

MRDS Systems in Law Enforcement

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Preface

It is the intent of this document to serve as a reference guide for law enforcement officers of whom have a goal to implement red dot sighting systems within their law enforcement agency. Administrators and those tasked with making financial decisions within their agency need to do so knowledgably and with just cause to be sure the money spent is beneficial to the individual officers, the public and the agency as a whole. As such those administrators will likely have to assemble arguments questioning the applicability and advantages of the implementation of a weapon system or associated accessory for a weapon system. In laymen's terms an administrator must be able to clearly see why the juice is worth the squeeze. Administrators will do so in direct anticipation of similar doubt being cast upon them and their financial or otherwise supervisory decisions. Administrators will rely on firearm instructors and use of force experts to be able to outline information relative to any weapon system, use of force device/protocol, and/or accessory.

Frequently however, firearm instructors and use of force experts do not have the time to prepare, organize or develop noteworthy, significant or suitable material containing the correct volume of information to accurately portray a proper representation as to why certain items or training are desirable. Recurrently this results in a request being briefly discussed via email or in person for several minutes. Sometimes a few good arguments are made and depending on the cost and request at hand the request is met. Other times, the request is of a much greater financial obligation. Due to the short amount of time spent on the topic and quick back and forth between the officer and administrator, firearm instructors and use of force experts are often shot down, left with replies of indecisiveness, or told they'll be addressed at a later time.

This document will outline benefits, facts, statistics, research, and other data relative to red dot sighting systems and their place in the law enforcement community, specifically patrol and or tactical applications. Additionally this document will contend common myths relative to red dot sighting systems. Information will be provided within to highlight the benefits of the red dot sighting system to assist firearm instructors, use of force experts, and other officers in making informed, educated, and data driven arguments to their administrators.



Scientific analysis of deadly force encounters

Although data relative to law enforcement use of force encounters is often accurately gathered and compiled into statistics or other numbers from such sources as the FBI's LEOKA or Officer Down Memorial Page, this data is often incomplete, or inaccurate due to lack of reporting from individual agencies. Even still this data along with data from individual agencies is currently our best reference for use of force incidents, especially those relative to law enforcement and lethal force encounters. Additionally, although this data is very helpful, we are still unable to ever scientifically analyze a true life or death use of force encounter under scientific control. There are just too many variables. Firearm instructors and other use of force trainers will consistently try their best, and do a very good job at attempting to mimic use of force incidents by use of scenario driven training, simunition training, muscle fatigue and the inducement of stress amongst other training aids. However, trainers will never be able to fully mimic the effects of a true life or death situation in which the officers stress level and other factors are that of living or dying; an actual fight for your life, somebody goes home and somebody never sees their loved ones again.

Furthermore, we know that eyewitness testimony from the officers involved or the criminals involved, in these incidents is similarly skewed as a result of some of the effects of the incident itself. The stress and hormone releases can impact one's ability to remember and retain the information in the correct manner whether it be what was seen, heard, otherwise observed with the senses, or the exact order and timing of each detail itself. Additionally the human mind would then need to quantify this information exactly as it took place. This inability to recall or misrepresentation of events is undisputed and has become common knowledge for not only use of force trainers but lawyers, courts, and even the general public. We still frequently rely on this information to help depict a clear story as to the events that unfolded. Another variable in eyewitness testimony relative to lethal force encounters is they are frequently one sided. It is not uncommon that these lethal force encounters end with the death of one, or both parties involved, and in mass incidents, sometimes more.

Therefore, many variables around the circumstances and how they unfolded are never clear. We are not able to debrief and interview an individual on what they experience during the lethal force encounter if they did not survive.

Nevertheless, the inability to truly mock a life or death situation does not prevent us from knowing some of what will happen to the human body and mind as a result of a fight or flight response. Consequently we are able to predict some of what will happen during these encounters. The best we can do is prepare for what we will know will happen.



Red dot sights are slower

This is by far one of the most unfair myths about red dot sighting systems, and clearly comes from individuals who did not want to devote more than a few minutes let alone an actual eight hour class or more of training to the RDS system.

Commonly individuals will evaluate their abilities by utilizing the three most common metrics of success. Those metrics are accuracy, distance and speed. A great way to evaluate one's ability is to establish at what distance and speed accuracy remains.

RDS systems have been used in professional speed shooting competitions for years for a reason. They are simply faster whether you are up close or far away. Why are they only recently making their way into the law enforcement community? Well, they aren't. RDS systems have been utilized on rifles for over a decade. In fact, it is odd to see a personally owned or department issued rifle without some sort of red dot sight mounted on the firearm. Formerly the same argument of "red dots vs. iron sights" was had about 15-20 years ago pertaining to patrol, and military rifles. It is clear at this point that red dots won. So what's the difference when it comes to handguns?

The difference is twofold. Firstly, red dot sights mounted on rifles were able to be much more durable than the initial onset of red dot sights for pistols. This occurred mainly because of the size of the red dot sight, or more specifically the enclosure of the red dot sight and associated technology. It was almost immediate that red dot sights for rifles were able to be very durable because of the fact that building a large durable sight did not really effect whether or not it could be securely mounted to a rifle, and still easily utilized. Additionally, a large optic was not a huge deal due to the relative size of the rifle itself.

The size of the red dot sighting system had to be drastically decreased to be mounted on a pistol, and therefore initially durability of the optics themselves suffered. Over time, and with trial and error as well as advancements in the design and materials utilized to build the red dot sights, many companies have been able to produce a red dot sight that is sized appropriately for the pistol and extremely durable. Although not every company has been able to replicate this durability there are many good choices out there. Please keep in mind the difference between red dot sights suited for duty and those that are not.

Secondly, the red dot sight that is attached to the rifle is initially much easier to find and utilize. This is due to the almost automatic proprioceptive index of the rifle cheek weld. Whether you are shooting iron sights or red dot sights on a rifle, the stock of the rifle is brought to a position against the cheek. This is almost automatic every time due to the fact that the rifle is actually touching your face and the sighting system lies within inches of that area of proprioception.



When utilizing a red dot sight with a handgun however the sighting system is much further from the face and eye, there is no indexing the handgun against the cheek. The red dot itself seems to just be floating in midair. Also a rifle is automatically aligned in a straight fashion due to the stock being against the body and against the cheek. This places the rifle red dot immediately in a position to easily be viewed. With handguns however, there is another variable called grip angle. Depending on the manufacturer or the model from the manufacturer many diversely manufactured handguns have different grip angles. As a result the positioning of ones wrist and hands is extremely important in the ability to immediately locate the red dot within the optical lens.

The ability to locate the dot on a handgun is a training issue. Once this point of proprioception is developed officers will immediately be able to find the dot and not waste any time attempting to line up the front and rear sights with equal light on either side of the front sight post, or equal height between front and rear sight posts. This is advantageous and a must faster sighting system.

Training and learning from the dot

One of the hardest fundamentals for a firearm instructor to remediate is sight picture and sight alignment. This is because it is impossible for an instructor to ever truly see through the eyes of the officer. Instructors are relying completely on the officer to describe what they are seeing relative to their sights, should there be a possible issue that demands remediation. Iron sights will be the backup for an RDS system and the fundamentals of iron sight shooting still need to be taught and relayed to an officer. However, as far as training on the primary sighting system (RDS) the process is simplified. Simply put the dot where you want the round to go and pull the trigger.

Furthermore, RDS systems are capable in assisting officers in self-diagnosis of fundamental issues at hand. An example of this diagnosis is an officer who is monitoring his/her red dot during recoil of the firearm. The officer sees that the dot is reentering the window from the left side of the window. This action by the red dot is indicative of a loose grip with the left hand.

When this self-diagnosing technique is relayed to officers during training sessions officers will be able to identify and either self-remediate or inform the instructor of what they are seeing. The instructor will then get a good basis for problems at hand without having to conduct shooter evaluation and target analysis. If nothing else, even if shooter evaluation and target analysis are still needed the dot evaluation only adds extra data that would not have been gathered.



Most officer involved shootings occur at distances where sights are not used

The above argument is frequently utilized by administrators. The fact of the matter is this is misinformation. Before getting into the statistics themselves, let's take a look at some factors that are not considered within these statistics that could change the outlook or interpretation of the data collected and compiled.

- 1) The statement of "distance where sights are not utilized" is a blanket statement that casts shadow over top of how a multitude of officers engage threats. The statement is a presumption based on what is a generally accepted standard for "center mass" hits and the commonly accepted distance at which officers should be able to accurately hit this area utilizing point shooting or natural point of aim shooting, without having to acquire sight picture. This statement in and of itself is problematic.
 - a) The statement is assuming every officer involved in these shootings possess the same skill level, or should possess the same skill level nationwide.
 - b) The statement is assuming good hits are "center mass" or high thoracic cavity hits. Although these hits have become the accepted standard these hits are not immediately stopping threats and to immediately stop threats more precise shots need to be taken, utilizing sight picture even at close distances.
 - c) The immediate stoppage of a threat will require a precise accurate shot to the brain stem which on average is about 3 inches long, and 1 inch wide. That is a sight picture necessary shot at any distance.
- 2) What percentage of officers closed the gap or placed themselves closer to a potential threat for the purpose of being able to "guarantee" their ability to deliver accurate hits should a lethal force encounter occur?
- 3) Were the officers unable to obtain sight picture due to the natural occurrence of threat focus when involved in fight or flight?
- 4) What percentage of officers tried to obtain sight picture but diverted to point shooting due to the inability to establish sight picture, and now forget due to the stress of the incident?
- 5) If an officer falls on the wrong side of this statistic the statistic means absolutely nothing. An example is Officer "A" is engaged in one lethal force encounter during his 25 year career, where the firearm was deployed and shots were taken from approximately 25 yards away. For officer "A" 100% of the gun fights he was in occurred at a distance which required sights.



Table 33 Law Enforcement Officers Feloniously Killed with Firearms

Type of Firearm and Size of Ammunition by Distance Between Victim Officer and Offender, 2009–2018

			0-5	6-10	11-20	21-50	Over 50	Distance	Distance
Type of firearm	Size of ammunition	Total	feet	feet	feet	feet	feet	unknown	not reported
Number of victim officers killed with firearms	Total	471	187	80	61	39	37	45	22
Handgun	Total	336	175	57	36	19	6		
	.22-caliber	10	3	3	1	1	0		(
	.25-caliber	3	1	0	0	0			(
	.32-caliber	4	3	0	0	0			C
	.357-caliber	13	7	2	2	0	0		1
	.357 Magnum	6	0	1	0	4	0		1
	.38-caliber	28	21	4	0	2	0		(
	.380-caliber	21	11	6	1	2	0		(
	.40-caliber	76	44	11	11	2	2	5	1
	.44-caliber	2	0	0	1	1	0		0
	.44 Magnum	1	0	0	0	1	0		C
	.45-caliber	43	20	12	2	3	1	5	0
	5.7x28 millimeter	1	0	1	0	0	0		0
	9 millimeter	107	57	14	18	3	3	8	4
	10 millimeter	1	1	0	0	0	0		C
	Unknown	4	2	2	0	0	0		0
	Not reported	16	5	1	0	0	0		6
Rifle	Total	108	6	18	19	18	28	13	6
	.22-caliber	5	1	0	1	2	1	0	C
	.223-caliber	34	2	9	6	6	8	3	C
	.25-06-caliber	1	0	0	0	0		0	C
	.270-caliber	1	0	0	1	0	0	0	C
	.280-caliber	1	0	0	0	0	1	0	C
	.30-caliber	1	0	0	0	0		0	C
	.30-06-caliber	2	0	0	0	0	2		C
	.30-30-caliber	3	0	0	0	1	1	1	C
	.308-caliber	4	0	0	0	1	2	1	C
	.45-caliber	2	1	0	0	1	0		C
	5.45x39 millimeter	6	1	0	1	0	4	0	C
	5.56 millimeter	4	1	1	1	0	1	0	C
	7 millimeter	2	0	0	1	0	1	0	C
	7.62 millimeter	2	0	0	1	0	1	0	C
	7.62x39 millimeter	25	0	5	5	7	1	5	2
	9 millimeter	3	0	2	1	0	0	0	C
	Unknown	6	0	0	1	0	3	2	C
	Not reported	6	0	1	0	0	0		4
Shotgun	Total	23	4	4	6	2	3	2	2
	12-gauge	19	2	4		2			C
	20-gauge	2	2	0		0			
	Not reported	2	0	0		0			
Multiple firearms used by	Î								
offender(s), unable to determine									
which caused fatal injury ¹	Total	2	0	1	0	0	0	0	1
Unknown	Total	1	1	0	0	0		0	C
Not reported	Total	1 1	1	0	0	0	0	0	



The preceding chart was taken directly from the FBI's LEOKA statistics. When first evaluating these statistics it is important to note that a total of 471 officers were killed utilizing gunfire between years 2009 and 2018. Of those 471 officers, 45 were killed at a distance unknown and 22 were killed at a distance that was not reported, therefore these 67 should be removed from the equation making the new total 404.

Initially it does appear as, and can be argued that most gun fights occur at distances where sights would not be used. Again this is only if we're making this argument relative to making center mass, high thoracic hits, and not for precise hits that will actually stop a threat immediately. Dependent upon the shooter/officer, it is fair to say that relative to that shooter/officers skill most normal patrol officers will begin to utilize their sights somewhere between the seven to ten yard lines, or for purposes of the above chart, between 21 and 30 feet. The total amount of officers killed outside of 21 feet is 76 of the 404 total officers. This equates to approximately 19% of officers killed with gunfire occurring at distances that most standards say sights should be utilized.

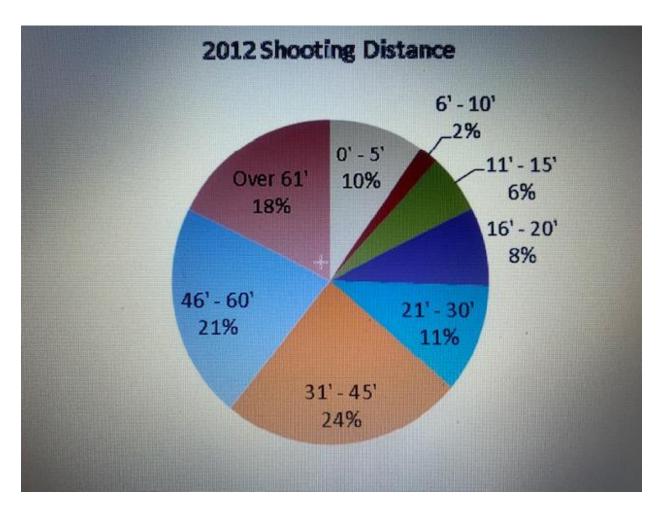
So where is the flaw? Read it again, this statistic is relative to Law Enforcement Officers who were KILLED. There is no statistic recording the distance at which shootings occur and officers survive.

There is no need to explain further that clearly the statistics of officers killed with gunfire are going to point out that the occurrences at closer distances more frequently result in the death of an officer. To make it easy, there's a reason an individual gets more points in basketball for the shots that are taken from further away, it's simply harder.

So what about all the shootings that occur where officers did not die that do not get recorded by LEOKA?



The LAPD is known for some very good record keeping and compiling of statistics and officer involved use of force incidents. The most recent information pertaining to distance is currently from 2012. The below pie chart was taken directly from the 2012 LAPD UOF (Use of Force) Annual Report. This simply shows the distance of officer involved shootings, not just those where officers died. It is clear that by following the same 21 foot distance or greater, a total of 74% of the officer involved shootings took place outside the realm of 21 feet. This is almost the exact opposite of the data from LEOKA.



Ouestions that should be asked:

- 1) Was the greater distance utilized by the officers a variable in their ability to survive?
- 2) Knowing red dot sights are better at greater distances are they worth it now?
- 3) Knowing red dot sights do not hinder one's ability to deliver accurate gunfire up close, why aren't they being utilized more when it's clear that a vast majority of officer involved shootings occur at greater distances?



Distance

A common standard, if you will, for distance relevant to handgun applications is 25 yards. In most states this is the furthest distance required to accurately fire a handgun during qualifications. Although every department/instructor may have a higher or further standard this is the generally accepted minimum standard for distance for handgun applications. With the RDS system it is highly likely that most officers will be able to achieve the same level of accuracy at even greater distances. Studies conducted by Absolute Dynamics have found that 96% of students who completed a basic RDS class and learned fundamental shooting techniques with the RDS system, are able to keep the same level of accuracy or better than that of traditional iron sights at twice that distance. Additionally the speed at which an individual is able to place accurate gun fire down range increases even at these greater distances. This gives officers a huge tactical advantage in being able to quickly deliver accurate gun fire at an offender at a distance where the offender will likely not be able to hit the officer. This extended distance can act as a "point of cover" should no other cover/concealment be available and still allow an officer to fight back.

Rifle/long gun threat

With rifles becoming more prevalent in the civilian world officers will begin to encounter rifle threats more frequently than before, as already seen and can be seen in the LEOKA chart above. With the added ability to fire accurately from a distance with the RDS system, an officer who unknowingly walks into a rifle threat situation will still be able to deliver accurate gunfire with a handgun at standard rifle distances, thus giving the officer a fighting chance against a rifle threat when caught off guard.

Prior to this implementation of RDS systems that would be highly unlikely unless the officer possessed extreme skill. The officer would have to take cover and attempt to return to the patrol vehicle, acquire a rifle from the vehicle (if available) and then return to the scene, likely losing visual on the threat, creating greater risk to the officer and the public.

De-escalation mentality-Over the past decade, de-escalation has continually been a topic of discussion even more predominately than before. Some of the de-escalation curriculum includes the use of certain verbiage to help officers communicate with individuals in a manner that will hopefully resolve the situation without the use of force. Another prong to de-escalation is the physical distance between officers and those individuals. A majority of current curriculum for de-escalation will have an element of "create space" or "standoff distance". As a result officers will need to be prepared to accurately fire their handguns at these "standoff distances" more than ever. Officers who were once prone to approach dangerous individuals and try to control situations with open or closed hand tactics are now more likely to "standoff" as courts and legislation are beginning to recognize this type of behavior by officers as "escalation".



There has been a dramatic increase in cases where offices are "justified" in their actions but the Monday morning quarterback has questioned was it "avoidable". If an officer places himself in a position which results in the use of lethal force, courts are beginning to look at whether or not that officer "needed" to be where he was or were other options available. Again pointing out a "standoff" distance as a better avenue of approach for officers moving forward.

Additionally noting why officers will now more than ever need to be able to deliver accurate gun fire from these "standoff" distances. What these "standoff" distances are will be determined by the situation itself and many other unpredictable variables created by the situation at hand. However the fact still remains, if the space is created it will be much harder for a court to say the officers escalated the situation and therefore officers must still be prepared to act at these distances.

Tools to succeed

Often it will be on the firearm instructors or use of force instructors to convince the administration that they need certain tools to succeed. This success should not be cut short of what could be, to save money. Officers are in the business of saving lives. Just like doctors, the correct tools need to be readily available to deal with any situation/emergency that walks through the door. Imagine a doctor being told he can't have an MRI machine because "most of the time" an ultrasound will get the job done. Falling shy of being able to help anybody who would have benefitted from a correct diagnosis or lifesaving imaging from the MRI.

Officers cannot afford to be provided with tools to succeed some of the time. Our officers, loved ones, and members of the public depend on law enforcement agencies to produce successful results at a moment's notice 100 percent of the time. Anything less is unacceptable. Over and over again it has been shown that officers almost have to be superhuman in their abilities to remain calm, process information, address a situation without emotion, and react tactfully, skillfully and lawfully. Not providing the tools requested by officers and expecting them to be able to complete their tasks is setting them up for failure.

A real fight or flight response and the Sympathetic Nervous System

As previously stated at the beginning of this document, firearm instructors and use of force experts do their best to mimic real world scenarios during training to try to induce stress, confusion, decision making, muscle fatigue, hormone response, and many other variables that effect an officer during a lethal use of force encounter. However, those instructors and experts will always fall short of ever actually being able to fully generate a realistic fight or flight response activated by the Sympathetic Nervous System. By no fault of their own these instructors will simply never be able to safely place an officer in an actual life or death situation. As a result trainers must rely on what they do know will happen to the body based off experience, testimonials, and medical research on how the body reacts to hormone releases.



The Sympathetic Nervous System is responsible for activating the fight or flight response that all officers are aware will activate during an actual life or death situation. During that SNS response several things will occur.

- 1) The immediate natural instinct to want to threat focus and not focus on the front sight
- 2) A release of hormones specifically adrenaline
- 3) Extreme pupil dilation to allow for more light and information to enter the eye and mind
- 4) The physical inability to front sight focus due to extreme uncontrollable pupil dilation (from hormone release)
- 5) Increased heart rate
- 6) Increased respirations
- 7) Failure of some fine motor skills dependent upon level of training

As a result of the above, officers will begin the first few seconds of their life or death situation with their years of training failing them. For years on the range, in the academy, or within the department and other trainings, officers have been told that to be able to fire a handgun accurately they must focus on the front sight and pull the trigger rearward without manipulating their sights. Suddenly officers are unable to front sight focus due to the release of adrenaline in their body which results in extreme pupil dilation. Equate this to having your eyes dilated at the eye doctor and then trying to read a document, type on your computer, or even focus on your front sight. It will be found that it is nearly impossible to do correctly.

Additionally not only will officers have to try to front sight focus during this altercation and pupil dilation but now their expected to be able to fluctuate between their threat, the rear sights, and the front sight. This process and fluctuation is an attempt to continuously acquire the threat, make sure it is still a threat, and correctly align the rear and front sights, prior to obtaining front sight focus. This is problematic for an officer experiencing pupil dilation because the dilation of the pupils will not allow for them to near sight focus.

One focal plane shooting

The red dot sighting system allows for one focal plane shooting which assists in solving the above issue related to the inability to focus on the front sight. How so? When utilized correctly the officer leaves both eyes open and focuses on the threat at hand. While remaining focused on the threat, the officer superimposes the red dot over top of the desired target area. Once the red dot hovers over the desired impact zone the officer is able to pull the trigger and deliver gun fire directly to the desired area. The process of delivering accurate rounds is simplified, the officer is able to deliver rounds to the threat because he/she no longer needs to front sight focus during a time that it is not possible, and the added benefit of being able to threat focus has been added.



Lobbying for the red dot system justifying cost

It goes without saying the purpose of this document is to assist officers who wish to make argument with administrators as to the benefit of red dot sights. Even if convinced that the RDS system is a good idea an administrator is still going to want to know how much it is going to cost the department. Obviously this figure will be dependent on the size of the department and the guns and red dot sighting system chosen. Here are a few ways to find money, or cut cost.

- 1) Utilize forfeiture money to assist in the purchase
- 2) Conduct the project over a period of time, purchase half the project, the red dots, at the end of year 1 and the guns at the beginning of year 2
- 3) Seek donations from local businesses and unions
- 4) Trade in current firearms for a credit towards new firearms ready to mount RDS systems
- 5) Convince local politicians of the minor cost of outfitting the department with this better system compared to that of a wrongful death lawsuit due to inaccurate shots by officers
- 6) The 50/50 program-Some officers have made deals with their department that if the department obtains firearms that are compatible with RDS systems, the officers will each purchase their own red dot. This can cost the officer a few hundred dollars but that investment will likely last for years to come, and when saving the department thousands of dollars it could make the deal possible

Conclusion

In conclusion it is clear that there are many benefits to RDS systems and their place in law enforcement. With the exception of cost there do not appear to be any drawbacks to the RDS system and it is clearly here to stay. If your administrators are still unsure take them to the range, run them through a few easy drills to get them acclimated to the dot. Show them how successful *they* can be utilizing the RDS system. Once they want it, they'll assist you in convincing others and finding the funds.

As always feel free to reach out with any questions comments or concerns relative to this document or any training for that matter.

Signed,

Daniel Barnett

Top Tier Instructor

Absolute Dynamics

Dynamic Training Concepts