

SPIKE-DEVIL

UP.S.D. Upside Down Performance

By:  ***SPIKE-STRIP™***

TRAINING MANUAL

*The training in this manual
does not supersede any
policy or procedure of your
department.*

*Free downloads of the latest
version of this manual available
at:*

www.spike-strip.com



USER AGENCY ACCEPTS LIABILITY

Officers authorizing and deploying the Spike-Strip must carefully consider the individual pursuit situation. Determine if this pursuit is being conducted by your departmental policy. Weigh the consequences and the options for your pursuit. You should determine if the Spike-Strip can safely be used to end the Pursuit.

This manual is designed to help you effectively and safely use the Spike-Strip Tire Deflation Device. The training in this manual does not supersede any policy or procedure of your department.

The use of Spike-Strip can safely stop the pursuit under the following conditions. Spike-Strip should be used from behind cover and concealment for officer protection in order not to provoke an adverse reaction by the driver of the targeted vehicle. Select a good location, ensure equipment integrity, and use all resources.

EQUIPMENT INTEGRITY

Make sure your equipment is in good operating condition. The Spike Strip is a system where each component is required for proper and safe use.

Always handle the system by the cord handle and winder and not the cord itself; keep Winder low to prevent it from snagging on a vehicle.

Never deploy without a cord Tethered to the system. If a cord or a system fails, never enter the roadway to attempt to retrieve a Tire deflation device.

If you are the driver in a pursuit, never attempt to circumvent a tire deflation device left on the roadway.

RESOURCES

Departmental supervisors must train on the proper use of the product and include departmental use of force, pursuit policies and policies on Pursuit termination devices. For Self training, have the officer with F.T.O. or another officer practice and become familiar with system in a parking lot. For a formal class, have officers attend a classroom setting and field practice with special unspiked training systems.

TRAINING MEDIA RESOURCES

- | | |
|---|---|
| <input type="checkbox"/> Training manual | <input type="checkbox"/> Pursuit policy |
| <input type="checkbox"/> Promotional video | <input type="checkbox"/> Department use of force policy |
| <input type="checkbox"/> Training video | <input type="checkbox"/> Spike policy |
| <input type="checkbox"/> Power point presentation | |

For self training, review media resources then practice with the Spike devil system in parking lot.

For advanced moving training locate a larger parking lot: training units, 1 patrol car, marked with lights. 1 vehicle civilian suspect vehicle.

PRE-PLANNED DEPLOYMENT LOCATIONS

Have your deployment locations pre-planned. We recommend you download maps and discuss these locations with fellow officers.

APPROVED DEPLOYMENT LOCATIONS

Know the traffic scenarios in your area and those favorable for deployment of tire deflation devices. Not all pursuits are favorable for use of Tire deflation devices.



Use Internet mapping software to look at these locations and document the scenarios and how it might effect cover and deployment.



Take a close up picture of the deployment site and discuss the safe locations to use. Discuss the direction of travel and where you might park your patrol car.



Discuss multiple deployment tactics. Understand the traffic scenarios and how it might effect your deployment. Consider, Traffic, lanes, direction of travel, opposite direction travel, etc...



In this picture we show the deployment tactics and discuss our options. Every area is different, discuss all possible deployment locations and know the tactics before you ever deploy a tire deflation device.

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PRE-PLANNED DEPLOYMENT LOCATIONS

A low visibility deployment is the most Effective deployment method; a high visibility deployment is most often ineffective and places all at risk.

When tasked to deploy a system you should know the difference between concealment and cover. In these example pictures and in the training video we are going to show you samples of both and describe them to you using simulated scenarios.

HIGH RISK DEPLOYMENT

A high visibility deployment is where a patrol car, the officer, and the system are used in a manner where they have a visible presence to traffic. High visibility deployments can provoke an adverse reaction by the target vehicle, and should be considered high risk.

CONCEALMENT

In the video the officer is able to see the orange Challenger before the curve, he spikes the Challenger as it comes out of the curve.



The curve provides concealment and the physics of the vehicle is such that it gives the deployment officer an added margin of safety. This is concealment and low visibility, however it is not protective cover.

PROTECTIVE COVER

Protective cover requires bridges, guard rails, concrete barriers and other solid objects that can stop a car.



Just beyond the curve, is a concrete wall, large poles and pipes which can be used for protective cover.



In this picture you can see a bridge and a ravine. This Community has several ravines and bridges, they were approved as safe deployment locations. Some provide cover to the front and back of the officer.



This is a close up of the bridge, ravine and concrete wall and pipes. It provides a place to park the car and provides a higher degree of cover.

DESCRIPTION

Spike-Strip manufactures tire deflation systems for use by Law Enforcement.



All Spike-Strip Systems include a winder and a storage holster or bag. Also included with each system but not shown are the replacement spike cartridges, and this training manual.

Each Spike-Strip device consists of a series of Strips fastened to bases. Each Strip and base creates a section and several sections create the frame. The accordion Frame allows for the device to collapse and roll up and be stored in the Holster and when deployed allows it to expand in an extended fashion across the roadway.

The frame size is marketed in 1-lane and 2 lane models. Both Models when folded fit the storage holster.



The Spike-Strip frame is attached to a winder with 80 feet of #3 braided cord. The winder allows the officer to adjust and recover the Spike-Strip frame from a remote location.

SPIKE DEVIL FRAME

The Spike-Devil is designed to slide and be deployed spike side up, Spike-Devil's Strips and bases support the spikes for performance on hard surfaces as well as gravel and dirt roads.

The Spike Devil system is the preferred system for agencies that might deploy on rough, bad, or unimproved road surfaces, like gravel and dirt; Spike-Devil is an all-terrain type system.

Each Strip is loaded with 8 hollow spike cartridges. The cartridge provides a controlled deflation. The cartridge also facilitates the reload of the Strip by the user for future use.



U.P.S.D. UPSIDE DOWN PERFORMANCE

If deployed Upside Down, Spike-Devil works like a traditional multi-sided tire deflation device with performance limited to hard road surfaces.

Multi-sided systems depend on the road surface to provide compression between the spike and the tire, the compression pushes the spike through the tire. Multisided systems collapse and are damaged every time they are used.

When upside down, the Spike-Devil's strip also collapses around the spike allowing the spike to penetrate the tire. At this point the Strip that has collapsed is now damaged.

When single sided systems are deployed upside down, system components are also damaged; however they won't penetrate the tire.

Spike-Devil's new technology is Patent Pending.



ACCESS

The system should be mounted in an area low and ready, holstered in a fashion that is ready for quick access. You should unmount your system and take it to cover or unpack



To access the system, unhook the strap. Then Remove the Winder from the Holster with your non dominant hand.



Using your dominant hand pull out the Spike-Strip from the holster.

HANDLING

Notice the Winder is in one hand and the Strip in the other hand. Regardless of the winder you use, it should be held by your non dominant hand to facilitate proper use.



The loop winder has a beveled side and allows rope to be released when it is twisted towards traffic. When the loop is spun back, it catches the cord and allows you to pull the system in place or retrieve the system from traffic.



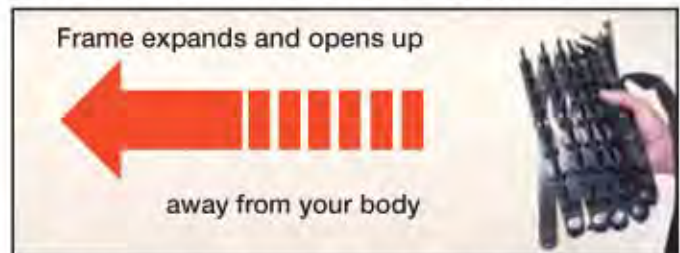
You can release cord by allowing the loop to spin on your hand, tossing the loop frisbee style, or dropping the loop and allowing the cord to pass through you hand.



The cord is released off the loop as the system is deployed. The winder can be attached to the right or left hand eyelet.



The cord reel is attached to the Spike-Strip frame. Notice the crank is facing towards the officer and unhooked to allow slack and deployment.



The other side of the Spike-Strip frame is loose and is the side that expands and opens up away from your body and onto the roadway.



You can hold and deploy the Strip with an overhand grip by holding onto both sides of the strap (smaller hands) or gripping the Spike-Strip frame.

DEPLOYMENT BY SLIDING

Position the strip where deploying the Spike-Strip in a sliding fashion allows it to open and expand away from your body.



With the Strip in your hand, posture your body in a low stance, by spreading your legs by stepping one leg back and practice with a swinging motion, and letting go, the Spike-Strip unit should drop and slide onto the roadway expanding.



The sliding deployment style is low visibility and covert. The loop and cord reel winders allow the cord to freely unwind.



Twisting the loop during deployment, causes the sliding to stop and snaps open the Spike Strip into the lane you have planned.



You can develop your own deployment style. Spike Devil can slide with your hand, foot, or it can roll out.

DEPLOYMENT BY PULLING

Spike-Strip device can be pulled open across the lanes of traffic by use of the Winder.



Place or throw the Spike-Strip device on the roadside with the rope side of the unit toward you.



When positioned behind cover keep the cord low. Traffic can pass over the cord.



When traffic is clear, and before the suspect vehicle arrives, pull the unit across the roadway into the path of the target. After the spike unit is run over, remove it from traffic with one quick, hard pull on the winder.

RETRIEVAL

Regardless of your deployment style, have your escape route planned, always use cover. Keep your slack minimized and your arm extended.

After the spike unit is run over by the target vehicle, one hard pull on the Winder should recover the Spike-Strip from the lane of traffic.

PARKING LOT TRAINING

Have each officer pair off with an F.T.O. or another officer and practice with the department issued spike system. The goal is to become familiar with the system, its handling, how to inspect the system, and basic traffic scenarios.



Vehicles are set up to simulate traffic scenarios. vehicles parked can represent traffic lanes.



First discuss the storage locations of your department tire deflation devices, Discuss and practice the proper method to unpack and repack the system.



Were ready to practice deployments, learn how your winder type works by simply conducting a series of practice deployments.



Practice unwinding the system and also keep your arm and reel extended away from you. Practice pulling the unit into place then practice sliding the unit into place.



Begin a series of deployments into specific lanes. Deployment into the specific lanes is easy during daylight. practice counting your steps to develop skills, which might help at night. Here the system is pulled into the far lane.



A few more steps and we deploy into the close lane, then finally recover the system.



Practice on your own developing skills, the deployment methods are outlined in the handling portion of this manual.



Department Name:

Officer's Name:

Trainig Officer:

Signature and Date:

You can conduct an advanced field training practice with actual moving vehicles. We recommend that all officers have first practiced skills with stationary vehicles first then graduate up to a moving class. Students should be familiar with the system, operation and then traffic scenarios, as to not slow down the class.



Shown in the pictures are ideal locations to teach such a class. An empty school parking lot, like a sports complex can provide such a location. A dead end road is another location however turning vehicles around might slow down the class. This parking lot has long straight roads, where high speeds can be obtained, this is an ideal spot.

VEHICLE SEQUENCE

The moving vehicles will traverse the location of the training units and then return from a different direction. This allows the officer to practice with different type traffic scenarios.



You should first practice pulling the unit into place and retrieving the pursuit vehicle and other traffic.

OFFICER SEQUENCE

Start slow with officers, pull method firsts then slide methods stress cover and proper handling of system winder, keep the winder out front and deployment by walking onto the roadway.



Notice the hand is extended, this keeps the cord out in front and deployment is by walking into place, to retrieve you then use your arm to jerk it out of traffic.



TRAINING UNITS

Spike-Strip training units allow you to practice deployment on moving vehicles without damaging tires.



A close up of the training units shows the rubber spikes, protruding from the Top of the Strip

Officer's Name:

Trainig Officer:

Signature and Date:

PRODUCT SERVICE

After the system has been used, it should be carefully inspected and serviced. The accordion frame must be inspected for missing spikes or a damaged section. Service might require a screwdriver.

SPIKE REPLACEMENT

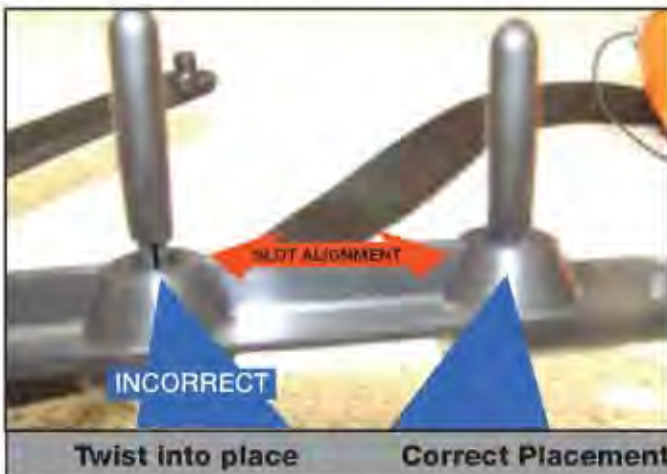
Under most conditions the only service needed would be the replacement of spikes.



Each Spike-Strip device comes with a package of 8 replacement spike cartridges and spare O-rings. Make sure the hole has an O-ring inserted flushed on the bottom shelf. *O-rings may be BLACK or RED in color.*



The Spike-Devil uses a cartridge, the top half of the Spike is covered with a cap / seal. You can cover the bottom portion of the cap with Silicon, and the end of the exposed spike tip with water. Place the exposed portion into the Spike Strip receiver hole, rotate until the slot on the spike aligns with the length of the Strip. Press the cartridge down into the hole.



STRIP REPLACEMENT

If the system is deployed spike side down, one or more sections might need to be replaced. In this case the spikes push through the bottom of the Strip into the tire damaging the section.



Take out the damaged section(s) by taking out the three screws to replace the Strip or four screws to replace the section.



Tighten the screws just enough to prevent the washer from turning. Do Not Over Tighten!

INSPECT

When folding the Spike-Strip device hold it, and shake it to dislodge any grass, or debris that will prevent it from folding up properly. Wind up the Cord-reel and inspect the reel via the mouth to assure it is properly wound up and has no debris.

TEST

Deploy the unit to test that spikes are firmly in place. With the Spike-Strip expanded, and retrieved it should test that the spikes are firmly in place and the frame fastened to the cord reel.

RE-HOLSTER THE SPIKE-STRIP

The Spike-Strip and Cord reel should be stored with the Strip on the bottom and the cord reel on top, fasten the strap provided on the holster. Re-pack Spike-Strip so that when you unpack, it is in the correct position in your hands

STORAGE

Spike-Strip optimizes storage options with a Holster or Bag. The holster is for storage of the Spike-Strip in patrol cars and S.U.V.'s. The bag is for Motorcycles and A.T.V.'s.

HOLSTER

The Holster is an end fed storage device, with special mounting options. The Holster includes a slot on the bottom to slide it into a mounting bracket. This bracket secures the system in the patrol car. The Holster and bracket allows for quick transfer to other vehicles. We recommend you mount the Holster in a low position to facilitate quick access. The Holster can be mounted flat or standing up on its end.



INSTALL

Since the Holster slides sideways in and out, clearance to the right of the bracket is required to accommodate mounting and retrieval of the holster. The bracket includes three rivets for mounting. The two long rivets (1414) are for the thicker portion of the bracket and the shorter rivet (1404) for the flush portion. The bracket can be used as a template for drilling of the holes. The Spike Strip also includes a Velcro strap (1508) for mounting it in other locations without the use of the bracket.

BAG

Spike-Strip also has a bag as an accessory for use on police bikes, ATV's and other applications.

****SPIKE-STRIP FITS THE SIDE LOADING BAGS OF HONDAS AND KAWASAKIS**



****SPIKE-STRIP FITS TOP LOADING BAGS OF BMWs, VICTORYs AND HARLEYs**



Our department's Spike-Strip Systems are installed in these locations: _____

PRODUCT WARRANTY

Spike-Strip tire deflation devices are fully warranted to be free of defects in material and workmanship for life, to the original purchaser. Defective parts will be replaced or repaired free of charge.

This limited lifetime warranty also includes free replacement of sections damaged in a pursuit for a period of three (3) years from the date of purchase.

ACCESSORY AND PARTS LIST

The Spike-Strip Spike-Devil model numbers SD10010 and SD10020 both use the same parts. Accessories are assembled and include all the parts and are shown in a gray box. Replacement parts for each accessory are shown below the gray boxes.

PART NUMBER PART NAME

HOLSTER PARTS

- 1900 GREY HOLSTER
- 1903 BLACK HOLSTER
- 1403 WASHER, 3/16
- 1404 RIVET, 3/16 X 1/8
- 1501 STRAP 18 INCH
- 1502 36 INCH VELCRO STRAP
- 1410 METAL BRACKET
- 1414 RIVET, 3/16 X 1/4

CORD-REEL AND PARTS

- 1601 CORD-REEL
- 1602 CORD NYLON BRAID #3, 3/32
- 2001 DEPLOYMENT STRAP

SPIKE-DEVIL SECTIONS

- 2501 SPIKE-DEVIL SECTION
- 1007 BASE BOTTOM SECTION OF SPIKE-DEVIL
- 1008 STRIP TOP SECTION OF SPIKE DEVIL
- 1401 SCREW, 5/8" #10
- 1402 WASHER FOR 1401 SCREW, 5/8"
- 1405 WASHER, BLACK SHOCK ABSORBER

CARTRIDGE PARTS FOR SPIKE DEVIL

- 2100 PACK OF 8 REPLACEMENT CARTRIDGES
- 2101 ROLL PIN 1.5 INCH
- 2102 THORN FOR SPIKE CARTRIDGE
- 2103 .741 INCH CAP FOR SPIKE

TRAINING UNIT CARTRIDGES

- 2199 DUMMY SPIKE CARTRIDGE