

ipmba news

NEWSLETTER OF THE INTERNATIONAL POLICE MOUNTAIN BIKE ASSOCIATION

IPMBA: PROMOTING AND ADVOCATING EDUCATION AND ORGANIZATION FOR PUBLIC SAFETY BICYCLISTS.

VOL. 29, No. 1

THE YEAR WITHOUT AN IPMBA CONFERENCE

by Maureen Becker
Executive Director



In the 1974 animated Christmas TV special, *The Year without a Santa Claus*, Santa Claus wakes up with a cold sometime before Christmas. His doctor, who thinks nobody cares about him anymore, advises him to make some changes to his routine, so Santa decides to take a holiday instead of delivering gifts.

Mrs. Claus enlists the support of two elves named Jingle and Jangle, as

well as reindeer Vixen, to help convince him otherwise, and they set out to gather evidence that people still believe in Santa Claus. A boy named Iggy soon joins the campaign, as does Mother Nature, who tries to get her sons, Heat Miser and Cold Miser, to cooperate.

In early 2020, people began waking up with flu-like symptoms, not unlike Santa's. As the affliction began to spread, doctors, world health leaders, and governments advised them to make changes to their routines and to stay home instead of attending events such as concerts, fairs and festivals, sporting events, and conferences. They began enlisting support to convince people that these were desperate times, and, as such, called for desperate measures.

Despite hope for seasonal help from Mother Nature, neither Heat Miser nor Cold Miser would cooperate. Suddenly there was no March Madness, no NBA, no MLB, no NHL, and then, no Tour de France and no Olympics. And then there was no IPMBA Conference.

2020 marks the first time since 1991, even before IPMBA's founding in 1992 as a program of the League of American Bicyclists, that the premier training event for public safety cyclists will be cancelled. The grand plans for the 30th Annual IPMBA Conference in Dayton, Ohio, the hometown of Allan Howard, PCI #001T, one of IPMBA's founding members, have been called to a halt.

In *The Year without a Santa Claus*, Santa, touched by an outpouring of generosity and appreciation, decides to make his journey. Unfortunately, there will be no journey to Dayton in 2020 for the IPMBA Conference, and it will take an outpouring of generosity on the part of our members and friends to sustain the organization and enable us to continue to provide the training and resources you expect and deserve.

As the Christmas special ends, Mrs. Claus promises that somehow, "yearly, newly, faithfully and truly", Santa always comes. That will be true for IPMBA, too. It may be the year without an IPMBA Conference, but it will not be a year without IPMBA!

Good luck and good health!

FORWARD TO THE PAST

by David Cohen

Maryland National Capital Park Police Reserve Unit, Montgomery County Division

In March of 2019, I was asked to help survey the 22 patrol bikes in my department's inventory. I had only recently been given the responsibility of the maintaining the five bikes in the Ranger/Volunteer program, but the bike officer in charge realized that an extra set of eyes would be helpful.

As the bike officer and I were taking stock of the bikes, Bike 904 was placed on the stand. (In Park Police nomenclature, the bicycle's stock number corresponds to the last three digits of the bike's license number. In Montgomery County, bikes are required to be registered and display a license sticker). I couldn't believe what I was looking at: while on the one hand it was your typical, ubiquitous Trek Police Bike, on the other, it stood out. This particular bike was equipped with cantilever brakes, a seven-speed drivetrain, threaded headset and a rigid fork. By anyone's standards, this bike was

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I Tip My Hat to You ...



Ed.'s Note: In this issue of IPMBA News, current IPMBA President Wren Nealy welcomes guest columnist Allan Howard, who served as IPMBA's first President, from 1992-1997. A former Marine, Allan lives by the mantra of improvise, adapt, overcome...and evolve.

If I had a nickel for every occasion some old timer admonished me, "You guys have it easy nowadays", I could have retired ten years

earlier. Usually, I heard it when I was doing all the work on a call while my "seniors" were standing around shooting the breeze. I assumed it was because they were tired from having it hard all those years prior to my arrival. Early on, one of the things I promised myself was that I'd never let those words fall out of my mouth. For the record, I've kept my word.

This issue of *IPMBA News* is our Product Guide. Unlike in the early days, there are many more products available. These days, you need to know so much more if you're responsible for purchasing and/or using modern bikes and equipment for public safety work. Indeed, a bike isn't "just" a bike anymore. I'm proud that IPMBA and its members have been a driving force to get manufacturers to create and upgrade products for our very specific needs. These products can and have saved lives, both public servant and civilian. While we all like to be comfortable, remember this: the equipment we use is not for "comfort", it is for "safety". No one ever promised that you "comfortable", so consequently they won't pay for it. Always bear that in mind when writing a proposal.

It doesn't take a genius to know that being a public servant or working in the private security industry today is much harder than it was thirty years ago. Criminals are more ruthless, better armed and willing to trade their lives to accomplish their twisted goals; often without warning. Even riding the bike isn't as carefree as it once was. If you would have told me three decades ago that cyclists would be run over by drivers typing on mobile devices, I would have called you crazy. Yet here we are.

The key point I want to make is that the equipment we used thirty years ago is vastly different – and I daresay – inferior to what is available today. Had the founders of this organization listened to the naysayers whine "but we've never done it that way before", we wouldn't have IPMBA and probably wouldn't have public safety cycling as we know it. Quite literally, we exist because people went against the grain; they suggested, advocated and pushed for something that wasn't the norm. I remember other officers on my department laughing when we first rolled out on bicycles. Soon after, they were trying to join us because we

made a difference. We did things other officers couldn't do to respond to crime, and they wanted to be a part of that.

Having a history is important. At this point in our organizational life, we have a living history in that some of us from the very beginning are still around. I can't say whether that's an advantage or not because sometimes I feel like there may be resistance to change because that's not the way we "old-timers" did it. Tradition and established practice are fine, but much has changed in public safety cycling during the last thirty years and that's a good thing. Equipment, training methods, networking opportunities and the inclusion of all public/private safety cyclists are big improvements over where we were in 1991.

One thing I hope never changes is the duty of everyone in this organization to be open to new developments, no matter what they are, even if they seem to fly in the face of tradition and established standards. Every person I worked with during IPMBA's infancy had that openness. Instead of asking "Why?" we demanded to know, "Why not?" I think I can speak for all the founding IPMBA members when I challenge you, the members and leaders of this organization, to keep up that "Why not?" attitude, because without it, we will surely fade away.

Back in February, I had the opportunity to have dinner with the IPMBA Executive Director and Board when they were here in Dayton for their annual board meeting. When I think of all the issues they face while making our organization both relevant and solvent, I'm thoroughly impressed. They have to consider things on a daily basis the founders never even dreamed of. Truly, it is more difficult to keep something going than it is to start it.



Left to right: Craig Lepkowski, Brian Gillman, Mike Wear, Jason Bain, Wren Nealy, David Millican. Photo by Maureen Becker.

To IPMBA Members, Board and Executive Director, I tip my hat. You guys don't have it easy these days, but you're doing a great job!

Allan

Allan Howard, PCI #001
Dayton (OH) Police Department (Retired)



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PRODUCT GUIDE 2020

Welcome to the 18th Annual Product Guide! As the world grapples with COVID-19, we echo the sentiment of Trek Bicycle Corporation's John Burke: "We've been saying for a long time that the bicycle is a simple solution to complex problems. This is a complex problem, this is a global pandemic and the bicycle isn't going to solve all of it. But in its own small way..." Similarly, IPMBA has always viewed the bicycle as a simple solution to the problems that public safety personnel are called upon daily to resolve. To help you address these problems effectively, our industry partners offer a wide array of products, services, and technologies. This issue of *IPMBA News* highlights some of these products, shares experiences from two CABDA Expos, and includes a special report on e-Bikes, arguably the greatest technological leap within the cycling industry in years. As you read through these articles and reviews, remember the directive issued by the Bowdoin College Security Department: "Bike patrol is very strongly encouraged whenever possible. You stay healthy in the open air – and it is easier to sanitize handlebars than an entire vehicle interior." Read on! *Pages 5 - 33*.

CABDA Midwest Expo: At Home in Chicagoland

by Craig Lepkowski, PCI #1180-B/EMSCI #272-B
Lake Forest (IL) Police Department
IPMBA Secretary

On February 12-13, 2020, I attended the CABDA Midwest Expo in Schaumburg, Illinois. The Chicagoland Area Bicycle Dealers Association (CABDA) re-launched its trade shows in 2014, and has since expanded beyond Chicagoland to two additional locations. The first of 2020 was held in January on the west coast (near San Diego); then it traveled east to Chicago-Schaumburg for the Midwest show before finishing on the east coast in Secaucus, New Jersey (Metro New York). The CABDA Expos are open to bicycle retailers and other invited industry participants. They feature seminars, clinics, and product displays from manufacturers, service companies, distributors, and sales groups.

With over 200 exhibitors, the event is a cyclist's dream. The exhibitors run the gamut from large distributors and companies like **Midway Bicycle Supply** and **Kryptonite** to family-owned shops like IPMBA Corporate Members **ISM Saddles** and **C3Sports (Police Bike Store)**. Even though I attended both days, it was impossible to stop into every booth. I was on a mission to strengthen connections with current vendors and establish relationships with businesses of

potential interest to public safety cyclists. I skipped all the e-Bike booths for two reasons: first, because many are not geared specifically for public safety use, and second, because I deferred to Clint Sandusky, IPMBA member and e-Bike expert, to make the appropriate introductions at CABDA West.

visiting with the following vendors. I tried to entice them to exhibit at our next conference, donate items for the silent auction, participate in the Product Purchase Program, and/or provide an item for a evaluation and subsequent review in the *IPMBA News*.



I did, however, renew my acquaintance with vendors I had met with at CABDA Midwest 2019, the majority of whom were unable to attend the conference in Fort Worth due to previous commitments elsewhere. I also managed to meet with some first-time CABDA attendees. I had the pleasure of

Serfas

Serfas offers a collection of headlights and taillights, along with helmets and bells, bags and other miscellaneous items that could be used on- or off-duty. As Clint alludes to in his article, they already produce a public safety

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(Continued from page 5)
light and there may be some innovations on the way.

Sena Helmets

Channel Manager Mark Ebner spoke with me about their smart helmets equipped with Bluetooth technology. The helmets’ built-in earpieces currently sync with smart phones, and I recommended he explore the possibility of syncing to Bluetooth-enabled two-way radios. My department has radios that connect to a Bluetooth microphone, which eliminates the mic cord, so I explained I didn’t think it would be too difficult to use their technology to enable bike patrol to utilize their helmets and hear radio traffic better.

Arrowwhere

I reconnected with Kayleigh Pinkman, president of the high visibility safety clothing company, and explained the importance of and requirements for reflectivity and retro-reflectivity for different branches of public safety. He had a good variety of highly reflective vests and jackets that seem like they would work especially well for EMS cyclists.

Sportlegs

Carl Holmes, the Chief Executive, explained that their sports supplements contain only FDA “generally accepted as safe” natural ingredients and are completely legal for use in professional sports. The

main ingredient is lactate, which, he explained, is “the muscles’ preferred natural fuel.” Taken before a shift of full-time riding, the supplement should prime your muscles to make less lactic acid and thus reduce muscle burn.

Tasco

The owner of the company, Nate Miller, was excited about IPMBA in 2019, when we discussed his custom gloves, and still excited this year. Last year, I bought a pair of full-fingered gloves with a subdued Stars and Stripes pattern and still enjoy wearing them. We discussed a design incorporating the thin blue, red, yellow line for public safety use, or possibly an IPMBA design in the future.

Hammer Nutrition

While Hammer markets a number of supplements, energy drinks and gels, they were specifically highlighting their CBD-infused products, which they claim improve sleep quality and reduce aches and soreness. When I explained that public safety personnel are a little leery about CBD products, they assured me there should be no problems with employee drug testing.

GU

Another energy and recovery company, GU had all kinds of samples for participants. The sales manager, Jon Parker, was open to

joining forces with IPMBA again with support for the conference attendees.

Nuun

As a user of Nuun, I stopped by to tell Craig Etheridge how much I liked their products. He introduced me to Steve Anderson, National Sales Manager. I explained the ins and outs of IPMBA and our non-profit status as a public safety training association. He seemed very interested in being a part of the Product Purchase Program and exploring other avenues to support our mission.

Muc-Off

A clean bike is a happy bike, so I stopped by the booth to learn about the various cleaning solutions Muc-Off has to offer. They offer everything from a pressure washer to liquid washes and from concentrates to biodegradable drivetrain cleaners and brushes.

Bike Rags

Tony Burnett was very open to the idea of joining the Product Purchase Program as well and in fact enrolled within a week or two of the show. His company does custom screen printing and is hoping to help fulfill our penchant for camaraderie and our love of t-shirts.

Untapped

This was one of the more innovative vendors I encountered. They use organic maple syrup as an all-natural source of sports nutrition. They had various flavored syrups and waffles to sample, and the visitors at the booth all seemed to have a favorable impression of the offerings.

Goodr

An eccentric company with pink flamingos on almost everything but their sunglasses, Goodr’s mission statement says it all: “We are recklessly committed to fun...BLAH, BLAH, BLAH sunglasses.” Lightweight and with a variety of designs, the inexpensive glasses would be attractive to a lot of public safety personnel. With fun model names like “Irish for the Day”, “Beelzebub’s Bourbon Burpees”, and

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At Home in Chicagoland

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"I Wanna Sax You Up", their glasses are designed to be "no slip, no bounce, all polarized, and all fun". I'd love to see their booth brighten up the vendor hall at our conferences!

Delta

Kaleigh Durkin was one of the very few vendors who contacted me after the show before I had even sent out a follow-up email to all the companies I visited. Delta provides a mix of bike accessories, storage solutions, and spare parts. I bought a stem extender from her booth and can't wait to try it out. She's interested in developing a relationship with IPMBA and hopefully will find a way to connect with our membership after things return to normal.

HGNER

I met with Maria Schur, who explained that the donation of lube samples for the 2019 conference was cost prohibitive for her company and she was unable to do it again this year. She did say the company was willing to assist with providing a raffle prize or auction item and a membership deal of buy one, get one on trial-sized chain lubes.

Planet Bike

Jereme Noffke from sales and marketing had many bike accessories at the booth, including lights, fenders, bags, pumps, and gloves. I mentioned how welcome they would be as a conference vendor booth.

Silca

This is another bike accessory company that I approached. Michelle

(Lillie) Shugars was interested in learning more about the options to connect with IPMBA and hopefully will respond to the email I sent after the event.

Kuat Racks

I explained to Craig Metcalf that public safety departments are in need of heavy duty bike racks to accommodate the growth in popularity of e-Bikes as well as racks that can withstand pursuit driving. We're hoping to arrange a demo and product review.

Creative Magnets and Hats

Bruce Johnson was one of the more eccentric people I met at CABDA. His passion for customized magnets was palpable and I tried both days to convince him he'd be a hit at our conference. I envision custom car magnets for departments to build rapport with the public, an IPMBA custom car magnet to go along with our other swag, and whatever other ideas members devise.

Camelbak

Jeremy Hancock at Camelbak was interested in connecting with IPMBA with respect to their newly introduced mugs and bottles. Some models can be engraved with logos or messages and some offer cold/hot technology for various liquids. They also continue to produce hydration packs for more active cyclists.

Skratch

I reconnected with Annie Dwyer from Skratch Labs this year as well. They make sports hydration mixes and energy chews. This year she

committed to providing an auction item or two and plans to enroll in the Product Purchase Program as well.

Light and Motion

Another contact I made in 2019 and saw again this year was Adrienne Fells from Light and Motion. They have a great selection of bike lights and are actively promoting their motion-activated taillights.

All-in-all, the CABDA Midwest event was a great time to peruse the new wares on the market, check out innovative products, meet with established contacts, and make new connections. Hopefully, the vendors with whom I spoke will understand the benefits they realize from having a relationship with our association and members. The best way to demonstrate these benefits is for our members to actively contact these companies to request demo units and purchase their wares. Be sure to tell them that IPMBA sent you!

Craig has enjoyed riding at his department for many years and was honored to assist with the development of the department's bike unit. Impressed with the IPMBA Course he attended in 2009, he attended the Instructor Course in 2010 and has enjoyed teaching bike skills ever since. Never one to say "no", Craig was elected to the IPMBA Board in 2013 and is currently serving as Secretary. He can be reached at lepkowsc@cityoflakeforest.com.

Photos by Craig Lepkowski.

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CABDA West Expo: Back for 2020

by Clint Sandusky, former PCI #849/EMSCI #159
Riverside (CA) Community College District Police Dept. (ret.)

For those of you that still don't know what "CABDA" is, it is the *Chicagoland Area Bike Dealers Association*. So what are they doing out west in SoCal? With the demise of the long-running and nationwide *Interbike*, CABDA and other promoters have picked up the slack!

Advertised as "North America's Fastest-Growing Bicycle Show," CABDA's 2020 plans included expos near San Diego (CABDA West), Chicagoland (CABDA Midwest), New York Metro (CABDA East), and an Industry Summit at the Walt Disney World Resort in Florida. Despite the looming shadow of COVID-19, all three expos went on as scheduled and were deemed a success.

These smaller and regional bicycle retailer trade shows provide a much more intimate, relaxing environment, with a focus on relationship building. But don't let that fool you! As noted on CABDA West's webpage: "For our second year at the Del Mar Racetrack near San Diego, we've expanded our floorplan by nearly 100%. We've added more food and lodging options, three brand new breakout areas for tech and sales seminars, and terrific indoor and outdoor demo tracks." And once again, the parking was free!

Keynote Speaker James Stanfill of *Professional Bicycle Mechanics Association (PBMA)* addressed the challenges and opportunities of "Making Money in a New Decade." I was honored to be seated at the same breakfast table as a couple from Minnesota who know one of IPMBA's legends, Kirby Beck!

Cycling history buffs in attendance particularly enjoyed the mobile Museum of Cycling, which featured very cool memorabilia from former American Cycling Pro and Legend Greg LeMond.



Greg LeMond memorabilia in the mobile Museum of Cycling

Of particular interest to public safety cyclists are the forthcoming revisions to emergency light and siren systems produced by *NiteRider* and *Serfas*. Jeff Buyer of *Haro Bikes* told me they are investigating the possibilities of producing a POLICE e-Bike model, adding to their current conventional public safety bicycle. *Muc-Off* (a British company) now has a U.S. presence and offers an exciting line of bicycle cleaners, lubricants, and other products – including ones specifically formulated for e-Bikes! Other booths of interest were *Defeat Socks*, who indicated interest in IPMBA's Product Purchase Program, and *Hollywood Racks*, which offers a rack that can hold two 80-pound e-Bikes – or heavier conventional bikes, such as sturdy, fully-equipped public safety models.



Muc-Off Booth

Speaking of e-Bikes, they were everywhere! Even IPMBA's old friend, Hans "No Way" Rey, whom I saw at the show, is now an e-Bike ambassador.



Clint & Hans "No Way" Rey

My two seminars entitled "Selling e-Bikes to Law Enforcement - Understanding their Unique Needs" were well-attended and appreciated by attendees from all parts

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CABDA West Expo: Back for 2020

(Continued from page 9)

of the industry (retailers, manufacturers, patrol bike companies, and law enforcement officers, both active and retired). Some were from as far away as NYC and Washington State. I would like to thank *BULLS Bikes USA*, for letting me borrow one of their POLICE “Sentinel” models for my presentations. Of course, I had my personally owned 2018 Trek “Police Electric” model there as well. It was fun, an honor, and a blessing to be selected to present.

I would personally like to thank **Maureen Becker** for giving me the opportunity to attend the expo and in connecting me up for presenting at it as well!

Overall, I again very much enjoyed this smaller expo compared to the expanse, expense, and time commitment of past Interbike shows. But don’t just take my word for it. Below are links to two articles about CABDA West, published in the *Bicycle Retailer and Industry News (BRAIN)*. I would recommend these expos to anyone!

“CABDA West opens with education day, big growth in brands and registered retailers”:

<https://www.bicycleretailer.com/industry-news/2020/01/14/cabda-west-opens-education-day-big-growth-brands-and-registered-retailers#.XiIxzG5FxpY>

“What brings you to CABDA West?”

<https://www.bicycleretailer.com/retail-news/2020/01/16/what-brings-you-cabda-west#.XiIxC25FxpY>

For more information on upcoming CABDA EXPOS, visit www.cabda.com.

These smaller and regional bicycle retailer trade shows provide a much more intimate, relaxing environment, with a focus on relationship building.

Clint retired in 2016 after a 24-year law enforcement career with the Los Angeles County Sheriff’s Office and the Riverside Community College District Police Department. He has been an active California POST Bike Patrol Instructor since 1994. Clint joined IPMBA in 1994, completed the Advanced Police Cyclist Course in 2000 and the IPMBA Instructor Course in 2005. He taught at the 2006, 2007, 2018, and 2019 IPMBA Conferences. He is currently a member of IPMBA’s E-Bike Task Force and presents about e-Bikes at various conferences. He can be reached at clint.sandusky@gmail.com.

Photos courtesy Clint Sandusky.



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Bontrager: Headstrong and Sure-Footed

by Austen Schlecht
Castle Rock (CO) Police Department

Police cyclists ride at all hours of the day or night and in any and all weather conditions. It is important that we have strong head protection and are sure of foot. Over the last several months, I have tested several products from Bontrager: their Quantum MIPS Helmet, Chaussure Shoe, and Pro Line Pedal. Let's work our way from head to toe.

Quantum Helmet



The Quantum helmet is a lightweight, comfortable, MIPS (Multi-directional Impact Protection System)-equipped helmet. It is well-ventilated, fully adjustable with a twist ratchet system, and has several retro-reflective stickers on the back to help you be seen by motorists approaching from the rear. The visor is adequate at keeping the sun and headlights out of your eyes; however, I did not find it easy to remove if desired.

My two favorite features of the helmet were the reflective stickers and the size adjustability. As officers tend to coif* their hair high and tight, I found the helmet would accommodate either a protective sun cap or thermal beanie underneath, both of which I used. My least favorite feature of the helmet was it seemed to be shaped for a narrower head. Despite having a shaved head and the adjustable ratchet system, the helmet still felt snug; even snugger with each additional layer.

**There are several ways to spell this French-derived word related to hair styles. Coincidentally, it is also a mountain biking term. Per the Urban Dictionary: While riding a trail, mostly up a steep incline, a rider decides not to maintain their speed, but rather allow their momentum to barely carry them over the apex, forcing the person following to either stop, eat their back tire, or in extreme cases, fly over their bars like superman.*

Chaussure Shoe



Immediately upon opening the shoe box and peeling the tissue paper back, I was greeted by matte black riding shoes with red accents and bright red laces. The shoes have a very rigid and rugged sole that pairs wonderfully with the accompanying Bontrager Pro Line Pedals.

The sole is "sticky" enough to absorb the pedal spikes yet was also comfortable for walking. However, they seemed to run small. The tag denotes a US 12; however, to me, they felt nearly a full size smaller.

The shoes are great for cool to cold weather, but conversely, they tended to feel quite warm in the heat. They kept my feet dry and warm through several thunderstorms.

What I like the most about these shoes is that the sole is hardy enough to endure the constant poking and prodding of pedal spikes but suffer little to no visible effects. My least favorite features are how hot they are for summer riding and the bright red laces/accents. The laces were a quick fix, but the accents were more suited for fire departments and/or EMS.

Pro Line Pedals



I picked up the Pro Line Pedals out of the delivery box and immediately realized I was dealing with a high quality product. There was a substantial heft to the package both pedals were packaged together – obviously.

The platform spikes not only caught my attention, they caught the soft pad of my

fingertips. I was intrigued. I installed the pedals as easily as any OEM pedal and took them for a spin. From the first pedal stroke they spoke to me with authority – I was sure-footed. It felt as though the pedals were pulling my foot down onto the pedal rather than me pushing down. No matter how I twisted my foot or changed the angle at which my foot contacted the pedal, I felt efficient power delivery throughout the pedal stroke. The platform spikes felt equally effective in the rain and snow as they did in the dry and hot weather.

My favorite feature of these pedals is the platform spikes. They give me such an incredibly sure-footed feeling – as long as I have a single atom of contact between my shoe and the pedal, I know I will be able to deliver power.

My least favorite feature of these pedals is the platform spikes (wait, what??). In full disclosure (and cops do not like to admit when they are in error) the problem I had with the pedals was user error. I foolishly made the mistake of lightly brushing the back of my leg against the pedal, and it left its mark like a cheese grater on Tillamook cheddar.

On a second occasion – and this one was nearly a religious experience – I exercised the freewheel of the rear cassette and spun the pedals backward to reposition my feet. What I failed to do was get my foot in the proper position to catch the approaching pedal. As a result, the platform spikes found purchase in my shin. All I can say is that these pedals offer exceptional grip – even on loose flesh and blood-covered surfaces!

Overall I really like the quality and effectiveness of the Bontrager equipment: the Quantum helmet is lightweight and reflective, the Chaussure shoes are durable and warm, and the Pro Line pedals provide the best grip I have ever felt from pedals – I'll probably buy a pair for my commuter bike (as well as shin guards). Enjoy the ride!

Austen is a member of the Castle Rock Police Department Community Partnership Unit. In his role, Austen has developed several free-to-the-community outreach programs, including Dirt Jumps and Donuts, Splashmob, and Adaptability Cycling – an adaptive cycling program for special needs adults. He not only rides year-round for work, but commutes by bike year-round as well. Lately Austen has taken a keen interest in treating shin/calf abrasions. He can be reached at aschlecht@crgov.com.

Photos courtesy Austen Schlecht.

by David Cohen
Maryland National Capital Park Police Reserve Unit

In the Gears & Gadgets column that appeared in *IPMBA News*, Volume 28, Number 3, the 2019 Board Issue, I discussed daytime running lights (DLRs) as both a tool for public safety cyclists and essential safety gear when riding off duty. The DRLs that I used as the basis for the column were the Bontrager Ion (front) and Flare (rear) RT bike light set.

The Bontrager lights can be purchased individually, but it is more cost-effective to purchase them as a set. The retail price for the set is \$114.99. That is a fairly steep price, especially when compared to some of the DRL offerings found online. However, the quality of the construction, in combination with reliability and effectiveness under all conditions, certainly justify the price.

The Ion/Flare come packaged together with a single micro USB cable to charge the lights. This is a slight inconvenience, as the lights can only be charged one at a time and the lack of an adapter for a wall outlet limits your charging options to being at or near a computer. It's more of a nuisance than a genuine hindrance, particularly since most of us have a few spare cables and adaptors lying around, but a cable that would enable both lights to be charged simultaneously would be a welcome feature, as would a wall adapter.

Battery life is monitored by a smaller LED in the unit. Anything above a 75% charge will give a green flash, at 25–75%, the LED flashes red, and below 25%, the LED becomes solid red. When the battery falls below 5%, the light goes to a low power mode, producing a minimum amount of light for about 30 minutes. Charging time is approximately two hours per light to full charge. The lights will give you 500 cycles to full charge before battery life begins to shorten, but with the run times available, these lights will likely last years before battery operation becomes unsatisfactory.

Mounting the Ion and Flare to the bicycle or a helmet is simple enough. They have a pretty typical rubber “watchband” mount, with a hook to secure it. The mounting band is large enough to fit easily around handlebars, seat posts, head tubes, and even the reflector mount on some models of rear panniers. Optional hardware is available to mount the Flare in the location for the rear reflector on racks and panniers, too. Regardless of the location, the lights are small enough that they cause little obtrusiveness into the bicycle’s normal operations.



Bontrager Ion Front Daytime Running Light

The Ion/Flare each have a quick release feature that enables you to remove the light while the mount remains on the bicycle. The quick-release is the typical friction-type mount that employs a plastic tab to hold the light in place. It is very easy to use, but upon reinstallation, it is essential to make sure the plastic tab is fully engaged. Much to my chagrin – and that of my wallet – I learned that lesson when I glanced down during a ride, only to discover that my Ion had disengaged from its mount.

Once on the bike, the Ion/Flare provide a dazzling array of lighting options. Up front, the Ion has high/medium/low steady, day flash and

Bontrager Ion / Flare

night flash options; while in the rear, the Flare offers day/night steady, day/night flash, and a setting called “all-day flash”. Both lights have automatic settings that choose the proper lighting as determined by their onboard sensors. They can also be controlled by a transmitter remote as well as by some Garmin and Bontrager GPS/computer models. For people like me, who still embrace certain old-school technology, there is a manual mode that lets you choose specific settings. Switching between settings is simply a matter of pressing

the button on the unit until you reach the desired one. The Ion/Flare will also remember the last setting when you power it up, so there’s no need to cycle through all the different settings to get to the one that you want.

For almost all my riding, I use the day flash setting. The Ion’s day flash produces a 100-lumen flash, with an amazing 12-hour run-time at that setting. Facing the rear, the Flare’s day flash setting produces a 90-lumen flash with a six-hour run time. The “all-day flash” cuts the lumen output to 45, but increases the battery run-time to match the Ion’s 12 hours.

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200 Daytime Running Lights

(Continued from page 12)

Such bright flash settings would be blinding to drivers at night, so the night settings considerably reduce the flash to only a mere five lumens for both the Ion and Flare. The run-times at the night flash settings are 30 hours and 15 hours, for front and rear, respectively. The point of these settings is simply to get drivers to notice you, not for you to be able to navigate. The Ion's high/medium/low steady settings produce light outputs of 200/100/5 lumens, with resulting run times of 1.5/3/30 hours. I would not consider these to be sufficient for any kind of night cycling and would only consider them as a backup source.

The Flare has only a high/low rear steady of 25 and 5 lumens, with run-times of 4.5 and 13.5 hours. Personally, I almost always prefer a flash to a steady light under just about any circumstance, but the option is available for those with other preferences.

While the lumen output is the typical measurement used for lighting, beam pattern and focus are probably the more important aspects of an effective light. This is where the Bontrager



Bontrager Flare Rear Daytime Running Light

units really shine (pun intended). The design of the reflective material in the LED housing, combined with the lens over the lights, yields a very effective lighting pattern visible at almost breathtaking distances. Trek claims the lights can be seen up two kilometers away (about 1.25 miles), and my real-world observations seem to confirm that, having detected these lights at distances of greater than a

mile. For more information about the efficacy of DRLs, refer to the above-mentioned "Gears & Gadgets" column.

Being able to provide adequate lighting at distance doesn't mean anything unless the lights operate reliably. The Bontrager Flare/Ion combination has proven to be exceptionally rugged and reliable in virtually any conditions.

Temperature seems to have little effect on battery life, whether riding in

90+ degrees or all the way down to sub-freezing temperatures. The lights work reliably in wet conditions ranging from drizzle to a full-on cloudburst. Even vibration from riding in off-pavement conditions doesn't faze these units. Bottom line is, as long as the battery has a charge, these lights are going to work, no matter what conditions you find yourself in, period.

There is no doubt that I am a huge fan of daytime running lights. I consider them to be as essential as a helmet and gloves for safe riding. Like any safety gear, they need to be of high-quality construction, durable, and reliable to be effective. Despite the minor nuisances with regards to the charging procedure, the performance and reliability of the Bontrager Ion/Flare 200 combo more than make up for those shortcomings.

David is a 12 year volunteer with the Maryland National Capital Park Police. When he isn't riding or tinkering with bicycles, David can be found tinkering with vintage cars or World War II airplanes. An avid historian, David enjoys researching and writing as well. He can be reached at onyx@sax@aol.com.

Photos courtesy David Cohen.



DRLs and the regular rear light

Aardvaark Ankle Biters Reflective Leg Bands

By Kirby Beck, PCI #002T
Coon Rapids (MN) Police Department (ret.)

I've always believed that police bike patrol is the most effective at night. Bike cops are the "submariners" of the police world, with stealth and surprise being their biggest tactical advantage. However, percentage-wise, more bicycle-motor vehicle crashes involving death and injuries happen during the night than during the day. Because there are fewer cyclists at night, motorists have a lower expectation for cyclists to be out on the roadways, and the percentage of impaired and distracted drivers tends to be higher. These factors, among others, require cyclists to make themselves more visible and conspicuous to other road users.

Traffic safety researchers discovered decades ago that pedal reflectors are the most effective bicycle-mounted reflectors with respect to helping overtaking drivers detect and identify cyclists. This, in turn, helps drivers respond to the cyclist safely. The distinct, bi-lateral, up-and-down motion of the pedals and cranks, when illuminated by headlights, says "BICYCLIST" to a driver faster than any other reflector or taillight.

The combination of retro-reflection, bi-lateral motion and the low position on the bike all work to a cyclist's advantage. Since low beam headlights are ideally aimed slightly below the horizon, and slightly toward the fog line (the solid white line marking the road's edge), reflectors mounted lower on a bicycle or cyclist will be seen earlier and appear brighter than those mounted or worn higher.



The US Consumer Product Safety Commission (CPSC) has long required bicycle manufacturers and retailers to install certain reflectors on new bikes sold. Among these are pedals reflectors. Many current pedals are not conducive to mounting effective reflectors, so bikes are often sold without pedals to overcome the CPSC requirement. So-called "clipless" pedal systems like SPD, Crank Brothers Eggbeaters and others, often have no room to mount reflectors. Neither do many of the high-quality flat pedals which have been gaining in popularity. Even "conventional" pedals, on which toe clips or cages are often installed, may not have effective pedal reflectors because they often break off. That is especially true when used in public safety work and training.

Some cycling shoes feature reflective material, but most I've seen have so little reflective material that it is functionally ineffective.

Years ago I discovered these wonderful little items – Aardvaark Ankle Biter Leg Bands – in a local bike shop. I was looking for a simple product to supplement the reflectors on my pedals and shoes for night riding. While they were actually designed to secure pants legs to keep them out of the chain, their reflective qualities are excellent. The straps are 13 inches long and one inch wide. They are made of light weight but very durable nylon. They secure to your leg or ankle with Velcro® hook and loop fasteners. Roughly half of the width of the strap is bonded with high quality, yet thin and flexible, 3M Scotchlite™ reflective material. For those who may not know, 3M is THE leader in reflective material technology. This stuff is the best!

I found that I could secure them over my socks at the ankle, just above my shoes. The reflective portion of the material wraps nearly ¾ of the way around my ankle, providing multi-directional effectiveness. I usually rotate them so the gap in Scotchlite™ material faces the bike frame, where it won't matter. They are so lightweight and flexible that, when worn over the socks, you forget they are there. In terms of cycling safety, their effectiveness at increasing visibility in a driver's headlights can't be overstated.

My "Ankle Biters" are black with silver Scotchlite™ material. Depending on the



color of your socks, they may blend in and appear to be part of the socks. They certainly don't look unprofessional, especially considering the other gear public safety cyclists wear. They also come in yellow, red and blue for the more fashion conscious.

I realize that some police officers are uncomfortable with retro-reflective material on their uniform in certain tactical situations. Another advantage of these is they can be quickly and easily removed and stowed in a pocket or rack bag, if so desired.

A quick online search found them available at several sources. They are sold separately and average around \$5 per leg band. It appears some vendors sell them in cards of 25. You can supply your whole bike team! Perhaps some of our IPMBA vendors might even find it convenient to carry them, should the demand for them arise.

If you are looking for a simple, inexpensive and effective way to enhance your nighttime bike patrol safety, wrapping a couple of these Aardvaark Ankle Biter Leg Bands around your ankles can do just that. Stay Safe.

Kirby retired after 28 years with Coon Rapids Police Department. He has 14 years of police bike patrol experience. He has taught bicycle safety and traffic cycling to children and adults for more than 25 years. As a training consultant, he co-taught the Bicycle Safety and Accommodation Course for the National Highway Institute, sponsored by NHTSA and FHWA. A founding member and past President of IPMBA, he was co-creator of the IPMBA Police Cyclist Course and Instructor Course. He contributed to both the Complete Guide to Police Cycling and the Complete Guide to Public Safety Cycling. He can be reached at kirbyp42@aol.com.

Photos courtesy Kirby Beck.

RexONE Rapid Extraction Device: Simple and Practical

by Steven Ray, *EMSCI # 349B*
Fort Bend County (TX) EMS

Fort Bend County EMS is located in the Southwest region of the Greater Houston area and provides patient care for approximately 886 square miles. Daily operations are carried out by three Battalion Chiefs, 16 dual Paramedic Mobile Intensive Care Units, and three single Paramedic Squad Units. Responses were a little more than 30,000 calls in 2019. Fort Bend County is unique because not only is it the most diverse county in the nation, it is also one of the fastest growing counties, with a population of nearly one million.

A certain percentage of our response is to rural areas such as farmland and river beds, as well as to congested pathways during events, so we are always looking for innovative specialty equipment to make access for temporary transport platforms feasible.

You could purchase an EMS-specific UTV (utility task vehicle, also known as a side-by-side), but then you have to add maintenance fees, specialty training, and a means of transporting such a piece of equipment in an emergency. Maybe you could even think about purchasing a wheeled Stokes basket (transport litter), but then you would have to store it in your response vehicle... and we all know those have an abundant amount of extra free space, right?

I had the pleasure of communicating with Linda Morin of Rex EMS, makers of the RexOne Rapid Extraction device, after seeing it on display during the 2019 IPMBA Conference. She kindly afforded Fort Bend County EMS the opportunity to field trial the system, just as the date of our county parade and rodeo was approaching.

It was a perfect time to field trial such a unique

piece of equipment as the parade route is roughly 4.5 miles in length and stretches through two cities, and the rodeo operates over a two-week period.

I was concerned about the size of the RexONE system as it is the length of a full-size EMS stretcher once it is assembled. To my surprise, the entire system, including the bicycle frame attachment, came in a back-pack style carrying case approximately the size of a large square duffel bag.

Any individual who operates an EMS stretcher would have no issues deploying the RexONE in a timely manner. The system deployed without instructions within seconds. There are foolproof, color-coded labels where the tire fenders attach and where the wheels attach to both sides of the frame. If you are utilizing the system without a bicycle, the handle adjusts to the height of the rescuer. If you plan to attach it to a bicycle, there is a simple quick-release pin that attaches the bicycle mount.

When a patient is loaded, the location of the wheels places perfect counter balance to keep the weight of the gear or patient more on the system itself rather than on the cyclist or to the rescuer handling it.

The danger is that the entire RexONE system is so light that you forget it is even behind you. It also rides so low that inattentive pedestrians, particularly in crowds, could easily trip over it.

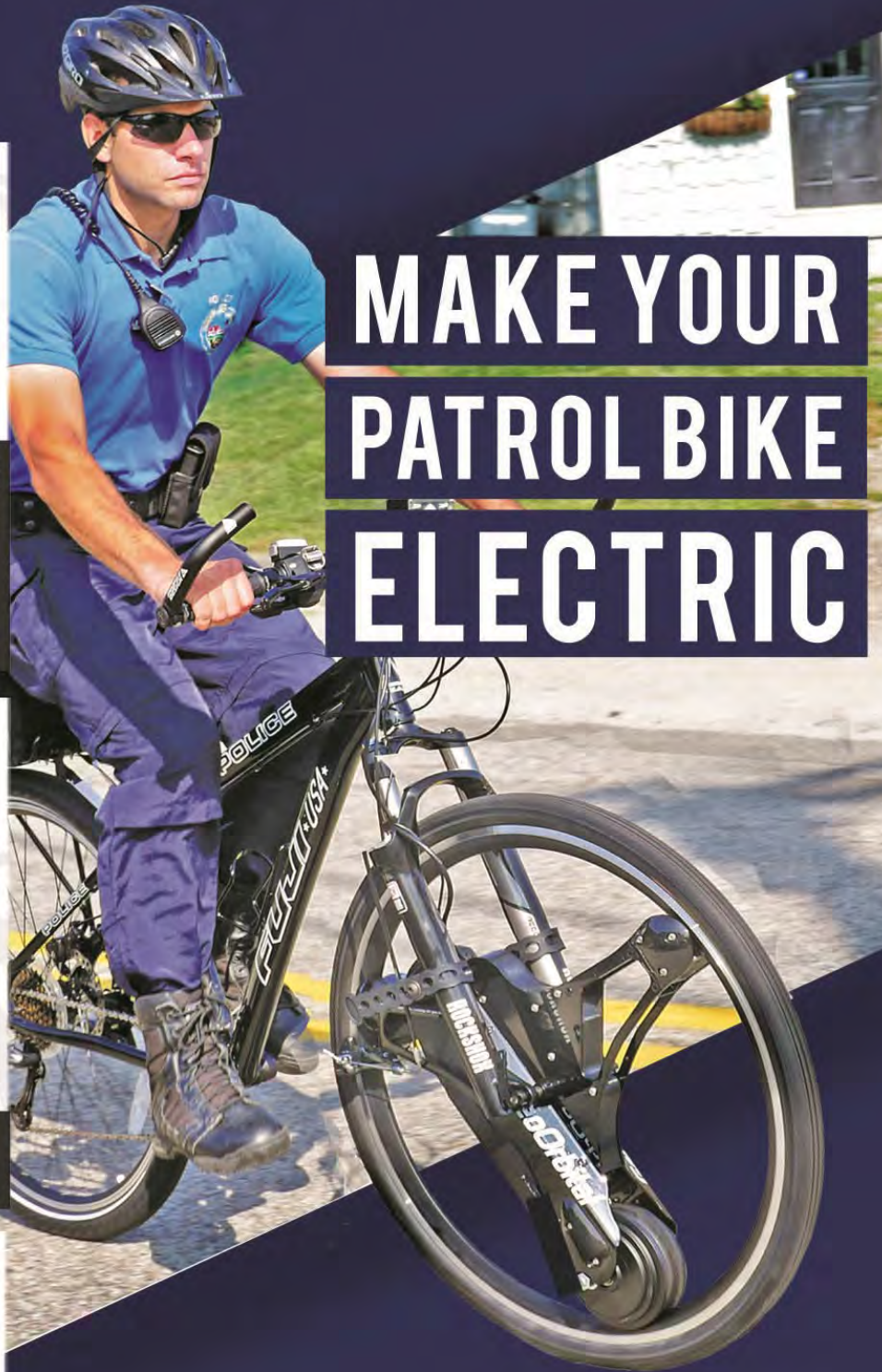
The RexONE does have some room for improvement. For instance, I would add a little bit of padding on top of the frame for patient comfort and place reflective striping and/or active lighting to the rear to use as daytime running lights and in low light environments. I'm going to add that to my project list.

Overall, the RexONE receives "two thumbs up" from both me and my agency for its simplicity and feasibility. The system does everything our agency asked for and will make event operations easier than ever. If you currently have a bike unit and are looking for a bike-mounted piece of equipment to make patient transport simple, this is the resource to have!

Steven began his fire/EMS career in 2006, when he joined Klein Fire Department as a firefighter. In 2008 he became a member of Cypress Creek EMS in Spring, Texas. While serving on their bike team, he attended the IPMBA EMS Cyclist Course, the Bicycle Response Team Training, the Instructor Course, and the BRT Instructor Seminar. He attended the Maintenance Officer Course at the 2016 IPMBA Conference in Asheville, North Carolina, and taught at the 2018 and 2019 IPMBA Conferences. Steven transferred to Fort Bend County EMS as a Paramedic. He serves as Assistant Team Leader of their Bike Unit and as a Paramedic on the Tactical Team. Steven has been an IPMBA member since 2011 and an instructor since 2012.

Photo courtesy Fort Bend County EMS.





BUILT FOR PATROL

The GeoOrbital electric wheel is the most universal way to add eBike power to your **existing** bike fleet providing safer, faster response times and expanded patrol zones.

"GEOORBITAL HAS MOVED OUR BIKE PROGRAM TO NEW HEIGHTS EXPANDING OUR OFFICERS' ABILITIES TO REACH CALLS FASTER AND CONSERVE ENERGY TO DEAL WITH THOSE EVENTS WHEN THEY ARRIVE"

CHIEF DOUGLAS P. BRACY | YORK, MAINE POLICE DEPARTMENT

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EMAIL: JEFF@GEOO.COM

FINANCING AVAILABLE

IPMBA Product Purchase Program



The IPMBA Product Purchase Program is going strong. As the retail environment continues to evolve, online shopping has made it increasingly easier to take advantage of the discounts offered by the below-listed companies. Many of them now offer a coupon code entered at checkout that automatically applies the discount. We know you have many choices when you shop, but we urge you to support those who support you. **Visit <http://ipmba.org/product-purchase-program> and start shopping today!**

Bicycles —

IFORCE PATROL BICYCLES

Product: iFORCE Patrol Bicycles and Accessories
Discount/Cost to Members: Contact for special pricing.
Contact Name: Skip Jones
Contact Info: 724-431-2335/sjones@ibistek.com
Website: www.iforcebikes.com

BLIMP CITY BIKE AND HIKE

Product: Kona Shield Multi-Purpose Safety & Security Bikes, Accessories, Repairs, Electric Assist
Discount/Cost to Members: Minimum 10% off MSRP
Contact Name: Michael J. Purdy
Contact Info: 330-836-6600/
info@blimpacitybikeandhike.com
Website: www.blimpacitybikeandhike.com

ENABLED ENTERPRISES LLC

Product: Electric Police Patrol Bike
Discount/Cost to Members: 20% off MSRP
Contact Name: Bill Eichengreen
Contact Info: 847-656-8100/bill@enabled.vet
Website: www.enabled.vet

STRIDER SPORTS INTERNATIONAL

Product: Balance Bikes and Accessories
Discount/Cost to Members: 24-53% off MSRP
Contact Name: Customer Service (Ann or Jennifer)
Contact Info: 605-342-0266/ann@striderbikes.com
Website: www.striderbikes.com
Notes: Available in four sizes (12, 14x, 16, and 20"). To order, email info@striderbikes.com for an order form. Mention your IPMBA number in the email.

Bicycle Accessories and Components —

ISM SADDLES, LLC

Product: ISM Bicycle Saddles
Discount/Cost to Members: 50% off Retail + Free Shipping in the US
Contact Name: Laura Toll
Contact Info: 813-909-1441/orders@ismseat.com
Website: www.ismseat.com
Notes: Click on PRODUCTS, choose your saddle, enter discount code FIRSTRESPONDER at checkout.

VOLCANIC BICYCLES

Product: Bicycles and Accessories
Discount/Cost to Members: 20% off MSRP on accessories, replacement parts, and tools
Contact Name: Jennifer Kackley
Contact Info: 509-427-8623/
info@volcanicbikes.com
Website: www.volcanicbikes.com

ARKEL

Product: Bicycle Panniers, Trunk Bags, Racks
Discount/Cost to Members: 20% off MSRP
Contact Name: Kevin Ryan
Contact Info: 888-592-7535/info@arkel.ca
Website: www.arkel-od.com
Notes: Use coupon code 20-IPMBA at checkout.

BAR MITTS, INC.

Product: Bar-Mounted Bicycle Mitts
Discount/Cost to Members: 20% off MSRP + Free US Shipping
Contact Name: Ward or Patti Graham
Contact Info: 775-622-8048/barmitts@charter.net
Website: www.barmitts.com
Notes: Send email with name, member number, item, and quantity. An invoice will be sent for payment via credit card or PayPal.

CANE CREEK CYCLING COMPONENTS

Product: Forks, Shocks, Cranks, Seatposts, Headsets, Brakes, Handlebar Accessories, etc.
Discount/Cost to Members: 20% off all non-sale/promotional items
Contact Name: Colin Reis
Contact Info: 800-234-2725/sales@canecreek.com
Website: www.canecreek.com
Notes: Visit www.canecreek.com/about-us/canecreek-heroes-program, complete the application, and submit with your IPMBA membership card or public safety credentials.

HERO KIT

Product: First Aid Kits, Bike Repair Kits, Multitools
Discount/Cost to Members: 50% off Retail
Contact Name: Jason Berv
Contact Info: 970-703-4376/jason@herokit.com
Website: www.herokit.com
Notes: Use coupon code IPMBA at www.herokit.com or contact HeroKit to use PO.

KENDA USA

Product: Premium Bicycle Tires & Tubes
Discount/Cost to Members: 40% off MSRP
Contact Name: Sam Jones
Contact Info: 614-866-9803/sjones@kendausa.com
Website: <http://shop.kendatire.com>
Notes: Available through Kenda's consumer direct platform using the discount code IPMBA2020.

PEDALING INNOVATIONS

Product: Bicycle Pedals - Catalyst
Discount/Cost to Members: 30% off MSRP
Contact Name: Kiele Wilson
Contact Info: 970-589-6418/
support@pedalinginnovations.com
Website: www.pedalinginnovations.com
Notes: Email support@pedalinginnovations.com for coupon code.

PRONETCYCLING, INC.

Product: GUTR, Sprintech, Donnelly, BiBBits, IceToolz, Effeto Mariposa, Leonardi Factory, Fouriers, FireTote
Discount/Cost to Members: 30% off MSRP
Contact Name: Mike or Ed
Contact Info: 360-782-2477/
info@pronetcycling.com
Website: www.pronetcycling.com
Notes: Place items in cart. Replace "Free Shipping" with "IPMBAPro". May not be combined with other offers. Excludes closeouts and Effeto Mariposa torque wrenches.

ROCK BAR CYCLING

Product: Rock Bar Gear and Training Case for Bikes and Packs
Discount/Cost to Members: 20% off four or less, 30% off five or more.
Contact Name: Mark Connelly
Contact Info: 818-745-2068/
moreinfo@rockbarcycling.com
Website: www.rockbarcycling.com
Notes: Call or email with quantity and you will be contacted to complete the order.

SERFAS

Product: Shoes, Lighting Systems, Seats, Brake Pads, Tubes, Tires, Tools, Inflation, Clothing, Accessories
Discount/Cost to Members: 10% off Retail Pricing through 4Bike-Police and Bicycle Patrol Outfitters
Contact Name: Bryan Harding
Contact Info: 800-424-0047 ext. 208/
bryan@serfas.com
Website: www.serfas.com
Notes: Place your order at www.4bike-police.com and enter SERFAS10 at checkout or at www.bikepatrol.info using coupon code IPMBA18.

SKS USA

Product: Fenders, Tools, Pumps, Bags, Bottles & Holders, Lubes & Cleaners
Discount/Cost to Members: 20% off to members/wholesale pricing for departments
Contact Name: Crystal Trout
Contact Info: 618-395-2400/sks.sales@sks-usa.com
Website: www.sks-germany.com
Notes: Contact by email or phone for full product price list, information, and order form.

SQLAB ERGONOMIC PRODUCTS

Product: Saddles, Bars, Stems, Grips, Insoles
Discount/Cost to Members: 20% off to members/wholesale pricing for departments
Contact Name: Corey Steber
Contact Info: 618-395-2400/sqlab@sks-usa.com
Website: www.sqlab-usa.com
Notes: Contact by email or phone for full product price list, information, and order form.

TEAM CYCLING AND FITNESS

Product: Accessories, Components, Tools (Trek, Shimano, Bontrager, Pearl Izumi, etc.)

Discount/Cost to Members: 15% off MSRP

Contact Name: Geoff or Greg Thielmeyer

Contact Info: 513-522-1551/
info@teamecyclingandfitness.com

Website: www.teamcyclingandfitness.com

Notes: Online: Use discount code IPMBA in promo box at checkout. Discount does not apply to bicycles.

TIGER EYE

Product: High-quality, USA made, Helmet-Mount Cycling Mirrors

Discount/Cost to Members: 10% off MSRP; quantity discounts and logo customization available

Contact Name: Rich Scott

Contact Info: 630-292-0044/ghreg@yahoo.com

Website: www.teamtigereye.com

Notes: Contact Rich via phone or email to place your order.

TOGS

Product: TOGS Thumb-Over-Grip Systems

Discount/Cost to Members: 30% off MSRP

Contact Name: Neil Harvey

Contact Info: 801-891-7739/cs@togs.com

Website: www.togs.com

Notes: Enter discount code IPMBA30 at checkout.

WTB

Product: Tires, Saddles, Grips, Rims, Wheels, Wheel Parts

Discount/Cost to Members: 40% off MSRP via Expert Voice

Contact Name: Matt Klene

Contact Info: 415-389-5040/info@wtb.com

Website: www.wtb.com

Notes: Join the IPMBA and/or Law Enforcement Team at Expert Voice to access the discounts.

Bicycle Storage and Transport —

LIFT AND STORE, LLC

Product: Automatic Bike Lift Storage Systems

Discount/Cost to Members: 25% off MSRP

Contact Name: Chris Benyo

Contact Info: 800-825-4777/chris@liftstore.com

Website: www.liftstore.com

VELOGRIP

Product: Bicycle Storage for Home, Apartment, and Commercial Settings

Discount/Cost to Members: 25% off MSRP

Contact Name: Eric Anderson or Sean O'Rourke

Contact Info: 972-824-9633/support@velogrip.com

Website: www.velogrip.com

Notes: Email support@velogrip.com with quantity and color choices. Include name and address for shipping. VeloGrip will send payment link and invoice.

Bike Patrol Supply Companies —

BICYCLE PATROL OUTFITTERS

Product: One-Stop Bicycle Patrol Products Store

Discount/Cost to Members: 5% off web prices

Contact Name: Mike Flynn

Contact Info: 951-318-7341/bpopatrol@yahoo.com

Website: www.police-bikes.com

POLICE BIKE STORE

Product: Full Line of Bicycles, Bicycle Patrol

Lights, E-Bikes, Sirens, Bags, Accessories,

Uniforms, C3Sports, Fuji, Haro, and More

Discount/Cost to Members: Additional 5-10% off Web Prices

Contact Name: Michael Espejo

Contact Info: 973-366-5868/
info@policebikestore.com

Website: www.policebikestore.com

4BIKE-POLICE.COM

Product: Police Bikes and First Responder Bicycle Duty Accessories; Complete "Head-to-Toe"

Outfitting

Discount/Cost to Members: 10% or more off MSRP

Contact Name: Mark Leonard

Contact Info: 501-517-5338/LCGInc@sbcglobal.net

Website: www.4bike-police.com

Notes: When ordering online, use coupon code IPMBA10 for 10% discount.

AMERICAN BIKE PATROL SERVICES

Product: Bicycles, Lights, Parts, Gloves, Clothing, Accessories

Discount/Cost to Members: 10% off products; 5% off bicycles

Contact Name: Aaron Roesler

Contact Info: 626-488-2421/abps@bikepatrol.info

Website: www.bikepatrol.info

Notes: Bike coupon code: police18 / Products coupon code: ipmba18

PATROL BIKE SYSTEMS

Product: Bikes, Accessories, Park Tools, Patrol Cycle Shoes

Discount/Cost to Members: Contact for Pricing

Contact Name: Mark Eumurian

Contact Info: 651-773-8763/
patrolbikesystems@gmail.com

Website: www.biketools.com

Clothing & Accessories —

ADIDAS OUTDOOR

Product: Apparel and Footwear

Discount/Cost to Members: 50% off MSRP

Contact Name: Customer Service

Contact Info: 866-639-7916/
customerservice@adidasoutdoor.com

Website: www.adidasoutdoor.com

Notes: Go to www.adidasoutdoor.com/vip and apply. Upon approval, orders placed using the email address on the account will be eligible for the discount.

ARMORPUR ODOR NEUTRALIZING

Product: Odor Neutralizing Products for Body Armor, Sports Gear, and More

Discount/Cost to Members: 10% off Retail

Contact Name: Lt. Thomas Norton

Contact Info: 973-244-1862/
Contact@armorpur.com

Website: www.armorpur.com

Notes: Enter coupon code "IPMBA" on check out page; 10% will be automatically deducted.

BERN UNLIMITED

Product: Helmets and Lights

Discount/Cost to Members: 40% off MSRP

Contact Name: Brendan Donarum

Contact Info: 781-582-8125/
Bdonarum@bernhelmets.com

Website: www.bernhelmets.com

Notes: Order online at www.bernhelmets.com using promo code IPMBA40 at checkout.

BIKE RAGS APPAREL

Product: Custom Cycling Apparel, T-Shirts, Hats, and More

Discount/Cost to Members: 15% off total order.

Free design (limits apply).

Contact Name: Tony Burnett

Contact Info: 515-422-0330/
info@bikeragsapparel.com

Website: www.bikeragsapparel.com

Notes: Mention the IPMBA PPP in your initial email.

MAXIT DESIGNS

Product: Summer & Winter Moisture-Wicking Headwear and Sock Liners

Discount/Cost to Members: 35% off Retail

Contact Name: Liz Fuoco

Contact Info: 800-556-2948/info@maxit-inc.com

Website: www.maxit-inc.com, www.headgator.com

Notes: Please provide IPMBA membership number and expire date.

SHOWERS PASS

Product: Cycling Outerwear & Apparel

Discount/Cost to Members: 40% off MSRP

Contact Name: Jeremy Rider

Contact Info: 503-203-8000/
jeremy@showerspass.com

Website: www.showerspass.com

Notes: Order online. Enter coupon code

IPMBA201940 at checkout.

Duty Gear —

R & B FABRICATIONS

Product: Panniers, Equipment Bags & Safety Vests

Discount/Cost to Members: 15% off Retail

Contact Name: Ashley Parisot or Melissa Durham

Contact Info: 800-553-1911/info@rbfab.com

Website: www.rbfab.com

RZ MASK, LLC

Product: Air Filtration Masks

Discount/Cost to Members: 30% off MSRP

Contact Name: Jim Hattenbuhler

Contact Info: 952-324-5474/jimh@rzmask.com

Website: http://rzmask.com/pages/public-safety-1

Notes: Order online. Enter coupon code IPMBA30 at checkout. Good for unlimited uses.

IPMBA Product Purchase Program



Electronics & Lighting —

CYGOLITE

Product: High-Intensity Lighting Systems, Designed and Built in the USA

Discount/Cost to Members: 35% off Retail

Contact Name: Andrew Ibanez

Contact Info: 949-297-4972/patrol@cygolite.com

Website: www.cygolite.com

C3SPORTS BIKE PATROL SOLUTIONS

Product: MaxPatrol-600 DLX Police Light System, Siren, Cycling Lights, Gloves, Bags

Discount/Cost to Members: 20% off MSRP

Contact Name: Michael Espejo

Contact Info: 973-631-9839/info@c3sports.com

Website: www.c3sports.com

Notes: Enter discount code IPMBA20 at checkout.

CATEYE BICYCLE ELECTRONICS

Product: Cycling Computers, Lights, and Accessories

Discount/Cost to Members: 30% off MSRP

Contact Name: Jim Blattner

Contact Info: 303-501-1317/jim@cateye.com

Website: www.cateye.com

Notes: Order via www.cateyeamerica.com. Apply "IPMBA2020" discount code at checkout.

CYCLE SIREN

Product: Police & EMS Mini-Sirens & Lighting for Bike Patrol

Discount/Cost to Members: 12% off Retail

Contact Name: Greg Bohning

Contact Info: 877-477-4736/sales@cyclesiren.com

Website: www.cyclesiren.com

Notes: E-mail or call with your name and IPMBA membership number.

LIGHT AND MOTION

Product: Cycling and Underwater Lighting

Discount/Cost to Members: 40% off non-sale items

Contact Name: Trevor McHenry or Adriane Fells

Contact Info: 831-645-1538/

sales@lightandmotion.com

Website: www.lightandmotion.com

Notes: Use discount code IPMBA-2020 at checkout.

NIGHT PROVISION

Product: Bicycle Lights/Tactical Flashlights

Discount/Cost to Members: 15% off MSRP

Contact Name: Evan Hsieh

Contact Info: 800-592-0319/

support@nightprovision.com

Website: www.nightprovision.com

Notes: Online: During checkout, use coupon code IPMBA15 and include your IPMBA membership number under "Comments and Notes".

Eyewear —

RUDY PROJECT USA

Product: Sunglasses, Sport Eyewear, Helmets, Goggles, Prescription Eyewear

Discount/Cost to Members: 35% off Retail + additional 10% off closeouts and promotional items

Contact Name: Reba Kucera, Sports Marketing Coordinator

Contact Info: 949-272-2468/rkucera@gorace.pro

Website: www.rudyprojectna.com/vip

Notes: Online: Go to www.rudyprojectna.com/vip to create an account. Enter VIP/Team code IPMBA.

XX2I OPTICS

Product: Prescription, Performance, and Casual Eyewear

Discount/Cost to Members: 60% off MSRP

Contact Name: Reba Kucera, Sports Marketing Coordinator

Contact Info: 949-272-2468/rkucera@gorace.pro

Website: www.xx2i.com

Notes: Go to www.xx2i.com and use coupon code IPMBA.

Footwear —

ADIDAS OUTDOOR - FIVE TEN

Product: Cycling Shoes

Discount/Cost to Members: 50% off MSRP

Contact Name: Customer Service

Contact Info: 866-639-7916/

customerservice@adidasoutdoor.com

Website: www.adidasoutdoor.com/fiveten-brand

Notes: Go to www.adidasoutdoor.com/vip and apply. Upon approval, orders placed using the email address on the account will be eligible for the discount.

Maintenance and Tools —

HGNER/DUMONDE TECH

Product: Chain Lube, Grease, Freehub Oil and Grease, Bike Cleaner

Discount/Cost to Members: 10% off dealer pricing

Contact Name: Maria Schur

Contact Info: 888-609-4467/maria@hgnr.com

Website: https://www.dumondetech.com/classic-bicycle-lubricants/

Notes: Contact directly to provide your member number and place your order. Credit cards only.

UNITED BICYCLE SUPPLY

Product: Bicycle Tools and Parts

Discount/Cost to Members: Wholesale Pricing to Departments

Contact Name: Erik Larsen or Mark Super

Contact Info: 541-482-1750/ubs@bisp.net

Website: www.unitedbicyclesupply.com

Notes: Call to establish an account for your department to be eligible for wholesale pricing on all products.

Nutrition —

GQ-6

Product: GQ-6 3:2:1 Hydration Base, GQ-6 REFUL Endurance & Energy, GQ-6 REKUVR Nite Time

Discount/Cost to Members: 35% off online orders

Contact Name: Richard Hiraga

Contact Info: 949-940-6649/info@GQ-6.com

Website: www.gq-6.com

Notes: Use the online code IPMBA2019 at checkout.

NUGO NUTRITION

Product: Nutrition/Energy Bars

Discount/Cost to Members: 20% off MSRP

Contact Name: Alyssa Nard

Contact Info: 888-421-2032/

anard@nugonutrition.com

Website: www.nugonutrition.com

Notes: Enter coupon code IPMBA20 at checkout.

Specialty Suppliers —

EXPERT VOICE

Product: Outdoor-Bike-Action Sports Gear

Discount/Cost to Members: Promotional Pricing

Contact Name: Customer Service

Contact Info: 866-376-4685/

Website: www.expertvoice.com

Notes: Email info@ipmba.org for the access code to create an account.

Training —

STREET CRIMES TRAINING

Product: Street Crimes Training

Discount/Cost to Members: \$299

Contact Name: Gail McCarthy, Natalie Walsh

Contact Info: 800-275-4915/

streetcrimesinfo@gmail.com

Website: www.streetcrimes.com

Notes: Call and mention IPMBA and the \$100 discount when registering.

Uniforms —

BRATWEAR (A DIVISION OF SOUND UNIFORM SOLUTIONS)

Product: Bike Uniforms

Discount/Cost to Members: 10% off Standard Price List

Contact Name: Sally

Contact Info: 253-625-7420/sally@bratwear.com

Website: www.sounduniforms.com

OLYMPIC UNIFORMS (A DIVISION OF SOUND UNIFORM SOLUTIONS)

Product: Bike Patrol Uniforms

Discount/Cost to Members: 10% off Retail Prices

Contact Name: Julie Cruise

Contact Info: 206-722-1412/

juliecruise@olyuniforms.com

Website: www.sounduniforms.com

BELLWETHER CLOTHING

Product: Uniforms

Discount/Cost to Members: 30% off MSRP

Contact Name: Fred Gonzalez

Contact Info: 888-800-5999 ext. 182/

fgonzalez@bellwetherclothing.com

Website: www.bellwetherclothing.com

Notes: Contact Fred for a list of participating dealers.

IPMBA's Corporate Partners are those companies which have shown their commitment to public safety cyclists over the past year through their active participation with and support of IPMBA, as Corporate Members, Conference Vendors and Supporters, Product Purchase Program Participants, Advertisers, and Sponsors. Show your appreciation by supporting them in return!

Bicycles —

 **Electric Spokes Corporation**
www.electricspokes.com

 **iFORCE Patrol Bicycles**
www.iforcebikes.com

 **Trek Bicycle Corporation**
www.trekbikes.com

 **Volcanic Bicycles**
www.volcanicbikes.com

Benelli North America
www.benellibike.com

Blimp City Bike and Hike
www.blimpcitybikeandhike.com

Borealis Fat Bikes
www.fatbike.com

Enabled Enterprises LLC
www.enabled.vet

MOD Bikes
www.modbikes.com

Pedego Electric Bikes Fort Worth
www.pedegoelectricbikes.com/
dealers/fort-worth

Strider Sports International, Inc.
www.striderbikes.com

Bicycle Accessories and Components —

 **GeoOrbital**
www.geoo.com/public-safety/

 **ISM Saddles, LLC**
www.ismseat.com

Bar Mitts, Inc.
www.barmitts.com

Cane Creek Cycling Components
www.canecreek.com

Hero Kit
www.herokit.com

Kenda USA
www.kendatire.com

Mountain Racing Products
www.mountainracingproducts.com
www.powergrips.com

Pedaling Innovations
www.pedalinginnovations.com

ProNet Cycling, Inc.
www.pronetcycling.com

Rock Bar Cycling
www.rockbarcycling.com

Serfas
www.serfas.com

SQLab Ergonomic Products
www.sqlab-usa.com

Team Cycling and Fitness
www.teamcyclingandfitness.com

Tiger Eye
www.teamtigereye.com

TOGS
www.togs.com

WTB
www.wtb.com

Bicycle Storage and Transport —

Lift and Store, LLC
www.liftnstore.com

VeloGrip
www.velogrip.com

Bike Patrol Supply Companies —

 **Bicycle Patrol Outfitters**
www.police-bikes.com

 **Police Bike Store**
www.policebikestore.com

4Bike-Police.com
www.4bike-police.com

American Bike Patrol Services
www.bikepatrol.info

Patrol Bike Systems
www.patrolbike.com

The Bicycle Store
www.thebicyclestorenj.com

Clothing & Accessories —

Adidas Outdoor
www.adidasoutdoor.com

ARMORPUR Odor Neutralizing
www.armorpur.com

Bern Helmets
www.bernhelmets.com

Maxit Designs
www.maxit-inc.com
www.headgator.com

Primal Wear
www.primalwear.com


Showers Pass
www.showerspass.com

SockGuy
www.sockguy.com

Tactical Wear Online
www.tacticalwearonline.com

Duty Gear —

 **R&B Fabrications**
www.rbfab.com

 **RZ Mask, LLC**
http://rzmask.com/pages/public-safety-1

BLAC-RAC Manufacturing, Inc.
www.blac-rac.com

Haven Gear
www.havengear.com

Legacy Safety and Security
www.legacyss.net

Whistles for Life
www.whistlesforlife.com

Electronics &

Lighting —

 **Cygolite**
www.cygolite.com

Alerte Systems Inc.
www.alertesystems.com

IPMBA Supplier Listing



C3Sports Bike Patrol Solutions
www.c3sports.com

Cateye Bicycle Electronics
www.cateye.com

Cycle Siren
www.cyclesiren.com

Night Provision
www.nightprovision.com

Sigma Sport
www.sigmasport.com

EMS —

Boundtree Medical
www.boundtree.com

Philips Healthcare
www.philips.com

REX EMS
www.rapidextraction.com

Stat Packs
www.statpacks.com

Eyewear —

Dual Eyewear
www.dualeyewear.com

Rudy Project USA
www.rudyprojectna.com/VIP

XX2i Optics
www.xx2i.com

Footwear —

Adidas Outdoor - Five Ten
www.adidasoutdoor.com/fiveten-brand

Haix North America
www.haix.com

Maintenance and

Tools —

HGNRDumonde Tech
www.dumondetech.com/classic-bicycle-lubricants/

ProGold Lubricants/ ABC Compounding
www.progoldmfr.com

United Bicycle Supply
www.unitedbicyclesupply.com

Nutrition —

Cera Products, Inc.
www.ceraproductsinc.com

GQ-6
www.gq-6.com

NuGo Nutrition
www.nugonutrition.com

Organizations and Associations —

 **NAEMT**
www.naemt.org

American Bicycling Education Association
www.abea.bike

California Peace Officers Association
www.cpoa.org

Code Green Campaign
www.codegreencampaign.org

International Association of Chiefs of Police (IACP) / IACPNet
www.theiacp.org / www.iacpnet.com

IMBA (International Mountain Bicycling Association)
www.imba.com

League of American Bicyclists
www.bikeleague.org

National Association of School Resource Officers
www.nasro.org

National EMS Memorial Bike Ride
www.muddyangels.com

National Interscholastic Cycling Association
www.nationalmtb.org

National Law Enforcement Officers Memorial Fund
www.nleomf.org

NHTSA Safety Countermeasures
www.nhtsa.dot.gov

Officer Down Memorial Page
www.odmp.org

PeopleforBikes
www.peopleforbikes.org

Publications and Tradeshows —

 **EMS World**
www.emsworld.com

American Police Beat
www.apbweb.com

Bicycling Magazine
www.bicycling.com

Blue Line Magazine
www.blueline.ca

CABDA Expo
www.cabda.com

Officer Media Group
www.officer.com

Police Magazine
www.policemag.com


Police Security Expo
www.police-security.com

Specialty Suppliers—

Dick Kramer Studios
www.dickkramer.com

Expert Voice
www.expertvoice.com

Training —

 **Jones & Bartlett Learning**
www.jblearning.com

Commission on Accreditation for Law Enforcement Agencies
www.calea.org

Exploring: Discover Your Future
www.exploring.org

National Institute for Occupational Safety and Health
https://www.cdc.gov/niosh/index.htm


Ryan Leech Online Mountain Bike Skills Coaching
www.ryanleech.com

Street Crimes Seminars
www.streetcrimes.com

UNC Highway Safety Research Center
www.hsrc.unc.edu

Uniforms —

 **MOCEAN**
www.moceantactical.com

 **Sound Uniform Solutions (Bratwear and Olympic Uniforms)**
www.sounduniforms.com

Bellwether Uniforms
https://bellwetheruniform.com/

Blauer Manufacturing
www.blauer.com

Corporate Members



IPMBA thanks **Cygolite Bicycle Lighting Systems, GeoOrbital, MOCEAN Tactical, and Sound Uniform Solutions (Bratwear and Olympic)** for their continued participation in the IPMBA Corporate Member Program.



Bicycle Patrol Outfitters
 Product: Bike Patrol Products
 Phone: 951-318-7341
 Website: www.police-bikes.com



Cera Products
 Product: Rice-Based Hydration Products
 Phone: 706-221-1542
 Website: www.ceraproductsinc.com



Cygolite Bicycle Lighting Systems
 Product: High-intensity lighting systems, designed and built in the USA
 Phone: 949-297-4972
 Website: www.cygolite.com



Electric Spokes Corporation
 Product: Tactical Electric Mobility for Law Enforcement
 Phone: 800-895-9049
 Website: www.electricspokes.com



EMS World
 Product: Leading EMS Magazine, Website, and Expo
 Phone: 800-547-7377
 Website: www.emsworld.com



GeoOrbital
 Product: GeoOrbital Public Safety Electric Wheel
 Phone: 781-248-5594
 Website: www.geoo.com/pages/public_safety



iFORCE Patrol Bicycles
 Product: iFORCE Patrol Bicycles and Accessories
 Phone: 412-215-2983
 Website: www.iforcebikes.com



ISM Saddles
 Product: ISM Bike Seats
 Phone: 813-909-1441
 Website: www.ismseat.com



Jones & Bartlett Learning
 Product: Educational Materials, Complete Guide to Public Safety Cycling
 Phone: 800-832-0034
 Website: www.jblearning.com



MOCEAN Tactical
 Product: Technical Bike Patrol Uniforms
 Phone: 949-646-1701/877-662-3680
 Website: www.moceantactical.com



NAEMT
 Product: Association of EMS Practitioners
 Phone: 601-924-7744
 Website: www.naemt.org



Police Bike Store
 Product: Complete line of public safety bikes & accessories
 Phone: 973-366-5868
 Website: www.policebikestore.com



R & B Fabrications
 Product: Panniers, Duty Bags & Safety Vests
 Phone: 800-553-1911
 Website: www.rbfab.com



RZ Mask, LLC
 Product: The World's Most Comfortable Air Filtration Mask
 Phone: 952-324-5474
 Website: <https://rzmask.com/pages/public-safety-1>



Sound Uniform Solutions
 Product/Service: Bratwear and Olympic Uniforms
 Phone: 253-625-7420
 Website: www.sounduniforms.com



Trek Bicycle Corporation
 Phone: 920-478-2191
 Product: Electric and Standard Patrol Bikes



Volcanic Bicycles
 Product: Patrol Bicycles, Hand-Built in the USA
 Phone: 509-427-8623
 Website: www.volcanicbikes.com



BECOME AN IPMBA INSTRUCTOR

Join the ranks of more than 1,800 of your fellow public safety bicyclists by becoming an IPMBA Instructor.

Call 410-744-2400 or email info@ipmba.org for an instructor application packet. In the simplest of terms, to become an Instructor, you must meet the criteria outlined in the packet, apply to IPMBA headquarters, be approved, then register for and attend one of the Instructor Courses.

Upcoming Courses:

Dates to be announced

SPECIAL REPORT:

E-Bikes

International Police Mountain Bike Association

Board Position Paper - Use of e-Bikes by Public Safety Cyclists | May 2019

As the leader in the field of public safety cycling, IPMBA endeavors to keep abreast of changing technologies, methodologies, and other factors that affect public safety bike operations. This includes equipment and devices for use in training and in the field. IPMBA comprises a diverse group of law enforcement officers, EMS personnel, and security professionals. These public safety cyclists operate their equipment under a wide range of environmental conditions, from rocky trails to urban settings, and in all kinds of weather. IPMBA teaches the skills necessary to safely operate a bicycle in a patrol capacity. As in other areas of public safety, different environments call for different apparatus; therefore, vehicle operations skills are designed to be transferable to other, similar vehicles.

IPMBA has long encouraged its members to remain open-minded and to experiment with new products and technologies in an ongoing effort to increase safety, comfort, and effectiveness.

Electric bicycles, referred to as e-Bikes, are the fastest-growing segment of the cycling industry. Advancements in technology and a corresponding reduction in the cost of many makes and models have made them more appealing to and effective for public safety agencies. An increasing number of public safety agencies are adding e-Bikes to their bicycle fleets. In keeping with the mission of providing the best practices for public safety cycling training and operations, IPMBA will strive to meet the needs of those public safety cyclists who choose to operate e-Bikes in the line of duty.

Content for this position paper includes input from IPMBA members, industry representatives, and other subject matter experts, as well as the results of an e-Bike survey conducted by IPMBA in January 2019.

This position paper was reviewed and approved by the IPMBA Board in April 2019.

Background:

There continues to be confusion amongst consumers, retailers, suppliers, policy-

makers, and public safety professionals as to what comprises a legal e-Bike.

According to People For Bikes:

“Under federal law, an electric bicycle is referred to as a “low-speed electric bicycle,” which is defined as “a two- or three-wheeled vehicle with fully operable pedals and an electric motor of less than 750 watts (1 h.p.), whose maximum speed on a paved level surface, when powered solely by such a motor while ridden by an operator who weighs 170 pounds, is less than 20 mph.” Significantly, this definition provides a maximum assisted speed that an electric bicycle can travel when being powered only by the motor, but does not provide a maximum assisted speed for when an electric bicycle is being powered by a combination of human and motor power.

Federal law does not preempt any state traffic laws or vehicle codes. While there is a preemption provision in Public Law 107-319, that provision is limited in scope to product safety regulation. Therefore, Public Law 107-319 has no impact on state traffic laws or vehicle codes, which regulate the use of electric bicycles, and it is still necessary to update these laws to incorporate these devices.

Electric-assisted bicycles have been defined and regulated at the federal level since 2002. Public Law 107-319 established that electric bicycles are regulated as consumer products under the Consumer Product Safety Act, and more specifically, subject to the same regulations that govern traditional, human-powered bicycles. Thus, electric bicycles are regulated by the Consumer Product Safety Commission, and must comply with the bicycle safety standards at 16 C.F.R. Part 1512. In addition, electric bicycles are explicitly not “motor vehicles” for the purposes of federal law, and are not subject to National Highway Traffic Safety Administration vehicle standards. As a practical matter, Public Law

107-319 ensures that electric bicycles are designed, manufactured, and tested like traditional bicycles for the purposes of consumer product safety law. The main provisions of Public Law 107-319 are codified at 15 U.S.C. § 2085.”

In an effort to establish a uniform definition of an e-Bike, the Bicycle Product Suppliers Association (BPSA; now part of People for Bikes) created a three-class system to categorize e-Bikes.

As stated on their website, *“In 2015, the coalition mobilized manufacturers and suppliers to establish e-Bike classifications based on the product sold in Europe and consistent with U.S. federal regulations around e-Bike manufacturing and sales. E-Bikes were organized into three classes, which separated low-speed e-Bikes from higher-powered vehicles and simplified the process of establishing regulations around the use of each class.”*

The three classes of e-Bikes are as follows:

- *“Class 1 electric bicycle” is a bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the bicycle reaches the speed of 20 miles per hour.*
- *“Class 2 electric bicycle” is a bicycle equipped with a motor that may be used exclusively to propel the bicycle, and that is not capable of providing assistance when the bicycle reaches the speed of 20 miles per hour.*
- *“Class 3 electric bicycle” is a bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the bicycle reaches the speed of 28 miles per hour, and is equipped with a speedometer.*

For all classes, the maximum power output is 750 watts (1 h.p.), and manufacturers and distributors of electric bicycles would be required to apply a class identification label to each electric bicycle.

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According to People For Bikes, “*The BPSA system also creates rules governing the use of electric bicycles, with safety as the top priority. Class 1 and 2 electric bicycles would be permitted to travel anywhere traditional bikes are permitted, as the maximum assisted speed of these devices is closely aligned with speeds traveled by traditional bicycles. Class 3 electric bicycles could be ridden on streets and roadways where traditional bicycles are permitted, including bicycle lanes, but would be restricted from slower speed areas such as multi-use paths. Class 3 electric bicycles would also be subject to additional requirements, such as a minimum user age and helmet mandate. Electric bicycles would not be subject to any licensing, registration, or insurance requirements.*”

The model legislation proposed by BPSA/PFB was first adopted in California and has continued to be adopted throughout the United States. A current state-by-state status report pertaining to the model legislation is maintained on the People for Bikes website.

Position:

IPMBA recognizes there are distinct differences, advantages, disadvantages, and other factors each agency must consider when deciding whether to integrate e-Bikes into a specific service environment. They include, but are not limited to:

Advantages: Faster response times, less fatigue, expanded patrol range, increased carrying capacities, enhanced community engagement, and potentially more interest in bike units.

Disadvantages: Increased cost, increased weight, additional maintenance costs, and potentially more complicated technology failures.

Other factors: Effects on riding techniques, including slow-speed handling and obstacle-clearing skills; effects of increased speed on cycling in traffic and/or during group rides; technology-related factors such as battery life and riding range; tactical considerations; and legalities.

IPMBA hereby authorizes participants in IPMBA training to ride e-Bikes that meet their agency’s needs and that can be safely used to complete the training

requirements, with the following provisions.

Those responsible for equipment selection and procurement are encouraged to conduct a needs assessment that includes such factors as operational environment, riding style, frequency, laws pertaining to e-Bike use and access, etc. They are encouraged to consult subject matter experts within the public safety and cycling industries to help ensure they make the right choices.

IPMBA Instructors are responsible for ensuring that each student is equipped with a well-maintained, properly fitted e-Bike and for evaluating the safety of all e-Bikes prior to the start of each course. These assessments are to identify obvious equipment problems that may jeopardize the safety of the operator. Instructors should refer to the IPMBA ITK for further instruction on Bike Fit (Skill Station 2) and allow time for screening and sizing student e-Bikes. If an e-Bike is found to be poorly constructed or maintained, poorly fit or otherwise unsafe, it is the instructor’s responsibility to prohibit use of the e-Bike in training. It is the student’s responsibility to heed the advice of the subject matter expert and either withdraw or locate a more suitable e-Bike.

IPMBA has assessed the use of e-Bikes in the current basic Police, EMS and Security Cyclist Courses and makes the following observations of the performance of the e-Bike in the skill stations. At this point, there has been no modification to the testing standards set forth in the current curriculum that differs for e-Bikes.

IPMBA recommends that students first complete the applicable course on a conventional bike in order to develop competency in the basic skills and then undertake e-Bike-specific training to learn how to successfully transfer those skills to an e-Bike. Instructors may benefit from making conventional bikes available to those who choose to undergo initial training on an e-Bike in case they need to first gain confidence on a bicycle that is not equipped with power-assist features.

- All the cone courses were completed successfully under no power assist and low power modes. As the motor assist increased, the braking resistance had to increase equally to maintain good control. It appears that several models of e-Bikes are extending the length of the frame to accommodate the motor

assembly in mid-drive units, so space in the nine-foot Slow Box is tight and does take some skill to accomplish.

- Curb and stair ascents can be more difficult using the power pedal technique if the battery is located toward the front of the bike, skewing weight forward. Models that have the battery located in the rear do not seem to create the same situation. The technique will work; however, it takes more power and skill to achieve. The motor engagement delay does not assist in the lofting, but does engage for assistance in the follow through and the remaining ascent. Certain makes and models are programmed with a “walk-assistance” mode which can facilitate the stair ascent methods taught in the EMS Cyclist curriculum. Cyclists must be aware that the pedals will turn while this mode is engaged.
- Power assist (or mode) awareness is a must for effective urban and team riding. E-Bikes have a variety of power assist levels and also use standard gearing in the front/rear (mid-drive) or rear only (rear hub drive). You must be aware of your mode/gear combinations when operating in different environments. If you are in too high of mode and gear at a stop, you will need more pressure to start, but when the assist engages at the higher levels you will feel an unexpected burst of power. Mode awareness is also important in the opposite scenario. You may find yourself coasting or not maintaining a “good spin” and inadvertently shifting your weight on the bike. Power mode awareness is important.
- The ability to achieve higher speeds with significantly less effort demands greater awareness of speed and the inherent associated risks. More speed requires more braking, and depending on where the weight is skewed, requires solid braking techniques. Skill stations such as the Quick Turn, Decision-Maker, and Rock Dodge must be practiced at gradually increasing speeds. Students must be acclimated to the significant speed that can be achieved with less effort. Flat pedals appear to be the preferred pedal retention among e-Bike riders, which appears to make sense as the increased speed requires the ability to more easily disengage from the bike.

(Continued on page 25)

Is an e-Bike Right for Your Bike Patrol?

Electric bikes have been around almost as long as traditional bicycles, but advances in motor and battery technologies in recent years have been driving growth – and now police departments in the U.S. are taking notice of the e-Bike’s advantages.

by Claudia Wasko

Bosch eBike Systems

February 3, 2018 (posted on www.officer.com)

Content provided by Bosch eBike Systems

Police officers on bicycles are nothing new; officers adopted bicycle patrols as part of their standard functions as early as the 19th century, and there’s been a revival in the practice since the late 1980s – for good reason.

Bikes give officers access to areas that would be difficult to get around quickly in a squad car, especially in cities congested with traffic, and allow police to pursue suspects in crowded areas or through tight spaces, and even over terrain a squad car can’t tackle.

Traditional bicycles have their downsides, though. They require a lot of energy to pedal, and can’t go as fast as officers sometimes need to move. Police officers also have to carry a lot of equipment with them, which makes a bicycle heavier and harder to ride uphill or for long distances.

There’s a way to get all the positives of a police bicycle program and eliminate the negatives, however – with an e-Bike, or electric bicycle, which uses a pedal-activated electric motor and battery that gives riders an extra tailwind to pedal faster uphill and over longer distances.

Improved Policing on e-Bikes

Electric bikes have been around almost as long as traditional bicycles, but advances in motor and battery technologies in recent years have been driving consumer growth in places like Europe and China – and now police departments in the United States are taking notice of an e-Bike’s advantages.



Photo courtesy: Clint Sandusky

With a boost from an electric motor, officers can ride further and longer than they can on a standard bicycle, allowing them to expand their patrol area and cover more ground.

Officers are still able to get into tight places and crowds, but now they can get there even faster. When a call comes in, an officer can easily adjust the assist level into Turbo and quickly pedal up to

28 mph – that’s comparable with top Tour de France pro rider speeds on flat terrain, and 9 to 10 mph faster than an average rider.

Officers not only get to a scene faster – they also arrive stronger. The boost from the motor means an officer arrives at a scene less fatigued than he or she would be after powering a traditional bike at high speeds using just their legs, so they can use more energy for police work and less for pedaling.

E-Bikes also provide the opportunity to get more officers involved in bike patrol. Officers who aren’t sold on the physical demands of traditional bicycling now can get out, patrol and engage with the community because of the assistance the e-Bike’s motor provides.

Even bike patrol officers who crave the physical challenge of riding can appreciate an e-Bike, because the beauty is that the rider can always choose how much assistance to get from it. When an officer is cruising the town on standard patrol, he or she can have the motor assist on Eco (boosting their leg power by 50 percent), making the experience very similar to traditional bike riding, and increasing the e-Bike’s range to as high as 100 miles. But when they need to get somewhere fast, they have the option to kick up the assistance level to Turbo – a 300 percent boost.

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Board Position Paper - Use of e-Bikes by Public Safety Cyclists

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- The increased weight of an e-Bike may have a negative effect in tactical situations where the bike may need to be lifted or moved by means other than riding. For example, some Bicycle Response Team members may have difficulty lifting the bike and moving it forward during dismounted formations. Some of the defensive tactics taught to EMS cyclists are more difficult to perform with the weight of the bike coupled with the weight of the EMS equipment.
- The power-assisted e-Bikes made distance riding and quick-response riding significantly easier. Riders were

less fatigued and more capable to act in their respective job functions when responding to calls in comparison to the same calls on conventional bikes.

It remains the responsibility of instructors to familiarize themselves with e-Bikes and their operation, differences, advantages, disadvantages, and other considerations unique to public safety cyclists. If an instructor has little or no experience with e-Bikes, it may be difficult to instruct students on the proper operations of an e-Bike and the need to alter certain techniques to successfully complete required skills. However, instructors are not, nor should they be expected to be, experts in e-Bike

construction or knowledgeable about all makes, models and drive unit (motor) types.

IPMBA teaches the skills needed to operate bicycles safely and effectively within a front-line service environment. We embrace technological changes and encourage agencies to select bicycles that best suit their service environment. It is the responsibility of the IPMBA instructor to ensure that each rider masters all skills necessary to successfully complete the training requirements so they will be able to handle their individual bicycles competently in technical, vehicular, and operational cycling situations.

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A less tangible – but no less important – effect of a police officer on an e-Bike is the approachability the bike affords. Both kids and adults who might never approach an officer in a squad car will greet an officer on a bike, and the e-Bike’s motorized feature gives it an extra “cool factor” that serves as a conversation starter, helping the officers engage the community and get some face time with local citizens.

Tech-savvy police departments across the country are exploring the implementation of an e-Bikes program to gain some of these benefits, and it’s crucial to know what to consider before purchasing.

Shopping for a Police e-Bike

E-Bikes are available with every type of regular bicycle function. A police department can start by looking at the traditional bicycles with which the department has had the most success – the style and features that officers like best.

Most officers prefer a mountain bike-style e-Bike with front suspension, but police departments in coastal climates that patrol beaches may require fat tire e-Bikes, and departments that patrol trails in nature preserves or parks may need dual suspension to accommodate rougher terrain. And it goes without saying that a police department should

bikes, and mounting these to a normal bike can create load-balance issues.

Additionally, e-Bike braking systems are designed to allow the bike to brake quickly even when traveling at high speeds, and traditional bicycles with a clip-on motor can’t accommodate that type of braking, creating a safety hazard.

Case in Point: Green Bay Police Department

The Green Bay Police Department (GBPD), located in Green Bay, Wisconsin, is divided into four policing districts designed around factors like major geographical boundaries and call volume. Each district has an assigned captain and lieutenants as well as community policing officers.

When GBPD implemented its community police program in 1995, the department assigned each community police officer a mountain bike to use when patrolling.

“They have the option of taking out a squad car, but we tell them they should be walking neighborhoods, biking and engaging the community,” said Captain John Laux, captain of GBPD’s District C.

Traditional bicycles worked just fine when officers were patrolling smaller neighborhoods, but when GBPD moved to district policing in January 2012, community police officers had to patrol larger areas spread over several square miles, and it could be challenging on a standard mountain bike, Laux said.

“When our policing areas were small, it made sense to patrol on a bike or on foot, but getting from one end of the district to another quickly was problematic and not realistic,” he said. “Then I started hearing about e-Bikes.”

Over the summer of 2016, Laux began to do some research on e-Bikes, browsing the Internet and asking other departments about their experiences. He found Pete’s Garage, a local outdoor sports shop, and tapped store manager Derek Hughes for advice. Hughes, a veteran mountain and snow biker, had experience with e-Bikes, and steered Laux toward Cannondale e-Bikes, powered by the Bosch e-Bike system.

“We brought in a couple of Cannondale demo e-Bikes, and the officers absolutely

(Continued on page 27)



Photo by Raymond Cervantes, Fort Worth Police Department

Finding the Right e-Bike Dealer

Start by going to a reputable dealer who has experience with e-Bikes – not every bike dealer does, and it’s critical for a police department to find a trained, certified dealer who knows the ins and outs of the technology. Ideally, the dealer has completed e-Bike certification clinics for the specific manufacturers the department is considering.

Departments can also ask manufacturers to connect them with a dealer. Many e-Bike and e-Bike component manufacturers keep directories of reliable dealers who have the tools and software to sell and service e-Bikes appropriately.

Once you find a good bike dealer, ask if they have any agreements with manufacturers that will provide the department with trial e-Bikes. There’s no better way to figure out if you like something than to try it out yourself.

opt for the models with the fastest maximum speed (typically 28 mph) to achieve the fastest response time.

Additionally, some e-Bike manufacturers now make police-specific e-Bikes. The frame is often a standard mountain e-Bike, but with added speed capabilities, and a more robust brake system because of the higher potential speeds combined with added weight from police equipment. These styles may also have mounting points for equipment racks or integrated light systems that allow police departments to add their own flashing red and blue lights or sirens.

Some bike dealers sell conversion kits that allow riders to mount a hub motor on a back wheel and add a battery pack to the frame. These kits are less expensive than purchasing an e-Bike, but are strongly discouraged. An e-Bike’s frame is engineered to hold the extra weight of the motor and battery, unlike normal

How to Select A Public Safety e-Bike

by *Clint Sandusky, former PCI #849/EMSCI #159*
Riverside (CA) Community College District Police Department (ret.)
This article was posted to *officer.com* on June 13, 2019.

Electric bicycles, or e-Bikes, are the fastest-growing segment of the cycling industry. Advancements in technology and a corresponding reduction in cost have made them more appealing to public safety agencies and a more effective means of fulfilling their missions.

As with other potential tools at the disposal of a public safety agency, there are advantages, disadvantages, and other factors to consider when deciding whether to adopt e-Bikes. These include:

- **Advantages:** Faster response times, reduced fatigue, expanded patrol range, increased carrying capacity, enhanced community engagement, and more officers interested in bike patrol.
- **Disadvantages:** Increased weight, higher purchase cost, additional maintenance and parts replacement costs; and potentially more complicated technology failures.
- **Other Factors:** Effect on riding techniques, including slow-speed handling and obstacle-clearing skills; effects of increased speed on cycling in traffic and/or during group rides; technology-related factors, such as battery life and riding range; tactical considerations; and legalities.

What is an e-Bike?

The first step in selecting an e-Bike is to learn the legal definition. Per U.S. federal law (U.S. Public Law 107-319 in 2002; 15 USC 2085, SEC. 38. (b)), "For the purpose of this section, the term 'low-speed electric bicycle' means a two- or three-wheeled vehicle with fully operable pedals and an electric motor of less than 750 watts (1 h.p.), whose maximum speed on a paved level surface, when powered solely by such a motor while ridden by an operator who weighs 170 pounds, is less than 20 mph." In the words of People For Bikes' Morgan Lommele, it is a "Bike with a Boost". E-Bikes are regulated by the Consumer Products Safety Commission (CPSC) as consumer products. More specifically, they are subject to the same regulations that govern conventional, human-powered bicycles – NOT motor vehicles, which are regulated by the National Highway Traffic Safety Administration (NHTSA).

This is where things can get confusing. Federal law DOES NOT preempt any state traffic laws or vehicle codes that regulate use of e-Bikes. While some states regulate them as "bicycles," others do so as "mopeds" or other types of vehicles. To alleviate this confusion, and with the goal of establishing a nationally recognized, standardized definition, the Bicycle Product Suppliers Association (BPSA) and People For Bikes refined the federal definition as follows: "An electric bicycle is a bicycle equipped with

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Is an e-Bike Right for Your Bike Patrol?

(Continued from page 26)

loved these," Laux said. "Derek spoke highly of the Bosch battery life and motor, and the dual suspension was huge."

GBPD purchased three Cannondale Moterras with Bosch Performance CX motors and one Cannondale Contro-E Speed with a Bosch Performance Speed motor.

"E-Bikes give our officers the ability to respond quickly from a longer distance, and when they get there, they aren't exhausted – and an exhausted officer is a vulnerable officer," Laux said. "The e-Bikes with the electrical assist takes exhaustion out of the equation, so officers can be as effective as they would be coming out of a squad car."

Although police-grade e-Bikes have a higher price tag than a standard police mountain bike, Laux believes the benefits of an e-Bike outweigh the additional cost, and was able to finance his district's e-Bikes through a combination of

community fundraising and grants from organizations like the Wisconsin Public Service Foundation and Community Crime Prevention Grant Program.

"Most of our budget goes to wages and benefits, and that will be the case with many departments, but it comes down to how badly you want them and what you need to do to get them," Laux said. "It's a big commitment, but if other departments are serious about having a mountain bike program, there are grants out there, as well as generous community members and stakeholders who want to contribute to a way to enhance a police force."

Laux's vision is to staff all 14 community police officers with e-Bikes.

"I don't think there are limitations for this program," he said. "All it took for our department to get these e-Bikes was

PRODUCT GUIDE 2020



Trek "Police Electric" eMTB, with BOSCH Performance Speed



Photo by Susie Ochs

some enthusiasm and time. If you want it, there are no limitations, not even budget."

Claudia Wasko is General Manager of Bosch e-Bikes Systems Americas.

How to Select A Public Safety e-Bike

(Continued from page 27)

fully operable pedals and an electric motor of less than 750 watts.” Within their Model Electric Bike Law General Rules, they created the following class system:

- Class 1: an electric bicycle equipped with a motor that provides assistance only when the rider is pedaling, to a maximum of 20 miles per hour. This (and Class 3) is commonly known as a pedelec (derived from **pedal electric cycle**).
- Class 2: an electric bicycle equipped with a motor that may be used exclusively to propel the bicycle, to a maximum of 20 miles per hour. This is typically an e-Bike with a throttle.
- Class 3: an electric bicycle equipped with a motor that provides assistance only when the rider is pedaling, to a maximum of 28 miles per hour.

A current list of U.S. e-Bike laws, including a list of states which have adopted the model legislation, is maintained by People For Bikes (<https://peopleforbikes.org/our-work/e-bikes/policies-and-laws/>).

Selecting an e-Bike Type

Armed with the legal definition of an e-Bike and the knowledge of what is legal – or not – within its jurisdiction, an agency can begin the process of selecting the one – or ones – that best meets its needs. There are many makes and models available, but any e-Bike considered for use as a patrol vehicle must be of high-quality, from a reputable manufacturer, and, preferably, be designed and built to meet the specific needs of law enforcement. As is the case when selecting any other type of vehicle, there are several factors to first consider as part of a needs assessment:

- Riding surface(s)/environment(s)
- Frequency and duration of rides
- Type of riding/patrolling
- Weather and other environmental factors

The results of the above assessment will help narrow down the options to the technology that will best serve the agency and its members. The next phase should include a more thorough program assessment and intelligence-gathering phase. This phase should include:

- Seeking input from various sources, such as other agencies, organizations like International Police Mountain Bike Association (IPMBA), authorized e-Bike dealers, online resources, and subject matter experts.

- Testing and evaluating various makes and models, preferably for an extended period under various types of typical patrol conditions. Initial demonstration rides can be conducted at cycling industry events, retailers, the IPMBA Conference, and/or by borrowing or renting one. Longer-term demonstrations can be arranged with manufacturers, retailers, and distributors.

Selecting a Drive Unit and Class

After selecting the type of e-Bike, the next step is to decide which type of drive unit (motor) and class of e-Bike to use.

The three most common types of drive units are: **mid (or center) drive** (most common on eMTBs and, therefore, most public safety models), **hub drive** (rear or front hubs), and **bolt-on** (aftermarket conversion kits). There are advantages and disadvantages to each type of drive unit system. Here is a short, non-inclusive overview.

- **Mid (Center)-Drive Units:** Exclusive to pedal-assist. Rides and acts like a conventional bicycle, added weight is centered, promotes fitness, and tire changes are simple. Possibly places more torque on the drive system and lower frame components, and is typically more expensive than hub drive units.
- **Rear Hub Drive Units:** Better start up speed, chains do not wear out as quickly, limited maintenance, and the drive system is independent (if the chain and/or drivetrain is damaged, the e-Bike can still be powered). Does not ride like “conventional” bike, more weight in rear can negatively affect power slides, lurching can be a concern with some models, and rear tire changes are more complicated due to the motor connections.
- **Front Hub Drive Units & Bolt-on Motors:** More weight at the front of the bike may affect steering and handling and make lofting and slow speed techniques more difficult. Bolt-on motors and after-market front wheel motor units are cost-effective ways to turn a conventional bike into an e-Bike, but conventional bikes may lack the sturdier frames, rims, hydraulic braking systems, etc., necessary to support e-Bike operations.

- **Class:** For some law enforcement agencies, the best choice is a Class 3 e-Bike. Having an extra eight miles per hour for of speed on demand could make a difference in getting out of a “kill

zone” or responding to an “officer needs immediate assistance” call, making the additional \$1000+ money well spent. However, Class 3 e-Bikes may face more restrictions with respect to access to certain transportation facilities (such as bike/pedestrian trails), so the patrol environment must also be considered.

As alluded to previously, the brand and model of the drive unit and bicycle are important factors with respect to quality, longevity, customer service, availability and reliability of parts and service, etc.

Other things to consider when selecting an e-Bike include, but are not limited to, ease of use, warranty (bike frame, motor, and battery), ability to add accessories, aesthetics, ease of transport, security and storage.

Training

Regardless of the make, model, and type of e-Bike selected for public safety use, training is essential. E-Bikes are heavier and afford even the average rider the ability to travel further and at faster speeds. The International Police Mountain Bike Association (IPMBA) currently recommends that patrol personnel first complete a police cyclist course on a conventional bike and then undergo additional training to learn how to safely and effectively transfer their skills to an e-Bike. This will help reduce the risk of injury and property damage and ensure the cyclist is properly trained to operate an e-Bike in the line of duty.

Clint had a 24-year career in law enforcement with the Los Angeles County Sheriff's and Riverside Community College District Police Departments. He has been an active California POST-certified Bike Patrol Instructor for 24 years, teaching throughout Southern California. He has taught and presented at several International Police Mountain Bike Association (IPMBA) Conferences, most recently on the subject of e-Bikes and public safety. Clint's e-Bike (electric bicycle) experience includes owning an eMTB, presenting and instructing to law enforcement officers and the community, and running errands and commuting. He also races eMTBs and patrols as a bike-mounted usher at his church. Clint currently serves as a member of IPMBA's e-Bike Task Force. He can be reached at clint.sandusky@gmail.com.

Photo courtesy Clint Sandusky.

Experimenting with e-Bikes: QuietKat and BULLS

by Ashleigh Rose
Colorado State University Police Department

Colorado State University (CSU), located in Fort Collins, Colorado, is home to 34,166 students as well as 8,000 faculty and staff members. In 2017, the CSU Police Department's bike unit started researching the options of transitioning their bike fleet from conventional bikes to e-Bikes. This was done in support of the Department's efforts to educate and enforce the University's growing population about alternative transportation (pedestrians, scooters & e-scooters, bikes & e-Bikes, low-powered scooter, cars, and everything in between) and to help maintain CSU's Platinum Status in the League of American Bicyclists' *Bicycle-Friendly Universities* program.

In 2018, the department purchased their first two e-Bikes: the QuietKat Denali and Apex. The bikes were selected because they were equipped with fat tires and have Class 3, throttle-driven motors. Two

officers were assigned these bikes to test them on their daily bike patrol shifts and during football tailgate party enforcement. CSUPD sent three officers to the 2019 IPMBA Conference in Fort Worth, Texas, to attend the Bicycle Response Team Training (BRTT). Two of the officers brought the QuietKats to test their suitability for bicycle response team operations.

The officers found the QuietKats to be a great tool for community interaction. The throttle provides a quick response to calls and traffic stops with little to no effort from the officers. Additionally, the fat tires are great to have for all terrain types and weather conditions.

Unfortunately, the QuietKat Apex weighs approximately 75 pounds (34 kg) without additional gear. This weight created extra challenges for the officers during the BRTT. The QuietKat was great for rolling forward or blocking out individuals, but not ideal for lifting, dragging, or tight maneuvering. The officers also found out these bikes did not hold up to the kind of daily riding done by the officers.

With the help of the CSU Alternative Transportation Fee Advisory Board, CSUPD was granted the funds to purchase three additional e-Bikes, fully equipped for patrol use. CSUPD worked with Small Planet E-Bikes in Longmont, Colorado, to demo and eventually purchase the BULLS Sentinel.

CSUPD's bike fleet now consists of five BULLS Sentinels and the two QuietKats. The Sentinels are assigned to CSUPD's five bike officers for regular use, and the QuietKats are pool bikes which the bike officers can check out if they want to use the fat tires in bad weather. Additionally, each bike officer is assigned a conventional Fuji police bike.

CSUPD's bike unit plays an active role in community safety. The bike unit also serves as the University's Tailgate Enforcement for all football games, with the help of the Larimer County Sheriff's Office (LCSO) Bike



Photo by Scott Parr

D Allen with e-Bike during IPMBA Bicycle Response Team Training



CSU officers with the QuietKat Apex and Denali



D Allen with the BULLS Sentinel

Unit and Loveland Police Department's (LPD) Bike Unit. The e-Bikes have played an essential role in the bike unit's success at large events. They enable the bike officers to out-maneuver and arrive more quickly than any patrol car and ATV on the CSU campus during major events.

The Sentinels propel the bike officers across campus within minutes and can easily maneuver through the dense pedestrian and bike traffic that floods the campus during class changes. During routine enforcement, they have enabled the officers to catch up to all modes of transportation with ease and little fatigue, which was not the case with the conventional bicycle.

The CSUPD and LCSO bike units are working towards creating a regional bike team using BRT as their basis and the e-Bike as a tool. Since the IPMBA Conference, the CSUPD has employed their BRT skills at both university football games and the Turning Point USA Event. Their plan is to continue to train team members and apply BRT techniques and tactics whenever the bike unit is deployed for events.

Ashleigh is employed at the Colorado State University Police Department (CSUPD) in Fort Collins, CO, and currently holds the rank of Corporal. During her thirteen years as a member of the department, she has worked in Patrol and the Support and Events Division. Her focus has been building the department's bike unit and defensive tactics team. She is currently the bike unit supervisor, joining the unit in 2009. As a native Coloradoan, her love is for the Rocky Mountains, where she adventures with her husband and four children. She can be reached at ashleigh.rose@colostate.edu.

Photos courtesy CSU except as otherwise noted.

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Benelli Public Service e-Bike: Built for the Job

by Eric Barnes, *EMSCI #400-B/PCI #1908-B*
Cypress Creek (TX) EMS/Montgomery County
Constables Office Pct. 3

With e-Bikes slowly but surely making their way into public safety cycling, Cypress Creek EMS (CCEMS) has added five Benelli Public Service e-Bikes to its fleet. Benelli, which has been manufacturing motorcycles since 1911, introduced its first e-Bike to the European market one hundred years later, in 2011. They broke into the US market in 2018 with the creation of a new rear hub drive e-Bike specifically designed for public safety cycling.

Members of the CCEMS team were initially introduced to this product at the 2019 IPMBA Conference in Fort

the bikes would be an asset to our organization.

Since taking delivery of our new bikes in August of 2019, we have deployed them at numerous events. With nothing but big smiles and positive feedback from the riders and the public, we have even converted a few skeptics. The Benelli platform enables our medics to ride further, longer, and respond faster to emergency incidents. The increased time we spend on the bikes gets us out in view of the public more often and encourages more interaction with the people we are there to support. The Benelli e-Bike is frequently a conversation piece among the general public as well as other public safety

or perform essential law enforcement functions. This in turn increases officer and medic safety and efficacy.

Some call riding the e-Bikes “cheating”. Well, to them I say, “If you ain’t cheatin’, you ain’t tryin’”. In this line of work, if some gee-whiz new thing makes the performance of my duties easier, I’m all in. With that said, there are times while riding slow-speed, such as in crowded areas, you have to pedal with no power assist. The Benelli is not difficult to ride without the assist, but the added weight of the bike made it feel at times like I was one or two cassette gears too high.

Switching the power assist off when riding slow in high pedestrian traffic areas and turning the controller off when dismounted will extend the battery life during a shift. I got into the habit of switching the controller off and on when dismounted due to the bikes’ auto-off feature. That way, when I mount the bike, I know it has been turned back on and I am ready to respond.

The Benelli Public Service e-Bike is designed and built specifically for public safety cyclists. The integrated rear rack frame adds stiffness to the frame and supports more weight than aftermarket products. The adjustable stem facilitates use as pool bikes because individual riders are able to make adjustments for comfort and rider efficiency. The tires offer a good balance of fast-rolling, small block tread in the center and larger side knobs for grip. The tires are 2.8” wide and feel stable when riding at higher than conventional bike speeds. You just need to be careful in harder leaning corners on paved or hard-packed surfaces as the tires do feel and act more like a knobby, trail-style tire.

One of the unique features of this bike, being purpose-built, is the integrated safety equipment. The headlight/tail light, emergency lights, and horn (yes, it has a motorcycle

(Continued on page 32)



Matt Tomlinson and the Benelli e-Bike

Worth, Texas. Two weeks later, a demo model was at our facility for use during the Memorial Hermann Ironman Triathlon, which was held on April 27th. I spent 18 hours riding the bike in conditions ranging from crowded spectator areas (using no supplemental power) to open routes on the course, using power to move from section to section making emergent responses. The bike performed well and made my long day much easier. Based largely on our experience at the Ironman, we decided

professionals. With the motor located in the rear hub rather than in the center of the bike, most people don’t immediately recognize it as an e-Bike.

The eye-opener for everyone we talk to is when we explain that the e-Bike enables us to respond more effectively to serious medical or traumatic emergencies and in-progress calls. Additionally, when they arrive on scene, the riders are not spent. With plenty of “gas in the tank”, they are able to perform any treatment required

Benelli Public Service e-Bike

(Continued from page 31)

horn) are all powered by the same battery that powers the motor. All of the wiring runs internally, which keeps the appearance of the bike very clean. The lighting system is comprised of a three-light cluster with a large center (white) headlamp and two smaller emergency lights (red/blue). The emergency lights have two flash patterns controlled with via a left side, handlebar-mounted controller

Since it can't be sunshine and rainbows all the time, here are some relative downsides. The bike weighs more than a conventional bike, so certain tactics and techniques are more difficult. A stair carry for EMS would be a challenge and might necessitate an alternate route to the patient or a two-person carry. Law enforcement officers who perform BRT skills that involve lifting the bike, such as forward at the half step, will find it more physically demanding. Currently, the bike is only offered in two frame sizes, medium and large. The top rack frame is integrated and strong, but it is slightly wider than a typical frame, which makes mounting some one-piece bag/pannier sets difficult. Also, the battery location under the top rack frame causes a top rack bag to sit higher, which makes mounting and dismounting more challenging for "vertically challenged" riders.

The battery has a locking feature; once slid onto the track and seated, a pin locks the battery in place with a key. Each bike comes with two keys; however, each bike is keyed differently. This makes sense for individuals but does not work as well with pool bikes.

The cost is another relative negative; however, when compared with the cost of a conventional bike from a reputable manufacturer equipped with mid-range components and racks, bags, lights, etc., the cost of the Benelli e-Bike is only marginally higher. The integrated headlight, taillight and emergency equipment are included in the base price, which is still significantly less

expensive than many other public safety oriented e-Bikes.

One of the best parts of this purchase has been the level of customer service and technical support we have received. Any questions or concerns we have had thus far have been answered without undue delay, usually with a quickly returned phone call or email.

The Benelli team has truly gone above and beyond to make this bike work for EMS as well as for law enforcement. Based on input from us and other testing agencies about the first-generation model, Benelli made several changes to the design and manufacture.

We requested a rear-mounted kickstand to support the heavier EMS gear and panniers and that they add an attachment point to the top rack frame to secure the lower pannier hooks, which they did. We also suggested that they upgrade the braking system. Benelli upgraded the discs from 180mm to 203mm, adding a little more "whoa" to balance out all the e-Bike "go". Several other upgrades were made to the second generation e-Bike, and it is now even more well-suited for public safety use.

The Benelli Public Service E-Bike currently retails for \$1998. Color, size and identification labeling options are available. For general or purchasing information, contact Ron Toler with Benelli North America at 1-800-832-2966 ext 800, or by email at usasales@benellipolicebike.com.

Benelli Public Service E-Bike	
Key Specifications	
Frame:	27.5" Aluminum Alloy 6061
Brakes:	203mm TEKTRO Hydraulic Discs
Derailleur:	Shimano Acera 1 x 9
Front Suspension:	SUNTOUR XCT 29"
Tires:	27.5 x 2.8 WTB Trailblazer
Rims:	36-spoke
Rear Rack:	Frame Welded, 88-lb Capacity
Saddle:	Selle Royal Comfort Gel
Handlebar Mount:	Adjustable -10° to +50°
Pedals:	Metal w/Adjustable Studs
Electrical Controls:	Motorcycle style: Fully Integrated with System Battery
Headlight:	2400 Lumen, 4 LED
Flashers (F/R):	Red/Blue LED Flashers
Stoplight (R):	Red LED, Flashing
Horn:	110dB Motorcycle Style
Additional Features:	Motor and Derailleur Protection
	Rock Bros Bags with Panniers
	Rear Mounted Side Stand
	Multi-tone Siren
Performance	
Max Assisted Speed:	22 mph
Range at full charge:	Up to 40 miles
Power Assist:	3 Levels
Net Weight:	44 lbs
Charge Time (max):	4 hours
Battery:	36V/10.4AH Lithium-Ion
Motor:	350W rear hub
Rated Power:	500W

Eric is currently a Special Operations Specialist for Cypress Creek EMS (CCEMS), where he is the Team Leader for a multi-jurisdictional special operations group. He is a course coordinator for multiple trauma courses for the National Association of Emergency Medical Technicians. He is a deputy constable with the Montgomery County Constables Office Precinct 3, a commissioned peace officer since 2011, and has been in EMS since 1999. He speaks nationally on public safety training and specializes in tactical emergency medicine and tactical operational medical support. He can be reached at ebarnes@ccems.com.

Photo courtesy Cypress Creek EMS.

Stealthy and Mobile, e-bikes Gain Traction Among Law Enforcement

Weapons of Mass Rotation

by Dean Yobbi,
Bicycle Retailer and Industry News (BRAIN)
August 9, 2019



YUCAIPA, Calif. (BRAIN) — While the number of agencies using e-Bikes is unknown, a police bicycle safety group said their adoption is “growing rapidly,” further fueling the e-Bike market. That’s leading to opportunities for suppliers and retailers, and the need for patrollers to update their training as more officers navigate bikes with top speeds of 28 mph and weighing an average of 50 pounds.

With more than 12,000 police and 3,000 sheriff’s departments nationwide, the Bureau of Justice Statistics currently only tracks the number of bike patrols, not which type of bike or how many are used. Maureen Becker, the International Police Mountain Bike Association’s executive director, estimated about 4,000 police departments, sheriff’s offices and campus law enforcement agencies use bikes in some capacity. Some park and forest rangers also use bikes and e-Bikes.

While hard numbers are hard to find “it appears that e-Bikes are gaining in popularity based on the volume of news stories about agencies either buying or accepting donations of e-Bikes as well as inquiries from our members and instructors regarding such topics as equipment selection, training and operations,” Becker said.

Chief among those agencies going electric is the Los Angeles Police Department, the third largest force in the U.S. It began converting its 500-bike fleet to e-Bikes last year. With the LAPD’s input, Bulls Bikes created the Bosch-powered Sentinel police e-Bike model.

“We were confident that we could deliver, and we had a comparable if not superior bike to our competitors,” said Adam Anderson, assistant manager of sales and marketing at Bulls Bikes. “It’s good for the market and good for our business.”

Headlined by the Sentinel, the Bulls e-Bikes making up the LAPD’s fleet would sell for \$4,099-\$5,299. Anderson declined to say how much the LAPD paid because “this is a special case because of their closeness to the project.” Bulls e-Bikes are available only through specialty bike stores.

Anderson said several additional police forces, including those from the District of Columbia and Las Vegas, have shown interest. Other brands with police e-Bike models include Trek, Raleigh, Pedego, IZIP and Detroit Bikes.

As for repairs and maintenance, agencies usually establish a contract with their dealer. It includes repairs and semi-annual to quarterly adjustments, Anderson said.

Becker said retailers shouldn’t necessarily count on large group sales if interest continues.

“More than half of the police departments in the United States have fewer than 10 officers, so they are far more likely to sell one or two bikes at a time, not dozens or hundreds,” she said. “Their focus should be building on long-term relationships. Some manufacturers seem to view selling to police departments as a get-rich-quick scheme, but that is not the case.”

While it might be true you never forget how to ride a bike, navigating an e-Bike efficiently and safely comes with some risks for officers.

That means not only getting officers up to speed quickly, but getting them to and from the scene safely. National certification is not required, and training is left to each agency. Clint Sandusky, a retired Los Angeles County Sheriff’s Deputy who organizes e-Bike workshops for IPMBA, said training is “essential.”

IPMBA recommends personnel complete a police cyclist course on a pedal bike before additional e-Bike training. The LAPD requires officers to complete a pedal bike patrol course before taking a one-day e-Bike course. Sandusky, a California POST-certified bike patrol instructor since 1994, said officers need to be able to master slow-speed handling and obstacle clearing.

E-Bikes allow officers to respond faster with less fatigue, expand their range and enhance community engagement. Their stealthy nature is what attracted the City of Bend (Oregon) Police Department to

purchase four e-Bikes recently. Sterling McCord, owner of Bend Electric Bikes, sold two Sentinels to the force, in addition to several accessories.

“(Officers) say, ‘I’m driving around the corner and a guy is stealing a car stereo and hears me roll up in my police cruiser before I’m even on the scene,’” McCord said “‘And he goes and hides behind a tree, and I drive right by him. Then he goes back to stealing radios.’

“They’re excited about that stealth component (to e-Bikes).”

So much so that McCord upgraded his officers’ bikes to quieter freehubs.

LAPD Sgt. Shannon Geaney was one of two officers assigned on e-Bikes during the Hollywood Division’s New Year’s Eve deployment in 2018. She credits it for getting her to the scene of an active shooting quicker because she could avoid the gridlock of the festivities.

Acceptance of e-Bikes was slow in coming, according to Michael Espejo, owner of Police Bike Store, which sells bikes and accessories online. He blames a lack of training and early reliance on rear hub motors.

“With the advent of the mid-motor systems, utilizing regular rear wheels that are easily swapped out if need be and feel much better when riding, the police began to adopt e-Bikes and see the benefits of them during patrol,” he said. “The pedal-assist technology has also greatly assisted with this.”

Espejo said because of higher initial cost, many agencies need training and education before investing, making it critical for retailers to have demo units.

Ben Serotta, who consults with e-Bike sharing companies and owns The Serotta Design Studio, pumped the brakes on the outlook of the police e-Bike market.

“In general, police departments globally are seeing small, light, quiet and cheaper transportation alternatives to cruisers as a smarter alternative in many congested-area applications,” Serotta said. “There are still forces that don’t fully understand all the advantages. ... So enlightenment comes at a different pace in different locations.”

A version of this story appeared in the August 1, 2019, issue of BRAIN.

Photo courtesy Bicycle Retailer and Industry News (BRAIN).

by David Cohen

Maryland National Capital Park Police Reserve Unit

If you're fortunate to be in a department that has a motorcycle unit, you have probably noticed the immaculate condition in which the motorcycles are kept. Every part is shined to perfection, every blemish is fixed, and it would probably be cleaner to eat your meal atop its fuel tank than on one of the tables in the break room at the station. While part of this cleanliness is for show, there certainly are several mechanical benefits. A clean motorcycle is not only easier to work on, but it

is also easier spot problems, such as oil leaks, when the motorcycle is clean.

One would think that the importance of cleanliness would "trickle down" to the motorcycle's baby brother, the public safety bicycle. While I am sure there are some departments and officers who keep their bicycles in "inspection condition", the public safety bicycles I see are usually a bit tattered and worse for wear. Besides having accumulated dirt and grime, decals are torn, and paint is often chipped. Officers that are interested in joining a bicycle unit might find their enthusiasm dampened when they see the appearance of the bicycles.

For a bicycle, maintaining a clean appearance is surprisingly easy and takes only a little bit of effort and expense.

Purchasing a set of automotive or motorcycle detailing brushes of varying sizes and stiffness is all one really needs to get started. The bike can be brush-cleaned while dry; there is no need to get soap, buckets and rags. Brushes with soft bristles work well to clear dust off the bikes, whether that dust was picked up from storage or from riding. Stiffer bristled brushes can be used to knock off accumulations of mud or thicker layers of grime. Smaller bottle-brush type brushes are great for getting into hard-to-reach spaces, like the front derailleur and the area at the intersection of the seat tube and chain stays. You would be amazed at what working with a detail brush kit can do for the appearance of a bicycle.

The majority of public safety bicycles have aluminum frames. The majority of police bicycles are painted black. It is very

noticeable when the paint gets chipped or scratched and the underlying aluminum is exposed. A quick, temporary method of covering up scratches or chips is to use your trusty Sharpie. Again, this is only a temporary fix. Painting over aluminum using touch-up paint or model paint is an iffy proposition, and the results seldom last. The best product I have found for touching up aluminum-framed bicycles is the One Shot Striping Enamels. It is the choice of artists who paint the nose art on various vintage aircraft restorations, and, you guessed it – the skin of those planes is made from aluminum. I figured if it is good enough for vintage aircraft, it is more than good enough for touching up aluminum-framed bicycles. A four-ounce can, the smallest size, is sufficient for years of touch-ups. Paintbrushes can also be purchased fairly inexpensively. Typically, the touch-up is good enough, but if you really want to shoot for perfection, doing a bit of wet sanding with a fine grit sandpaper, no less than 1000 grit, followed by brushing on a bit of clear coat will help you match the surrounding paint.

Most decals on public safety bikes are white. With some of them, it is easier to use a bit of white paint to fill in the chips and gouges than it is to replace the entire decal. Again, the One Shot Striping Enamel, applied with a very small brush, comes in handy. Replacing the entire decal is possible – and at times necessary – but it is a more involved process that includes heating and removing the old decal and placing a new one precisely. Some manufacturers offer replacement decal sets if the existing ones are damaged. Availability varies from manufacturer to manufacturer, and some manufacturers may not be able to replace the decal sets from older models, so look before you peel. Reproduction decal sets are available from some internet suppliers. Replacement decals can run anywhere from \$10 - \$30, depending on the material and size.

Another option, albeit a more expensive one, is to purchase a stencil maker/cutting tool such as the Silhouette Cameo. The stencil maker will cut out vinyl lettering that can be applied to the bicycle, such as the "POLICE" lettering on the top tubes. It is probably a bit much for just fixing up bicycles, but it may be useful for other items such as vehicle lettering, so perhaps the acquisition of such a product could be shared by the entire department to make it financially feasible.

A bike that looks clean and well-maintained not only presents a professional image to the public; it can be a point of pride for the bicycle team. It can also help attract and retain officers for the bicycle unit. Companies hire cleaning services and periodically repaint and redecorate their offices. It helps set the tone for the work environment. Likewise, clean and professional-looking bikes will help set the tone for the bike unit.

Gears & Gadgets is a blog written by David Cohen #1116. It features various repair tips and tricks that David has picked up in nearly 25 years of cycling, including 12 years of public safety cycling. Gears & Gadgets will also periodically review some of the latest "gadget" items of potential interest to public safety cyclists. The advice and opinions in this column are solely the author's and should not be interpreted as IPMBA mandates or recommendations unless explicitly stated.

About the author: David Cohen is a 12 year volunteer with the Maryland-National Capital Park Police. When he isn't riding or tinkering with bicycles, David can be found tinkering with vintage cars or World War II airplanes. An avid historian, David enjoys researching and writing as well. He can be reached at onyxax@aol.com.

Photos by David Cohen.



Decals before



Touch ups



New decals in place

DONATE TODAY!

This newsletter comes with our best wishes for good luck and good health as we weather the COVID-19 crisis. At times like these, it is even more important than usual for us to band together, not only for our own safety, but also for that of the communities we serve. The bicycle affords essential fresh air and exercise, a patrol vehicle that is easy to keep clean and sanitize, and an effective means of public safety service delivery.

We expected to be celebrating our **30th Annual Conference** this year, but alas! That is not meant to be. Instead, we will be redoubling our efforts to complete the third edition of the **Complete Guide to Public Safety Cycling** and other ongoing projects. However, the loss of conference revenue and class cancellations will strain our finances and could hamper our ability to continue to provide you with the resources and support you expect and deserve.

Since 1991, IPMBA has been the driving force behind public safety cycling. Today, bikes are used in nearly every facet of public safety. IPMBA unites a diverse group of public safety cyclists to share knowledge and expertise, which in turn helps us to advance the profession of public safety cycling.

We produce the excellent, information-filled **IPMBA News**. We work closely with manufacturers to help ensure that their products meet your needs and encourage them to

enroll in our **Product Purchase Program**, through which our members are eligible for discounts on a variety of products for personal and professional use.

We author publications ranging from educational materials to model policies and our signature work, the **Complete Guide to Public Safety Cycling** and the accompanying curriculum. We usually offer the only **training conference and product exhibition** designed exclusively for public safety cyclists, and we'll be back in 2021!



We host a **resource-packed website** (www.ipmba.org) and **FaceBook** page to help you keep pace with public safety cycling news from around the world. We offer outstanding **networking opportunities**, through our live events and via IPMBA HQ, which serves as your **information clearinghouse** and referral point.

IPMBA has a lot of practice operating on a shoestring budget, but that string is going to be a little thinner for the foreseeable future. If you are in a position to do so, please make a **tax-deductible contribution*** to help us keep those wheels turning!

**If you take the standard deduction on the 2020 tax return you file in 2021, you can claim an "above the line" deduction for up to \$300 in donations made to charity in 2020.*

Thank you for your support of IPMBA and public safety cycling!

Please remember IPMBA in your giving plan.

Your support will help us continue to develop world-class training and resources for public safety cyclists.

When it comes to police, EMS, and security cycling and Bicycle Response Team ops, IPMBA's got your back!

I support IPMBA's efforts to continue to offer resources and training for public safety cyclists in the wake of COVID-19.

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Keeping the Wheels Turning!

IPMBA is very fortunate to have a committed, dedicated membership. Many of our members realize that our very reasonably priced membership dues only go so far to keep the association's wheels turning. While we appreciate all of our members and donors, we want to recognize the following individuals for having donated to IPMBA for at least five years. Many thanks for your ongoing support and vote of confidence!

Scott Anderson, Los Angeles Fire Dept., Los Angeles CA; **Michael Anderson**, Saint Louis Metropolitan Police Dept. (Ret.), Saint Louis MO; **Jim Bowell**, Troy Fire Dept. (Ret.), Troy OH; **Arthur Chatman Jr.**, Armed Security on Bikes, Houston TX; **Dwight Edwards**, Cabell County EMS (Ret.), Huntington WV; **Donald Erb**, Lancaster City Police Dept. (Ret.), Lancaster PA; **Robert Ferguson**, Howard County Fire & Rescue, Columbia MD; **Alan J. Friedland**, Moline Police Dept., Moline IL; **Michael Joseph Gagliardi**, University of Mary Washington Police Dept., Fredericksburg VA; **Brian Gillman**, Cypress Creek EMS, Spring TX; **Artie L. Gonzales**, Topeka Police Dept. (Ret.), Topeka KS; **Alex Gorme**, Los Angeles Fire Dept., Los Angeles CA; **Thomas Harris**, East Baton Rouge EMS, Baton Rouge LA; **Michael Langdon**, Queensland Dept. of Transport and Main Roads, Brisbane QLD; **Craig Lepkowski**, Lake Forest Police Dept., Lake Forest IL; **Martin A. Martinez**, Albuquerque Public Schools Police Dept., Albuquerque NM; **Neal Mitchell**, San Antonio Police Dept. (Ret.), San Antonio TX; **Wren Nealy, Jr.**, Cypress Creek EMS/Waller Co. Sheriff's Office, Spring TX; **Stephen Noftz**, O'Bleness Hospital Safety & Security, Athens OH; **Gregory Parsons**, Leesburg Police Dept., Leesburg VA; **Alberto Santiago**, Rochester Police Dept., Rochester NY; **Jason D. Schiffer**, Lehigh University Police Dept., Bethlehem PA; **Ronald Schlegel**, Allentown Police Dept., Allentown PA; **Frank Shaw**, Bremerton Police Dept., Bremerton WA; **Alan L. Simpson**, Pompano Beach Police Dept. (Ret.), Greenwood IN; **Richard Sulfsted**, Cincinnati Police Division District 4, Cincinnati OH; **Michael A. Wear**, Metropolitan Police Dept. (Ret.), Washington DC; **Thomas Young**, Shippensburg (PA) Police.



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An Unimagined Farewell

by Todd Prevost, PCI #650 (former)
Lafourche Parish (LA) Sheriff's Office

It was the summer of 1999. I was one of three selected by my agency to attend the IPMBA Police Cyclist Course being instructed by then-Lt. Stanley Cospier of Tulane University Police Department, in New Orleans, Louisiana (NOLA). At age 23, I had only been in law enforcement for three years; this was an exciting yet very nervous time for me! It would be the first course I would attend since the academy, which is held by my agency. So not only was this my first supplemental career training, but it was also with an agency which was not familiar to me.

Reporting for the first day of that course was something I will never forget, mostly because we were sent there grossly underequipped. We had old bicycles that were two sizes too large and no bike patrol uniforms. We wore BDU pants and t-shirts with "SHERIFF" printed on them that we were able to pick up at a nearby law enforcement supply. The lack of preparedness was because bike patrol was new to our agency. The three of us had just been selected after applying for two newly opened positions as bicycle deputies. I can recall Lt. Cospier's big eyes and the smirk of disbelief on his face as he assessed our equipment; he even had to loan one of his bikes for use by our third counterpart.

The course was phenomenal. I couldn't get enough of riding or working obstacles. And the night ride was something to remember as we stealthily rolled through the dark and infamous Calliope Housing Development, littered with loiterers who stared in disbelief at all the bike cops. Vehicular cycling around the busy NOLA streets was unforgettable as well. So was riding the French Quarter and Riverwalk, where I can vividly recall our fearless leader, The Lieutenant Stanley Cospier, who, during a "follow-the-leader exercise" dismount to transition into a bike carry up a set of stairs had been stopped in his tracks as he literally ran into a fixed sign, which put him on

the ground (isn't it great when an instructor has a mishap?!). To bring the recollections of my IPMBA certification course to a close, my partner and I rode those ragged, too-tall, heavy bikes like no one else in the course; we excelled and from that point forward, there would be no stopping me!

Upon returning to duty, another deputy and I were assigned the full-time bike patrol duties; the third guy was listed as a supplemental rider, to be called upon as needed. I began my bike patrol assignment in September 1999 and it proved to be the best decision. It enabled me patrol flexibility, and my jurisdiction, roughly 20 miles wide and 100 miles long, provided more than enough variety of patrol areas. Whether I was working day or night, I loved my job. I was able to take part in countless special assignments/operations and ultimately created an entire new section designated the "POP Squad" (Problem Oriented Policing). Over the years, building on my successes as a bike cop, I attended many out-of-area schools relating to street crimes, high risk event planning, advanced SWAT, and my most coveted, the IPMBA Instructor Course.

In 2002, my-then partner and I reported to San Antonio, Texas, where we met the most outgoing T.J. Richardson and Shiner Bock (yes, the beer). T.J. would be our lead instructor for the course. We got an immediately sense of his personality when he promptly dubbed us "Boudreaux and Thibodeaux*", which stuck with us throughout the course. Naturally I passed the course and became IPMBA Police Cyclist Instructor (PCI) #650. I will never forget those times with T.J. and his co-instructor, the late Mike Goetz of the Seattle Police Department; the two complemented each other perfectly and made for a heck of a pair.

**Boudreaux and Thibodeaux are two fictional, humorous characters from Southern Louisiana experiencing life's trials and tribulations.*



Years passed and I conducted many courses, instructing public safety cyclists from all across Louisiana and Mississippi, ranging from police departments and sheriff's offices to military police. Our bicycle fleet was transformed from the raggedy old Mongoose bikes we certified with to twelve police bikes, including Fuji and my long-coveted favorite, Volcanic. Let me just add, getting approval to purchase new bikes at all – much less Volcanic – was no easy task considering none can be purchased from local bike shops. But I overcame the obstacles and was able to obtain four Volcanic bicycles for the fleet, two of which were purchased by donations for those specific bikes. Not only had we improved the quality of our bicycle fleet, but we were able to maintain it in exceptional working order in the in-house bike shop granted me after I completed the IPMBA Maintenance Officer Course in 2013. Even if maintenance lessons come at the cost of an ER visit when the brake rotor slices off your fingertip! See "Maintenance Lesson #1: Do Not Rush" in *IPMBA News*, Vol. 23, #1, Winter 2014.

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An Unimagined Farewell

(Continued from page 37)

Easter Sunday 2015, my wife, who was also an IPMBA-certified Police Cyclist (I can proudly add that she was the first female patrol lieutenant with our agency) was diagnosed with Acute Myeloid Leukemia (AML).

Her harsh treatments and long-term hospitalization forced me to slow down at work, remove all of the extras from my plate, and focus on her and the three children. After remission, the AML returned after only 10 months following her bone marrow transplant; she passed on December 20, 2016. The loss was difficult and the life adjustments were another thing to contend with; I had to step back from my involvement with so many things at work. This included my bicycle time and my ability to host courses of instruction.

I have never fully recovered my work flow with bicycle duties; when the oil field declined, our tax revenue suffered and we made a few cutbacks.

We consolidated two programs into one, the bike patrol section and the POP Squad section lost personnel, and what remained was dubbed the "POPcycle Patrol". We were still super-successful with the program despite it being only two people, the POP Squad guy and me; after all, I was one of the founding members of the POP Squad.

Now at 43 years old, I have parked my beloved white Volcanic Patrol bike, left my departmental bicycle shop, and hung up my duty belt. This February, a position opened for an Investigator at our District Attorney's Office. Our DA is our jurisdiction's first female DA and is well-known to us LEOs, having served many years as

an Assistant Prosecutor. Although I thought highly of the DA, when I heard about the open position, I was immediately dismissive since I was happy with my current POPcycle position, and a job change was not something I had been considering.



The option weighed on my mind. After just a few days, I was all about the possibility of a new opportunity and the ability to add another chapter to this career. I wanted the position so much, and hoped I could be a success there, just as my late wife had been when she created the Sheriff's "Safetyville" exhibit for the Bayou Country Children's Museum located in Thibodaux, La.

I interviewed on the evening of March 2, and within the hour, was notified I had been selected. This is when the weight of turning in my bike patrol status really struck me. So, for the time being, my legs will be idle and my buttocks will not be in a saddle for patrol. But I have hanging on my

walls nine certificates of commendation, two distinguished service medals, and a medal for valor, all of which I can attribute to my time in the bike patrol program, which molded me into the fine public servant I have become.

I look forward to the years to come working for my Sheriff and District Attorney as an Investigator; I look forward to setting the benchmark for the position so that when I leave, the next person will be nervous about trying to fill my shoes. I am sad, however; saddened that for the time being it will not be possible to attend another IPMBA Conference. I will remain part of the IPMBA family, and one day, I will again be a conference attendee and competition course competitor, perhaps when I reach the "old man" age category.

To the new bike patrol personnel, do good! The community will love you, your agency will realize the asset

you can be, and your career will be rewarding beyond what you can now imagine.

Todd attended the IPMBA Police Cyclist Course in 1999, the Instructor Course in 2002, and the Maintenance Officer Course in 2013. He also attended the 2007 and 2008 IPMBA Conferences in Baton Rouge and Indianapolis, respectively. During his tenure as an IPMBA Instructor, he taught approximately 20 IPMBA courses. In 2011, he was part of the effort to pass legislation recognizing police bicycles as emergency vehicles in the state of Louisiana. He can be reached at todd-prevost@lpsa.net.

Photos courtesy Todd Prevost.

THE ALLAN HOWARD AWARD FOR EXCELLENCE

NOTE: The Allan Howard Award will debut at the 2021 IPMBA Conference (dates and location to be announced). The deadline for nominations is March 1, 2021. Awardees will be notified by April 15, 2021. All nominations received for 2020 will be held for consideration in 2021.

Overview

The *Allan Howard Award of Excellence* has been established to recognize individuals who have taken exemplary action to further IPMBA's mission. It is presented during the IPMBA Conference to IPMBA members who have been nominated by a colleague and selected by the awards committee. There are two categories: law enforcement/security and fire/EMS. Honorees must be current IPMBA members and must be nominated by someone who is familiar with their contributions to public safety cycling. Self-nominations will not be accepted. Nominations may be for work within their own communities, on a regional level, nationally, and/or within IPMBA.

Allan Howard is a retired sergeant with the Dayton (Ohio) Police Department. Allan started his distinguished career in law enforcement in 1982 and retired in 2008. During his career, he held various assignments, including foot patrol, motorcycle patrol, Dayton Police Academy instructor, SWAT team member, patrol operations supervisor, Internal Affairs Bureau investigations supervisor, fleet manager, and founding member of the bicycle patrol and the Dayton Bike School. Prior to becoming a police officer, Allan served in the United States Marine Corps from 1977-1981 as a machine gunner.

From 1984 to 1997, Allan raced professionally as a United States Cycling Federation (USCF) and a National Off-Road Bicycle Association (NORBA) racer. He competed for DCC/Huffy, DCC/Huffy/Raleigh, Huffy/Hain Natural Foods and Chevrolet/LASD.

Allan is one of the founding members of IPMBA and was its first chair, serving from 1990 until 1997. He was a co-creator of the IPMBA Police

Cyclist Course and a co-author of the *Complete Guide to Police Cycling*, the first manual for public safety cycling. Allen has authored numerous articles about bike patrol and training for *IPMBA News* and other publications. He is a highly respected instructor who has trained more than 3,000 bike officers and still makes guest appearances to assist with classroom and on-bike sessions.

Nominations

IPMBA is seeking nominations for law enforcement/security officers and fire/EMS personnel who have gone above and beyond in their support of public safety cycling.

To be eligible, a nominee must be a volunteer, part-time or career law enforcement, security officer, firefighter or emergency medical provider who is actively involved with department-based bicycle operations. Nominees must also be current IPMBA members.

Please describe, in detail, initiatives and/or actions undertaken, developed, and/or performed by the nominee that demonstrate their outstanding dedication to public

safety cycling during the past calendar year or over the course of their affiliation with IPMBA. Efforts may include, but are not limited to, creating or expanding bike operations within their agency and/or others, developing community outreach programs, working with local, state or national elected officials in support of bicycle-related legislative actions, participating with and providing support for IPMBA's projects, programs, and initiatives, etc.

Application Process

Download the *Allan Howard Award of Excellence* Nomination Form from the IPMBA website or email the Awards Committee at awards@ipmba.org to request one.

(Continued on page 40)

The *Allan Howard Award of Excellence* has been established to recognize individuals who have taken exemplary action to further IPMBA's mission.

THE ALLAN HOWARD AWARD

(Continued from page 39)

Submit the application, along with a nomination letter of no more than one page and up to five supporting documents (articles, letters of commendation related to the nomination, letters of recommendation, etc.), as well as a photo (if possible) to the Awards Committee no later than 90 days prior to the first day of the IPMBA Conference. For guidance on how to write a compelling nomination, please consult "How to Write a Compelling Nomination" on the Allan Howard Award page on the IPMBA website.

The Awards Committee will review all applications and, at their discretion, select up to two awardees, one each from the law enforcement/security and fire/EMS career fields. Award recipients will be notified after the selections have been made, at least 45 days prior to the first day of the IPMBA Conference.

The Allan Howard Award of Excellence will be presented during the IPMBA Conference. Awardees are encouraged to attend the IPMBA Conference to receive the award. The fee for a Workshop Only registration will be waived, but travel costs are the responsibility of the award recipients.

IPMBA Members on the Move

David Boe, formerly San Marino (CA) Police, now back with Los Alamos (NM) Police

Steve Kensinger, formerly Madison Village (OH) Police, now Geneva-on-the-Lake (OH) Police

Felipe Lopez, formerly Texas A&M University Police, now Bryan (TX) Police

Christopher McClurg, formerly Stephen F. Austin State University (TX) Police, now Lufkin (TX) Police

John Novela, Los Angeles (CA) Fire Department, retired

Todd Prevost, Lafourche Parish (LA) Sheriff's Office, after 20 years of bike patrol, is now an investigator for the District Attorney's Office

Jesse Ramirez, University of Texas El Paso Police, retired
Greig Samuelson, formerly Charleston County (SC) EMS; now Rutherford County (TN) EMS

Garth Smith, University of Utah Police, retired

INTERNATIONAL POLICE MOUNTAIN BIKE ASSOCIATION
BADGE ORDER FORM

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Let's Support Our Organization!

by Albert Jackson, SCI# 038
Atlanta (GA) Downtown Improvement District

Hello, my fellow public safety cyclists and members of IPMBA! I hope that all of you are staying safe while we work our way through these unforeseen and uncharted waters of service coupled with surviving in a time of risk and commitment. Like you, I am still on the front line of service to the community as "essential personnel", helping to maintain our district and continuing to live up to our mission statement: Keeping Downtown Atlanta Safer, Cleaner and More Hospitable.

In this time of service, I challenge all of you to help make sure that IPMBA remains at the forefront of training, information and leadership of public safety cycling. As you have heard, the 2020 IPMBA Conference has been cancelled. This will have a significant impact on the organization's financial situation. To help ensure another year of the service that we expect, I am asking each member who can to join me in an effort that is both grassroots and basic.

I am pledging to contribute \$100 each month for as many months as it takes to equal the amount that I would have spent for classes, workshops, and maybe even SOME of what I would have spent on the silent auction AND in the exhibit hall. (The hotel costs and meals just "ain't happnin'". My wife does look at the bank statement on occasion.) Just imagine how much it would benefit the organization to have these funds coming in without subtracting the overhead of paying our vendors first!

And if you could take some of the items leftover from previous conferences off their hands, that would help with cash flow also since these items have been paid for and are still in inventory. I know that some members may have cash flow problems, but those of us who are still essential, handling overtime and getting hazard pay may be able to spare a little bit to help the greater good. And it doesn't have to be in bulk.

If you can, I know the office and executive board would be grateful, and we as an organization would be stronger for your efforts. So, "Come on people! You didn't wake up this morning to be mediocre!" Join me in this challenge to sustain and grow IPMBA.

Be sure to renew your membership for 2020. Make the pledge to contribute to the organization each month for awhile. Get that conference jersey, hoodie, polo and that extra pair of socks that would not fit in your luggage going back home the last couple of years. I challenge you, and I pledge to see you next year on two wheels!



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Attention Arizona Instructors!



IPMBA Instructors in Arizona have been authorized to offer AZ POST credits for the IPMBA Police Cyclist Course! Please contact Cindy Sawyer at 602-774-9377 to request a Program Compliance Confirmation Form and submit a bio.

Instructors will be required to distribute the Program Compliance Completion Form (PA4) to eligible students upon course completion in order for them to obtain the credits.

Attention IPMBA Instructors: Information about Maintaining Instructor Status

Thank you for your support of IPMBA. We hope that you are weathering the COVID-19 storm both personally and professionally. We wish you strength and good health as you continue to protect and serve your communities.

We have received a number of inquiries about maintaining instructor status. As you know, in addition to keeping their memberships current, IPMBA Instructors are required to teach at least one approved course every 24 months in order to maintain active instructor status. If they are unable to do so, they have six months during which to complete a supervised co-teach, that is, teach with an active instructor, who must submit the reinstatement form with the balance of the course paperwork.

The COVID-19 pandemic has resulted in widespread cancellation of public safety training, including the IPMBA Conference and numerous IPMBA courses. This has negatively impacted those instructors whose 24-month teaching period or six-month co-teach period was scheduled to expire in 2020.

Because it may be impossible or illegal for instructors to conduct classes in the immediate future, the teaching period for all affected instructors will be extended by 12 months, using the date of the last course on file. This means that your new teaching period expiration date will still be dictated by the date of your last course.

For instance, if your last course submitted was July 2018, your last course date will be advanced to July 2019, which means your instructor status will go inactive at the end of July 2021 instead of July 2020 (if you do not fulfill the teaching requirement) and your co-teach period will be in effect until the end of June 2022.

As a reminder, your 24-month teaching period resets each time you submit course paperwork, so if you are able to teach a course in 2020, your instructor status will be active through the end of the corresponding month in 2022.

Should the crisis continue into 2021, additional extensions will be considered. Individual instructors may also submit requests for further extensions to the Education Coordinator, which will be considered on a case-by-case basis.

If you do not recall the dates of your last class and need to know your revised instructor status expiration date, please contact IPMBA HQ at info@ipmba.org to request that information.

We remain hopeful that those IPMBA Courses that have been cancelled will be rescheduled for later in the year, and those that have not yet been cancelled will be held as planned.

IPMBA remains committed to providing world-class training and resources to public safety cyclists and appreciates the continued support of our members and instructors.

Good luck and good health!

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(Continued from page 1)

obsolete. As we delved a bit deeper into the condition of the bike, we could have added “beyond economical repair” to describe its overall condition. Generally, once the department makes that determination, the bike goes off to the recyclers.

However, anyone who knows me, or has at least read my articles, realizes that I have a penchant for taking on personal projects involving the restoration of various types of vehicles. The thought that this was a surviving example of one of the earliest iterations of the Trek Police

offerings by adding an aluminum-frame option based on their Trek 7000 mountain bike.

Like many departments, the Maryland-National Capital Park Police had experimented with bicycle patrols in the 1970s utilizing the existing technology of the time, and like many departments, they found motorized vehicles such as scooters to be the better option. The department began experimenting with bicycle patrols again after having seized a purple Trek 7000 mountain bike during the arrest of a drug dealer in one of the local parks. The bike was tuned up and quickly brought up

to a reasonable police bike standard with the addition of a rear rack and other on-bike equipment. With the Trek 7000 now working for the good guys, and the concept of bicycle patrols proven effective, the department ordered two Trek police bicycles from a local bicycle shop.

Bike 904 was one of those two bicycles. It was originally assigned to Officer Kerry Dempsey, who worked in the Community Services Section. The bicycle and Community Services proved to be a good match, and the bike saw considerable duty, from bike rodeos and community events to patrolling hiker/biker trails.

Upon Officer Dempsey's retirement, the bike passed through a number of other officers' hands before being relegated to wallflower status. For some unknown reason, it was still kept in the inventory despite being largely obsolete by the year 2000, let alone 2019.

904's story is rather uncommon. Most police bikes were used for their intended purposes and sent off to recyclers once their service days were over. A few were stripped of their police gear and markings and sold as surplus, but almost none of them were preserved for historical purposes. Bike 904 inexplicably survived for almost 25 years. While built when the modern public safety bike renaissance was well underway, 904 is an excellent example of a first-generation public safety bicycle. As such, it provides us with perspective on just how far public safety cycling has moved forward from the past.

Teardown, Cosmetics, Reassembly

The first step of a bike restoration project is to take the bike apart, all the way down to the frame. This provides a solid assessment of what can be salvaged and

what needs to be replaced. Overall, 904 was in pretty decent shape. The tires were brand new – they still had the little rubber tags – and the tubes held air. The cables and cable housings were shot, and the brake pads needed replacement.

What surprised me the most was that the bearing race for the top part of the threaded headset was integral to the frame. I had not seen that before; on most other bikes, the threaded headset utilizes bearing cups. Removing the cables from the first-generation grip shifters was much more difficult than it needed to be.

One thing was clear – whoever rode this bike after Officer Dempsey must have been a fairly large individual with a rather poor riding technique, preferring to mash the pedals in a high gear rather than spinning. The wear on the middle chainring on the front was worse than what I'd seen when I used to ride singlespeed. One of the cogs of gear #6 was snapped off, the chain had an unmistakable twist in it, and the left side pedal would not come out of the crankarm, despite my trying every trick in the book, from breaker bars to a butane torch.

Certain parts, like the bottom bracket and the rear hub, were in surprisingly good shape. It goes to show you that these early sealed bearing units did what they were designed to do. Curiously, the front hub did not preserve as well and rolled very roughly.

Cosmetically, the bike was in fairly decent shape, though the paint was chipped in places and the decals were all torn up. I was able to touch-up the chipped paint, and I ordered replacement “TREK” decals from a vintage decal supplier. I made my own “POLICE” decals using a stenciling machine. Finally, I wet-sanded and clear-coated the entire frame to preserve the original finish.

After addressing the cosmetics, I began to tackle the rebuilding process. This was a true nut-and-bolt restoration. Every part was cleaned and refreshed, and slowly, Bike 904 began looking like a bicycle again. One of the hardest tasks was plumbing the rear derailleur cable through the Grip Shift. It had to be run through the shifter in a very precise way to work. This eventually necessitated the removal of the handlebar grip so I could fully disassemble the Grip Shift pod and plumb the cable properly.

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Bike 904 and the Seized Bike

Bike piqued my interest. I put in a request for this bike to be preserved for historical purposes. As usual, it took quite a bit of time for the request to make its way through the departmental bureaucracy, but much to my surprise and delight, the request was approved. Not only was it approved, but I was also given two more Trek Police bikes that, although they were somewhat newer, they were still deemed obsolete and beyond economic repair. I set the two other bikes aside and went at Bike 904.

A Little Bit of History

With the rebirth of the public safety cycling in the 1980s, several manufacturers began marketing public safety-specific bicycles. In most cases, these were civilian mountain bikes given black paint jobs, white POLICE decals, and a non-ratcheting rear hub. Trek was no exception. While Trek had marketed an aluminum-frame mountain bike as early as 1985, their first police bikes were based on the steel Trek 920. In the mid-90s, Trek expanded their police bike

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The balance of the rebuild was fairly routine. I serviced the front hub so it rolled smoothly, trued the wheels, and straightened out the twist in the chain. I installed new cables and cable housings and put new brake shoes in place.

Specifications

A lot of the components are similar, at least in name, to those on newer public safety bicycles, such as the Shimano Deore XT rear derailleur, Shimano Deore LX front derailleur, and Shimano hubs on Bontrager rims. You can find the latest iterations of these components on modern bikes. The tires are Trek Connection, part of their Matrix setup of wheels and tires. They are a very skinny 1.6 inches wide, only 0.1 wider than the slick tires I use on one of my old hardtails that I converted to a pavement/gravel bike. The main difference in the wheelset is that the rear hub had the standard bolt-on wheel, not a quick-release hub. That would come back to haunt me on one of the bike's shakedown rides when the wheel came loose and I had no means to tighten it back up with the tools that I normally carry with me.

The differences in the components do highlight technological advancements. Nowhere is this more evident than in the brakes. Bike 904 came from the factory with cantilever pull brakes. Cantilevers were an evolution of the center-pull calipers that were popular on many higher end 10-speed bikes, but with a simpler mechanism. The theory behind the cantilever brakes was sound – having both brake shoes engage the rim at the same time. The stopping power was considered decent for its day, but the development of linear pull brakes and disc brakes with their far greater modulation and stopping power soon rendered the cantilever brake obsolete.

The Sugino crankset is a bit of a curiosity. It is your standard mountain triple, but the gearing was up-rated from the standard 22/33/44 to a 24/35/46 to give the bike a bit more on the top end. The cranks are connected to a square taper bottom bracket. The old square taper is a tried-and-true design, and still can be found on many lower to mid-range bikes today. The industry tried to get away from the square taper with the advent of the ISIS splined bottom bracket, which turned out to be a huge misstep. The ISIS splined bottom bracket had a fatal shortcoming in its design that resulted in premature failures of the bottom bracket bearings.

So, the industry returned to the good old square taper bottom bracket and then developed the external bearing bottom bracket for higher-end bikes.

The rear cassette is a seven-speed unit. The 11-32 gear spread is still similar, but the jumps between gears are far more noticeable than what you experience with a nine-speed unit. Controlling the derailleurs are SRAM Grip Shifts. The Grip Shift was a response to those who found trigger-shifters confusing. In 1996, Grip Shifts were still a relatively new technology, and it shows. While the shifts were accurate, the shifters feel very heavy and clumsy compared to modern Grip Shifts, let alone trigger-shifters or electronic shifters.

Up in the front, the chromoly fork is attached to the frame via a threaded headset. Threaded headsets are still used on some lower-end bikes, but they certainly lack the smoothness of a threadless headset. All of this attaches to a flat handlebar equipped with bar ends. Bike 904 was built at a time when the industry felt a narrow flat bar was preferable. Out of all the differences between the generations, the narrow hand position is probably the hardest adjustment for me to make. It is very uncomfortable compared to the wider spear of the riser bars that are standard on a modern public safety bike. However, the bar ends do allow you to move your hands around rather than having to maintain any one particular position for an extended length of time.

...And in this Corner

For comparison's sake, I rolled out my 2009 Trek 6500. While the 6500 is more than a decade old, it does represent the ultimate development of the 26-inch hardtail mountain bike. At that time, manufacturers began focusing more on their 29-inch and 27.5 inch offerings. This particular 6500 was upgraded with a lighter wheelset, tubeless tires and external bearing bottom bracket and crankset. I installed a Topeak Beam Rack to carry my trunk bag.

I purchased this bike specifically for my work as a volunteer with the Maryland-National Capital Park Police. When I joined in 2007, volunteers had to supply their own bicycles. I initially rode a 1998 Klein Pulse Comp as well as a 2005 Trek Fuel 70. As I got more experience as a volunteer, I began developing a set of specifications that I felt were necessary for a patrol bicycle. When I plugged in all



Side by Side Rear View/Tire Width Comparison

the features I wanted – hardtail, hydraulic disc brakes and front suspension – the 6500 most closely met the specifications, at least out of the bikes carried by my local bike shop. I was somewhat pleased to discover that the bike I had spec'd out was almost identical to the “official” public safety bike offerings.

Tale of the Tape

Here's how the bikes stacked up against each other:

Year:	1996	2009
Weight:	28.5	29.5
(Includes rack, kickstand, bell and two water bottle cages)		
Top Tube:	22.5	21.0
Clearance:	11.0	11.5
Wheelbase:	41.0	41.5
Chain Stay:	16.5	17.0
Reach:	28.0	25.5
(Top of seat tube to center of handlebars)		
Bar Height:	40.5	41.5

I'll have to admit; I was surprised the 1996 bike tipped the scales lighter than the 2009 bike. I would imagine that is attributable to the additional weight of the front suspension fork. While the wheelbases are within a half inch of each other, the 1996 bike feels longer, with a top tube that is 1.5 inches longer and a reach that is 2.5 inches longer. Ground clearance is slightly higher on the 2009 bike, and the chain stay is slightly longer.

While the bikes are fairly similar, the components present a starker contrast. The two biggest changes are the hydraulic disc brakes and the front suspension fork.

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In terms of performance, there is simply no comparison between the cantilever brakes and hydraulic discs in terms of modulation and stopping power.

The front suspension fork is certainly an improvement over the rigid fork. It is interesting that, on the 1996 model, the bike frame is aluminum but the fork is chromoly. It appears Trek's engineers knew that an aluminum rigid fork would be far too stiff for public safety riding. The 2009 6500 came equipped with the Rock Shox Toro SL, your typical elastomer shock with a very reasonable 100 mm of travel, and a very easy to adjust preload dial to lock out the fork when on pavement or climbing.

Drivetrain is a bit of a wash. The 2009 has nine speeds and a wider 11-34 gear spread; the componentry is virtually identical with Shimano Deore XT. Having the additional gears does make for smoother gear transitions. The trade-off is that the nine-speed chain is narrower and cannot withstand the kind of abuse a wider chain can tolerate. I would imagine that the heavyweight assigned to 904 would have easily snapped the nine-speed chain.

Front and rear derailleurs are controlled by Shimano Deore LX "Mega 9" trigger shifters. I've found the Shimano trigger shifters to be very smooth and accurate in their operation, although they have been known to wear out, particularly on the front derailleur. The shifters are far more smooth and precise than the clumsy, early-model Grip Shifts on the 1996 bike.

The 2009 bike was originally equipped with a Shimano Octolink bottom bracket and crankset. The Octolink was Shimano's version of the ISIS splined bottom bracket, a technological wrong turn. I replaced the Octolink with a SRAM X7 external bottom bracket unit. The X7 is very smooth and rugged and, in theory, is a stiffer crankset than one with a cassette type bottom bracket. In all honesty, I can't really feel the difference. However, I am sure this type of unit would be more capable of withstanding the kind of high-torque strain larger riders place on the drivetrain.

The wheelsets are both Bontrager wheels with Shimano hubs. They both operate quite smoothly. I opted for the lighter Bontrager Race Lite Tubeless wheelset instead of the stock one. The rubber is Maxxis LUST 2.1 tires, which makes the 1996 bike look knock-kneed on its very narrow 1.6 tires. I've run tubeless tires on this bike and my previous Trek Fuel. I'm really on the fence on this one. I definitely

see the advantages of tubeless tires: wider footprint, better traction, ability to run lower tire pressures with less chance of a pinch flat.

However, I have also encountered situations in which the tubeless tires did go flat, even with sealant in the tire, and I have been unable to effectively repair them. Weighing that against the ease with which a bicycle tube can be changed in almost any situation, plus the need to add sealant every 6 to 12 months, I opted to go with tubed tires when I purchased my 29er. I don't regret the decision.



Photo courtesy Artie Gonzales

Artie Gonzales, Topeka Police, with circa 1993 Trek

So, having analyzed the differences between the two bikes, it was time to take them out into the world.

Road Testing

The 1996 bike got the first nod. As noted previously, I found the riding position somewhat awkward because of the very narrow grip. The bar ends were somewhat helpful, but the reach was too far for my 5'6" physique to use them comfortably. If the frame size was 16", the long reach may have been less of a problem. Raising the stem and increasing the angle of the bar ends did help somewhat.

Once I got accustomed to the hand position of the narrow grip, the bicycle offered a pleasant ride. It was very stable, cornered well, and could be pushed past 20 miles per hour without feeling any significant under-steer. It remained very stable and controllable over bumpy surfaces. While

the lack of a suspension fork transmitted more of shock of the bumps to the rider, the chromoly fork did a surprisingly good job of absorbing much of the shock and chatter. The narrow 1.6 tires moved the bike along at a fairly quick pace. Shifting was certainly clumsier than on a modern bike and double shifting (simultaneously shifting front and rear chainrings) was more difficult to accomplish.

Up to that point, despite its age, the 1996 bike would still be considered a viable public safety bicycle. However, the bike truly shows its age and obsolescence in the braking. For someone used to riding disc brake-equipped bikes, mechanical or hydraulic, downgrading to the cantilever brakes is downright scary. The reach for the brake levers seemed excessive. They weren't right where you want them to be. Modulation wasn't terrible, but the braking power is a fraction of that of a disc brake-equipped bike. Even linear-pull brakes are a significant improvement upon the cantilevers.

I found myself having to initiate braking at nearly double the distance when compared to a disc brake-equipped bike to come to a routine stop. Maximum braking situations would probably more often lead to having to take evasive action because of the shorter stopping distances. While I'm fairly certain that most departments no longer have cantilever brake-equipped bikes in the inventory, if there happens to be one lingering, I would not ride it. If removing the bike from service is not an option, then, at a minimum, an upgrade to linear-pull brakes is essential.

The 2009 bike reflects many of the lessons learned over the intervening years. The narrow bars have given way to larger riser bars with a slight rearward sweep. The result is a more upright riding position, and a wider, more comfortable hand position. The bar ends are history, but are not really needed with such a wide bar, though many riders enjoy ergonomic grips.

Like the earlier bike, the 2009 has very pleasant riding characteristics. It is more agile and responsive to the rider's inputs, partially the result of better frame geometry and partially due to the wider grip, which allows more leverage. Under-steer is almost non-existent until you reach much higher speeds, and is easier to overcome with body lean and handlebar input.

The geometry of the more recent bike enables a more upright riding position; the shorter reach measurements make for a

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to the Past

(Continued from page 46)

more compact cockpit area. The front shock adds weight up front, but it also provides a lot more comfort to the rider, even when fully locked out. If I was spending more time off-road, I'd probably want a higher-end, lighter pneumatic shock, but this does well for the majority of situations I encounter. The larger 2.1 tires also make for a more "plush" ride, trading away only a slight increase in rolling resistance.

Shifts throughout the entire gear range were crisp and smooth. Having the extra two teeth on the rear cog enabled much easier middle chainring climbs, with a 33:34 ratio versus the 35:32 ratio that was the best middle-ring combo on the 1996 bike. The slight disadvantage at top end was barely perceptible between 44:11 and 46:11, perhaps because the 2.1 tires had a slightly taller profile than the 1.6s, which could negate any gear advantage.

If we compare the top end gearing, the higher gear of the 1996 bike would yield a 15-inch advantage per rotation of the crank. At a 100 RPM pace for 60 seconds, that translates into a 12.5 foot advantage. Conversely, though, the 2009 bike has the much deeper low gear at 22:34 versus 24:32, which facilitates improved slow speed/steep climbing/heavy load operation.

Where the 2009 bike really shines is in its brakes. Quite simply, there are no braking systems for bicycles that are as effective as hydraulic disc brakes. Stops are quick, smooth and well-controlled. The shorter stopping distances reduce the need for a maximum braking. However, should the need arise, max braking stops can be accomplished in remarkably short distances. Should the wheel lock under such conditions, skids are fairly easily to control.

Hydraulic brakes do have their downside. A properly aligned rotor is essential for the disc brakes to be most effective (see Gears & Gadgets, June 2019, "The Most Annoying Sound" on the IPMBA

website). The need for brake bleeding is perhaps the biggest downside to hydraulic disc brakes. It is not an adjustment that can be made in the field, and often requires a trip to the bike shop unless you are familiar with the process. Brake bleeding done incorrectly can exacerbate the problems with the brakes, and sometimes render them completely useless. Routine maintenance is a must.

Cable-operated disc brakes tend to be a good "halfway house" between the stopping power of the hydraulic discs, and the relative ease of maintenance of cable-actuated rim brakes. The only disadvantages are a loss in power and modulation compared to hydraulic disc brakes and the need to set up the brake caliper properly to ensure clearance between the rotor and brake pads.

If there is one seriously annoying aspect to the 2009 bike, it is the placement of the water bottle cage. Trek's frame design makes for a very short seat tube – too short for a water bottle cage. Their answer was to put the water bottle cage on the underside of the down tube. This makes it hard to reach while the bike is in motion, and exposes it to whatever detritus gets kicked up by the front tire. I suppose this is still a better option than doing away with the water bottle cage altogether.

In Summary

The public safety bike has certainly evolved, and continues to do so. Some changes, such as the difference between the square taper bottom bracket and the external bearing bottom bracket are quite subtle. Other changes, most notably the brakes, represent huge advances in technology.

The 1996 Trek Police Bike surprised me in many ways. It was comfortable and responsive. With modifications to its drivetrain, handlebars and especially its brakes, it could still be a viable public safety bike. However, the cost of such upgrades would not be economically feasible, particularly on the 26-inch wheel

platform, which has largely given way to 27.5- and 29-inch wheel bicycles. As it stands, it is a pretty fair testimonial to the design of the public safety bicycle. There's not a single aspect of the bike that could have used improvement that bike designers did not act upon.

The 2009 Trek 6500, with a few aftermarket modifications, is truly the product of Trek addressing the shortcomings of the 1996 Trek police bike. With the exception of the water bottle cage placement, every aspect of this bicycle is an improvement over the 1996 bike. Despite being more than 10 years old, the 6500 accurately represents the pinnacle of the evolution of the 26-inch public safety bicycle. Other than perhaps going to a single front chain ring system (whose benefits are debatable, see Gears & Gadgets, April 2019) and an air suspension shock, there really is no need for any further upgrades.

The evolution of the public safety bicycle continues. Once the 26er had reached its ultimate development, manufacturers began focusing first on 29ers and then on 27.5-inch wheel bikes, bringing a whole different set of design and riding characteristics. Now, we're seeing the addition of electric power to the equation.

However, we must never lose sight of the fact that the evolution of the public safety bike began with the basic building blocks, and early police bikes such as the 1996 Trek Police Bike helped move public safety cycling *Forward from the Past*.

David Cohen is a 12 year volunteer with the Maryland-National Capital Park Police. When he isn't riding or tinkering with bicycles, David can be found tinkering with vintage cars or World War II airplanes. An avid historian, David enjoys researching and writing as well. He can be reached at onyxsax@aol.com.

Photos courtesy David Cohen, except as noted.



Top, restored 1996 Trek Police Bike; bottom, 2009 Trek 6500



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THE 30TH ANNUAL IPMBA CONFERENCE IS CANCELLED

It is with great sadness that we must announce the cancellation of the 30th Annual IPMBA Conference, scheduled for June 1-6, 2020, in Dayton, Ohio. The Board of Directors considered many factors regarding the continuing impact of COVID-19 and the decision was not made lightly. Although there will be no IPMBA Conference in 2020, we remain committed to providing you with the training and resources public safety cyclists expect and deserve. Our cadre of more than 700 instructors stands ready to conduct the Police, EMS, and Security Cyclist Courses, and Bicycle Response Team Training at the local level. See the full announcement at <http://ipmba.org/conference/notice-of-cancellation>.

BUT WE WILL SEE YOU IN 2021!

INFORMATION TO COME SOON

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