WEST COAST STYLE
MOUNTAIN BIKING INSTRUCTION

DICTIONARY OF SKILLS

Written by Joan Jones
Photography by Daamiann Skelton, Chris Bremer, Michael Maguire, Chris Zaborowski and Derek Vanderkooy

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DICTIONARY OF SKILLS

The Basics

1. Neutral Position
2. Bike/Body Separation
3. Pressure Control
4. Braking
5. Pedal Position
6. Eye Movement
7. Speed
8. Gearing and Cadence
9. Timing and Coordination
10. Steering

A group of ten key bike and body movements used by riders to maintain balance and stability on the toughest of trails. Refer to each of the Basics in this dictionary for definitions and to the eBook lessons on the Basics for in-depth discussion.

Braking

One of the ten Basics needed to maintain balance and stability on the trail. Braking includes the techniques used to brake, such as finger position and modulation, the body positions used to brace against the forward force of braking and decision-making regarding when and how to use braking when riding.

Bike/Body Separation

Movements of bike and body used to improve lateral stability: the rider leans the bike to one side and , depending on the skill being performed, counterbalances this lean by moving their body to various degrees in the opposite direction, away from the lean of the bike.

Bunny Hop

An advanced skill used to get both wheels in the air and onto or over obstacles. The front wheel is lifted first, with a manual front wheel lift, and then the rear wheel is lifted while the front wheel is still in the air. It is a popular BMX and trials skill for which there is an official world record. This skill is often confused with the Level Lift, an easier and less powerful technique.

Crouched Climb

The Crouched Climb is the mountain biker's chosen technique for technical terrain. It takes its name from the rider's position over the bike. Shoulders and hips hover over the bars and saddle where they can quickly make the weight shifts needed as the wheels roll over undulations and obstacles on the climb.

Seated Climb

The Seated Climb is the most efficient form of climbing and is used on smooth and non-technical climbs. Riders may manage to climb quite steep grades so long as they can maintain traction with the rear wheel and keep weight on the front wheel. Success on such grades is accomplished with a lowering of the shoulders and a shift of the hips towards the nose of the saddle. The diagrams to the left show the relaxed seated climb used on an easy grade and the more aggressive seated climb used on steep ascents.

Standing Climb

The Standing Climb is a powerful technique best used on short, steep grades that are not overly technical or loose, as traction on the rear wheel is compromised when pedalling in the standing position. It is not very energy-efficient and is mostly used for a break on a long seated climb or as a way to burst over the crest of a hill.

Climbing Bail

This slow-speed skill is a simple way to stop your bike when a climb suddenly becomes too technical to ride and a quick dismount is needed. It is an easy skill for beginners to master.

Note: The picture to the right shows the bike and body position used to set-up for a Restart on a Climb. It is also the finish position for the Climbing Bail.

Restarting on a Climb

Restarting on a Climb is a technique for getting back on your bike and climbing again. Once you master it on technical terrain you'll never want to walk another hill.

Coaster Wheelie also called **Coaster Manual** See WHEELIES

Descending also called Downhill

Descending and Downhill mean the same thing - riding down a descent. To do so with control requires correct use of all the Basics along with any number of skills that may be needed to handle roots, rocks and trail features along the way.

Descending Bail

The Descending Bail is most useful on slow, technical descents that become unridable. It is a way to get safely off the back of the bike after bringing the bike to a standstill.

Dirt Jumping

Traditionally Dirt Jumping was practiced in areas designed only for Dirt Jumping. Over the years we have seen the Dirt Jump become a popular mountain biking challenge as trail builders and park designers bring dirt jumps into their terrain. Many communities are also adding dirt jump parks to their recreational facilities.

Ducking Limbo See LIMBO

Eye Movement

Eye Movement is one of the ten Basics that riders constantly work with as they learn to scan the trail, pick their riding line, look through corners, look where they want to go and adjust their eye movements to their speed and the challenges on the trail.

FRONT WHEEL LIFTS

Basic Front Wheel Lift

The Basic Front Wheel LIft is the easiest of the front wheel lifting techniques. It is used to go over small obstacles, while coasting, and when the bike has sufficient momentum for the rear wheel to roll over the obstacle. Speed is slow to moderate and terrain has very little grade.

Manual Front Wheel Lift

A technique for lofting the front wheel without using a pedalstroke. The rider quickly preloads the front wheel and then pushes away from the bars. The arms extend, the shoulders move up and back and the front wheel rises. As the front wheel lifts, the hips move back over the rear wheel and the legs extend and push the rear wheel forward. This technique allows the front wheel to be kept up for extended periods of time. It is useful for lofting the front wheel over small puddles and dips in the trail and for going off the end of obstacles without the front end diving towards the ground. It is also the technique used in the Bunny Hop for lifting the front wheel.

Pedaling Front Wheel Lift

In this skill the rider uses a strong pedalstroke to lift the front wheel onto, or over, obstacles. This first powerstroke is followed by a second or more pedalstrokes, hence the name Pedalling Front Wheel LIft. It is the easiest of the front wheel lifts that use pedalstrokes. The rider's speed and gear selection are critical to success.

Half-quarter Front Wheel LIft

The Half-quarter Front Wheel Lift is a slow-speed skill used to loft the front wheel and accelerate the bike. It may be used to get over large logs, onto walls and to ride off the end of the *Wheelie-drop*. It requires precision with powerstrokes, speed and gearing. The rider moves the back foot of their preferred riding stance so foot and pedal are at the top of the pedalstroke, in the 'powerstroke' position. The rider now uses this foot to power from the top of the pedalstroke through half of a full pedal revolution. This is called a *half* stroke. At this point the other foot is at the top of its powerstroke where it is used to power through a quarter of a full revolution. Hence the name *half-quarter* or *1/2-1/4*. After this sequence of pedalstrokes the pedals are level and the rider is in their preferred stance. This is an essential skill for the trials riders and is sometimes called a *Drop-in.*

Punch Front Wheel Lift

A technique for lifting the front wheel, accomplished in part by using a short, hard pedal stroke with the forward foot. This powerstroke, about a quarter, *1/4*, of a revolution, is often called a *kick* or *punch*.

Gearing and Cadence

Gearing and Cadence is one of the ten Basics. Cadence is a term used to measure how fast a rider is pedalling and is measured in pedal revolutions per minute (rpm). Fast cadences around 90-105 rpm, are used when efficiency is all important. Such is the case in cross-country mountain bike races and in road cycling events. Slower cadences between 50 and 75 rpm are used for climbing and for front wheel lifts that use powerstrokes. Speed is determined by gear and cadence.

Hee-haw Lift

This intermediate skill is really two lifts performed one after the other - a Basic Front Wheel Lift followed by a Basic Rear Wheel Lift. The wheels are not off the ground at the same time. In this respect it is unlike both the Bunny Hop and Level Lift. It is a great exercise for improving timing and co-ordination of the two lifts. On the trail it may be used to get each wheel over very small obstacles such as slippery roots and small rocks.

Hopping

A technique for lifting both wheels off the ground with the brakes fully locked. Hopping can be used to keep balanced in a small area, moving the bike forwards or backwards, to either side, up onto low obstacles or to sideways and down from skinnies several feet in the air. It is an essential skill for trials riders.

Level Lift

This intermediate skill requires the rider to lift both wheels off the ground at the same time, while the bike is moving. The Level Lift is used to jump over small obstacles (maximum 5”-8” high) providing the bike is moving fast enough for both wheels to clear the obstacle.

Level Lift to the Side

This skill is very similar to the Level LIft with two key differences. As both wheels are being lifted the body is used to move the bike to the side. Mostly used on the trail to change riding line or to exit off the side of skinny obstacles. Unlike the Level LIft the skill is useful at slow, moderate and fast speeds.

Limbo

There are two types of bike limbo: *Ducking Limbo* and *Pick-up Limbo*. Both involve getting the body low, perhaps as low as seat and handlebar heights. Ducking limbo is a technique for riding under low branches, blowdowns or even gates and fallen trees. It is covered in Lesson 6. Pick-up limbo is more of a play and show-off skill and is used to pick up objects on the ground as you ride slowly by.

PICK-UP LIMBO

Manual Front Wheel Lift See FRONT WHEEL LIFTS

Neutral Position

A body position where the rider has their weight distributed equally over the front and rear wheels. In this position riders will have some traction and control over each wheel. To maintain a neutral position the body moves as the pitch of the bike changes – shoulders shift forward on climbs and hips move back on descents. Maintaining neutral position is dynamic and is essential for balance and control.

Nose-pick

The nose pick is an advanced skill that is used to get up onto obstacles, mostly for trials and urban riding. The rider starts by lifting the front wheel and placing it just past the leading edge of the top of an obstacle. This move is followed by application of the front brake which will assist the lifting of the rear wheel. After the rear wheel rises the pressure on the front brake is let off causing the bike to roll forward as the rear wheel continues to rise. The goal is to land the rear wheel on top of the obstacle without hitting the leading edge.

Restarting on a Climb See CLIMBING SKILLS

Pedal Position

Pedal Position is another of the ten Basics. Included in Pedal Position are four key movements that riders work with. These are:

1. **Preferred Stance**: This is the footwork that feels most natural for coasting and descending. Beginner riders do not usually have a Preferred Stance but with experience everyone is likely to have a preference for either “right foot forward” or “left foot forward”.

2. **Level Pedals**: In this position the riders stands with equal weight on each foot. The result is level pedals, sometimes called “level to the horizon” or “a 3 and 9 position”. West Coast Style will simply use “Level Pedals” or “pedals equally weighted”.

3. **Heel down**: This refers to the position of the heel of the foot. The heel is always down on the forward foot when braking and descending. The heel is also down as the foot pushes through the top portion of a pedal’s revolution.

4. **Toe down**: In this position the ankle is flexed and the toes are pointed down. Using “toe-down” is an essential part of clawing the pedals to allow the rider to better hold onto the rear when during rear during rear wheel lifts, dirt jumping or riding drops over one foot in height.

5. **Powerstroke**: There are two powerstrokes in a full revolution of the pedal. They are the portions of the revolution where each foot pushes on the pedals to make the bike move forward. A complete powerstroke is about half a revolution and occurs when the foot puts power on the pedals from the top, to the bottom, of a full revolution. This is referred to as a “half-stroke”. A shorter powerstroke is called a “quarter-punch” or “kick”, the same as the top portion of a powerstroke.

Pick-up Limbo See LIMBO

Pressure Control

Pressure Control is one of the ten Basics. Pressure Control is performed by a rider shifting their body weight, primarily hips and shoulders, quickly down or up in order to place more or less pressure on the tires. Riders use these weighting and unweighting movements to increase or reduce traction between the wheels and the terrain.


Weighting the wheels


Un-weighting the wheels

Punch Front Wheel Lift See FRONT WHEEL LIFTS

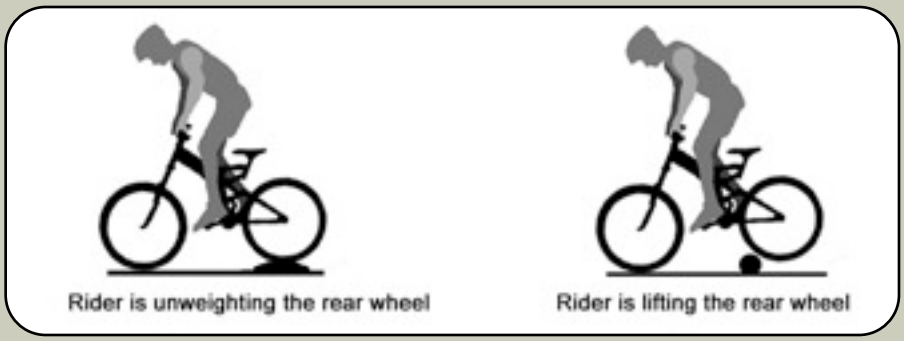
Ready State

Ready State is the position of body and mind that allows riders to maximize their ability to react to challenges ahead. It is best described as the correct use of the ten Basics with an alert mind, a commitment of the eyes to the riding line, steady breathing, a light engagement of all core muscles and a slight bend of the knees and elbows. Ready State is not energy efficient but it does assist the rider with anticipation and reaction.

REAR WHEEL LIFTS

Basic Rear Wheel Lift

The Basic Rear Wheel LIft is the easiest of the techniques for lifting the rear wheel. It is also the least intimidating as the lift is not assisted by applying the front brake AND it does not require the rider to pivot their body over the front wheel. Common uses of this lift are to unweight the rear wheel as it rolls over obstacles, lift the rear wheel off the ground completely and reposition the rear wheel by moving it to the side.



Rider is unweighting the rear wheel

Rider is lifting the rear wheel

Tail-whip: Static Tail-whip and Rolling Tail-whip

A technique in which the rear wheel is lifted and moved a short distance to the side. The *Static Tail-whip* is repositioning the rear wheel with the front brake locked to stop the forward motion of the bike. The *Rolling Tail Whip* is a repositioning of the rear wheel as the bike is moving. The front brake is modulated in the Rolling Tail-whip so the rider can keep the rear wheel off the ground for a longer period of time.

Rear Wheel Pedal Kick also called **Pedal-kicking**

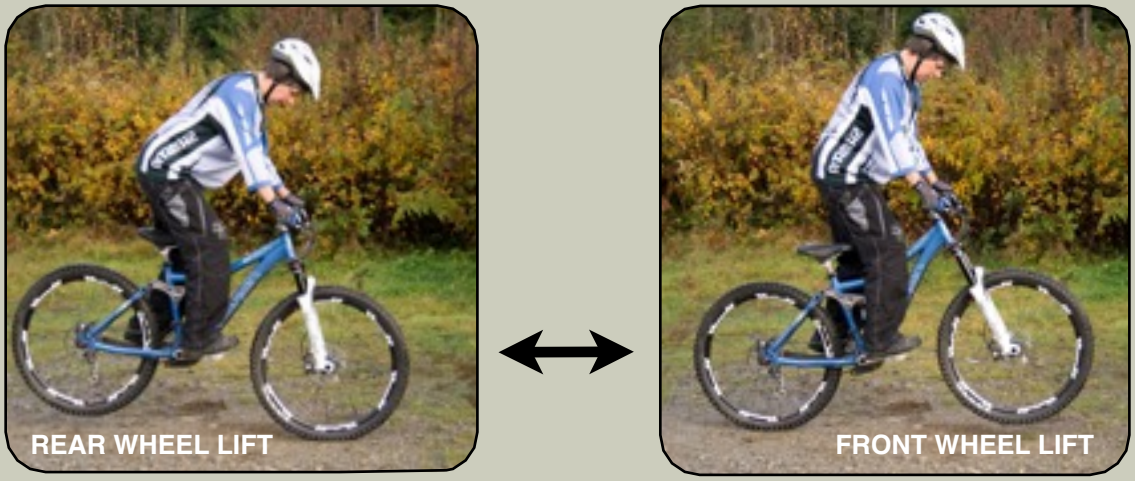
In this technique the rider is balances on the rear wheel and performs short, pedal kicks with the forward foot and pedal. The pedal kick will lift the rear wheel off the ground and surge the bike some distance forward. Each pedal kick is performed during a brief release of the rear brake. The brake is applied again as the rear wheel returns to the ground.

Rock Dodge

Rock dodge is a slow speed technique used to manoeuvre the tires around rocks or obstacles, by passing the front wheel on one side of the rock, then steering hard towards the other side so that the rear wheel passes on the opposite side of the rock.

Rocking

Rocking requires riders to lift the rear wheel and then, as it returns to the ground, to lift the front wheel. The brakes are fully locked as the body pivots causing the bike to rock fore-aft as the wheels lift repeatedly. The result is a rhythmical rocking motion. Rocking can be used to reposition the wheels or to balance when stopped. Rocking is a more advanced skill than Hopping. It also uses less energy. Rocking, Hopping and the Trackstand are skills required for slow-speed balance and for the sport of Bike Trials.



Rolling Drop-off

A Rolling Drop-off is a short section of trail with a sharp transition at its entrance that leads into a steep pitch which, after 2'-10', takes you to a second transition and onto less steep terrain. Riding a Rolling Drop-off is covered in the lesson *Descending Steep Pitches*.

Shifting

Shifting is one of the ten Basics. Shifting is simply the process of changing gears. Shifting smoothly, shifting at the right moment and shifting into the correct gear requires timing, co-ordination and practice. Knowing when and how to shift on climbs can easily be learnt and is an essential part of cross-country riding. Also understanding how to use the many types of shifters on the market can be complicated.

Skinnies also called **Riding Straight Lines**

Skinnies are narrow obstacles such as logs, ladder bridges, boards, the tops of concrete barricades and generally all places where a rider needs to ride a narrow line. Key body movements and progressions for learning to ride Skinnies and for Riding Straight Lines are covered in Lesson 2 - *Staying on Track*.

Side -hop

A trials technique where a rider positions their bike beside an obstacle and uses their body to move the bike up, to the side and onto the obstacle A small and relatively easy side-hop is performed with the brakes locked, a pronounced rocking motion and a sideways and upwards movement. Bigger and more advanced side-hops require a pedal kick to gain extra height.

Speed

Speed is one of the ten Basics. Many skills require a fairly specific speed or a narrow range of speeds for success. For confidence and control over fear, riders must respect both the upper and lower limits of speed that define their comfort zone.

Steering

Steering is the turning of the front wheel. Steering is used to turn a bike at slow to moderate speeds. It is always used in combination with a leaning of the bike. Steering is one of the ten Basics.

Stoppie also called Nose-Wheelie. See WHEELIES

Switchbacks

Switchbacks are tight turns on the trail built so that riders can climb or descend a steep grade by traversing across the slope in a zigzag fashion. Switchbacks are an excellent alternative to building the trail straight down a fall line that cannot be climbed and would become worn and damaged from repeated descents.

Tail-whip See REAR WHEEL LIFTS

Timing and Coordination

Timing and Coordination is one of the ten Basics. When a rider understands correct timing and coordination they will know exactly when and how to perform key bike and body movements required for balance and execution of a skill. To build confidence, riders should first learn to coordinate their movements in a relatively risk free environment until the movements become automatic. It is best to work on coordination of a move in a non-threatening environment before adding timing. After coordination of the skill comes automatically it is time to introduce timing. Eg: Draw a line in the dirt to mark the spot where the front wheel is lifted. Small errors in timing and coordination often make the difference between success and failure and can result in disastrous consequences.

Trackstand

The Trackstand is a technique for balancing the bike with very little movement of the bike or the rider. It is an essential skill for track riders, BMX, Trials and even mountain biking. On a mountain bike the Trackstand is performed without using the brakes and on terrain with a gentle slope (front wheel facing uphill) that will allow the bike to move under the rider when pressure on the forward pedal is varied.

Tree Dodge

The Tree Dodge gets its name from singletrack with trees so close to the trail that riders can't pass without clipping their handlebars, unless they use the Tree Dodge. At moderate to slow speed the rider uses bike/body separation to lean the bike away from the tree to allow the handlebars to pass and once they have the rider leans the bike towards the tree allowing their shoulders to pass. This is explained and shown in the lesson called Tree Dodge.

West Coast Bail

The West Coast Bail is a slow-speed skill used to get off of elevated trail features. The rider stops their bike and then jumps off and down to the ground. The West Coast Bail is certainly preferable to falling off the obstacle but it is not useful at heights that are too dangerous to jump from.

WHEELIES

Coaster Wheelie

This advanced skill requires the rider to balance with the front wheel in the air, while seated and without pedalling - a popular technique for wheeling downhill. Subtle weight shifts and modulation of the rear brake are used to maintain balance on the rear wheel.

Coaster Manual also called Manual Wheelie

The Coaster Manual is a type of wheelie where the rider is not seated as they ride and balance with the front wheel in the air. No pedaling is used, just subtle weight shifts and rear braking to maintain balance on the rear wheel.

Seated Wheelie also called "Catwalk"

As the name implies the rider is seated while riding on the balance point of the rear wheel. Unlike the coaster wheelies the rider will use pedalstrokes to keep the bike moving forward and to keep the front wheel off the ground. Subtle weight shifts and braking are also used for balance.

Nose-Wheelie also called "Stoppie"

This advanced skill requires the rider to pivot their weight onto the front wheel, find the balance point and use subtle weight shifts along with modulation of the front brake to maintain balance.

Wheelie-drop

This term originated on Vancouver's North Shore (British Columbia, Canada) - a reference to early man-made obstacles characterized by a slow approach leading to a drop of perhaps 2'- 10' off the ground to a flat landing. The name wheelie was probably used to stress the importance of keeping the front wheel up so it won't nose-dive when riding off the drop. The term is misleading, as the technique used to ride off these drops at slow-speed does not closely resemble a wheelie. Because the term Wheelie-drop refers more to a type of obstacle than to a specific technique – its interpretation varies and is often inaccurate. The most common technique used to ride a Wheelie-drop is the *Half-quarter Front Wheel LIft*. See *Front Wheel Lifts*