

Connecticut Technology
Transfer Center

BICYCLE SAFETY RODEO

A GUIDE TO RUNNING A CHILDREN'S
BICYCLE SAFETY RODEO

Bicycle Safety Rodeo

The purpose for the Bicycle Safety Rodeo is to teach children the importance of seeing, being seen, and remaining in control at all times when riding a bike. This is achieved through a simulation of traffic situations and a series of bike handling drills.

Goals:

- Children will demonstrate an awareness of what is going on around them.
- Children will demonstrate the ability to maintain good balance and control of their bikes.
- Children will demonstrate the correct procedures before entering the street from a driveway or proceeding through an intersection.

This last point is especially important because more than 30% of all car/bike crashes involving kids under the age of 15 happen when children ride out the end of their own driveways, onto a quiet residential street, without stopping.

Eight different lessons give students the opportunity to practice a variety of bike handling skills and procedures for operating a bike safely.

Some factors to consider when planning a rodeo are:

- Space you have available
- Time available with the kids
- The number of adults available to assist
- Each lesson should take a group of ten about ten minutes to complete

One lesson for parents to try at home is to have the child sit in the driver's seat of a car. Show them how difficult it can be for a driver to see a bicyclist coming down a driveway or sidewalk. Make sure they understand that just because they see a car, it doesn't mean the driver sees them. Have them point out trees, bushes, and parked cars that may block the driver's view.

Countless crashes are caused by failing brakes, loose handlebars, or children riding bicycles that are too big for them. Bicycles must function properly and fit correctly for children to be safe when riding.

Prior to splitting up into groups, always begin with a bicycle fit, safety check, and helmet fit. The Instructor should explain to the group that these safety checks must be followed every time we ride.

Bicycle Size: Begin by checking the size and condition of the bicycles. Children should be able to stand flat-footed over the bicycle with at least one inch between a boy's bicycle top tube and the child. Inexperienced bicyclists should be able to place both feet on the ground while seated. The bicycle seat should be level and not tilted forward or backward. For more advanced bicyclist, their legs should be just slightly bent at the bottom of the pedal stroke with the ball of the foot on the pedal.

Brakes: Check foot brakes by pushing the bike forward while pushing back on one pedal; the rear tire should skid. Hand brakes can be checked by making sure the levers work smoothly and by ensuring that they have one-inch of clearance from the grip when the brake is applied fully. Also, make sure the brake pads are not worn and that they hit the wheels evenly.

Tires: Check to make sure the tires are properly inflated. If not, have a pump available to inflate or deflate tires as necessary.

Bike Frame: Check to make sure the handlebars are tightly fastened. This can be done by holding the front wheel between your legs and trying to turn the handlebars to the side. If the handlebars twist, the bolt at the handlebar stem needs to be tightened. Also, make sure the chains are not loose, the pedals are attached tightly, and the chain is on properly.

The children should also check to make sure the seat is properly tightened and if applicable, that the bicycle is shifting properly. If a bicycle is not functioning properly, the child should seek out an adult to assist with adjustments. If a bike is deemed unsafe for a child to ride help, the child should find a "Bike Buddy" who will share their bike. Other children who wish to participate and have helmets but not bikes should find with a friend who is their size and take turns with the bike. Another opportunity for them to participate is by having them help with the Safety Town "human stop sign" course.

Helmet Fit: The Instructor should instruct the group to check their helmet fit. The emphasis on wearing a well-fitted helmet cannot be overemphasized. The helmet must be snug and level, and you should have room for no more than two fingers between the straps and your chin. Make sure the children connect the chin straps because leaving them hanging down is a recent trend; if the child falls, the helmet could slip off. Adults should make sure all helmets are adjusted properly. Children should not be allowed to wear baseball caps under their helmets (the knob on the top of a cap will cause serious injury if impact occurs).

Nearly all bicycling deaths involve head injuries. Children are 14 times more likely to survive a bike crash if he or she is wearing a helmet. Nationwide, approximately 800 Americans die each year in bike crashes. Studies show that wearing a bicycle helmet can reduce the risk of head injury by 85% and the risk of brain injury by 88% in bicycle accidents. This could save about 680 people each year.

Many children reject the idea of a helmet while riding a bicycle. Here are some tips that may assist in getting a child accustomed to the idea of wearing a helmet.

- Let your child help pick out the helmet. Helmets come in many colors and styles and some with helmet-friendly stickers.
- Always insist your child wear the helmet when riding. For anyone under the age of 16 in Connecticut, it is the law!
- Begin the helmet habit with the first bicycle. Make it a firm rule and it will become a habit as your child grows, similar to buckling up in the car.
- Parents - when you ride together, wear your own helmet. Your own good example can make a significant difference in encouraging your child.
- Praise and reward your child each time. You can help take some of the anxiety and embarrassment away with words of support.
- Encourage other parents to buy helmets. Making helmets seem as normal as possible is the best way to eliminate any discomfort from being "different."

Safety Course Instructions for Course Instructors

In order for the kids to truly learn from these lessons, the Instructor must make certain that the children really demonstrate the principles being taught. In addition to explaining what is expected at each station, stress the importance of the principal being practiced. Be sure to provide lots of encouragement and enthusiasm. Thanks to the Marin County Safe Routes to Schools initiative for some of the ideas and diagrams used in this guide.

Now on to the Bike Rodeo...

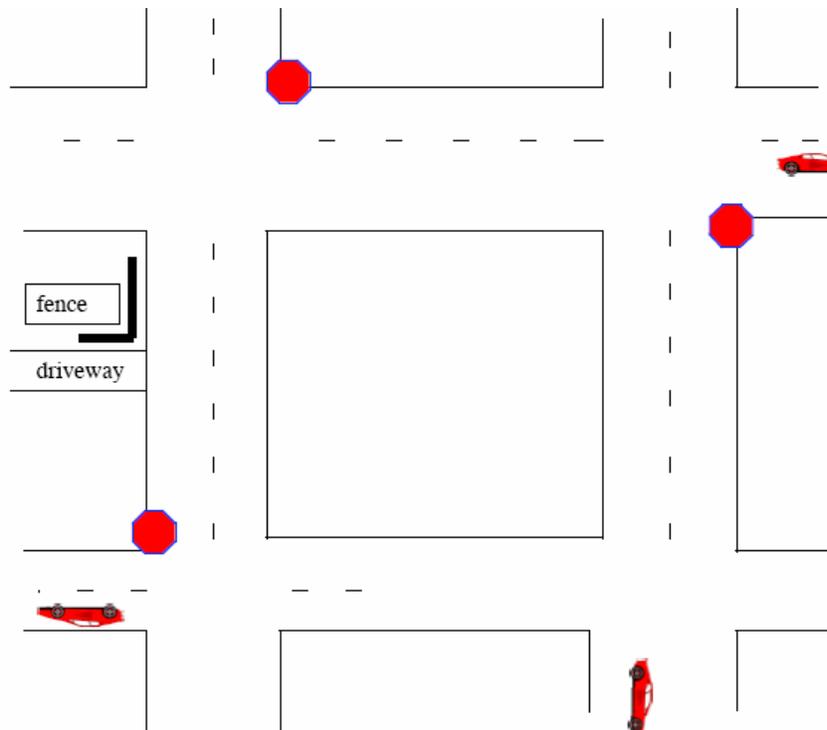
1) Safety Town Traffic Course

This station creates street riding situations, with an emphasis on:

- Coming to a complete stop before crossing a road
- Looking left, then right, then left again before crossing a roadway
- Riding with the traffic
- Following the rules of the road and respect traffic signs/signals
- The danger of pulling out from behind an obstacle

This Instructor should provide clear instructions for the proper procedure for pulling out of a blocked driveway, stopping at the curb, and looking left, then right, left again. Then, only if it is clear, they can pull out into the street. Students move on to negotiate multiple intersections and repeat the full procedure at each intersection.

The role of Safety Town Helpers (possibly played by children who are not participating in the rodeo) is to act as human stop signs at each intersection. They should check for compliance with the proper procedures and allow the children to proceed only if it's clear. Human stop signs should model the procedure when necessary. Prop cars, buses, pedestrians and other bikes (portrayed by additional Helpers) can move around the course and require that children make real decisions about how to react and proceed safely. All Instructors should talk to the riders as they come through their intersection, offering positive and encouraging feedback.

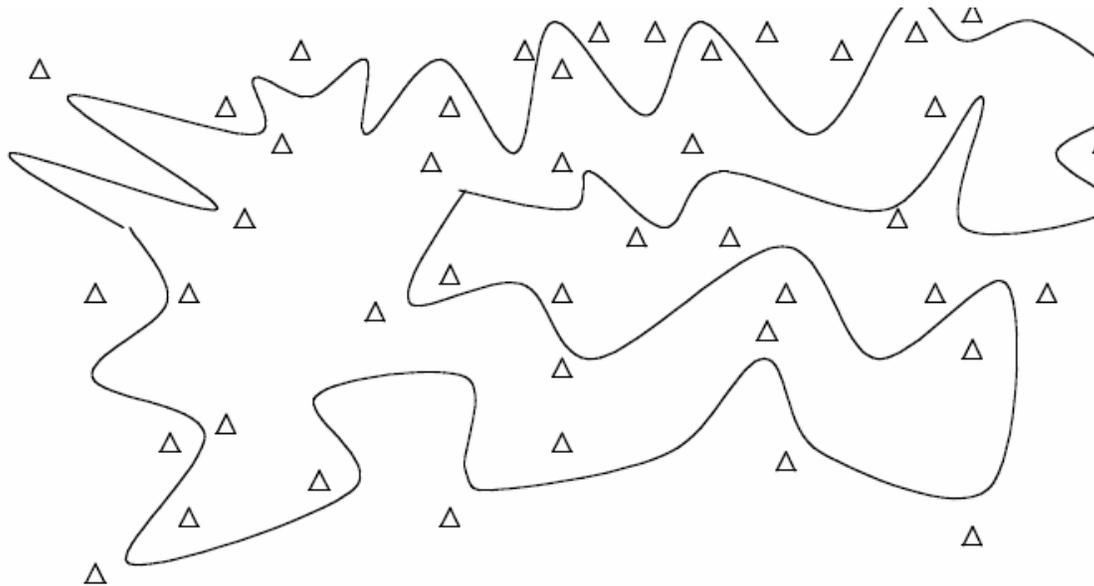


2) Slalom Course

This station is an exercise in bike handling designed to challenge all ability levels yet still ensuring success for every rider. The course consists of a circuitous chalk line, which winds and turns tightly; outlined by traffic cones. The traffic cones are placed far enough apart that any child should be able to navigate the course while remaining between the cones.

Instruct the riders that the object is to follow the chalk line drawn on the blacktop with their front wheel. Explain that the cones are set up to mark the course and that they must stay within the cones. Explain that keeping their tire right on the line will be very difficult to do, but everybody should be able to stay within the cones.

The course Instructor will monitor the distance between riders and check their speed. Talk to the riders, offering positive and encouraging feedback but holding riders to the goals of following the line and avoiding the cones. Replace cones when they get knocked over.



3) Turtle Race - This station is an exercise in balance and control. The Instructor enforces the theme of this activity, which is: don't be the hare, be the turtle. The course consists of lanes about 2 feet wide, the number of lanes you will want to have is determined by the size of the groups you will be working with and should be as long as possible, at least 75 feet.

Ask the riders if they find it harder to control their bikes at slower speed. They will most likely agree. Explain that this is a balance exercise; the last person across the finish line is the winner. You cannot put your foot down and you must stay within your lane. Explain that we want them to practice controlling their bikes at slow speeds, which is achieved through good balance. Talk to the riders, offering positive and encouraging feedback and coaching them to stay in their lanes.

4) Chaos Course

This station demonstrates the need for traffic rules, signals and signage. If possible, this is an outstanding course for a law enforcement officer to supervise. In this station, an area will be designated by four tall safety cones, arranged in a square. The riders must remain within this space. The size of the area will be determined by the size of the group, a good ratio is approximately 5 square feet per student. The object is to make the space difficult to navigate without running in to one another.

The Instructor will allow riders to enter one at a time, the object being to ride within the confined area without touching another rider. If the Instructor sees riders making contact they are to be given a citation. Intentional collisions will result in the offending riders being removed for the duration of the station. The riders involved in accidental collisions should have their licenses temporarily revoked and their insurance rates increased.

Stop the traffic after a few minutes and ask the riders what rules would make the course less chaotic. Try their ideas. At the end of the course, ask the riders if the new rules helped.

An excerpt from *The Guide to Bicycle Rodeos* explains why this course is important: "One surprising thing that we've learned from the accident studies is this: while the kids involved in car/bike crashes were most often at fault, they generally knew the traffic law they violated. They violated them anyway because of competing needs ("Got to get home or Mom will be mad") or faulty expectations ("No one ever comes down that street...why stop at the stop sign"). For this reason, expecting kids to obey traffic rules simply because we tell them to is unrealistic. The old rote learning programs that give "dos and don'ts" will not do the trick. The kids need to see first hand why rules help people get where they are going."

5) Kwik-E-Stop

This station teaches the ability to respond quickly; braking suddenly and maintaining control while stopping fast. The Instructor will demonstrate applying the brakes evenly and shifting your weight back while braking. Explain that this will make stopping quickly easier and safer because putting equal pressure on the front and rear brakes and putting weight on the rear wheel keeps you from going over the front of the bike and makes it stop faster.

This exercise can be set up in a big (at least 100 feet long by 15 feet wide) oval or as a straight line exercise. Set up 2 rows of cones along the long sides of the oval or in a long straight line. You will need enough cones to space them at intervals that challenge kids to "slalom" through them (about 4 feet apart). Each rider should circle around the outside of the cones once so they feel comfortable about where to go.



On their second turn the Instructor randomly blows a whistle, signaling the rider to stop immediately. The object is to stop fast by braking evenly and shifting their weight back. Encourage the riders to build up speed, continue to randomly blow the whistle several more times as the rider proceeds around. If time allows have the students perform the exercise while slaloming through the cones. This allows them to practice the principals of the quick stop while changing direction. If there is room to do this as an oval you can have several riders do this at once.

Performing this task incorrectly could lead you to:

- Hit the object you are trying to avoid
- Somersault over the handlebars
- Lose control of the bike as the rear wheel skids out from under you

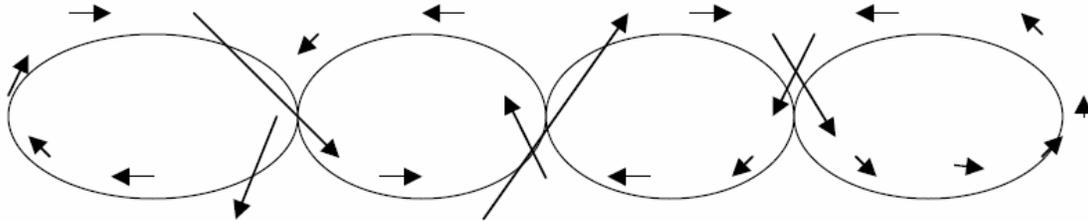
There is an art to stopping a bicycle in an emergency. Most people instinctively grab both brakes in an emergency and apply them equally until the bike begins to skid. By doing this, you have no control over a locked wheel and a wheel that is skidding offers little stopping power. When you apply either the front or the rear

brake, the bicycle begins to slow down and your weight transfers forwards. The more weight on the wheel, the more effective the braking and less tendency to skid. If you apply the rear brake hard, your weight is shifted to the front wheel, decreasing weight on the rear wheel. Since the rear wheel is supporting less weight, it will skid as you brake, decreasing the effectiveness of the brake. Applying the front brake also shifts weight to the front wheel. In this case however, the weight transfer increases the effectiveness of the brake and the tendency of the front wheel to skid is greatly reduced. The danger is that if the front brake is applied too hard the rear wheel will lift off the road and the rider may be thrown over the handlebars.

The implications for effective braking are as follows:

- Using just the front break can lead to a somersault over the handlebars
- Braking with the rear brake alone will avoid pitch-over, but it is not very effective
- The best system for a fast, safe stop is to use both brakes, which produces the optimum deceleration. If the rear wheel starts to skid, this indicates that you are un-weighting the rear wheel too much. Therefore when the rear wheel skids, ease up slightly on the front brake.
- When braking hard, slide your body back on the saddle as far as possible. You can transfer even more weight to the rear wheel by moving your butt straight back.

6) Crazy Eights - This station practices bike handling while challenging riders to employ their peripheral vision to help them make decisions. This course also practices traffic courtesy. The layout consists of two or more conjoined circles drawn on the pavement and outlined with small safety cones.



Begin by asking if they know what we mean by "peripheral vision". Explain that peripheral vision is what we see out of the corners of our eyes, and that we can see things without looking directly at them. A child's field of vision is not fully developed so they must be taught to take advantage of everything they can see.

We always want to focus on where we are going, so instruct them to follow the chalk line but also to be aware of the other riders without looking directly at them. The Instructor will monitor speed and distance between riders. The children must avoid collisions at each intersection and avoid running into the rider ahead of them.

The Instructor should allow each child to ride the course as a warm up. Then, the Instructor should add riders onto the course one at a time, until as many students as possible are on the course at once.

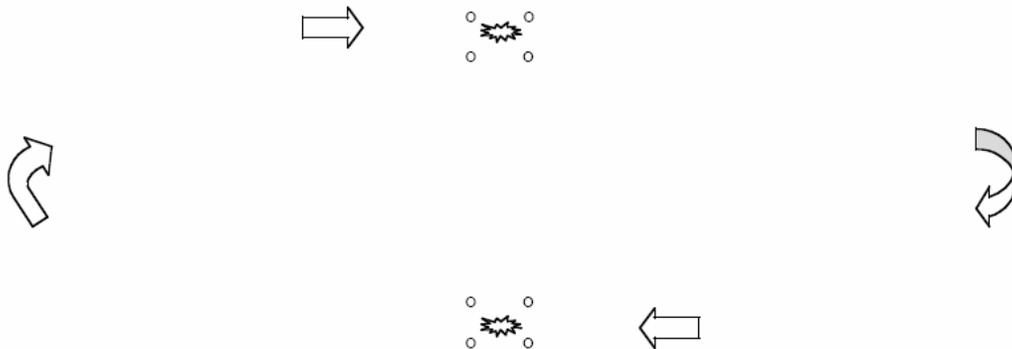
The first time a rider slows down or stops in order to prevent a collision, commend the student on their good judgment. Ask the entire group to stop and point out what just happened. Explain that slowing or stopping to let someone else go ahead is the best way to stay safe and the kind, courteous thing to do. Explain that is what "sharing the road" is all about.

7) Over the Shoulder - This station practices the maneuver of looking over your shoulder while riding in a straight line. The set up consists of a lane marked with cones, at least 100 feet long, approximately 2-3 feet apart. Riders proceed down the lane one at a time while the Instructor stands behind the rider and randomly calls out either "check right" or "check left" and holds up a big red card or a big white card.

The rider must look over their shoulder to the right or the left and call out the color of the card. Explain that the challenge is to stay in the lane because the natural tendency when we look back is to swerve in the direction we are trying to see. When riding on the street, this can put you in the path of traffic.

Note: this lesson should be omitted for the younger or less experienced bicyclists.

8) Rock Dodge - The Instructor should explain that we want the riders to demonstrate the technique of suddenly turning the front wheel (without swerving wildly) to avoid an unexpected obstacle. The course is laid out in a circular pattern. The diagram shows a somewhat compact oval with two rock obstacles. The markers should be arranged around the course so that they create narrow chutes with an obstacle (i.e. cone) in the middle. Instruct the children to warm up by riding the course and keeping both wheels inside of the markers when they come to the chutes. Once students have done this several times, place the obstacle in the center of each chute. Instruct them that this simulates a situation we often encounter; a sudden obstacle in your path, and you have to stay within a narrow area. Instruct them to steer away from the obstacle at the last moment, which will cause you to lean in the opposite direction. This can be countered by over-steering the opposite way. The Instructor should model this for the riders and then move around the course, offering feedback and encouragement.



Bicycle Helmet Standard

Law Mandate:

In 1994 Congress directed the Consumer Product Safety Commission to research existing standards and if needed develop a CPSC standard for bicycles helmets in order to accomplish two things:

1. To eliminate consumer confusion by too many different voluntary standards being used by manufactures.
2. To establish a set of test criteria which would assure consumers all bicycle helmets sold in the US provide a reasonable level of protection, as a minimum.

The CPSC has developed a comprehensive standard that builds upon the existing ASTM and Snell standards. The CPSC standard became effective on March 10, 1999 and applies to all bike helmets sold in the US. The Bike Helmet Standard requires among other things, all helmets to be:

1. Marked with a label so that the following information be legible and easily visible to consumers:
 - a. Model designation
 - b. Proper fitting instructions
 - c. Care instructions
 - d. What to do if a helmet is damaged
2. Tested for peripheral vision, positional stability and impact quality.
3. Helmet should be specifically and specially designed for children 1 to 4 years old with additional head coverage.

Regulating Agency
U.S. Consumer Product Safety Commission

BICYCLE RULES OF THE ROAD

1. Always ride with the flow of traffic.
2. Always ride in a single-file line.
3. Read & obey all traffic signs and signals.
4. Plan the safest route.
5. Keep the stunts & tricks off the roads.
6. Be seen!
7. Be heard!
8. Be predictable!
9. Pay attention!
10. Expect the unexpected!

**Be healthy.
Be safe.
Have fun!**

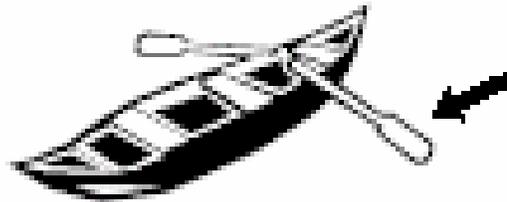
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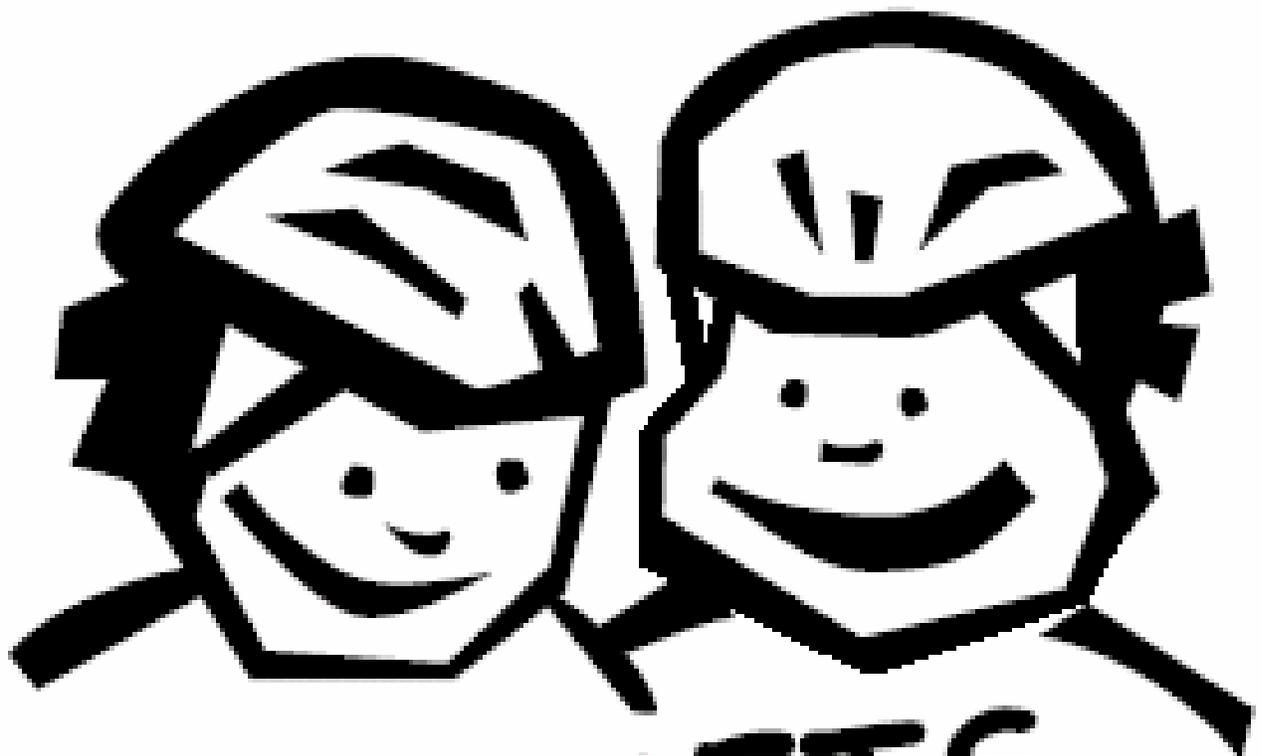


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