Braking – Straight path

Put marker A down to indicate your starting point. Then place markers B1 and B2 100 feet down a straight path. Start your ATV and ride straight toward the second marker. Begin to slow down before you reach markers B1-B2. Come to a smooth, non-skidding stop with your front tires between markers B1 and B2. Practice this a few times in first gear. Then try it in second gear. Ride straight toward B1-B2, accelerate and shift into second. Begin to slow down and shift back to first gear BEFORE you

reach markers B1 and B2. Come to a smooth, non-skidding stop with your front tires between markers B1 and B2.

#### Drill 2: Braking – In a turn

Place markers C and D as indicated in the diagram. Start at marker A and ride toward B1-B2. Accelerate and shift into second. Begin to slow down and shift back to first gear as you go through markers B1-B2. Once through the markers, turn the handlebars to the left so that you make a gradual turn and come to a smooth, non-skidding stop with your front tires next to marker C. Practice this to the right with your front tires stopping next to marker D. As in Drill 1, practice a few times in second gear; then practice in higher gears until you can stop smoothly and consistently at markers C and D.

## Tips

- Keep your feet on the footrests at all times.
- Keep your head and eyes up.
- Look straight ahead when stopping in a straight line. Look around the turn as you slow down in the curve.
- Shift to a lower gear as you decelerate.

### Watch For

- Overshooting the final marker.
- ATV turning to one side during braking in a straight line.
- Rear end sliding or skidding.
- ATV turning too wide in the curve.
- Rough or inconsistent shifting.

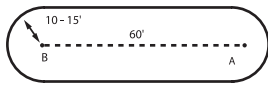
### Suggestions

- Begin to slow down earlier.
- Keep the handlebars straight and look ahead.
- Begin to slow down earlier. Apply brake pressure more gradually.
- Steer with the handlebars. Move forward and lean in slightly. Begin to slow down earlier.
- Move foot clear of the shift pedal after each shift. Release the throttle before each shift.



# Exercise 3 – Turning

36



**Objective:** To demonstrate basic turning skills by shifting your weight properly to maintain balance and avoid the possibility of losing control of your ATV.

**Skills:** Throttle control, shifting weight, turning, braking.

## Directions

### Drill 1: Turning – Large oval

Place markers A and B 60 feet apart as indicated in the diagram. Ride around the outside of the markers so that you have made a large oval. Ride to the left a few times and then ride around to the right. Do not shift gears during the exercise.

### Drill 2: Turning – Small circles

Now use those same markers as the center of two large circles. Ride around marker A to the left. Continue riding around to the left and decrease the radius of the circle so that you are making tighter turns, then ride around marker B to the right and practice decreasing your turning radius.

### Drill 3: Turning – Figure 8

Combine the circles around marker A and marker B so that you are doing a large figure 8. As your skills increase, move the marker closer together (25 feet apart) so that the figure 8 becomes smaller.

## Tips

- Keep your feet on the footrests at all times.
- Look ahead, concentrating on your intended path of travel.
- Slow down before the turn and gently increase the throttle as you exit the turn.
- Use body positioning (leaning in) to help maintain balance during turns.
- Move your body weight forward and to the inside of the turn.
- Turn the handlebars while looking in the direction of the turn.
- When riding a two-up vehicle with a passenger, weight shift should mirror operator weight shift.

### Watch For

- ATV tipping.
- ATV turning wide.

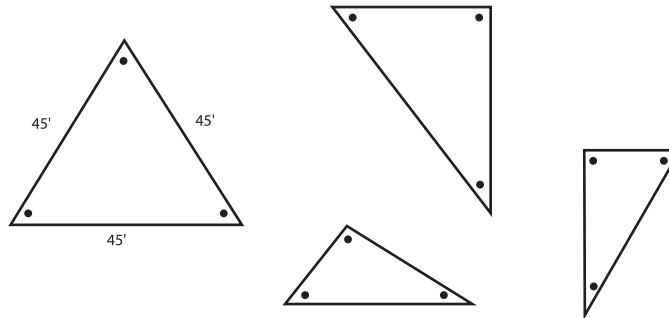
### Suggestions

- Lean your body farther into the turn.
- When carrying a passenger, shift more of your body weight and your passenger's body weight to the side that is lifting, and make a wider turn if possible.
- Slow down. Put more weight up front, use more effort to turn the handlebars, and look in the direction of the turn.

NOTE: If the terrain you are using has ruts or other obstacles, include Exercise 9 after Exercise 3.

# Exercise 4 – Sharp Turns

38



**Objective:** To make sharp turns without tipping the ATV by coordinating braking, weight shifting, and throttle control to maneuver the ATV in tighter turns.

**Skills:** Shifting weight, turning, throttle control, braking.

## Directions

**Drill:** Place three markers down to create a triangle with sides of equal length. The sides should be at least 45 feet long. Ride around the outside of the triangle going to the left. Stay within three feet of the triangular path. After this is mastered, ride the triangle to the right. Then change the sides and angles of the triangle and practice with each new triangle.

## Tips

- Keep your feet on the footrests at all times.
- Slow down before the turn.
- Look through the turn at your intended path of travel.
- Gently increase the throttle as you exit the turn.
- Lean in and turn the handlebars in the direction of the turn.
- When riding a two-up vehicle with a passenger, weight shift should mirror operator weight shift.

### Watch For

- ATV turning wide.

### Suggestions

- Slow down more prior to the turn.
- Lean into the turn more.
- Apply throttle gradually to avoid unweighting the front end.
- Bend your elbows and lean forward a bit to maintain weight on the front wheels.

## Exercise 5 – Quicker Turns

40



**Objective:** To make quicker turns to avoid an obstacle by coordinating speed, body position, and weight shift to help you make quick directional changes.

**Skills:** Shifting weight, steering with the throttle, changing direction.

### Directions

**Drill:** Put five markers down at 35-foot intervals. Travel to the left of the first marker and then to the right of the second and continue until you reach the last marker. At first, practice at slow speeds, then gradually increase your speed. Do not exceed second gear. After you have mastered this, move the markers closer together. Do not move them closer than 18 feet apart.

## Tips

- Keep your feet on the footrests at all times.
- Shift your weight quickly to initiate the turn. To shift your weight effectively, rise up slightly standing on the footrests, quickly move your hips, lean your body to the inside of each turn.
- To go left, apply a slight left turn to the front wheels, quickly lean left, and apply a short burst of throttle. To go right, do the opposite.
- Do not look at the next marker you are approaching. Look ahead; do not fixate on a marker.
- When riding a two-up vehicle with a passenger, weight shift should mirror operator weight shift.

### Watch For

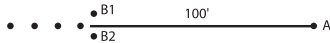
- Running over markers as you try to go around.

### Suggestions

- Swing wider as you go around the marker, and shift your weight more.
- Use a quicker burst of throttle but not enough to un-weight the front end.

# Exercise 6 – Quick Stops

42



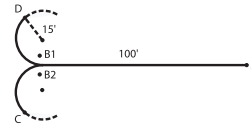
**Objective:** To make a smooth, safe stop in the shortest possible distance. Practicing these drills will help enable you to stop quickly should an obstacle suddenly appear in your path.

**Skills:** Shifting gears, stopping, braking while turning.

## Directions

### Drill 1: Quick Stops – Straight path

Place markers A, B1, and B2 as indicated in the diagram. Start at marker A and ride toward B1-B2 in second gear. Be sure to maintain your speed until you pass B1-B2. When the ATV PASSES markers B1-B2, stop as quickly and as safely as you can. Notice where you stop. Put some sort of marker down there (a small rock perhaps). Do it again and stop smoothly and quickly, but in a shorter distance. Make your first two attempts in second gear. Remember to begin



braking and to shift back to first gear only AFTER you have passed markers B1-B2. Shift to higher gears when you have mastered the exercise in second gear.

### Drill 2: Quick Stops – In a turn

Place markers C and D as indicated in the diagram. Start at marker A and ride toward B1-B2. When you reach B1-B2, veer left and ride in second gear toward C. When you PASS marker C, stop as quickly and safely as you can. Note where you stop. Put some sort of marker down. Do it repeatedly and stop smoothly and quickly, but in a shorter distance. Make your first two attempts in second gear. Remember to begin braking and to shift back to first gear only AFTER you have passed marker C. Shift to third gear when you have mastered the exercise in second gear. Practice this to the right and stop quickly after you have PASSED marker D.

**NOTE:** It is best to avoid excessive braking in a turn, but certain conditions may require you to brake while in a turn.

### Tips

- Keep your feet on the footrests at all times.
- Keep your head and eyes up.
- If you accidentally lock the wheels, release the brakes momentarily and reapply the brakes more gradually.

### Watch For

- ATV swerving to one side.
- Rear end sliding or skidding.
- Front end sliding or skidding.

### Suggestions

- Center your body on the ATV. Look where you want to go.
- Apply less rear brake pressure. Shift to a lower gear more smoothly.
- Apply less front brake pressure.



# Exercise 7 – Hills

44



**Objective:** To ride up, turn around, and ride down a hill by using the proper techniques for safely making a U-turn.

**Skills:** Maintaining balance, shifting weight, application of brakes, throttle control.

## Directions

Make sure your parking brake is in working order before doing this exercise.

### Drill 1: Climbing, Turning, and Descending

For this exercise, select an easy hill, free of obstructions (easy to climb on foot). Start your approach to the hill by accelerating before the base of the hill. Shift into a lower gear at the base of the hill, if necessary, to maintain momentum while climbing the hill. Turn the ATV to the left, in an arc, before you reach

the top. Keep turning, using your remaining momentum until you are facing downhill. Descend the hill in a lower gear and as you descend, slow down by applying the brakes. Then practice to the right.

If you are riding uphill and lose all forward momentum:

- Keep your weight uphill, and apply the brakes to come to a stop. Never allow the ATV to roll backward.
- Apply the parking brake while keeping your weight uphill.
- Dismount on the uphill side or to a side if pointed straight uphill, and follow the procedures described in your owner's manual.

Do not attempt to ride backward down a hill. Should you begin rolling backward, do not apply the rear brake abruptly. Using the rear brake only or abruptly could cause the ATV to roll over backward.

If you begin rolling backward follow these steps:

- Keep your weight uphill, and apply the front brake. If your ATV has linked brakes or if you are in 4WD, follow the procedures described in your owner's manual.
- When you have come to a complete stop, apply the rear brake. Then apply the parking brake and dismount on the uphill side. If pointed straight uphill, dismount to either side and follow the procedures described in your owner's manual.
- If the ATV continues to roll backward, dismount to the uphill side immediately.

## Exercise 7 – Hills (Continued)

46



### Drill 2: Stopping While Descending

As you descend the hill, slow down by gradually applying the brake(s) and then stop.

### Tips: Climbing

- Some hills are too steep for your abilities. Do not exceed your capabilities.
- Some hills are too steep for your ATV regardless of your abilities.
- Keep both feet firmly on the footrests.
- Shift your body weight forward on the seat as you go up the hill. For steeper hills, lean forward more, move up on the seat, or stand and position your torso over the front wheels.
- As you near the top and turn, shift your body weight to the uphill side for balance by leaning into the hill.

### Tips: Descending

- To go downhill, shift your weight back. On steeper downward slopes, straighten but do not lock your knees and elbows. Then bend forward sharply at the waist so that your posterior is over the back of the seat.
- Use the brake(s) to slow you down as you descend the hill and always descend in a low gear.
- The key to successfully performing this exercise is to shift your weight smoothly from forward (as you climb) to the uphill side (as you turn) and to the rear (as you descend). For smooth weight shifts, rise up slightly off the seat.

### Watch For

- ATV losing all momentum going up the hill.
- ATV descending too quickly.
- Wheels locking, creating a slide.
- ATV rolling backward while you are on it.

### Suggestions

- Approach at a higher speed. Do not attempt to turn your ATV if you do not have the momentum to make the 180-degree turn. Apply the brake(s) before you lose speed. Do not let the ATV roll backward.
- Maintain smooth braking. Use a lower gear. Do not apply the throttle.
- Release brakes and then immediately reapply brakes gradually.
- **DO NOT LET THE ATV ROLL BACKWARD ON A HILL.** If your ATV has an independent front brake, you can try to stop the ATV by using only the front brake. Move your body weight forward and use the front brake to slow the ATV to a stop. If the front brake does not slow the ATV, dismount to the uphill side immediately. Do not attempt to ride backward down a hill. Using the rear brake only or abruptly could cause you to roll over backward.

NOTE: When riding a two-up vehicle with a passenger, weight shift should mirror operator weight shift.

# Exercise 8 – Traversing Hills

48



**Objective:** To use the correct technique to ride across a hill so that you will not lose your balance or directional control.

**Skills:** Shifting weight, maintaining balance, throttle control.

## Directions

**Drill:** For this exercise, select an easy hill free of obstructions. Start your approach and accelerate before the base of the hill. Shift into a lower gear at the base if necessary to maintain momentum while climbing the hill. Turn the ATV to the left, ride across the slope, and then ride down the hill. Repeat the exercise to the right.

**Reminder:** Traversing hills is tricky, so practice this carefully. Remember, **DO NOT LET THE ATV ROLL BACKWARD.**

## When riding a two-up vehicle with a passenger and TRAVERSING –

- Avoid this type of riding when possible.
- If traversing is unavoidable, follow the procedure described in your owner's manual.
- Never operate a two-up vehicle up, down or across hills steeper than what is recommended in your owner's manual.

## Tips

- Keep both feet on the footrests.
- Apply the same principles for climbing and descending as you did in the previous exercise.
- Exaggerate your weight shifts.

## Tips (Continued)

- If the ATV starts to turn downhill as you traverse the slope, turn the front wheels slightly uphill to keep the ATV going straight across the hill.
- If the ATV begins to tip, turn the front wheels downhill if the terrain allows you to do so. If the terrain prohibits your turning downhill, and shifting weight into the hill does not help, then dismount on the uphill side immediately.

### Watch For

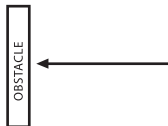
- ATV losing momentum going uphill.
- Front wheels lifting as you climb the hill.
- ATV tipping as you traverse the hill or turn.
- Rear end sliding downhill while traversing.
- Excessive jarring as front wheels encounter bumps on descent.

### Suggestions

- Approach at a slightly higher speed.
- Lean forward more; move way up on the seat or stand and position your torso over the front wheels. Do not accelerate as quickly up the slope.
- Lean into the hill more. Move off the seat toward the uphill side. Weight the uphill footrest.
- Avoid abrupt changes in throttle position that could cause the rear wheels to lose traction.
- Shift more weight to the rear. Descend more slowly.

# Exercise 9 – Riding Over Obstacles

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**Objective:** To use the proper technique to safely ride over obstacles which you cannot avoid.

**Skills:** Surmounting obstacles, shifting weight.

## Directions

**Drill:** Choose small obstacles for your initial practice. A small rut, mound, or small log will work fine. Approach the obstacle at walking speed and as close to a 90-degree angle as possible. Rise up slightly on the footrests and apply a small amount of throttle as the front wheels reach the obstacle. Lean forward and release the throttle after the front wheels clear the obstacle. Return to your normal riding position after the rear wheels clear the obstacle.

For two-up vehicles, have the passenger correctly dismount before riding over the obstacle.

**NOTE:** If the terrain you are using has ruts or other obstacles, include Exercise 9 after Exercise 3.

## Tips

- Be sure to stand on the footrests when performing the exercise.
- Be sure to bend your elbows and knees so that you can use them as shock absorbers.
- Mounds and ruts are considered obstacles.
- If only one front or rear wheel goes over the obstacle, be prepared to shift your weight and maintain balance as the ATV leans to one side.

**Watch For**

- Excessive jarring from impact.
- ATV failing to continue straight over the obstacle: i.e., as front wheels clear, the ATV turns to one side.
- Front wheels pushing the obstacle rather than crossing over it.
- Rear wheels hitting the obstacle with excessive impact.

**Suggestions**

- Bend knees and arms more.
- Keep a firm grip on the handlebars (even though your arms are bent) to keep the ATV pointed straight ahead.
- Apply a small amount of throttle as the front wheels meet the obstacle. Release the throttle as soon as the front wheels have gone over the obstacle.
- Lean forward slightly once the front wheels have gone over the obstacle in order to unweight the rear wheels. The throttle must be released before the rear wheels hit.



# From the ATV Safety Institute

## Parents, Youngsters and All-Terrain Vehicles

Especially developed for parents who are teaching their youngsters, this booklet provides important safety information and tips on learning to ride an ATV. *Parents, Youngsters and All-Terrain Vehicles* is designed to help parents determine whether their youngsters are ready to ride an ATV. It contains easy-to-use readiness guidelines and checklists for parents to review with their youngsters. It also covers pre-operating and operating procedures, protective gear, riding techniques, and many other safety points.

## “Ride Safe, Ride Smart” DVD

This nine-minute DVD is a rider-friendly look at how to get a proper start in ATV riding. It profiles two families: one who rides for recreation only, the other who uses their ATVs first for working the farm, then as camping and trail riding machines. Both sets of parents lead by example, emphasizing riding an ATV that is right for your age, wearing proper protective

gear and respecting the environment. They also recommend taking an *ATV RiderCourse* to get the most from your ATV, enjoy the opportunity to meet other enthusiasts, and find out about the best places to ride.

Single copies of *Parents, Youngsters and All-Terrain Vehicles* and “Ride Safe, Ride Smart” are available free by contacting:

### ATV Safety Institute

2 Jenner, Suite 150  
Irvine, CA 92618-3812  
949.727.3727

To purchase large quantities of the DVD or booklet, contact ASI for prices.

View and download *Parents, Youngsters and All-Terrain Vehicles* and “Ride Safe, Ride Smart” online at [atvsafety.org](http://atvsafety.org).

**To enroll in the *ATV RiderCourse* nearest you, visit [atvsafety.org](http://atvsafety.org) and click on “Online Enrollment” or call 800.887.2887.**



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