

What effects a K9 team's success?

by Robert Dougherty

The dog:

Technological alternatives have to this time proved inadequate as compared to the acute ability of a dog's nose. The Pentagon spent \$19 billion dollars to determine that their best explosive detection tool was a dog. Right now, good detection dogs are getting harder and harder to obtain. Government agencies such as Customs and Border Protection, TSA and ATF have multiple vendors trying to come up with good dogs to fill their specific requirements. Reports suggest that the good dogs go to whoever has the most money and at last look that is most likely not the American government, which by the way competes against itself in the procurement of dogs and is also in competition with local and state law enforcement agencies for the same purposes. Also, in the mix are private companies who purchase dogs needed for a host of detection work, some to fill U.S. contracts at home and overseas. Some U.S. Government bids even spell out that the dogs MUST come from Europe. The Department of Defense reported that most of their transactions occur in Germany and the Netherlands however, many Eastern European countries have become major resources for purchasing working dogs. America is buying as many dogs as it can find and afford from Europe and here is a shocker, America is not getting the best dogs. Finding dogs is, depending upon breed, getting harder and obtaining the best dogs most likely impossible. The advanced countries the U.S. is purchasing dog from also have concerns for keeping safe from terrorism or drug trafficking. Common sense will suggest those countries are keeping the best dogs for themselves. Breeders in less secure economic countries will sell to whoever will pay the highest price for a dog. Why are we not finding and buying dogs domestically?

The TSA had for 1999 to 2012 a Canine Breeding and Development Center which selectively bred nearly 500 puppies with a goal of breeding genetically selected high-performing healthy explosive detection dogs raised from puppies. The breeding program closed in 2012 after an efficiency review determined that although "important" further investment would not best manage taxpayer dollars. It is a loss of a program that if given what it needed then would have only advanced the goal of keeping America safer and providing a source of domestically bred bomb sniffing dogs. Over several years ongoing testimony before the U.S. House of Representative committees and subcommittees on examining the use of canines has happened. Recently HB4577 entitled "Domestic Explosives Detection Canine Capacity Building Act of 2017" was introduced in the House in December of 2017, passed the House and is now before the Senate. This bill calls for the development of a working group to develop a decentralized domestic canine breeding network to produce high quality explosives detection canines and modernize canine training standards.

The dog's primary sense is olfaction and *not every dog is or can be a very good detection dog*. For now, let's accept that the selection process has been good, and the dogs chosen to have either been genetically bred well for work and raised from puppies to do detection. If the dog came from a shelter or was a donation let's hope the drive to play the hunt game is high and the dog has a good nose. With all the check marks in the right boxes the process to teach the dog to find anything from explosives to an SD card will happen through solid basic detection course instruction.

Maintenance Training:

Not to lump everyone into the same category and it is clearly understood that agencies differ in training requirements, time allotted, and budgets. For much of the law enforcement community with K9 units the K9 officers are assigned to platoons or squads running everything from auto crashes to neighbor disputes until they are called out for their specialty. For these teams monthly, in-service training is their reality and twice a month if their agency is compliant with a national standard. For detection in service multiple training aids are placed out for detection dogs where trainers are most likely doing their best to set up problems for teams to work out. As if often the case the training sites are familiar, or maybe if a new location is used it often is an abandoned building or auto pound or car lot or a less active part of a transportation center. Trainers know it can be difficult to find places to train and they know how important it is to change locations. During training sessions trainers may be present during the searches to support the teams, helping handlers to identify a dog's behavior changes in odor and provide the approval nod so that the handler accurately rewards the dog on source. For most detection K9 teams they have a very high reliability in training...but that's training. The real concern for handlers and trainers is what happens in the field? Because in the field, on the street, it is solely the handler's call as to the accurate performance of their dog. The mere real world around the team will undoubtedly impact the performance of the dog by countless contextual elements: situation, endurance, and conditions.

Imagine the handler-dog team who have a high accuracy rate in locating source odor in training who one day find themselves working in a large moving crowd, perhaps sweeping the site of an event for hours, or a densely populated environment full of different odors and environmental stimuli, a moving subject who drops a book bag in a trashcan containing a rice cooker bomb. What are the chances the team will be successful in their mission and what are the factors the team can be reliable and effective?

Distractions:

Teams should train as close to the same circumstances as they will work in and face real world. Trainers know this but still sometimes can't fulfill the requirement as best as they would like. A dog that is very consistent in detecting the target odors of various weights, amounts or location placements of explosive or narcotic training aids in a sparse training area will be faced eventually with an array of sights, smells, sounds and environmental exposures that impact even the best of dogs. Dogs get a great deal of information through smell. Just look at two dogs greeting each other, they can't put their noses into enough places close enough or long enough. Take your dog for a walk and they stop every few feet to take in some piece of information about their surroundings, relieve on a pole perhaps where 50 other dogs have relieved themselves, pulling to an unknown object to smell it, figure its purpose out, what is the meaning of this "thing" to the dog.

The same principle is at work when the expectations in the real world are that the dog will work just like in training. Dogs will get distracted in real world situations. Unlike the sometimes-sanitary conditions of training the real world provides distractions; other dogs, people they don't know, noises they are not familiar with, food discarded in the interior of a car or on a train platform and the list is endless of people, places and things. A dog cannot just detect the odor of TATP or Crystal Meth without having to work through everything else in its path. The dog that performs alerts on stationary hides cannot be expected to detect the person carrying an explosive in a backpack moving through a crowd. A narcotics dog might miss a hidden compartment because the car interior is full bags of partially eaten fast food. An explosive dog

might miss the back pack tossed into a trash can because of a loud noise that was distracting enough to stop the dog from smelling.

Endurance and time changes everything:

The endurance ability of a dog, how long can a dog work for and under what conditions. Every trainer and handler know that the ability of a dog to perform well changes over time. Very simply, a tired dog is less reliable. An overweight dog will become ineffective quicker than a dog at the correct weight, a dog that is exercised regular and correctly will last longer than a dog that only exercise comes from jumping in and out of their vehicle. Watching the dog work means more than just waiting until the dog finds the odor source and alerts. Watching the dog means considering how is the dog being affected by time, weather and stress. When a dog is mouth breathing or panting they do not sniff odors at their best, a hot or overheated dog will be forced to cool themselves and therefore has a less reliable nose. A thirsty, hot, tired dog may start seeking shelter from the climate, an overheating dogs tongue will often cup, mouth wide open taking in as much air as possible to cool themselves down. The dog that shows signs of stress (yawning, making lots of eye contact with the handler, sitting to scratch or shake off stress...) is not reliable at that moment. To be more reliable does the dog need to take a break, lose weight, get more beneficial exercise?

Odor disperses and changes:

When a hide is set up for training often the first dog is the test dog. Watching how the dog works, where they catch odor, how they work it out. The next 7 dogs show similar or exact behavior, but dogs 8 through 10 changes are noticed to where they now pick up the odor and work it out because things changed in the room. The placement has become harder to source or easier to source. Time has elapsed as to when the aid was placed out, the temperature in the room changed, strong sunlight is drawing the odor towards the window. Odor is different when the weather changes, warm or hot humid weather odor disperses differently than in the cold. Dogs can miss odor searching in one direction and catch it moving in the opposite direction because of air moving. A narcotic dog can miss an odor on a car stop because traffic is moving by causing drafts, noise and exhaust odors. A cold engine aid placement will be sourced differently by a dog than a real odor source concealed in an engine compartment that has been driving on the highway for 5 hours.

Human error:

The human is always a factor in the team's success. The handler did not read the dog correctly, missed a behavior change, has lots of other personal issues in their heads drifting off thinking about "stuff" when they are to be focused on the task. Maybe the person on the end of the lead is not a good handler to begin with, being indecisive or doubting themselves or the dog or worse, being indifferent to it all.

"Trust your Dog" ... "The Dog is Always Right" ... may not really apply in the real world but make great mottos that hang in training facilities and passed down by trainers to handlers through the decades. A more accurate motto might be *"What is your dog telling you"?* Being able to accurately "read" what the dog is communicating is perhaps the single most principal factor in a team's success.

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