



Putting the “I” in IPMBA

by Maureen Becker
Executive Director

You may have noticed that the *IPMBA News* is a bit thinner and lighter than usual. Perhaps you thought it was a cost-saving measure, since it is less expensive to print and mail a shorter publication. Or perhaps you thought it was because more articles and information are being placed on the IPMBA website and Facebook page. While both of these statements are true, the reason that this issue of *IPMBA News* has less heft is that less content was submitted.

If you were to look back through past issues of *IPMBA News*, you would notice that the vast majority of articles have been authored by IPMBA members. From time to time, it does contain reprints from other publications or articles by non-members, but its primary purpose has been to serve as a forum for information-sharing amongst IPMBA members. From product reviews to operations to

great ideas to lessons learned, a wealth of information has appeared within these pages.

It has been said that knowledge is useless unless it is shared.

In recent years, the amount of content submitted by IPMBA members has been dwindling. There are many reasons for this phenomenon: people

are busy, overtaxed at work and at home, overwhelmed by information, juggling multiple modes of communication, and participating in forums that did not exist just a few years ago.

You may be asking yourself, “is a newsletter still relevant in the digital age?” The answer to that question is a resounding “yes!” Some people find paging through a print publication easier on their eyes than staring at a screen. Some enjoy focusing on an article without links and other distractions. Some want to get to the heart of the matter without first having to watch an advertisement or answer a survey. Some are just plain old-fashioned. And some realize that there is more to be learned about public safety cycling than can be communicated in 140 characters or less.

But the real reason the *IPMBA News* is still relevant is the content. Over the course of the last 25+ years, IPMBA has amassed a wealth of content. All of that information is now available on the IPMBA website, both in the newsletter archives and in the blog postings. When you submit content for *IPMBA News*, you are also submitting it for use on the website and for distribution via other modes of electronic communication. Without good, solid content, even the most sophisticated digital resource is useless.

IPMBA challenges you to share YOUR story – be it an innovative practice, a moment of triumph, a sweet success, or a hard lesson learned. It has been said that knowledge is useless unless it is shared. Start sharing by contacting maureen@ipmba.org for article submission advice.

Electric Bikes: Hype or Hope?

by David Cohen
MNCPPC Park Police Reserves, Montgomery Division

As an avid cyclist, my first reaction to the concept of an electric bike is negative. By putting a motor into the equation, you reduce the health benefits of riding while adding a considerable amount of weight and complexity to the relative mechanical simplicity of riding a bike. On further examination, though, the electric bike does offer certain advantages, including the ability to pull heavy loads and patrol faster and farther while still maintaining the advantages of bicycle patrol, including flexibility, maneuverability, ease of access, and stealth.

There are a number of public safety-specific electric bikes on the market, but their costs are very high, sometimes two to four times the price of a conventional bicycle, although still less expensive than a Segway. Still, the price is high enough to make many departments reluctant to take the chance on a relatively unproven technology.

Our department was afforded a unique opportunity when an electric bike ended up in our Abandoned Property section. The bike, a 1999 Giant LaFree, was generally considered one of the best electric bikes around during the nine years it was on the market. Most bikes that end up in abandoned property wind up being shipped to a metal recycling center. In many cases, smelting is an appropriate fate as some of these bikes are too weathered

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ALL THE NECESSARY EQUIPMENT



For many years now, we have wrestled with the perception that bike patrol somehow a lighter form of patrol. I have often seen officers put together a bike-duty belt with less gear than their regular duty rig. They offer a variety of reasons, from having items on their belt interfere with pedal stroke to a desire to reduce weight.

An even more alarming trend is for officers who receive a newer weapon, like the Taser®, and then replace some other weapon with it. I am a firm believer in carrying all of the weapons that our agencies allow us to use. I recently taught a baton course to an agency and was dismayed to learn that since they received Tasers®, more than half the officers no longer carried batons. I made it my personal mission to reverse that trend, at least for that agency.

There is no perfect weapon, so until the *Star Trek* phaser that can be set to “stun” is invented, we have to have to look to our current weapons and training. I have been around the job long enough to see the introduction, and

Weapons are like parachutes. If you need one and don't have it, you'll never need it again.

subsequent abandonment, of several new weapons, some of which were billed as, but none of which became, “the perfect weapon”.

I know it is a burden to load yourself down with a firearm, Taser®, OC spray and a baton, especially on bike patrol, but you can't predict which weapon, or combination of weapons, will give you the best chance to prevail in a violent encounter. If weight is such a big issue, fellow instructor Craig Wainman offers the best advice, “Make that cheeseburger a single rather than a double!”

When we determine what equipment is necessary for bike patrol, we should emphasize the “patrol” part; after all, most experienced bike officers would agree that an active bike officer is more likely – not

less – to get into arrest situations.

One of my fellow law enforcement trainers says it best, “Weapons are like parachutes. If you need one and don't have it, you'll never need it again.”

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Newsletter of the
International Police Mountain Bike Association

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Trek 29er Police Bicycle

INDUSTRY

by Dominic Scali, PCI #1382
Anne Arundel County (MD) Police Department

Springtime 2012. The Anne Arundel County Police Department Bike Unit was ready to purchase new bikes for 2013. Our lineup has been composed of Fujis and Treks for the past fifteen years, but we're always open to new products. We became aware of the Safariland-Kona 29er in October 2012 and were able to demo it for several weeks. We made numerous attempts to purchase these bikes through our local shop; however, we were unable to do so because of "red tape." Therefore, we purchased the new Trek Police 29er bikes for 2013.

The familiarity and history we have with the brand made our purchase easy; however, thoughts of the Safariland lingered in our minds. After a couple of months of waiting, we brought our Trek 29ers home and put them to work.

After taking the bikes for a test ride, my partner, Cpl. Kam Cooke, PCI #1355, and I both observed that the ride comfort was lacking. His frame is 21" and mine is 17", but we both felt slumped over and stretched out as we reached for the wide handlebars. We made the appropriate adjustments but still did not feel comfortable. To combat the problem we went back to our local bike shop and purchased Bontrager RL stems to achieve a more upright riding position. The ride is more comfortable; however, the handlebars are still too long. Bring back the shorter handlebars from previous years. They made riding through tight spaces like parking lots and negotiating obstacles much easier.

The next thing we noticed were the disc brakes. We were excited because the first time we rode disc brakes was on the Safariland-Kona 29er. Our expectations were high when we mounted the Treks, which have mechanical disc brakes. However, when I attempted to make quick stops, I would instead coast to a stop. I was told by our bike mechanic that the brake pads needed to be worn in, but after several threshold braking stops, I noticed the brakes still sluggishly rolled to a stop. Of course this was an immediate concern, so we brought the bikes back to the shop. We explained to our shop mechanics what was occurring and had them verify what we were experiencing.

Our bike shop contacted their Trek rep and explained the problem. We actually had a personal conversation with the Trek rep and told him what we were experiencing. We were candid and gave

the rep full disclosure that we had tested another bike prior to purchasing the Treks. We also told him that Trek may want to step up their game because a new police bike was available. The solution was to switch out the Shimano mechanical disc brakes for Shimano Deore hydraulic disc brakes, which was a huge improvement.

Earlier Trek police bike models were equipped with a combination tire that was great for our line of work. While on patrol, citizens would sometimes comment that our tires were worn out in the middle. Of course, we kindly informed them they were combination tires, which often led to further discussions about public safety cycling. Instead of a combination tire, the new 29er was spec'd with a lower profile, knobby mountain bike tire. There is a huge difference in rolling resistance, smoothness of the ride, and noise. Bring back the combination tire, Trek...please!

The drive train of the Trek is great and we have had no issues since deployment of the bike. Overall, Trek still provides a quality product; however, I believe they fell asleep at the wheel when developing the 29er for the police cycling community. Trek has a lot to learn from the new Safariland-Kona Police Mountain bike. If they will put some more time and attention into their police mountain bikes, I believe customers will remain loyal to the brand.

The MSRP on the Trek Public Safety bicycle is \$1269.99. For more information, visit http://www.trekbikes.com/us/en/bikes/town/urban_utility/police/police/.

Dominic has been a police officer since 2004 and on the bike patrol unit for about five years. He enjoys physical fitness and loves to ride bikes on and off the job. He can be reached at P91704@aacounty.org.



Photo courtesy Dominic Scali

Duro "Berm Master" Tire

by Jeff Britton, PCI #1205
Central Point (OR) Police Department

While at Interbike last September, I stopped by the Duro Tire booth and was introduced to Duro representative Rick Emmert. Rick and I discussed different tires made by Duro that would work on public safety bicycles.

Rick showed me several suitable tires and recommended the "Berm Master". Although this tire is advertised on their website as a gravity tire, the low tread pattern and 2.3 size made it a tire that

could stand up to the abuse and different terrain typically encountered while on patrol. The tire is also marketed to commuters, BMX, and urban street jumpers, so it must be a solid tire on pavement and concrete. It has a wire bead and is a little heavier than the Continental Town and Country tires that our patrol bikes run.

Now that the weather is warm and dry, I am even more impressed by this tire.

I received the "Berm Master" in December, just in time for the ice and snow. I mounted the 26 x 2.3 tire onto the rim with a little difficulty. Because of the stiff wire bead, I had to use a little dish soap to get the tire onto the rim. Once the tires were mounted, they were ready to take my Volcanic out on patrol during our annual Christmas Parade.

(Continued on page 6)



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Duro "Berm Master" Tire, cont.

(Continued from page 5)

There was a 1/2 inch to an inch of ice and frozen snow on the streets and sidewalks of the parade route. I was nervous riding in front of a large crowd with the fear of going face first a realistic one. I dropped the tire pressure to about 25psi and set out on patrol. I was amazed how comfortable I felt while turning, braking, and accelerating, all with little or no slippage. I wasn't able to ride like I normally can, but considering the conditions, I was pretty darn good.

Now that the weather is warm and dry, I am even more impressed by this tire. The tread has a low knob pattern and looks like a semi-slick designed for hard-packed dirt. I can roll over uneven roads, rocks, cracks in the pavement, grooves in poorly-poured concrete, granite alleys, and dirt pathways. I am very confident riding with these tires. They run quietly and smoothly on the pavement.

The first thing I did before my shift started was run the tire through some IPMBA basic class drills. I did some maximum braking on pavement and some cone drills in parking lots with gravelly old pavement as well as sand and gravel. I had no issues with the tire slipping or washing out.

The straight line stopping did not seem to be affected by the low tread knobs.

The negative issues with the tire are few, but they are worth noting. They do well on wet pavement because of the grooves, but they were a little squirrely when I hit heavy standing water or mud. This is to be expected from a tire built for hard-pack conditions. Also, the tire is a little heavy, but in the world of public safety cycling, that isn't necessarily a bad thing.

The price of the tire is very reasonable, running anywhere from \$20 to \$30.

In short, I would have no problem recommending this tire for public safety cycling.

Duro does not yet participate in the IPMBA Product Purchase Program. For more information, visit www.durotire.com or contact Rick Emmert at Rick.Emmert@durotire.com

Jeff is a 24-year veteran with the Central Point Police Department (OR). He has been a member of the bike patrol team since 2004. He was certified as an IPMBA Instructor in 2010. Jeff loves downhill and cross country riding in Southern Oregon, Lake Tahoe and Whistler. He can be reached at 541-210-7251 or jeff.britton@centralpointoregon.gov.

Whistle a Tune of Safety

INDUSTRY

by Josh Stilts
Northwest Business Monthly

Bob Cameron knows what it feels like to be lost. When Cameron turns 74 this April he will have spent more than half a century aiding those who are lost.

As honoree of the 2009 “Lifetime Achievement Hero” award from the Red Cross, Cameron may have been overwhelmed by the acknowledgement, but he deserved it. For more than 50 years, Cameron has volunteered thousands of hours throughout the United States ensuring people were found and rescued safely. Time and time again, Cameron risked his own life in search of missing persons, to rescuing injured hikers and climbers as well as participating in the extraction of bodies as a result of aviation disasters and wilderness incidents.

When Cameron was a kid, he went to visit his grandfather in British Columbia and ended up lost for four days in the wilderness.

“It’s truly a blessing I’m alive,” Cameron said. “I knew I was meant to do something.”

Career and Passion

Cameron’s career in finding the lost started during his military service in the U.S. Air Force as part of the crash rescue unit. He eventually found himself in Montana where his passion for rescue eternally cemented.

For 15 years Cameron served as a special deputy sheriff and expert trainer of English bloodhounds. Cameron and his canines worked on more than 150 cases throughout Montana and Idaho.

“It was important to me to bring to light the ability of these dogs,” he said.

During the 1970s, Cameron was instrumental in court cases involving blood hounds and their eventual witness testimony.

“A dog doesn’t have the ability to lie,” he said. “They either know something and can tell if someone’s scent is or was there, or they don’t.”

Whistling While He Works

Dogs aren’t the only rescue tool Cameron is known for. In the past 14 years Cameron and his business partner have established their business, Whistles for Life, as the only whistle you’ll need.

Among the official licenses, Whistles for Life is the official whistle of Smokey the Bear, the National Association for Search and Rescue (NASAR), Community Emergency Response Team (CERT), Search and Rescue of British Columbia, Department of Agriculture U.S. Forest Service, National Park Service and the Coast Guard. Each licensed whistle has its own logo.

CERT coordinator Bob Jacobson wrote, “The CERT logo really adds a sense of pride for the members and identifies them with a great program. We feel that the whistle provides an excellent signaling device for any scenario the CERT member might find themselves in. It also gives them a sense of security.

At 120 decibels, trained dogs, like the bloodhounds Cameron worked with, can hear the whistle even under large debris because of its three-chamber design.

“It’s truly a blessing I’m alive, I knew I was meant to do something.”

“If you can breathe, you can blow our whistle,” Cameron said. “What most people don’t realize is you can only shout for

so long. Eventually, whether because of dust or lack of moisture, the vocal cords become hoarse and you simply can’t shout anymore, which is why we donate so many of our whistles.”

During the rescue efforts in Haiti last month, Red Cross members used an estimated 1,000 of Cameron’s whistles to notify one another when someone was found.



“Any whistle is better than no whistle,” he said. The problem is most whistles are made from cheap polypropylene, which can easily break.

“Don’t give people a toy,” he said. “[Rescue] whistles are a tool. They should be made of the best materials possible.”

Cameron’s whistles have also been sent across the globe. After hearing of the atrocities women were suffering in Iraq and Afghanistan he knew they needed help quickly.

“Sound is the number one deterrent of crime and the number one factor in finding lost victims,” he said. “The whistles don’t just make [search and rescue] easier, they make everyone’s job easier.”

The next addition to his whistles will be to fit them with three new options, he said. Customers will be able to choose from an oil-filled compass, an L.E.D. light with replaceable battery or a thermometer.

As an inventor, Cameron has more than 20 patents. His Rhino Grip, a heavy-duty multi-purpose tarp clip made from a fiberglass-filled nylon material that resists cracking even at 65 degrees below zero, can be found at Hardware Sales and Grainger.

This article appeared in the February 2010 edition of the Northwest Business Monthly, www.nwbmonline.com.

Mobile Edge: Bring it On

by Jared Williams, PCI #1214
Tacoma (WA) Police Department

The Mobile Edge UrgentPower is a universal smartphone battery for backup power. When connected to your mobile device, it provides additional hours of run time. It comes with a USB charging cable, Apple 30-pin connector, and Micro USB & Mini USB connectors, making it compatible with most smart phones, e-readers, tablets/iPads and iPods. The UrgentPower can be recharged from the USB port on a laptop or any USB AC power source.

Like so many other people, I rely heavily on my mobile devices, so I was eager to give it a try.

PACKAGING CLAIMS

2600mAh battery, provides up to 10 hours of additional run time for iPhones and Smartphones, and up to 300 hours of additional run time for iPods and e-readers.

Prior to use, the instructions direct you to charge it for a full 24 hours. The instructions also state: "to ensure the greatest battery life, fully charge the battery at least once every six months."

The battery unit is sleek and small, a cylindrical tube approximately 1" diameter and approximately 4" long. It can easily be stored in a pocket, briefcase, or saddle bag.

TESTING

Each of the following three tests begin with the Mobile Edge fully charged.

Test 1: Samsung Galaxy S3

I began the Galaxy S3 test with 20% battery life – the point when most devices will advise of a low battery. My Galaxy S3 acts as my mobile wi-fi hotspot when I am working, so I left the hotspot on during the test. I plugged in the Mobile Edge charger, which immediately began charging my S3. The Mobile Edge charged the phone to more than 90% battery life in about 2.5 hours before it died. This would easily allow for another 7-8 hours of phone use under my normal circumstances.

Test #2: iPhone 5c

I tested the Mobile Edge on my iPhone 5c. I used an Apple USB charging cable for direct connectivity with my iPhone. When I plugged in the device, my iPhone's battery life was at 64%. This little device only took an hour to bring my iPhone's battery to a full charge – pretty impressive.

Test #3: Kindle Fire HD

Finally, I tested the device on a tablet – specifically a Kindle Fire HD. The battery life on the Kindle at the start of the charge was 13%. I allowed the Mobile Edge to charge as long as it was able, bringing the battery life on my Kindle to 55%.

Pros:

Sleek and small,
easy to carry



Photo by Jared Williams

along
Multiple adapters for different phones

Cons:

No iPhone 5 adapter
Very short USB cable (approx. 10")
Not waterproof (no rubber seals on end caps)

PERSONAL THOUGHTS

I am a big fan of this device. It is easily tucked into a pocket or stored in a saddle bag (just be aware that it doesn't appear to be waterproof). If you are on the go, particularly if you are full-time bike patrol, this device can easily add hours of life to your mobile electronic devices. I can't speak for the longevity of the Mobile Edge, as I just haven't had it long enough or used it enough times to say how long it will continue to hold a charge and perform well. But, for a price of around \$30-40, it is a nice bit of added insurance.

Mobile Edge participates in the IPMBA Product Purchase Program, offering 15% off retail prices. Contact Matthew Olivolo at social@mobileedge.com or call 714-399-1410 for the coupon code. Visit www.mobileedge.com for more information.

Jared is a nine-year veteran of the Tacoma Police Department, currently assigned as a Community Liaison Officer. Jared loves to get his hands dirty and can often be found obsessing over the mechanical state of his bike. He can be reached at jared.williams@cityoftacoma.org.

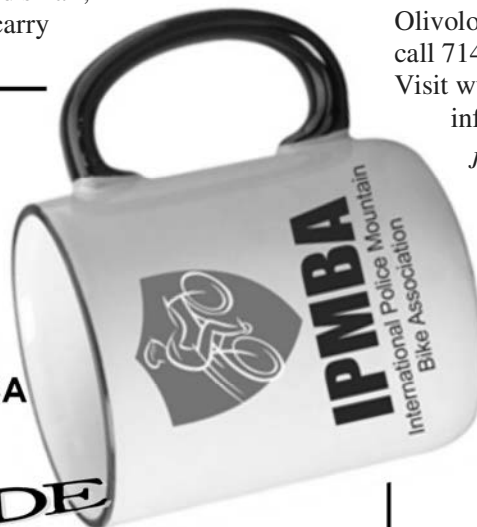
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Phone: 404-766-3990
Email: sales@progoldmfr.com
Website: www.progoldmfr.com
Notes: Use coupon code PG2014 online.

SRAM

Product: Premium cycling components, suspension products, wheels
Cost to Members: Employee pricing
Contact Name: Thomas
Email: ip@sram.com
Website: www.sram.com
Notes: Email ip@sram.com to request order form. Use the subject line "EP for (your name) at IPMBA" in the email subject line. Include your membership number and expiration date in the body of the email.

StupidBright.com

Product: Bicycle Lights/Tactical Flashlights
Cost to Members: 15% off MSRP
Contact Name: Evan Hsieh
Phone: 415-592-9630
Email: info@stupidbright.com
Website: www.stupidbright.com
Notes: Online: During checkout, use coupon code IPMBA15 and include your IPMBA membership number under "Comments and Notes".

Updated Listings

Swagman (New contact person)

Product: Bicycle Carriers (Roof/Hitch/Trunk)
Cost to Members: 15% off Retail
Contact Name: Joanna Montis
Phone: 800-469-7924 x 206
Email: joanna@swagman.net
Website: www.swagman.net
Notes: All Shipments Made from Orville, WA.

Omitted from the Product Guide

Promotive.com

Product: Outdoor-Bike-Action Sports Gear
Cost to Members: Promotional Prices on Gear; Free Pro-Deal Membership
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» Visit www.policebikestore.com/maxpatrol for more information and video demonstrations

Ed.'s Note: On page 193 of the Complete Guide to Public Safety Cycling, 2nd Edition, bike officers are advised to use a passenger side vehicle approach when possible. An IPMBA Instructor submitted this guidance from his department's training unit, which is provided to all officers, not just bike officers. As a result, it is more specific to patrol vehicles than bike officers, but still relevant. The agency is not identified at their request.

The Police Department recognizes that due to hazards inherently present while conducting Motor Vehicle Stops on the side of roadways, there are times when a passenger side vehicle approach (PSVA) is preferable to the standard driver's side approach. This outline does not create a policy or standard procedure but merely provides information on an alternative tactic designed to help minimize risk to the officer conducting the stop.

Justification for Multiple Tactics to Minimize Risk on Vehicle Stops

- In 2012, US law enforcement suffered a total loss of 125 officers. 52 of these deaths were vehicle related. Of these deaths, 22 were from automobile accidents, five from motorcycle accidents, **six** were struck by vehicles, five from vehicle pursuits, three from an aircraft accident, and 11 from vehicular assaults. For comparison, gunfire resulted in 48 deaths.
- In 2013, US law enforcement suffered a total loss of 105 officers. 47 of these deaths were vehicle related. Of these deaths, 25 were from automobile accidents, four from motorcycle accidents, **eight** were struck by vehicles, four from vehicle pursuits, one from an aircraft accident, and five from vehicular assaults. For comparison, gunfire resulted in 30 deaths.
- In 2014, through May 11, US law enforcement suffered a total loss of 41 officers. 73 of these deaths were vehicle related. Of these deaths, ten were from automobile accidents, two from motorcycle accidents, **two** were struck by vehicles, two from vehicle pursuits and four from vehicular assaults. For comparison, gunfire resulted in 15 deaths.

Source: Officer Down Memorial Page (www.odmp.org)

Note: For all stops, the severity of the offense should be weighed against the risk posed to the officer. An expired tag may not be worth exposed to a motor vehicle traveling within feet of you at 55+mph.

Techniques for Completing a Passenger Side Approach

1. If possible, choose a location in advance that reduces risk. Think about potential hazard areas, including blind hills and corners, heavy traffic flow, congestion zones, natural choke points, acceleration and deceleration zones.
2. Move the traffic stop to a more desirable location through the use of the PA system.
3. Position the patrol vehicle with appropriate spacing to the offender's vehicle, offset and cant wheels as you would for a driver's side approach, creating a safety zone.
4. Take the time to assess traffic prior to and while exiting your vehicle. Wait for a break in the flow of traffic.
5. Exit patrol vehicle to the rear. Expeditiously make it around to the passenger side doors while maintaining visibility on stopped vehicle.
6. Assess emergency escape route (retreat to vehicle or exit to side of the road and beyond).
7. Re-assess traffic and approach stopped vehicle utilizing natural cover (e.g., jersey barriers, guard rail).
8. Utilize lighting and vehicle mirrors to assist in visually clearing vehicle upon approach and contact.
9. Minimize time spent outside of the patrol car. The safest place on a traffic stop is inside your vehicle.
10. Don't be hesitant to end the traffic stop due to newly identified hazards prior to its completion.
11. If necessary, block an entire lane of traffic. Don't allow drives the opportunity to squeeze by you.
12. Do not conduct DUI roadside maneuvers in hazardous areas.

Safety Concerns of a Passenger Side Approach

1. Loss of visibility on the stopped car while transitioning behind the patrol car/SUV.
2. Negatives of crossing between vehicles.
3. Loss of safety zone officers should be creating on the driver's side through proper patrol vehicle positioning.

4. Subsequent loss of cover from gunfire due to vehicle positioning and approaching on the passenger side (increased opportunity for occupants to shoot accurately from within the vehicle).
5. If a passenger is present in the front seat, the officer is forced to deal with two people at the same time (passing documents, control of hands, relaying verbal information).
6. If the occupant is a solo driver, the officer could be required to lean into the vehicle to exchange documents, etc., potentially exposing them to physical attack or injury if the driver accelerates.



<http://www.policemag.com/channel/patrol/articles/2002/03/the-right-approach.aspx>

The only proven methods of reducing the risks associated with a vehicle striking an officer are to incorporate large physical barricades (bridge supports, jersey barriers, etc.) and or reduce the speed at which the impact would take place.

Weighing the risks of conducting any traffic stop versus the hazards presents is still the best option.

As always, maintain situational awareness!

Another article about the passenger side vehicle approach can be found at <http://www.lawofficer.com/article/patrol/passenger-side-approach>.

Conclusion

Officers should not gain a false sense of security when conducting passenger side vehicle approaches. Despite the apparent benefits of distancing the officers from traffic flow and placing the stopped car between the officer and an impact vehicle, department instructors are not aware of any current research that shows a decrease in incidents or severity of injuries through the use of a the passenger side vehicle approach.

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Virgil White Retires

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IPMBA Instructor Virgil T. White, PCI #1069/EMSCI #235, has retired from the Putnam County Sheriffs Office. Virgil attended the IPMBA Police Cyclist Course held October 6-10, 1997, in Jacksonville, Florida, and joined as a certified member shortly thereafter. He was certified as an IPMBA Police Cyclist Instructor in October 2007, after attending the Instructor Course held in Fredericksburg, Virginia. He was certified as an IPMBA EMS Cyclist Instructor in March 2010. At the time of his application in 2007, he had served as a full-time bike officer for eight years and a part-time one for two. Since being certified, Virgil has conducted numerous combined Police-EMS-Security Cyclist Courses in historic Saint Augustine, Florida. He has also been involved with youth and civilian cycling education. IPMBA congratulates Virgil on his career and wishes him all the best for his retirement. Virgil plans to continue teaching the IPMBA Courses in Saint Augustine for the foreseeable future.

Tom Lynch MBE and LAS CRU Receives Alasdair Liddell Memorial Prize

Tom Lynch MBE and the **London Ambulance Service Cycle Response Unit** have been awarded the Alasdair Liddell Memorial Prize, an NHS Innovation Challenge Prize.

Challenge: Receiving emergency care in the right place, first time

Award: £100,000

A team of cycle-mounted paramedics is saving lives on London's streets, getting to patients quicker and helping lower the burden on A&E services.

The Cycle Response Unit (CRU) has become a key part of the London Ambulance Service's (LAS) drive to deliver fast first response in a small, but high emergency call demand, city centre area.

The fully trained two-wheeled responders are able to get into congested areas quickly and provide timely, on the spot treatment. The team has played a major role in helping LAS boost its

cardiac arrest survival rate from 12% to 28% in the last five years.

The team has also helped ease the pressure on busy A&E departments by resolving 50% of all incidents at the scene.

In addition, more than 5,600 hours of ambulance time has been saved each year, with a cost savings of approximately £1,466,000 (\$2,470,495) per year.

Tom Lynch and the Cycle Response Unit are this year's winners of the Alasdair Liddell Memorial Prize for Outstanding Contribution to Healthcare Innovation.



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James Englert Earns Medal of Valor

INSTRUCTOR CORNER

On December 13, 2014, an armed shooter entered Arapahoe High School in Centennial, Colorado. Among those who sprang into action was IPMBA board member James Englert, a school resource officer with Arapahoe County Sheriff's Department. Along with school security guard Rod Mauler, James ran to the source of the gunfire, where he ultimately discovered the shooter, who had shot himself.

At the memorial service of shooting victim Claire Davis, her father thanked James with these words: "Thank you to Deputy James Englert for not only fulfilling your duty with the utmost bravery but for following your heart that led you down an empty corridor to find Claire." Sheriff Grayson Robinson praised James, saying, "The officer went immediately to the threat, as he was trained," Robinson explained. "Try to go to the threat and eliminate the threat. James Englert is a hero, he saved lives," Robinson said.

On April 22, 2014, James was awarded his agency's Medal of Valor for his heroic actions.

IPMBA joins with the Arapahoe County Sheriffs Office in saluting James for his response and role in preventing further tragedy.

References: ABC News 7, the Denver Channel, January 2, 2014. (<http://www.thedenverchannel.com/news/local-news/arapahoe-high-school-shooting-heroes-fabian-llerenas-james-englert-rod-mauler-more>)



Photo Courtesy James Englert

ADVANCE NOTICE

— CALL FOR INSTRUCTORS AND WORKSHOP PROPOSALS —

The 25th Annual IPMBA Conference will be held Saturday, April 11-Saturday, April 18, 2015, in Chandler, Arizona. Pre-conference courses will be scheduled April 11-15, and the conference workshops will take place April 16-18.

If you are an active, IPMBA-certified instructor and are interested in teaching at the conference or pre-conference, you must submit a **Call for Instructors and Workshops** form, which will be available from the IPMBA office shortly after the 2014 IPMBA Conference.

You will be asked to outline your bicycling, work, and teaching experience, *including non-bicycling-related expertise and/or instructor certifications.*

Instructors will be selected for the pre-conference training courses as well as the core conference workshops.

It's easy – just follow these steps!

STEP ONE: Contact IPMBA HQ at Maureen@ipmba.org or 410-744-2400 or visit www.ipmba.org for a Call for Instructors and Workshops form (available shortly after the 2014 conference).

STEP TWO: Select a Topic. Stop hoarding your in-service training ideas.

STEP THREE: Write your Proposal. Follow the guidelines carefully.

STEP FOUR: Submit your proposal to IPMBA HQ by **July 13, 2014.**

STEP FIVE: You will be notified of the Education Committee's decision in early fall.

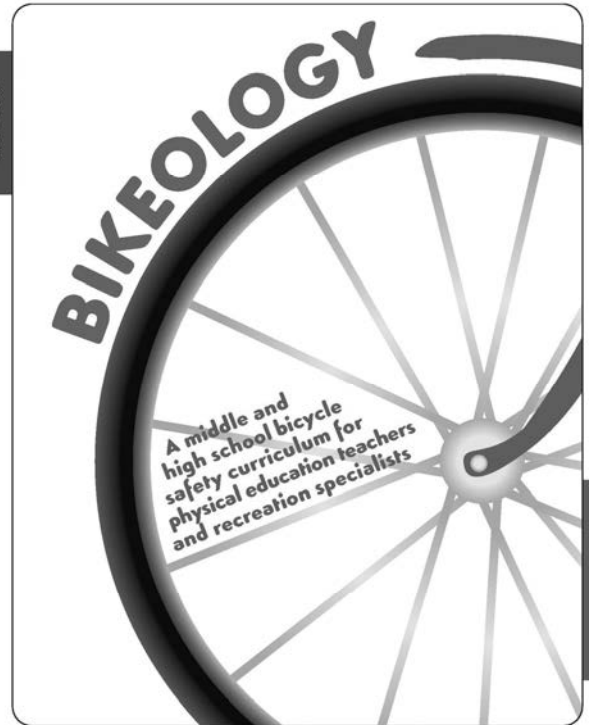
Note: Even if your workshop has been offered at past conferences, you must still submit the form. Past inclusion does not guarantee future acceptance.

Bikeology

Bikeology is a ready-to-use bicycle-safety curriculum for physical education teachers and recreation specialists working with students in grades 6-12. It was developed for the Society of Health and Physical Educators (SHAPE) by the American Alliance for Health, Physical Education, Recreation and Dance, with funding and technical support from the National Highway Traffic Safety Administration.

This curriculum (part 1 and part 2) is aligned with the National Standards for K-12 Physical Education and includes lessons and assessments for the skills and knowledge students need to enjoy a lifetime of safe bicycling. It also includes a guide to share with parents that provides ways in which they can support safe bicycling, including guidance on selecting an appropriate bicycle and helmet for their child.

The materials can be downloaded from the Bicycle Education, Advocacy, and Enforcement page of the IPMBA website (<http://ipmba.org/resources/bike-education-enforcement#rodeos>).



American Alliance for Health, Physical Education, Recreation and Dance  *****  Funding for this project was provided by the National Highway Traffic Safety Administration.

Pedal Retention

Of the four items deemed mandatory safety equipment by IPMBA, pedal retention is the one that inspires the most resistance. New cyclists are reluctant to wear it, and some departments are reluctant to purchase it.

In recent weeks, IPMBA HQ has been contacted several times regarding pedal retention. The first was by an instructor who was organizing a class for a department that refused to purchase the equipment. He explained the reasons why it was necessary, but they still balked, so he contacted the office requesting a letter reinforcing his position. Fortunately, it wasn't necessary because once they found out how inexpensive toe cages are, they dropped their resistance.

The next was an instructor calling about the procedure for testing a student who had been injured during the class and was therefore unable to take the practical test. Turns out he had removed his feet from the toe clips during a stair descent. His feet flew off the pedals and he hit the top tube. He missed three shifts and filed a worker's compensation claim. After the incident, he said to the instructor something to the effect of "I get it now."

Finally, a person proposing a bike team called. He had taken the list of equipment from the IPMBA website to a local "bike guru", who advised against pedal retention for new riders. After hearing the reasons for pedal retention and the various styles on the market, the officer realized that the "guru" was

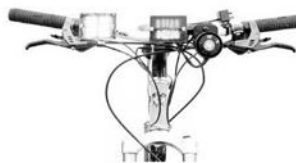
fixated on clipless and decided to include strapless toe clips (mini-clips) in his proposal. He also related his own memory of having a serious pedal bite on his shin as a 10-year-old BMXer without pedal retention.

There are a number of resources available to instructors encountering such arguments against pedal retention as safety and cost. Refer to pages 36-37 of the *Complete Guide to Public Safety Cycling*, 2nd Edition; the *Pedal Retention Primer* by Kirby Beck, found at <http://ipmba.org/blog/comments/pedal-retention-primer>, and the above account of an injury to a student who refused to use it.

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Providing Feedback to Students

by Kirby Beck, PCI #002T/EMSCI #017T
 Coon Rapids (MN) Police Department (Ret.)

Here is a quick, yet effective, way to provide feedback to a student that will support your comments and highlight exactly what the student is doing correctly and what they could (or must) do better: video.

It isn't a new concept. Instructors have long used video as a way to document a student's performance. It used to require using an awkward and bulky camera, perhaps a tripod, and a person to do the taping. The distribution and viewing of the video was even more challenging. As a result, videos weren't used very often or effectively.

Today, the vast majority of students coming into class have smart phones of some sort. Virtually every smart phone has a video camera among its many apps and features. When deemed necessary or appropriate, an instructor can use the student's own smart phone camera to record them performing the problematic skill. Students can then take their phones, review the video, and see for themselves the riding behavior that needs improvement. This can help clarify the instructor's comments and suggestions and hopefully will hasten the student's improvement. It can be done in a manner that is relatively private, it can be reviewed as many times as necessary, and it may reduce the number of times a student needs to perform an exercise before comments and suggestions lead to a "light bulb" moment.

Try this with struggling students and see if it helps speed up their learning and skill development.

This can help clarify the instructor's comments and suggestions and hopefully will hasten the student's improvement.

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Electric Bikes: Hype or Hope?

or missing too many parts to be rehabilitated. However, a fair number of bikes that end up being recycled are quite salvageable. This electric bike, while in pretty sad shape, fell into the latter category. I pitched the idea of rehabilitating the LaFree and retaining it for departmental use to my supervisor, and she ran it up the chain of command, where it was approved.

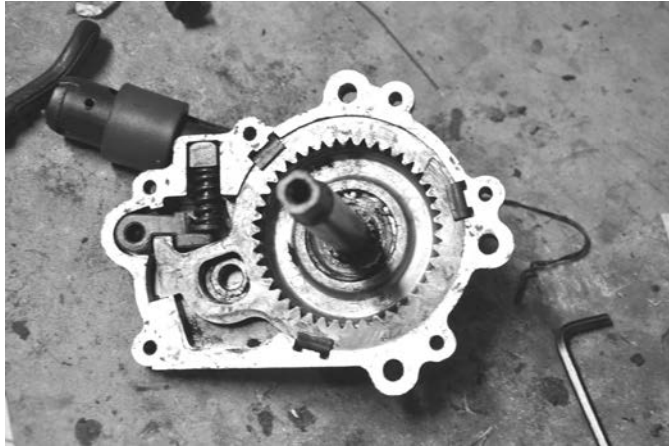
With the green light to proceed with the project, I put the bike rack on the back of my car to retrieve the bike. This is where I encountered the first problem associated with an electric bike: it is obscenely heavy. It took two of us to load the bike onto the rack, and the bike was so tail-heavy (where the motor is) that it nearly twisted the rack. The LaFree also has a very long wheelbase, far longer than your typical mountain bike. I figured that would probably translate to better stability at speed, but at the expense of turning radius and maneuverability.

Once back at my garage, I proceeded to tear down the bike. Some of the components were quite familiar: Tektro linear pull brakes, SRAM Grip shifter (the LaFree has a 7-speed rear and standard 26-inch bicycle wheels.) The motor, battery, and wiring were a completely new animal to me. After about two hours, the bike was torn down to its frame. The serial number revealed that this bike was the 97th LaFree Electric Bike ever constructed.

I was unsure of the condition of the motor itself. Getting it to work, obviously, was paramount to the success of the project. Without a motor, all you have is a very, very heavy bicycle. When applying an outside power supply to the motor, I found that the motor was “bumping” – meaning it wanted to move, but something was preventing it from doing so. The only way to fix this was to tear down the motor.

The motor consists of two components, a sealed electrical motor and then the mechanical transmission that helps assist with the pedaling. I first worked on the electric motor. After some

cleaning, it was spinning freely. The transmission, on the other hand, was still not moving. The only way to fix it was to open it up. When I did, all the parts spilled out. I was able to put everything back together, or so I



thought, as I ended up with leftover parts. Uh oh! It was time to reopen the transmission.

The transmission continued to be troublesome. It would spin freely until I torqued down the bolts holding both halves together and then it would bind up again. Once again, I took the transmission apart and discovered that the ratcheting gear was bent, causing the binding. I thought, “Oh, who needs a silly ratcheting device anyway?” Well, that didn’t work out too well as there was no way to pedal the bike without it. I straightened up the bent gear and opened the transmission yet again to reinstall the ratcheting device. I then hooked up the motor and applied power to it. Finally, the motor and gears were happily whirring along. Success!

The next step was to hook up the wiring harness and the rest of the electrical system. I cleaned up the frame in anticipation of re-installing the wiring harness. The harness went back in, as did the motor. I headed over to the battery store to pick up a new pair of 12-12 batteries (12 volts, 12 amps) to install in the bike’s battery pack. Once they were installed, it was time to fire up the electrical system. I turned the

key, flipped the power on, and... nothing. There was obviously a problem within the wiring harness.

Checking out various online forums revealed that the LaFree’s schematics are a very closely guarded secret and therefore not readily available. Complicating the matter further was that while electric bikes are far more popular in Europe than in the United States, this particular LaFree was not sold in any kind of numbers in Europe, so there was a general lack of information

regarding the bike.

I knew I had a functioning battery pack and a functioning motor. I figured all I would have to do is rewire the bike myself. My first try bike literally went up in smoke as I attempted to run the full 24 volts through a low-voltage throttle unit. I decided I needed some expert advice, so I consulted with Geoff Elliot of Green Pedals in Annapolis, Maryland. Green Pedals is an electric bike shop; Geoff is a big believer in the e-bike and thinks it is a natural fit for public safety applications. He pointed out the errors of my ways and recommended that I purchase a voltage control unit, which would allow me to use a standard e-bike throttle unit while keeping the wiring fairly simple. I picked up one off eBay for \$50 and waited for it to be shipped from China.

Meanwhile, I continued to work on the “bicycle” part of the electric bike, reconditioning just about every component that was attached to the bike. New tires, new chain, new brake shoes, new cables, a new headset and a new shifter pod were all added. Rusty parts were sanded down and reconditioned.

(Continued on page 18)

(Continued from page 17)

I installed the voltage control unit upon receipt, but I was having issues with the throttle unit. After lots of hair-pulling, I once again turned to Geoff Elliot. He came to the rescue and pointed out that the older brushed motors required a certain kind of throttle. Another order to China was in the offing. When that finally arrived, I put it all together... and



NOTHING!!! I could not for the life of me figure it out, and after several attempts, I decided to set the project aside for about a month so I could work on other projects.

When I returned to the project, I decided I would work my way backwards and unwire everything until I just had battery and motor again. I got to that point, and still had nothing. It was then that I saw my problem: the battery terminals had been bent again and the power from the battery pack was not being delivered. Once I fixed that, the motor came back to life. This time, when I rewired everything, it all worked. It was like Dr. Frankenstein giving life to his monster! With the electrical issues solved, I had gotten over the toughest hurdle, and I knew this bike would be returning to the road.

After about 45 hours of labor, the bike was ready for its maiden voyage. The LaFree was initially a "pedelec", meaning that electric power would only be delivered if you actually pedaled. It became very apparent that even though the new wiring harness enabled the bike to be run on motor alone, it worked far better when you were actually turning the pedals.

The first ride revealed the usual squawks: handlebars, brake levers, and derailleurs all needed adjusting. It also revealed that the bike is slow, with maximum sustained speeds on level ground of about 15 mph. Over a 4.5 mile course around my neighborhood, I actually achieved a higher average speed on my conventional bike than on the electric bike. While the bike was slower than a conventional bike, the amount of effort used during that first ride was comparatively minimal. Basically, it is the physical equivalent of a brisk walking pace, at worst.

Absolute speed, though, was not a requirement for this bike in its role with the volunteer patrol. In fact, its lack of speed makes it ideal for operating alongside conventional bicycles, and makes it far easier to tame for the less experienced rider.

As I had observed when I first brought the bike home, its long wheelbase and low center of gravity give it an amazing amount of stability. It also has a very comfortable upright riding position, making it an ideal observation platform.

The remainder of the fall was spent on test rides, checking battery life and continuing to make adjustments to the bike. Hopes for getting the bike out into the field were dashed by the very cold and very snowy winter. During the winter months, the bike simply sat in my garage, along with my "conventional" bicycles, just waiting for the weather conditions to improve.

Towards the end of March, the weather began to show enough improvement that riding became feasible again. A bicycle training class was being held for the newest volunteers who passed through our Volunteer Academy. Volunteers go through 24 hours of classroom training followed by another 12 hours of field training before they can go to their "specialties" such as horse or bicycle patrol. The training course we use

comprises one hour of classroom instruction, one hour of cone course instruction and then a one-hour trail ride. I am the Volunteer Instructor for bicycle, so it seemed to be a good time to try out the electric bike. My observations are as follows.

The LaFree has a very long wheelbase, making tight turns required by the cone courses somewhat challenging. The bike's heft and low center of gravity due makes it very stable in low speed maneuvering, overcoming the difficulties of handling a longer wheelbase bicycle. Curb-hopping was no different than on a regular bike, although with the considerable weight, riding off the curb led to a pretty hard landing. The braking left something to be desired, but given the bike's heft, it did an adequate job of stopping the bike.

Trail riding revealed this bike's biggest downside; it climbed with the agility of a tortoise. With the bike in its lowest gear and the motor running wide open, the bike would still bog down on moderate inclines. Adding pedal effort is a must. On sharp climbs the bike could manage no more than three mph. However, it would make the climb without over-exerting the rider, who just needed to be patient. The trail ride also confirmed that the bike is an excellent mobile observation platform and is comfortable to ride for prolonged periods.

After proving the LaFree had the potential to be an effective tool, it was time for it to prove itself under real world service conditions. No trial could be more effective than the annual detail at Black Hill Regional Park in Boyds, Maryland. Once per year, an Iranian-American group rents out the entire park for the Nowruz Celebration. Crowds of 3,000 or more are not uncommon. With this many people in the park, a significant presence from our department is required to ensure that the patrons are following the rules.

The role of the bicycle patroller is to rove from checkpoint to checkpoint in the various parking lots as well as ride the trails in the park's interior to monitor

(Continued on page 19)

Hype or Hope?



(Continued from page 18)

the crowds. This part of the park is very undulating and a rider will have anywhere from 120 to 150 feet of climbing per mile. In short, if the LaFree performed well at Black Hill, it would perform well at any of our other parks and trails in the County.

We were greeted by a sunny, but cool, morning the day of the Persian Festival. I brought both the electric bike and my regular ride (a Trek 6500) as a backup. I parked my car at the police substation and then rode approximately 1.5 miles to the center of the park. At the first hill, I encountered a horse-mounted volunteer. The LaFree chugged up the first hill, keeping pace with the horse at a walking speed. Once we got onto the flats, the electric bike pulled away from the horse and I joined two other bicycle patrollers in the center of the park.

The bike proved to be a good match for the conventional bikes. Its speed on the climbs was no worse than the other two volunteers riding with me, and I was far less winded at the top of the hills than either of the other riders. We had to navigate our way around crowds milling about and seemingly unaware of our approach despite our warnings. Again the LaFree proved to be extremely stable in low speed

maneuvering, and adding a little bit of throttle helped keep the bike upright.

Totally unexpected was the amount of attention the bike received. It was quite the conversation piece! I was stopped by park guests, uniformed officers and park maintenance staff, all inquiring about the bike. The general consensus

was that it is a very cool machine. Some of the officers remembered what this bike looked like just one year before in Abandoned Property, and could not believe its transformation.

After about two hours of riding, I switched to my conventional bike. I did not realize how much of a help the electric motor had been until I started pedaling up the same hills I had ridden earlier on the electric bike. While I enjoyed the lighter weight and much quicker responsiveness of the Trek, I have to admit, I missed having that extra boost. After another two hours with the Trek, I went back to the electric bike for the final two hours of the detail.

The detail itself was fairly mellow. We did not have the kind of parking issues that we had in previous years. The most serious items were permit disputes about who was supposed to be at which picnic shelter, patrons bringing propane cookers to the park (which are not allowed), and a handful of dogs that were off lead. All of these were addressed by the bicycle-mounted volunteers, as we had the flexibility to be able to get to the various places where the patrons were congregating.

With a half hour left in the detail, the battery was no longer putting out enough power to climb the steeper

hills. I had to do some out of saddle climbing to help get the bike up the hill. The out of saddle exertions were far less than they would have been, even with the diminished assist that was available to me at the time. I was offered a ride back to the substation, but I wanted to see how much was left "in the tank" on the bike. The substation is at the end of a long uphill, and by the end of the uphill, the motor was barely putting out, so I had to go out of saddle to go the last 20 yards.

Overall, the day was a success. No major incidents occurred and the patrons were able to enjoy a day of beautiful weather. The electric bike proved it could work at one of the two biggest details our department works (4th of July fireworks being the other), and did so at the park with the most undulating terrain in our system.

Mind you, this particular bike is a first-generation electric bike, using late 1990s technology and weighed down with very heavy, lead acid batteries. Even with these handicaps, the electric bike proved it could be an asset to the department. A modern electric bike, with more powerful motors, lighter, longer-lasting, and more powerful batteries would have had significantly increased performance.

The electric bike's performance at the detail was brought to the attention of our department's bike patrol sergeant. It interested him enough that the department is looking into the possibility of utilizing modern electric bikes in the patrol role. The evaluation of a modern electric bike will be the next chapter of this story, so please stay tuned to your *IPMBA News!*

All photos by David Cohen.

David Cohen has been a volunteer with the Maryland-National Capital Park Police, Montgomery County Division, since 2007, and is an avid cyclist both on- and off-duty. Besides tinkering with bicycles and putting old electric bikes back together, David also enjoys working on vintage British sports cars and World War II era aircraft. He can be reached at onyxasax@aol.com.

The IPMBA News



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