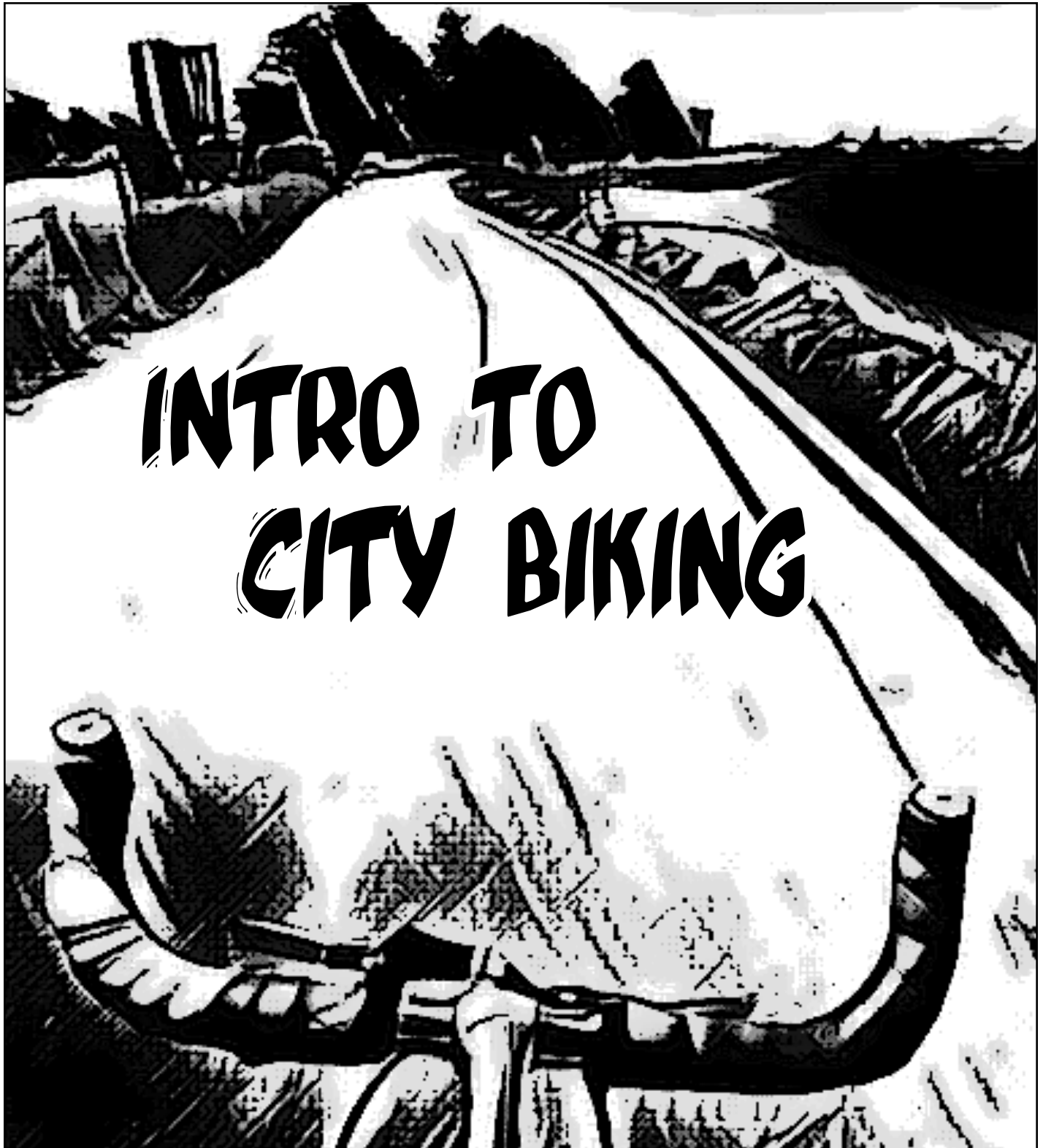


HARD KNOX

BIKES 2020



INTRO TO CITY BIKING

HARD KNOX ACADEMY

VOL #1

INTRODUCTION

Welcome!

Did you come here looking for an intro into biking in a city? You are in the right place! This is a first step on your biking journey. In this issue, we introduce different basics of bicycles to those interested in expanding their knowledge. Getting to know or learn a new skill or practice can be intimidating. We aim to ease the unfamiliar aspects and give people a look into bikes in a comfortable and understandable way.

This guide will assist those who want to bike more in a city, to have an idea of what to expect and how to prepare. Intro to City Biking, covers basics on different types of bikes, tools to keep on hand, what and when to check. There are also helpful road and traffic guidelines to keep you knowledgeable biking around others.

Keep this zine around to use for any quick bike questions you may have about riding in a city. We don't cover everything, but we cover the basics. Every road you bike on will have different styles, laws and space. Bicycles have liberated communities and individuals for over two centuries. Bikes are a uniquely empowering experience.

Hard Knox hopes you will remain encouraged to keep indulging your curiosity for bicycles. Biking is for everyone. Remember... #WeRideToo!

Always be safe and always have fun! Ride 6' apart and Wash Your Hands!

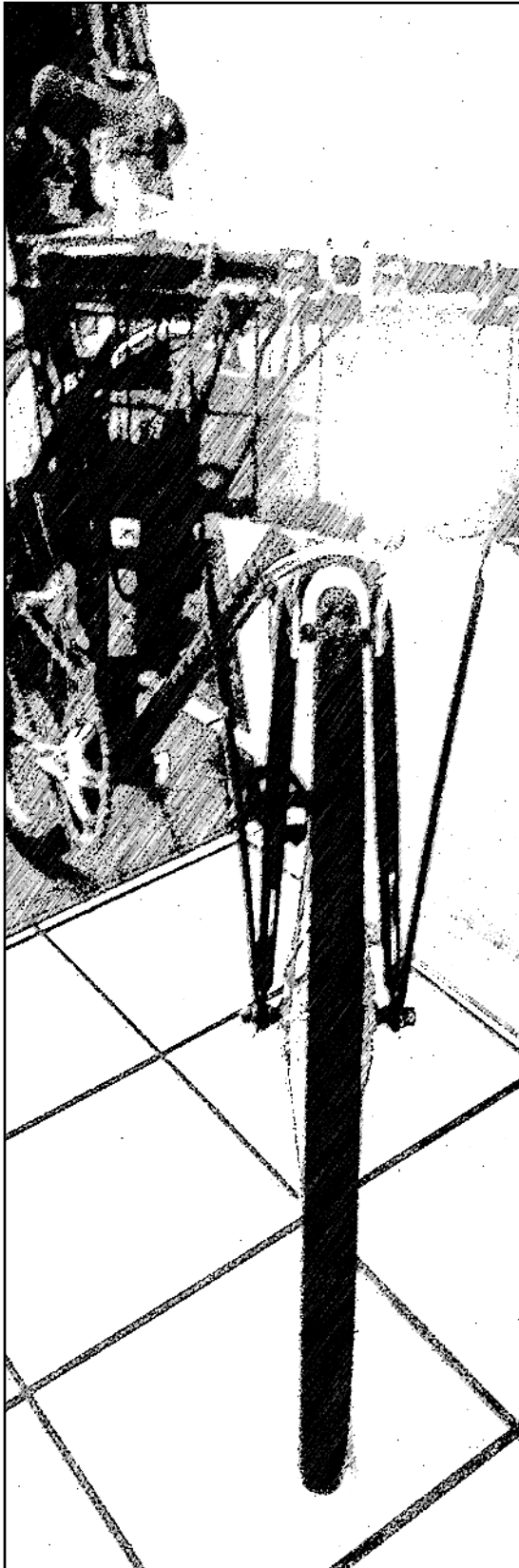
See you on the road!

Binky,
Hard Knox Bikes

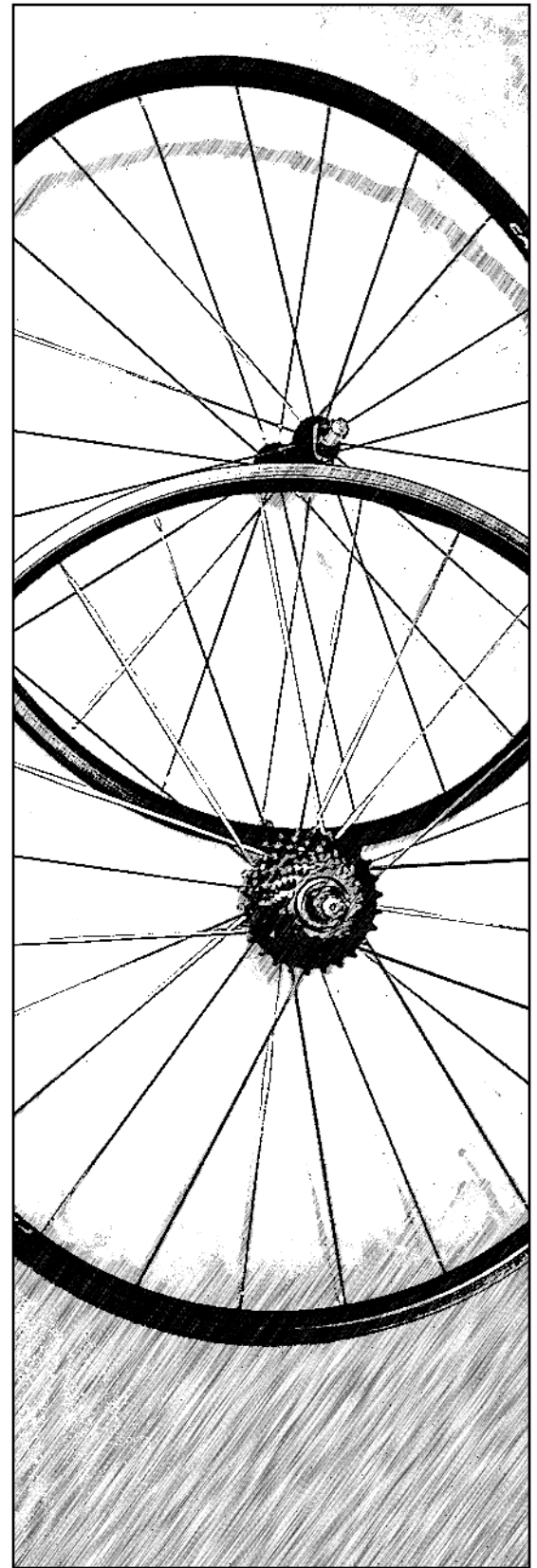
*Hard Knox Bikes is a specialty
bicycle education resource, offering
maintenance and riding workshops for
and by underrepresented communities
in the Bay Area.
Hardknoxbikes.com*



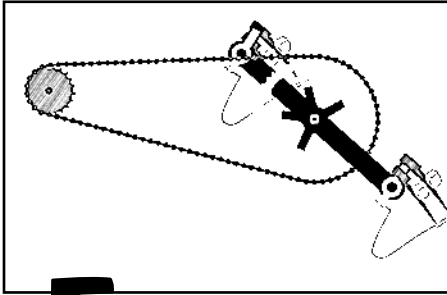
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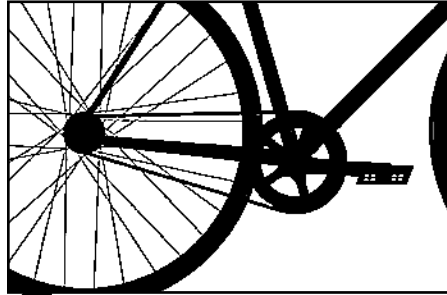


TYPES OF BIKES



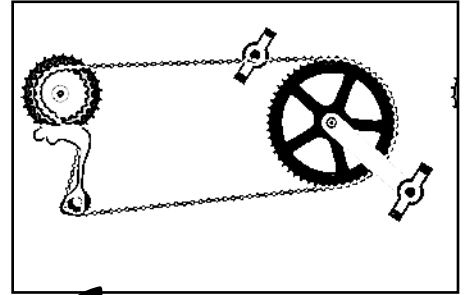
FIXED

Pedal arms move with wheels. If wheels are moving, the pedals are moving the same speed. No coasting. Rider can move bike forward or backward.



SINGLE SPEED

Only one difficulty level for pedaling, like fixed. But wheels can move while pedals don't. Can coast downhill without pedals spinning.



GEARED

Rider can change difficulty level of pedaling. How many gears varies by bike. Good for hills.

There are different bikes to accommodate different types of riding. Frame shape and material differ to make certain activities easier and more efficient.

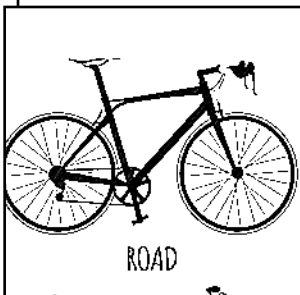
Road bikes are for riding on paved roads with the goal of going fast. They have narrow tires and sleek frames.

Hybrid bikes, also called City bikes, are good for comfortable riding in an upright position. They often have shocks, racks and are good for short trips or casual rides.

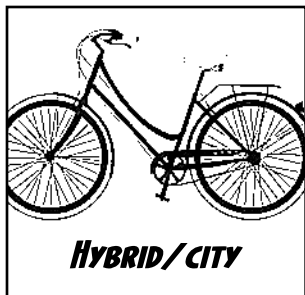
Cyclocross bikes were made for the sport of the same name. They have tires that are made to go over paved, dirt, gravel or other roads. Frame design is durable.

Mountain bikes were made to ride off road. Wider tires, thick frames. Some have shocks and others are specific to different categories of mountain biking.

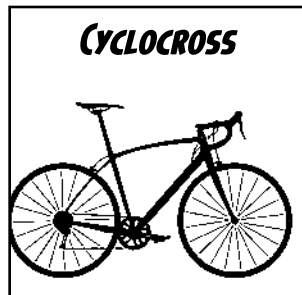
Touring bikes were made to take on long tours often several hundred if not thousands of miles. If you want to take a bike from California to Chile, you'll want one of these.



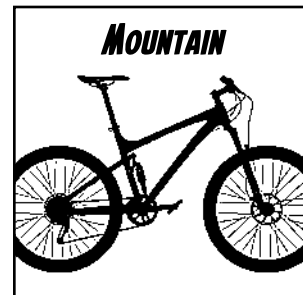
ROAD



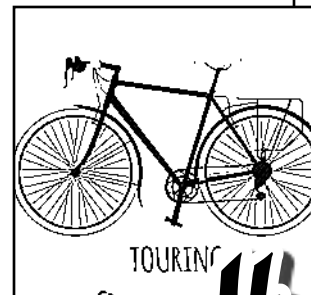
HYBRID/CITY



CYCLOCROSS



MOUNTAIN



TOURING



BIKE FIT

EASY AS 1, 2, 3!

A basic bike fit is easy and important. You can change lots of things on a bike, but if the frame doesn't fit then you are not going to have fun and may even injure yourself. Go to a professional for a more complete bike fit, especially if you plan to make this a career or serious hobby. If you are going to be on your bike all the time, you want it to be comfortable.

The original specs for bicycles were made to fit bodies that had longer torsos and shorter legs. Most "women's" bikes are made to fit shorter torsos and longer legs. Get a bike that fits. Measure the top tube and stand over height of your bike and record it for future reference.

Bikes that are made in sizes S, M, L have slanted top tubes to accommodate the most variety of riders on one model. Bikes with sizes in centimeters 49c, 51c, 59c have straight top tubes that are exact and don't allow for much variance in rider height.

If you experience any pain or discomfort from riding, contact a doctor.

ONE - STAND OVER HEIGHT

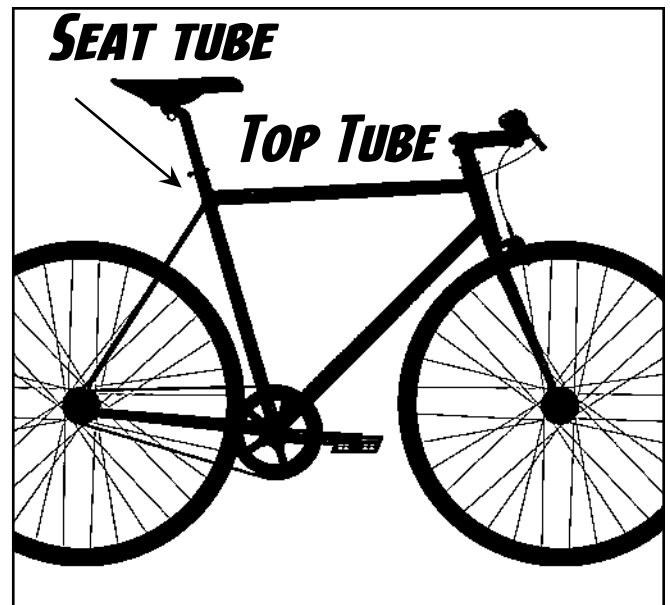
THIS IS WHERE THE BIKE COMES UP TO YOU WHEN YOU STAND OVER THE BIKE STRADDLING THE TOP TUBE BETWEEN YOUR LEGS.

IF ITS A ROAD BIKE, THERE SHOULD BE 1-2 INCHES BEFORE THE BIKE TOUCHES YOU.

IF ITS A MOUNTAIN BIKE OR BIKE WITH SUSPENSION, THERE SHOULD BE 3-4 INCHES BEFORE THE BIKE TOUCHES YOU.

THIS IS SO IF YOU SUDDENLY COME OFF THE SEAT YOU DON'T END UP IN A LOT OF PAIN.

A FRAME THAT IS TOO TALL CAN CAUSE PROBLEMS WITH THE JOINTS IN YOUR LEGS, KNEES AND HIPS.



TWO - REACH

THIS IS WHERE YOU MAY NEED SOME ASSISTANCE TO HOLD THE BIKE UPRIGHT TO YOU CAN GET ONTO THE SEAT.

WHILE SEATED, LEAN OVER THE TOP TUBE AND GRAB THE HANDLEBARS HOW YOU WOULD WHILE RIDING.

IF YOUR ELBOWS ARE STRAIGHT WHILE SEATED, YOU ARE OVER EXTENDED. THIS IS NOT A GOOD POSITION.

IF YOU ARE HUNCHED OVER SO MUCH IT MAKES YOUR VIEW LOOK DOWN INSTEAD OF AHEAD, YOU AREN'T EXTENDED ENOUGH.

ULTIMATELY HOW MUCH YOU REACH OVER IS UP TO INDIVIDUAL COMFORT.

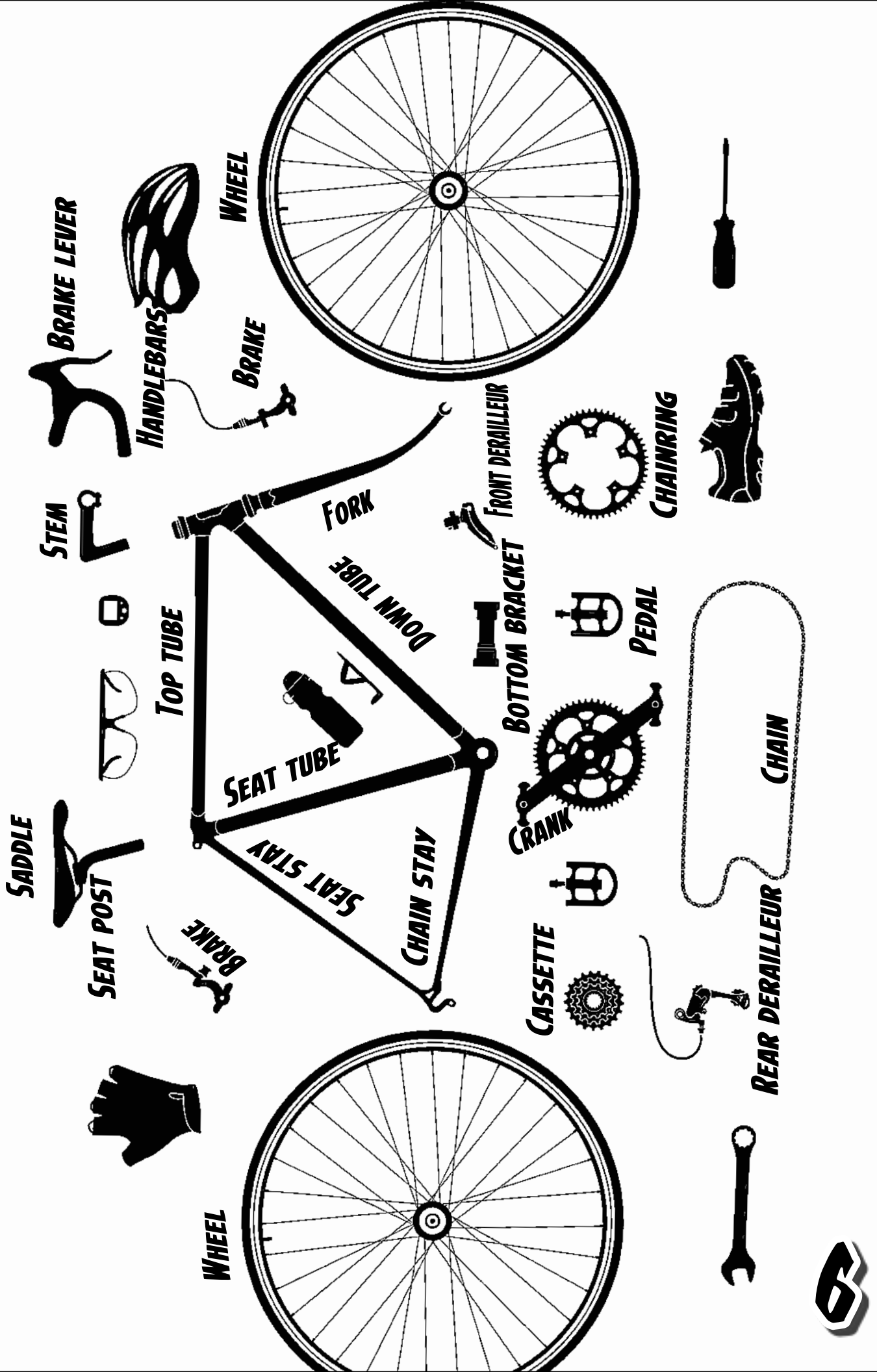
THREE - SEATED POSITION

THIS IS ANOTHER ONE YOU MAY NEED ASSISTANCE HOLDING THE BIKE UP WHILE GETTING IN A RIDING POSITION.

WHILE SEATED, PUT YOUR FOOT ON A PEDAL AND ROTATE THE PEDAL TO THE LOWEST POSITION WITHOUT MOVING UPWARD.

THE MORE BENT THE KNEE, THE MORE ROTATION OF THE KNEE WILL OCCUR WHILE RIDING. THE STRAIGHTER THE KNEE THE LESS IMPACT ON THE KNEE. USUALLY ALMOST STRAIGHT WITH A SLIGHT BEND IS GOOD.

PARTS OF THE BIKE



TOOLS FOR:

ROAD



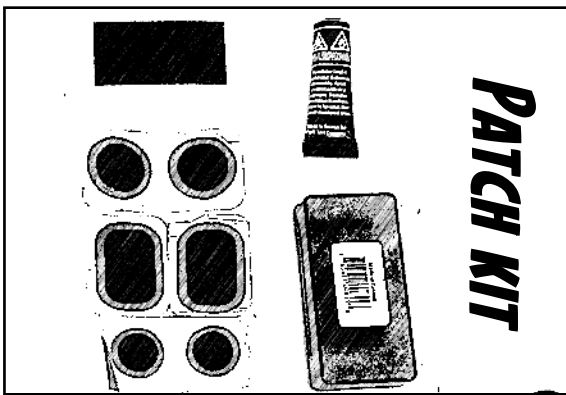
HAND PUMP



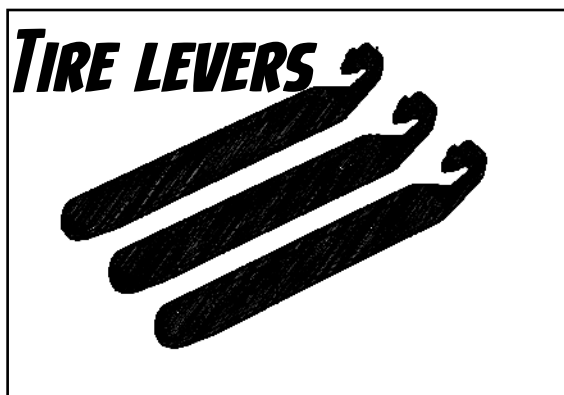
MULTI TOOL



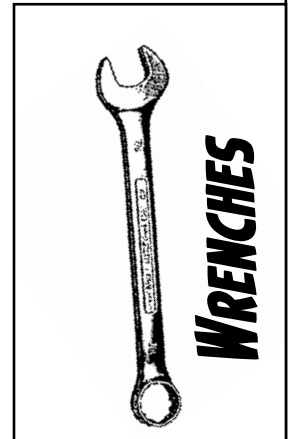
INNER TUBE



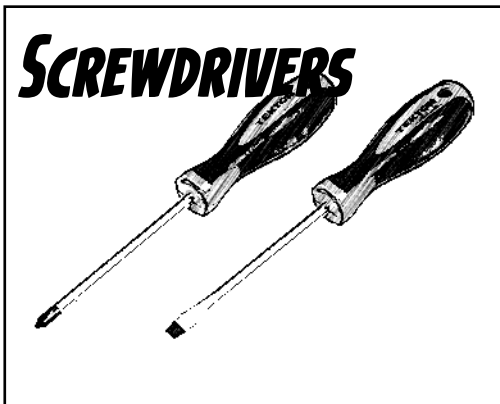
PATCH KIT



TIRE LEVERS



WRENCHES

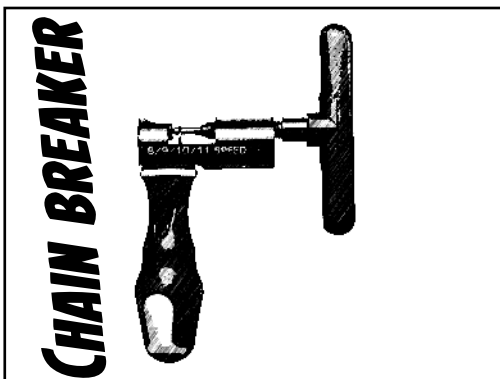


SCREWDRIVERS



ALLEN WRENCHES

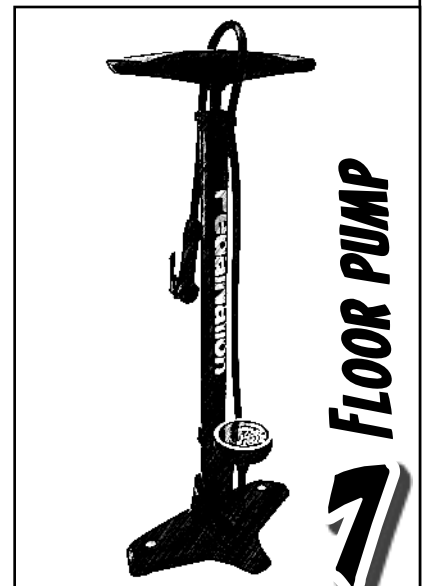
HOME



CHAIN BREAKER



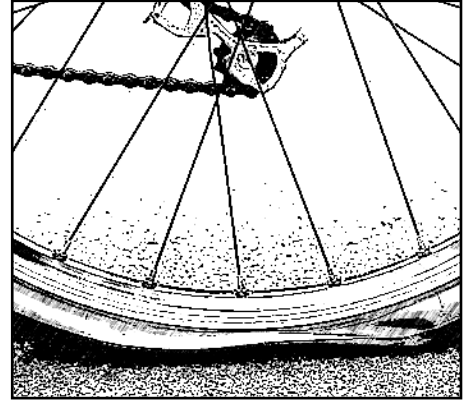
TORQUE WRENCHES



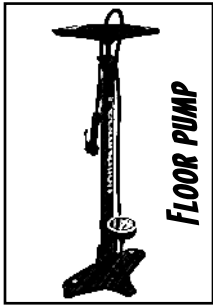
FLOOR PUMP

FIX A FLAT

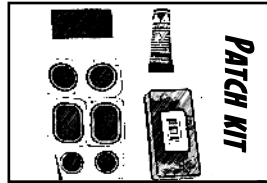
It is easier to simply replace a new inner tube for a flat one than to fix the flat on the side of the road. Carrying an extra inner tube is a good idea. Fix the flat at home and have another spare ready to go!



THINGS YOU'LL NEED



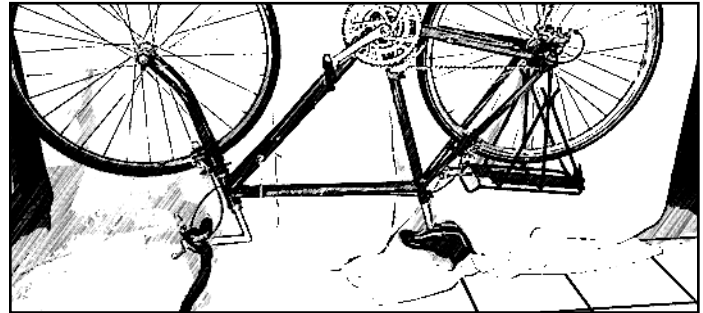
FLOOR PUMP



PATCH KIT

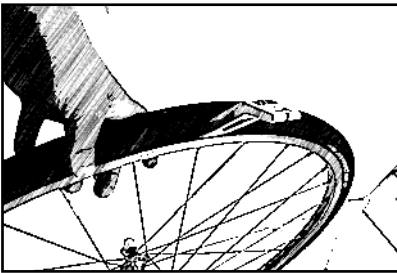


TIRE LEVERS



First thing is to remove the wheel with the flat from the bike. Turning the bike upside down, resting handlebars and seat on the ground is an easy way to access the wheel.

It's good to know before hand if you have quick release or nutted axles. If no QR, then always carry a wrench to remove wheel In case of flats.



Find any debris to pull out of tire.

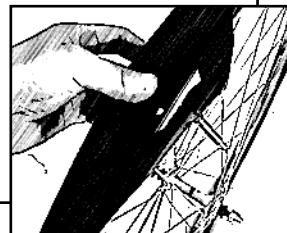
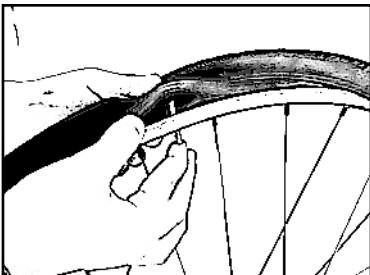
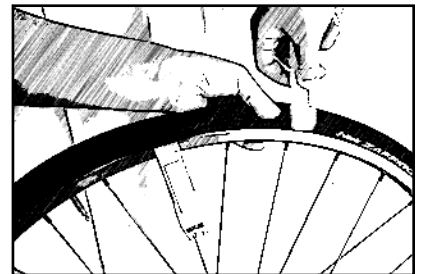
Now remove one side of the tire. Use one tire lever - place the flat end of the lever under the tire between the rim and tire.

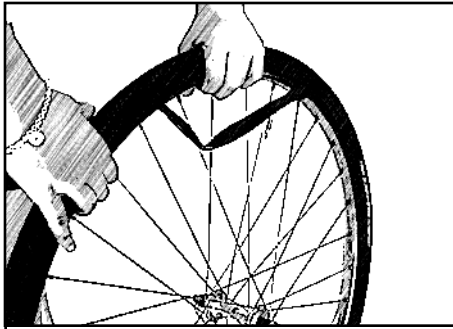
Make sure the lever gets underneath the "lip" of ONE side of the tire. Then hook the other end of the lever to a spoke.

About two inches from the first tire lever, place a second the same as the first. Keep the side of the tire out from the rim and repeat moving to the right of the original lever until tire is loose enough to use hands to remove ONE side of the tire off the rim of the wheel.

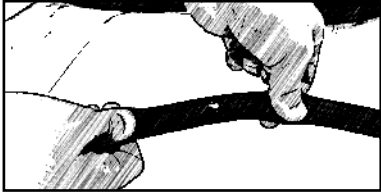
Now you are ready to remove the inner tube.

To remove the inner tube, begin with the air valve. Push it up through the rim and to the side of the tire. Then pull up and out. The rest of the inner tube should come off easily after that.

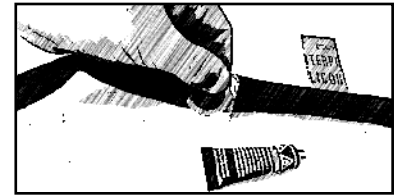
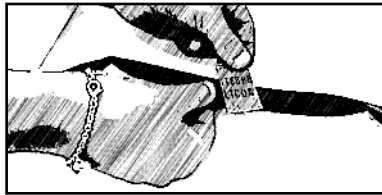
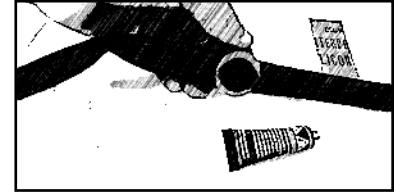




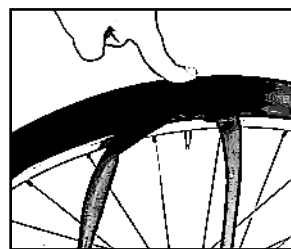
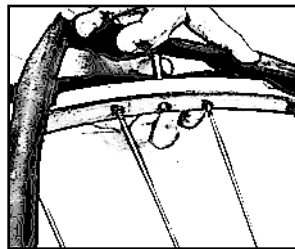
To find the hole there are two options. Pump some air back into the tube and pinch sections of 3 inches and listen for air escaping. The other is to pump air in the tube and hold it under water, pinching 3 inch sections and look for air bubbles to find the hole. Keep your finger on the hole so you don't lose it when you're ready to patch it. Make sure area around hole is dry first.



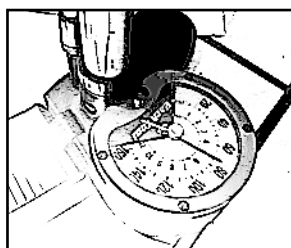
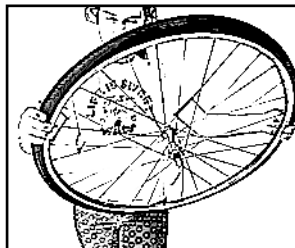
Use sandpaper to rough the area around the hole. This will help the glue stick. Pour glue over the hole larger than the size of the patch to be used. Wait for glue to be tacky before applying the patch. Hold patch tightly to inner tube for 3-5 minutes. Make sure patch cannot be peeled off inner tube.



Now it's time to put the patched tube back in the tire. Begin with the valve again. Make sure it is securely in the hole and within the tire walls. Not between the rim and the tire. Slowly begin to tuck the remaining inner tube up under the tire with both hands at the same time.



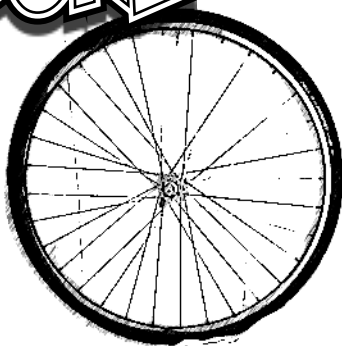
Make sure there are no twists in inner tube. Once the inner tube is securely in the tire. Push the side of the tire over the rim of the wheel. Using thumbs, push the tire side back around the whole wheel. The last part will be the hardest, use both hands at the same time, squeezing tire to help get it all the way around.



Check the whole wheel once making sure there is no inner tube visible between the rim of the wheel and the tire. Place the wheel back onto the bike and using a floor pump, get the correct amount of air in the inner tube.

Spin the wheel and check the brake works and everything is back on correctly. Now you are ready to get back on the road!

DONE



PRO!

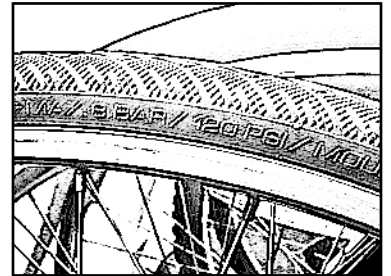


PRE RIDE CHECK

Whenever you are going for a ride, do a pre ride check. This allows you to find any potential issues before you get on the road. Doing a check after leaving your bike locked in a public space for a long time is a good idea too. Any time the bike could be moved, bumped, dropped or tampered with, check before you ride. Better to find loose brakes at home than on a downhill.

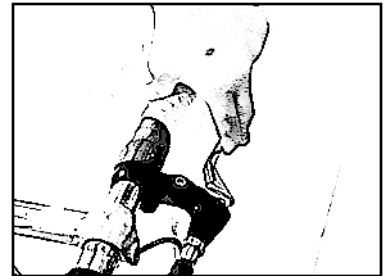
AIR

Check the amount of air in both tires. Look for the PSI, pounds per square inch, on the wall of each tire. This will tell you how much air to add. Thinner tires require higher air pressure and are hard. Wider tires have lower air pressure and are squishier than thin tires. Always check pushing tire down onto wheel, not by squeezing the tires sides together.



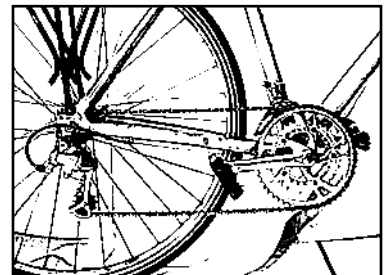
BRAKES

Make sure the brakes work. Pull the levers back toward the handlebars. The lever should come no closer than a thumb's width to the handlebars. If the lever touches the handlebar the bike won't stop. The wheels should spin freely, not touching brake pads.



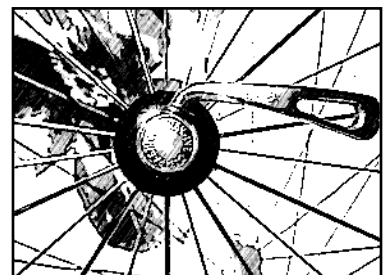
CHAIN

Check the chain and what the chain is connected to. Chain should move smoothly when pedals rotate. Chain should not change position or fall to the frame or off the bike. Take to a shop if this happens. Look at chain too for rust, damage or other things that may effect how well the pedals move.



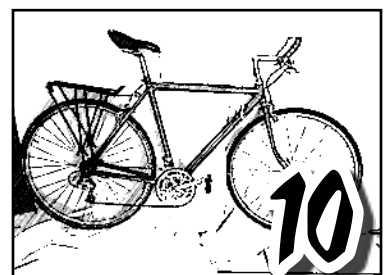
QUICK

Quick is for Quick Release. It is a type of locking closure common on bike wheels and seat posts. They make it easy to quickly remove wheels and are easy for wheel to fall off if not properly attached. The QR should be tightened with the short side and closed with the longer side. The QR lever should leave a mild imprint on your hand when closing.



CHECK

Check everything else. The frame for dents, the tires for damage or glass. Check the cables and the spokes and things you don't even know the names of. Know your bike to know when there is a funny sound or change. When in doubt, take it to a mechanic.

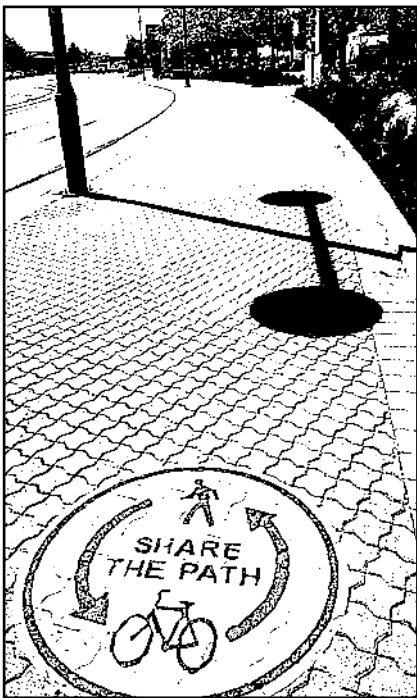


ROAD GUIDELINES

DRIVE YOUR BIKE

Bikes have basically the same rules and responsibilities as motor vehicles (CVC 21200).

If you have a drivers license the you know how to ride a bike on the road. If you don't you can get a free DMV drivers pamphlet to learn how vehicles are suppose to use the road. There are also classes on how to ride a bike on the road and in traffic.



Plan your route. If you plan ahead of time you can avoid busy streets and find nicer bike friendly ways to get around. There are lots of different ways cities indicate where bicycles are to ride. If there is a bicycle symbol on the road somewhere, it is likely where bicycles are ok to be. Some have signs indicating designated bike friendly streets or routes.

SHARE THE ROAD

Bikes have the right to use the full lane (CVC 21202).

Vehicles must have three feet of space to safely pass a bicyclist.

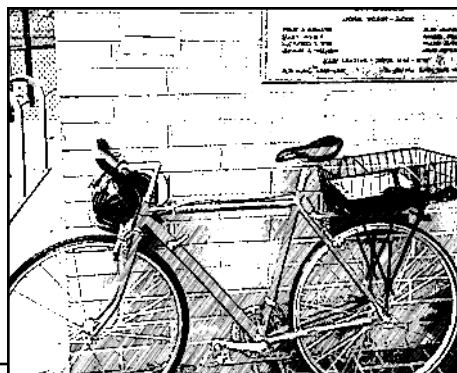
BE VISIBLE & PREDICTABLE

Cars don't always know how to drive around bicycles. The more visible and predictable a biker is to drivers, the more communication can occur. Let people know what you are doing and everyone can share the road easily.

The California Vehicle Code has all the answers to what is required for your bike to be on the road. But some basics are:
It must be able to stop and fit you properly.

At night a bike must have a rear red reflector, front white light visible for 100 feet, white or yellow reflectors on the pedals and both wheels(CVC21201).

A rear red light is highly recommended. Visibility is key!



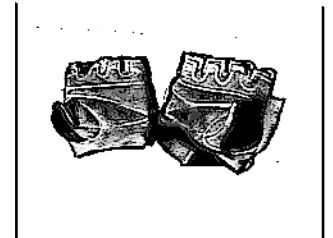
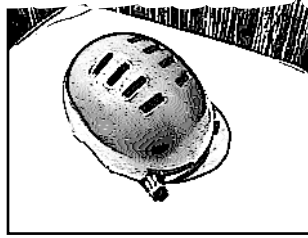
- Ride with traffic.
- Use hand signals to signal turns.
- Ride in a straight line and be predictable to other drivers and riders.
- Riding on the sidewalk laws vary by city. The street is a more predicatable place to ride. Driveways are dangerous when on the sidewalk
- Walk your bike through intersections and in crosswalks.
- It is legal to use a cellphone while riding a bike but its not very wise.
- It is only legal to wear one headphone in an ear while riding a bike on the street.
- Traffic tickets are the same price as for cars.

HAVE FUN! 11

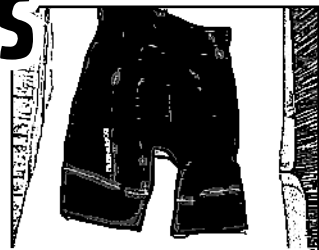
GEAR FOR THE ROAD

There are a few things that can help make your ride more comfortable. Riding a bike is a workout. Making sure you have water and snacks with you is always a good idea. A helmet will protect you in case of an accident. In California they are only required for bike riders under 18 years old and for certain electric bicycles.

HELMET GLOVES



SUNGLASSES



BIKE-SHORTS

Bike shorts have extra padding where you sit and are great for long rides. Gloves help with the pressure of resting on handlebars. Carrying lights with you is a good idea if you might be out after dark. Carry a lock too. You never know when you may need to go somewhere your bike cannot follow. Check shoes for loose laces and baggy pant legs before riding. Tuck in laces and roll up pant legs. A leg strap can help with his. Loose strings and fabric can get stuck in moving parts and cause an accident.

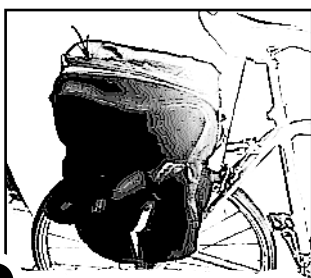
WATER-BOTTLE



LOCK



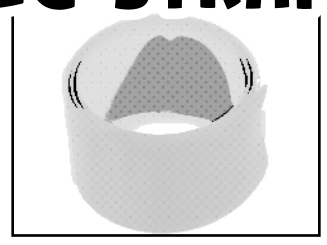
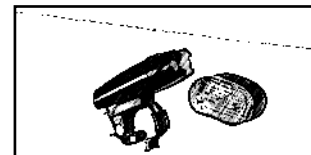
BASKETS



PANNIER

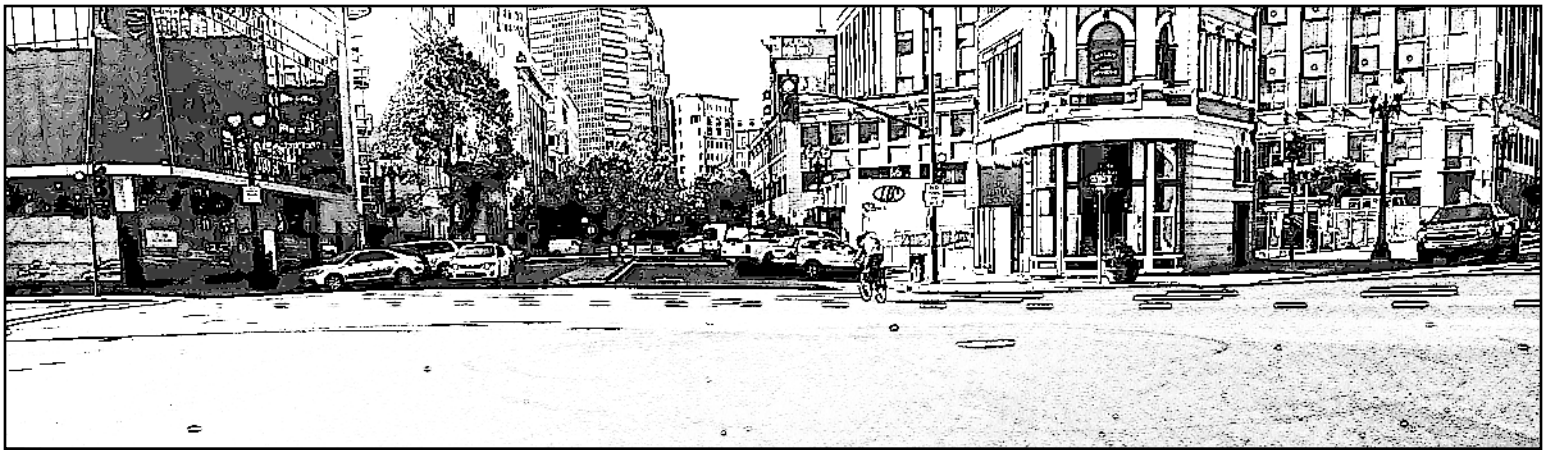
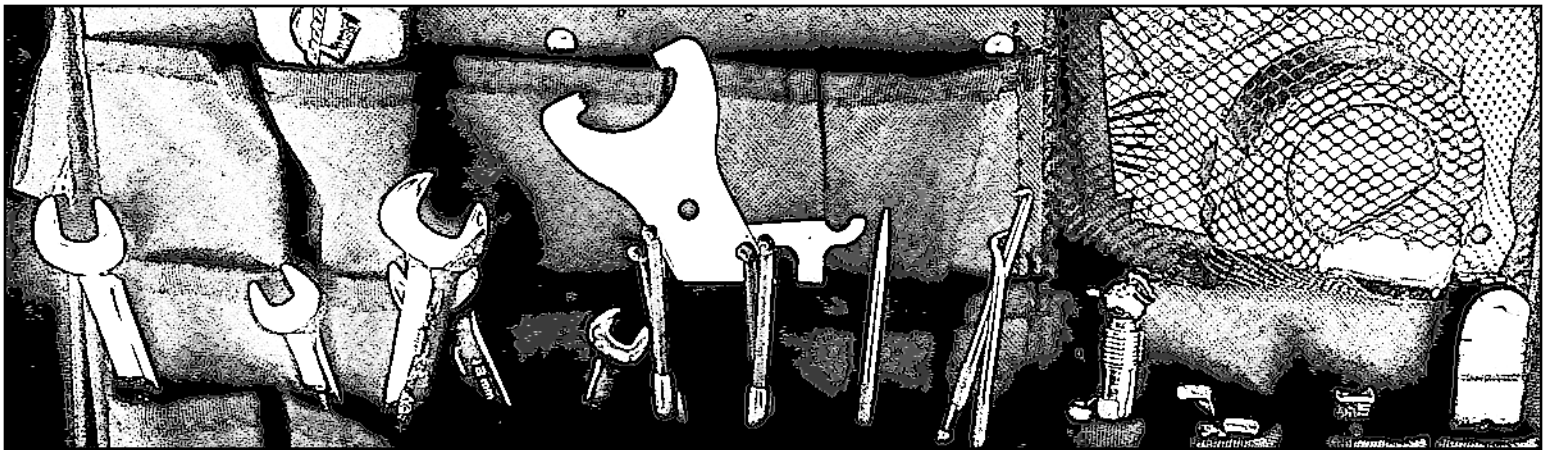
TRAILER

LEG-STRAP



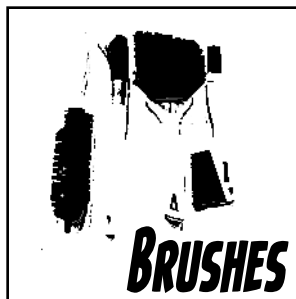
LIGHTS

If you plan to carry anything other than yourself on your bike, you may want to consider getting a front or rear basket. If you don't want to use a backpack baskets can help. Panniers hang from the sides of the rear or front wheels. They can be detachable as usable bags too. If there is a lot of stuff you need to transport or it is larger than a basket will carry, a trailer is another option. Trailers can be for children, animals or cargo. All baskets, trailers and panniers have weight limits, check the limit before using one. Your bike can carry basically everything!!!



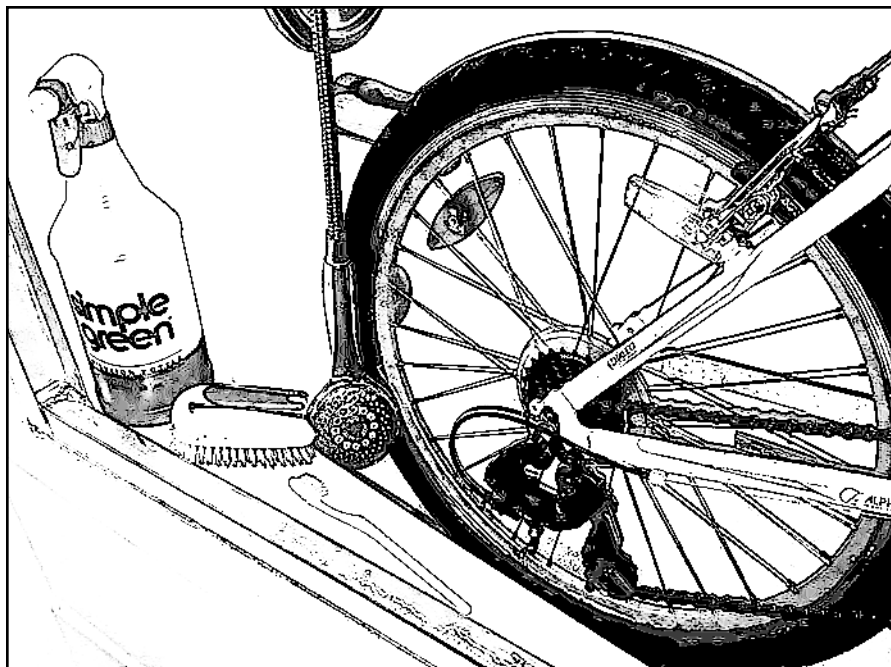
CLEANING

THINGS YOU'LL NEED



Washing your bike at least once a year is good for your bike. But cleaning it after certain conditions will keep it in good working order longer.

Clean your bike after riding in rain, mud, sand or around salt. For a simple clean you can use a hose to spray off most dirt and grime. Then use a bike cleaner and some brushes to scrub around moving parts. Use hose to spray off cleaner or rags to wipe off excess. Always dry bike off after thoroughly.



You don't have to have a yard to wash your bike. It will get messy but there are lots of options. Dish soap can be used as well. Just wiping off dirt and padding down with rags can work if you are in dry weather.

CLEANING A BIKE CHAIN

If a chain is covered in grease it may not move smoothly. A degreaser can remove grease on the chain. Make sure to let degreaser dry then place a single drop of lube on the chain where links connect with each other. Rotate chain until all links have lube then use a rag to remove extra lube from chain. When touched, the chain should only leave a thin layer of lube on your hands.

If the chain is too dry it can cause problems too. Just repeat chain cleaning steps after degreaser to lube your dry chain.

DISC BRAKES

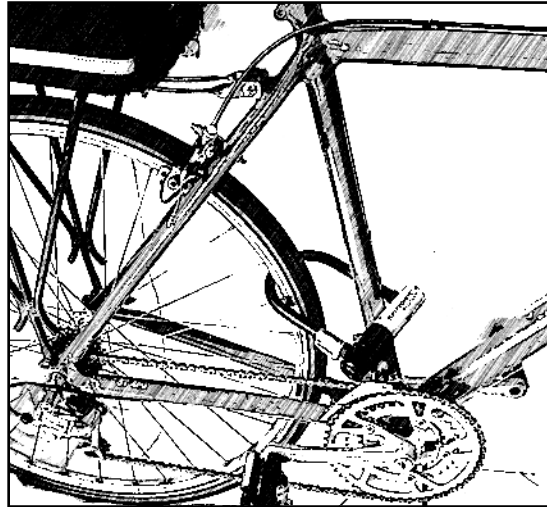
Disc brakes work using a rotor. The rotor should be kept clean and not touched with bare hands. If the rotor gets grease or lube or other chemicals on it, it may not stop the bike any more. Remove disc brake wheels before cleaning. Water is ok on disc brakes, allow to air dry.

LOCKING

If you can bring your bike inside, still lock it.

Some business let you bring your bike inside, check first.

Oakland Public Libraries have a lock to borrow while at the library.



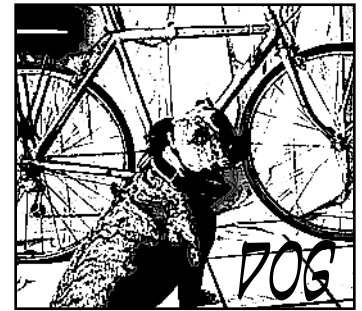
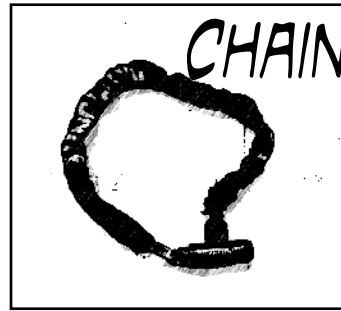
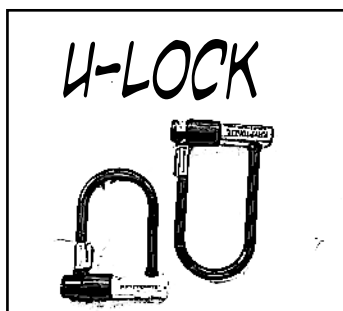
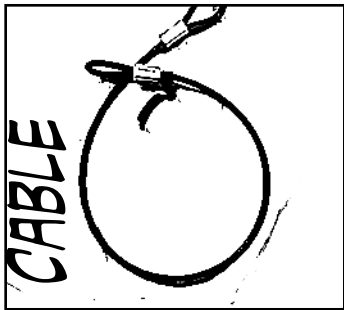
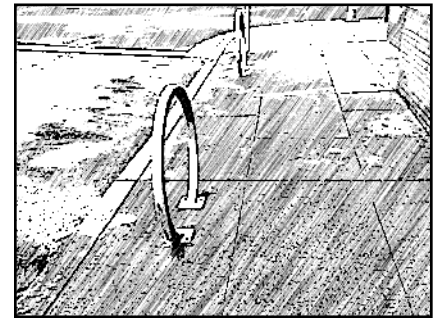
The REAR TRIANGLE of the bike is a good place to lock. Either just the wheel or the frame to a post. This securely locks the rear wheel, as they are stolen the most.

Lock everything that can be removed.

Removed everything that can't be locked.

The more locks the merrier.

Never leave unlocked.



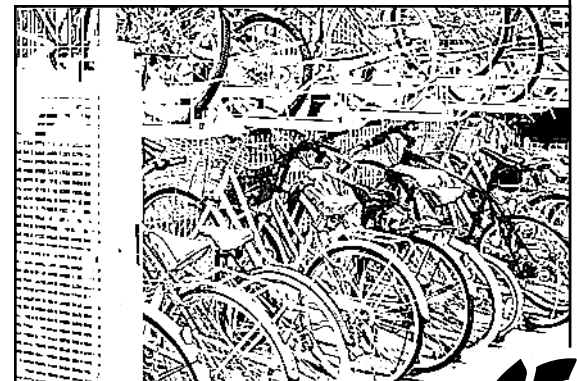
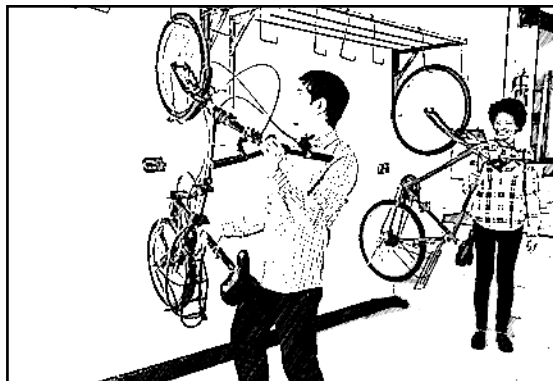
Cable locks are better than nothing but are the easiest to cut.

U-Locks are tough. The smallest fit is the best to prevent theft.

Thick chain locks are good for small trees or locking many things/parts together.

Dogs can deter people from your bike too. Grrr...

Valet bike parking is often free at events & BART.



At home leaving a bike inside keeps it safe from the elements. A hook on the wall can hold a bike & keep it out of the way

RESOURCES

NATIONAL

BAY AREA

Bike East Bay, Oakland

Spokeland, Oakland

SF Bike Coalition, SF

Cycles of Change, Oakland

PODER, SF

Oakland Bikes, Oakland

Scraper Bikes, Oakland

Black Girls Do Bike, ATL, CHI

Brown Bike Girl, NY

Black Women Bike, DC

Blackstone Bicycle Works,
CHI

Ride On Bike Shop
Co-Op, LA

DreamBikes, TN

INTERNATIONAL

La Frida -
Preta, Ben de bike, Brazil

Maya Pedal,
Guatemala

CREDITS

New Logo - Jac G
Images - Sir Binx, Shutterstock, Britney B.

THANK

Thanks to everyone who helped
me get here to make this zine.
Extra special thanks to my
daughter, Mom and Miss Q.
Wouldn't have gotten this
far without y'all. And to
everyone else who
encouraged me or just
listened to me or just
about my dreams.
Ride on!