



EL PASO INTELLIGENCE CENTER

Southwest Border Unit

Project Gunrunner

EB10-17: Assessment of the GT200 Molecular Detector

March 15, 2010

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1. EXECUTIVE SUMMARY:

This report is a review and assessment of the GT200 Molecular Detector manufactured by the British company Global Technical Ltd¹. The company claims the device can detect explosives, narcotics, and can be customized to detect uranium acetate, human bodies, gold, ivory, poison, currency, and tobacco. The governments of Mexico, Iraq, Thailand², and other countries use the devices. The U.S. Government does not use the device. In June of 2009, Sandia Laboratories³ conducted a double-blind study involving the Military, company representation, and an independent tester. The study showed that there was no possible means by which the device could detect anything, and “random chance” was more likely to be successful.

2. GT200 AND SIMILAR DEVICES BACKGROUND:

According to numerous government and press reports cited in this report, the “GT-200” functions by detecting “magnetic fields” and the “paramagnetics” (magnetic fields) the substances it is allegedly detecting are emitted when stimulated by static electricity. The device costs approximately \$250 to make and the Iraqi government paid \$60,000 for 800 of them⁴. Mexican open source refers to the device as “la Ouija del Diablo⁵” or the Devil’s Ouija. Reports state that the Mexican military has been using the devices for over nine years in an effort to “Reinforce the national security strategy with the objective to keep organized crime at bay” (per SEDENA/Mexican Army and Air Force). A “GT-200 SEDENA” press release video⁶, presented a Mexican soldier who was demonstrating the device. The soldier presenting the device was very confident in its capabilities. The soldier had to walk in a specific manner and referred to the construction of the device as made out of “Mattel plastic.” When a reporter was given

¹ <http://www.globaltechnical.co.uk/>

² <http://www.andrew-drummond.com/2010/01/04/british-magic-wands-accused-of-killing-people-in-south-thailand/>

³ http://www.justnet.org/Lists/JUSTNET%20Resources/Attachments/440/moleeval_apr02.pdf

⁴ <http://www.mainjustice.com/2010/02/01/the-iraq-wars-divining-rod-or-corruption-magnet/>

⁵ http://www.exonline.com.mx/diario/noticia/primera/pulsonacional/nueva_arma_de_sedena_pone_a_temblar_al_narco/369821

⁶ <http://www.youtube.com/watch?v=BRqGyqZtc8g>

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the opportunity to use the device it did not function properly as the soldier pointed out that the reporter was not holding the device correctly. James Randi of the James Randi Educational Foundation⁷ explains that the “detection” is affected by the ideomotor effect or the operator causing the antennae/dowsing rod to move in the desired direction.

The Iraqi government has spent at least \$50 million U.S. dollars on the devices. The Government of Mexico’s Secretary of the Navy (SEMAR) has purchased 102 units in 2007 and 2008, and the Secretary of Defense (SEDENA) in the same period has purchased 521 of the units. The total cost for 623 units at the \$36,000 purchase price would be \$22,428,000.



In 1993 the U.S. government indicted a company by the name of Quadro⁸ in South Carolina and banned the sale of a device similar to the GT200. Apparently the company sold over 1,000 of their devices. The company was served with an injunction in 1996 on the basis of having no scientific principle with which their device could function. They apparently could not explain how the device worked. The court eventually showed that the device was worthless, but did not prove intent to defraud. The owners of Quadro were not prosecuted because the device did not work, but because the device had an electronic chip (exactly the same as the GT200) that enabled the device to “detect” substances, which did not work.

In 2002 Sandia Laboratories conducted double-blind testing of the device named “MOLE Programmable System” and their finding was “the Mole performed: ‘No better than random chance’”. Apparently, Global Technical Ltd. changed their marketing of the device and renamed it the “GT200”, claiming it operates on static electricity. The company went so far as to state that the amount of static electricity generated by a “calm” individual would be less than that of an “anxious” person. The devices have been referred to as a “dowsing rod,” and a U.S. government (FBI cited below) warning resulted from this test to not use due to the devices being “bogus explosives detection devices”.

The U.S. Navy conclusion was the “detector does not work” and “The vendor failed to make good on any guarantee of the device’s performance and provided no possible reason as to why it was unable to perform as marketed”. The U.S. Navy’s final recommendation was that “No further resources should be allocated to matters concerning the device”.

⁷ <http://www.randi.org/site/>

⁸ http://en.wikipedia.org/wiki/Quadro_Tracker

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In 2009, the Minister of Defence Equipment in the U.K. asked Global Technical Co. Ltd, to remove a suggested Minister of Defence endorsement from their website. According to recent open source reporting the endorsement was never removed.

The Thai Prime Minister⁹ was asked by the “Committee of the south” to withdraw the use of the GT200 based on the U.S. Military’s concern over the Iraqi’s use of the devices and the research showing they clearly do not function as claimed. The request also asks the Thai government to withdraw the devices until they have been scientifically tested. It is estimated that 800 of the devices have been sold to the police at a cost of 11,000 pounds (\$18,500 U.S. Dollars) each. As of February 14, 2010, the Prime Minister of Thailand has banned the purchase of anymore GT200¹⁰. The U.S. Navy¹¹ had tested the device in 2005 at the Yuma Proving Grounds on explosives and it was determined the “detector performed no better than random chance over the course of the testing” and “None of the vendor’s claims proved true during this test series”.

As of January 2010, the Iraqi government has ordered an investigation into the GT200 and the company’s claims, and the U.S. Department of Defense was rushing 145 bomb detection dogs to Iraq¹² to provide the government of Iraq with a viable and tested bomb detection option.

Dr. Markus Kuhn¹³ of Cambridge University in a program by Newsnight and BBC dated January 22, 2010, in reference to the cards (photo on page 2) the device uses stated; “There is nothing to program on these cards. There is no memory. There is no microcontroller. There is no way any form of information can be stored.” The cards apparently contained nothing other than anti-theft sticker/tag used in stores to prevent shoplifting which cannot store any information. The owner of Global Technical Ltd., Jim McCormick, who claims that the device works similar to “dowsing,” and was arrested by the British Government on suspicion of fraud on January 23, 2010.

On January 23, 2010, the British Government’s statement in response to the Newsnight and BBC story led to the following official statement: “Tests have shown that the technology used in the ADE651 and similar devices is not suitable for bomb detection. As non-military technology it does not need an export licence, and we would not normally need to monitor its sale and use abroad. However, it is clearly of concern that it is being used as bomb detection equipment. As soon as it was brought to the attention of the Export Control Organisation and Lord Mandelson” (the current First Secretary of State, Secretary of State for Business, Innovation and Skills, President of the Board of Trade and Lord President of the Council) ” we acted urgently to put in place export restrictions which will come into force next week.”

The UK Minister of Defence made an order, under the Export Control Act 2002 and banned the export of this type of device to Iraq and Afghanistan¹⁴. The reason the ban is limited to these two countries is that it is in their authority is limited to products which could cause harm to UK and other friendly forces. The British Embassy Baghdad has raised concerns about the ADE651 with the Iraqi authorities. They

⁹ <http://www.andrew-drummond.com/2010/01/04/british-magic-wands-accused-of-killing-people-in-south-thailand/>

¹⁰ <http://www.youtube.com/watch?v=zBQEkXkSVd0>

¹¹ <http://5497006912600339367-a-1802744773732722657-s->

[sites.google.com/site/sniffexquestions/sniffex/Home/NavyReportfromProPublica.pdf?attachauth=ANoY7crYLup_SLsOBh-6UcifyxFdf6NdZt5-jeh-3c_ouQpLq7EK3QicE37rBYLEuwNfjwck4t9CA8weP3Rk1zlkzsmi1E93K0RYCuqLDUXhVzShsi2LJiDw7D3_LpXZAQVqP4rdWQ4cTh6hH-Vbnt9TUazTa2jRN9S69N_MLwkpS0i1UaoR3-23yzT8Q_fsbftDhR7Q2jqt6JgGwUbKmuKggGkJiaF1qtSarLZtCMxgwRRYdSKLorEj2Jnnw_42xwvDUfk5w&attredirects=0](https://www.google.com/search?q=sites.google.com/site/sniffexquestions/sniffex/Home/NavyReportfromProPublica.pdf?attachauth=ANoY7crYLup_SLsOBh-6UcifyxFdf6NdZt5-jeh-3c_ouQpLq7EK3QicE37rBYLEuwNfjwck4t9CA8weP3Rk1zlkzsmi1E93K0RYCuqLDUXhVzShsi2LJiDw7D3_LpXZAQVqP4rdWQ4cTh6hH-Vbnt9TUazTa2jRN9S69N_MLwkpS0i1UaoR3-23yzT8Q_fsbftDhR7Q2jqt6JgGwUbKmuKggGkJiaF1qtSarLZtCMxgwRRYdSKLorEj2Jnnw_42xwvDUfk5w&attredirects=0)

¹² <http://news.discovery.com/animals/us-bomb-sniffing-dogs-iraq.html>

¹³ <http://news.bbc.co.uk/2/hi/programmes/newsnight/8481774.stm>

¹⁴ http://en.wikinews.org/wiki/UK_bans_export_of_fraudulent_bomb_detector;_arrests_director_of_manufacturer

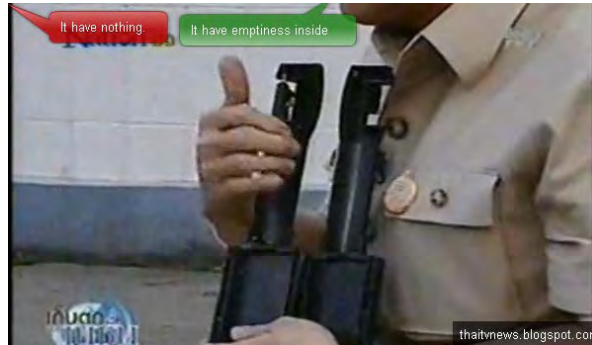
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have offered to cooperate with any investigation they may wish to make regarding how the device was bought for their military as bomb detection equipment.

3. SANDIA NATIONAL LABORATORIES JANUARY 29, 2002 DOUBLE-BLIND TEST:

Sandia National Laboratories participated in a double-blind field test¹⁵ on January 29, 2002, at the Rocky Mountain office of the National Law Enforcement and Corrections Technology Center (NLECTC) in Denver, Colorado to test the explosives detection capability of the MOLE Programmable System manufactured by Global Technical Ltd. of Kent, UK (precursor to the GT200). The target material used was approximately 20 grams of C4 explosive placed in a plastic bag with a twist top and enclosed in a plastic 35-mm film canister. Based on statistical analysis of the double-blind test results, the MOLE performs no better than a random selection process. To assure that no contamination occurred that might have affected test results, the boxes used during the test were tested for the presence of explosives using an ion mobility spectrometer.

The photos depict the MOLE and the GT200, and the YouTube clip¹⁶ on the right shows there is nothing inside the GT200.



4. MANUFACTURER WEBSITE¹⁷:

This website is only accessible with a username and password that has to be obtained from Global Technical Ltd. The GT200 is made and marketed by Global Technical Co. Ltd, of Ashford, Kent or more precisely of Unit 7, The Glenmore Centre Moat Way, Sevington, Ashford, Kent TN24 0TL. Tel:+44 0 8701 694017

As of March 1, 2010, Global Technical has removed all information on their website and placed the following in response the Thailand, Iraq, and the UK's response to the numerous studies showing the GT200 does not work as claimed to by the manufacturer.

“Conflicting documents: We have read conflicting media reports of the outcome of the latest tests on the GT200 carried out by the Thai government. You will appreciate that it is difficult to comment on the latest test report until we have seen it and had the opportunity to study it and, in particular, to understand the testing methodology employed. We can say that previous tests carried out by independent bodies, and the experience of the large number of users of this

¹⁵ http://www.justnet.org/Lists/JUSTNET%20Resources/Attachments/440/moleeval_apr02.pdf

¹⁶ http://www.youtube.com/watch?v=46INXyVmT_Q

¹⁷ <http://www.globaltechnical.co.uk/>

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product all over the world, confirms that the GT200 is effective and because of this, we would ask that you treat with caution any reports to the contrary.”



5. CHALLENGE FROM JAMES RANDI EDUCATIONAL FOUNDATION:

A Direct, Specific, Challenge From James Randi and the JREF

Written by James Randi

Thursday, 05 November 2009 *NOTE: This notice first appeared in Oct, 2008*

This notice is directed to Cumberland Industries, UK. The ADE651® device, a totally fraudulent product, is advertised as described ahead, by Cumberland Industries, who we have contacted at Cumberland Industries UK LTD

11 Murray Street

Camden. London NW1 9RE, UK

and at

Cumberland Industries UK LTD

Welham Lane

Great Bowden

Market Harborough, Leicestershire LE16 7HS, UK

Okay. Here's a simple statement from the James Randi Educational Foundation. It's in clear, basic English, plain language, direct and unequivocal. It's directed to any of the manufacturers, distributors, vendors, advertisers, or retailers of the ADE651® device as described above:

This Foundation will give you our million-dollar prize upon the successful testing of the ADE651® device. Such test can be performed by anyone, anywhere, under your conditions, by you or by any appointed person or persons, in direct satisfaction of any or all of the provisions laid out above by you.

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No one will respond to this, because the ADE651® is a useless, quack, device which cannot perform any other function than separating naïve persons from their money. It's a fake, a scam, a swindle, and a blatant fraud. The manufacturers, distributors, vendors, advertisers, and retailers of the ADE651® device are criminals, liars, and thieves who will ignore this challenge because they know the device, the theory, the described principles of operation, and the technical descriptions given, are nonsense, lies, and fraudulent.

Prove me wrong and take the million dollars. I am James Randi, citizen of the United States of America, resident in Fort Lauderdale, Florida, and thoroughly identified through the James Randi Educational Foundation described at www.randi.org.

6. CONCLUSION:

One thing is evident in this controversy and that is that no one can empirically prove scientifically that the GT200 and other “dowsing” devices function as their manufacturers claim, and the company that manufactures the GT200 cannot explain how it “detects” from a scientific perspective either. The theory behind how these devices function is inherently flawed in that they use “static electricity” to “detect” supposed “molecular fields” and there are no empirical studies proving this actually works. According to BBC, a skeptic Mr. James Randi has offered Mr. McCormick one million dollars if he can prove the device works (cited above) and Mr. McCormick has not responded to Mr. Randi. If the device actually works as Mr. McCormick claims it does, one would think McCormick would be anxious to take advantage of an offer to show how well his GT200 works and to earn one million dollars.

Numerous governmental agencies have shown as well as independent studies that the devices do not work as claimed. The two most significant events against the GT200 is that the owner of Global Technical in the U.K., Jim McCormick (a former policeman) was arrested for fraud on January 23, 2010, and the British government has halted all exports of the devices to Afghanistan and Iraq. The Iraqi government has also ordered an immediate investigation into the use of the GT200 and similar devices in the use of bomb detection and are shifting to the use of bomb sniffing dogs. The U.S. government does not use the device and has issued numerous warnings against such devices over the past 17 years. The British Ministry of Defence stated “The GT200 has not been considered to satisfy any of the capabilities we need.”

Iraqis and Mexicans who use the devices have commented that one needs to be “relaxed” in order to use the device or it does not work properly if one is stressed or has a higher heart rate. As to the Iraqis in an environment wrought with bombings it must be difficult to be “relaxed” next to a vehicle or parcel one suspects to possibly be a bomb.

An Iraqi, Major General Jihad al-Jabiri who appeared this past year at a press conference with Mr. McCormick stated he did not “Care about Sandia” (2002 test of the device), knew more about bombs than the Americans, and “Whether it's magic or scientific, what I care about is it detects bombs.” Yet there have been more than one incident in Thailand where the device was used prior to bombs going off and after they have exploded, and in both incidents the devices have failed to “detect.” The General claims these devices have detected “thousands” of bombs and that bombings are now at less than 10% of what they were. The General does not mention the surge the U.S. Military engaged in that actually led to the decrease of insurgent violence in Iraq.

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The Mexican government continues to use the device both on the border and in the country to “detect” everything the web site claims. The Mexicans claim numerous successes, but are these actually due to the GT200 or the combination of good intelligence and the use of a nonfunctional device to attribute the discovery of weapons, guns, cash, or drugs?

Much of the background available on the Internet discusses the vulnerability of the governments who have chosen to purchase these devices. Mr. McCormick told BBC he has been selling these devices for over a decade and has sold 6,000 of them to about 20 countries. There is extensive commentary of the possibility of corruption at the decision-making levels of the governments, but to date there have been no claims of bribes having been given. On February 1, 2010, the Aqueel Turaihi, the inspector general of the Iraq ministry of the interior’s anti-fraud watchdog stated he had raised concerns that the molecular detectors did not work and had been purchased as part of a corrupt contract. Turaihi did not elaborate on the corruption accusation in any detail. Hopefully the British government as part of its investigation will be able to uncover any possible concerns of corruption or bribes related to McCormick.

It is fascinating how supposedly “educated” decision makers of so many governments could have actually believed in a device that has never been proven scientifically and such “technology” as “static electricity” powered “molecular detection.” This analyst has had the opportunity on numerous occasions to observe the Mexican Army utilizing the device, and has seen the device falsely detect on two incidents (in one incident the object “detected” was a bottle of liquor which is not on the manufacturer’s list). The random variable of the human factor in the “operation” of the device is a significant concern. One can construct a similar “dowsing” device¹⁸ (YouTube video demonstrating the improbability the device can work as claimed) out of a wrench, a hinge, and an antennae to “detect” whatever substance based on the subtle movements of the operator. Therefore it is clear the GT200 and its predecessors have never been proven scientifically to “detect” the substances they claim to, and more reliable equipment needs to be utilized in explosive, drug, cash, weapons, and chemical detection. As long as the GT200 and other “detectors” are being used to detect explosives innocent lives will continue to be placed at risk and lost in some instances.

If you have any questions or comments in reference to this report, please contact the EPIC Research and Analysis Section, Southwest Border Unit, ATF IRS David J. Frankel at (915) 760-2147; email: david.frankel@atf.gov or Acting Unit Chief Jerry Grijalva at (915) 760-2065.

APPENDICES:

- A. **MANUFACTURER SPECIFICATION CLAIMS:** (From their website/brochure which no longer posts this information)

A Wide Range of Applications

The applications below are by no means exhaustive. They broadly describe the searches related to explosives and narcotics.

Open Search

The GT200 allows for area reduction when conducting large area searches in open country and mountainous terrain, reducing the overall search time and focusing only on those indicated locations.

¹⁸ <http://www.youtube.com/watch?v=mM5h2GAV-bl>

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Buried arms caches, narcotics stores and underground tunnel systems can be detected from distances of over 700m.

Port Control

With the advent of the new rules for screening containers at ports, authorities are struggling to screen as a result inadequate resource The GT200 allows all containers and goods entering or exiting the port can be screened in seconds for nuclear, explosive and narcotic materials. Similarly, the GT200 can be deployed in just about every port of entry including airport and border crossing.

Aerial & Naval Operations

Using the GT200 from the air enables task forces to respond immediately to intelligence or the result of an airborne search. By combining the ammunition, explosives and human sensor cards we can scan jungle canopies in the search for terrorist training camps or drug factories.

Vehicle Check Point

The GT200 allows for the successful screening of every vehicle coming through the VCP, eliminating the requirement for random selection. Vehicles can be screened in seconds.

List of Substances

The list below is by means exhaustive. Sensors for substances are customizable and we endeavor to provide updates from time to time. However please contact us if you wish to know a particular substance can be detected.

Explosives

Ammunition, black powder, propellants, C4, C1, C2, PE4, Semtex, RDX, TNT, PeTN, Nitroglycerine, Dynamite, Picric Acid, Tetryl, Hexogen, Octogen, Chlorates, Perchlorates, Slurry Explosives, Water gel explosives, Emulsion explosives, Rubber explosives, Nitroguandine, DNT, Ammonium Nitrate, AMFO, ANNIE, TATP, gunpowder, nitrate, MNX 194, PAX explosives 21/25/28/41, RSRDX, Amatol, Baratol, Comp A, Comp B, Comp B3, Comp A-5, TNB, CH6, Cyclotol, Detasheet, Gelatin, H6, HBX, Minol, Octol, PBX, Pentolite, Tetrytol, Torpex, HMX

Narcotics

Cocaine - Cocaine [powder and liquid], Crack, Cocoa Leaf, Cocaine based medicine, Heroin - Heroin, Heroin Based medicine, Cannabis - Marijuana, Cannabis, Hemp, Large tobacco shipments [leaf and cigarettes] Plant Amphetamine/D Methamphetamine/Ecstasy LSD, PCP, Shaking Head, Ecstasy, amphetamine, d-meth, Opium, Opium based medicine, opiates, opium, morphine Poppy plant, Mesaklol. Mandrex, Kiptogan, Ketamine

Customized

Uranium Acetate, Human Bodies, Gold, Ivory, Poison, Currency, Tobacco

SPECIFICATIONS:

Size:	173mm x dia max 50mm
Weight: Setup time:	450g
Operating time:	Unlimited Power source: static electricity
Detection method:	DIA/PARA magnetism

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Sensor card MBTF:	12 years
Detection distance:	<ul style="list-style-type: none"> ▪ Water (depth) 800 meters ▪ General search 700 meter ▪ Earth (depth) 60 meters ▪ Aerial 4 kilometers
Minimum detection quantity:	pico grams
Operating temperature:	-40° C to +65° C
Number of substances detected in one operations:	maximum 74
Number of substances identified in one operation:	one

COMPARISON BY MANUFACTURER:

Criteria	GT200	Canine	Vapor Technology
Detection Distance	<ul style="list-style-type: none"> ▪ 700m for open search ▪ 60m for buried substance 	<ul style="list-style-type: none"> ▪ affected by wind scent ▪ shallow and variable depth 	<ul style="list-style-type: none"> ▪ close proximity (about +/- 3m)
Speed	<ul style="list-style-type: none"> ▪ remote scanning and triangulation ▪ less's than 5 secs to setup 	<ul style="list-style-type: none"> ▪ handler must know where to start 	<ul style="list-style-type: none"> ▪ operator must locate target first
Penetration	<ul style="list-style-type: none"> ▪ detects through metal, wood, water, lead 	<ul style="list-style-type: none"> ▪ affected by masked substance e.g. substance hidden in coffee 	<ul style="list-style-type: none"> ▪ not effective as it depends on vapor
Detect ingested substance	<ul style="list-style-type: none"> ▪ detect ingested narcotics up to 2 weeks or more 	<ul style="list-style-type: none"> ▪ not known to be able to detect 	<ul style="list-style-type: none"> ▪ not effective as it depends on vapor
Power	<ul style="list-style-type: none"> ▪ Comparison against commonly used detection methodologies operator's body static 	<ul style="list-style-type: none"> ▪ gets tired after 2-3 hours 	<ul style="list-style-type: none"> ▪ requires battery
Covertness	<ul style="list-style-type: none"> ▪ remote detection therefore operator 	<ul style="list-style-type: none"> ▪ presence makes it obvious and barking alerts 	<ul style="list-style-type: none"> ▪ presence make it obvious as close proximity is

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	is unseen	suspect	required
Robust to external elements	<ul style="list-style-type: none"> reusable even after dropped in water 	<ul style="list-style-type: none"> gets tired direct sun confused by wind scent 	<ul style="list-style-type: none"> prone to sensor corruption (e.g. car exhaust) gets damaged if wet
Maintenance cost	<ul style="list-style-type: none"> virtually no maintenance required other than simple cleaning can be everyday 	<ul style="list-style-type: none"> requires constant training and upkeep 	<ul style="list-style-type: none"> expensive and problematic to calibrate
Customization	<ul style="list-style-type: none"> driven by software sensor making it highly customizable 	<ul style="list-style-type: none"> requires re-training but difficult to customize 	<ul style="list-style-type: none"> expensive to customize lack flexibility
Training and ease of use	<ul style="list-style-type: none"> almost anyone can be trained to use training is 3 days 	<ul style="list-style-type: none"> takes time to train both dog and handler 	<ul style="list-style-type: none"> requires frequent calibration
Confirm traces	<ul style="list-style-type: none"> sensitivity down to pico-gram levels even at great distances 	<ul style="list-style-type: none"> affected by masked substance affected by wind scent 	<ul style="list-style-type: none"> close proximity (about +/- 3m)
Operates with minimal lighting	<ul style="list-style-type: none"> triangulates with minimal light 	<ul style="list-style-type: none"> handler may be affected in the night 	<ul style="list-style-type: none"> requires lighting and battery pack to read data
International references	<ul style="list-style-type: none"> international reports available for explosives and narcotics 	<ul style="list-style-type: none"> too variable; dependent on local training centers 	<ul style="list-style-type: none"> available but technology varies making comparison difficult

B. OPEN SOURCE BACKGROUND MATERIAL:

UK Halts Export Of Bomb Detection Device To Iraq, Afghanistan After It's Called Ineffective¹⁹

Danica Kirka 01/23/2010, THE ASSOCIATED PRESS

¹⁹ http://ca.news.yahoo.com/s/capress/100123/world/eu_britain_bomb_device_3

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LONDON - Britain has banned the export of a hand-held bomb-detection device to Iraq and Afghanistan, months after the U.S. military warned that the product is ineffective and fraudulent.

The ADE651 device made by the British company ATSC is used at security checkpoints across Baghdad, and its makers claim it can detect explosives at a distance. But Britain's Department for Business Innovation and Skills halted the export of the ADE651 after a BBC-TV "Newsnight" investigation challenged its effectiveness. The broadcaster took the key aspects of the device to a laboratory, which concluded that a component intended to detect explosives contained technology used to prevent thefts in stores. "Tests have shown that the technology used in the ADE651 and similar devices is not suitable for bomb detection," the department said in a statement.

A British news agency reported that police have arrested the company's director on suspicion of fraud. The findings on the ADE651 backup the U.S. military, which has had concerns about the device for months. The military does not use it, and in June 2009, it distributed a study using laboratory testing and X-ray analysis that found the ADE651 ineffective. "The examination resulted in a determination that there was no possible means by which the ADE651 could detect explosives and therefore was determined to be totally ineffective and fraudulent," Maj. Joe Scrocca, a U.S. military spokesman in Baghdad, told The Associated Press in an email.

As a result of that study, the U.S. military notified all military and civilian personnel in Iraq that the bomb detection device is "ineffective and should not be relied upon as a means of insuring the safety of any personnel," Scrocca said.

The British government said it is not aware of the ADE651 being used in Afghanistan but it included that country in the ban because British and allied forces are fighting there. News about the ineffectiveness of the hand-held machine has sparked fury in Iraq. The British government said Friday that Britain's Embassy in Baghdad has raised concerns with Iraqi authorities who had bought the ADE651 - which consists of a swiveling antenna mounted on a hand grip - for security checkpoints and who continue to use them.

But Iraq's government defended the device. Interior Minister Jawad al-Bolani told state-run Iraqiya TV that the instruments "managed to prevent and detect more than 16,000 bombs that would be a threat to people's life and more than 733 car bombs were defused." "Iraq is considered as a market area for many companies producing such devices ... and there are other rival companies trying to belittle the efficiency of these instruments the government is buying," al-Bolani said. "Not all those who use the instrument are fully trained. The instrument's efficiency depends on the training of the user."

However, Iraqi civilians who lost relatives in recent bombings in Baghdad are furious and want to know why the Iraqi government still relies on the devices for security checkpoints. Haider Mohammed, a relative of such victims, called the detectors "a toy," and demanded the Iraqi government explain why it was not following the British government's lead. "We ask the Iraqi government, if this device does not work why did they buy it?" Mohammed said. "Are the lives of Iraqi people so cheap?"

Britain's Press Association news agency reported that Avon and Somerset police have arrested the company's director, Jim McCormick, on suspicion of fraud by misrepresentation and released him on bail. Police did not name the man arrested, as is customary with British criminal cases, but said that it launched an investigation after the force became "aware of the existence of a piece of equipment around which there were many concerns." "Given the obvious sensitivities around this matter, the fact that an arrest has been made, and in order to preserve the integrity of the investigation, we cannot discuss it any

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further at this time," the force said in a statement. McCormick, who has an office in rural Somerset, declined to comment when reached by The Associated Press.

BBC's "Newsnight" took the ADE651 device to the Cambridge University computer lab, which determined that a "programmed substance detection card" that is supposed to detect explosives contained nothing but the type of anti-theft tag used to prevent stealing in department stores. Though the instrument would not normally need a license because it is nonmilitary technology, the British government banned its export to Iraq and Afghanistan because of the risk that it could hurt British and allied forces.

US General Questions Iraq Bomb Detection Kit²⁰

AFP 08/11/2009

A top US army officer on Sunday said he did not have confidence in a hand-held device used by Iraq's security forces to detect explosives and stop suicide bombers passing through checkpoints. Major General Robert Rowe told reporters in Baghdad he was at odds with Iraqi officials on whether the ADE 651, a pistol-shaped gadget made in Britain which uses an antenna and is known as the "magic wand," worked. "We do not agree on the technical capability of the device that is used here widely by the Iraqi forces," said Rowe, naming the chief of the interior ministry's directorate for combating explosives Major General Jihad al-Jabiri.

Security at checkpoints is especially sensitive in the wake of twin bombings at government offices on October 25 which killed 153 people and wounded 500. The attacks were claimed by a group linked to Al-Qaeda. Rowe, director of the US army's training and advisory mission in Iraq, was quoted in a New York Times report as saying: "I have no confidence that these work," when talking about the ADE651. Jabiri in the same article defended the gadget, reputed to cost between \$16,500 and \$60,000 each and used at hundreds of checkpoints, and said "whether it's magic or scientific, what I care about is it detects bombs."

However Rowe, who on a previous tour of Iraq served as an infantry brigade commander, said he preferred using more traditional methods to spot explosives. "I am unaware and we have not been able to find for our forces an assured, highly probable technological solution that allows us to detect explosive devices," he said. "From a distance the best capability is highly trained soldiers and policemen attempting to recognize habits that might give you a reason to look closer. Much like when you go to an airport and your briefcase is swabbed." He also said sniffer dogs, baggage screening machines, vehicle scanners and closed circuit television systems could be used more effectively.

²⁰ <http://www.armybase.us/2009/11/u-s-general-questions-iraqs-ade-651-bomb-detection-kit/>

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"A device used by Iraqi forces to detect bombs and other weapons at checkpoints has been called useless by the American military." -NYTimes

Iraq Swears by Bomb Detector U.S. Sees as Useless²¹

By [ROD NORDLAND](#)/NY Times November 3, 2009

BAGHDAD — Despite major bombings that have rattled the nation, and fears of rising violence as American troops withdraw, Iraq's security forces have been relying on a device to detect bombs and weapons that the United States military and technical experts say is useless. The small hand-held wand, with a telescopic antenna on a swivel, is being used at hundreds of checkpoints in Iraq. But the device works "on the same principle as a Ouija board" — the power of suggestion — said a retired United States Air Force officer, Lt. Col. Hal Bidlack, who described the wand as nothing more than an explosives divining rod.

Still, the Iraqi government has purchased more than 1,500 of the devices, known as the ADE651, at costs from \$16,500 to \$60,000 each. Nearly every police checkpoint, and many Iraqi military checkpoints, have one of the devices, which are now normally used in place of physical inspections of vehicles. With violence dropping in the past two years, Prime Minister Nuri Kamal al-Maliki has taken down blast walls along dozens of streets, and he contends that Iraqis will safeguard the nation as American troops leave. But the recent bombings of government buildings here have underscored how precarious Iraq remains, especially with the coming parliamentary elections and the violence expected to accompany them.

The suicide bombers who managed to get two tons of explosives into downtown Baghdad on Oct. 25, killing 155 people and destroying three ministries, had to pass at least one checkpoint where the ADE651 is typically deployed, judging from surveillance videos released by Baghdad's provincial governor. The American military does not use the devices. "I don't believe there's a magic wand that can detect explosives," said Maj. Gen. Richard J. Rowe Jr., who oversees Iraqi police training for the American military. "If there was, we would all be using it. I have no confidence that these work."

The Iraqis, however, believe passionately in them. "Whether it's magic or scientific, what I care about is it detects bombs," said Maj. Gen. Jihad al-Jabiri, head of the Ministry of the Interior's General Directorate for Combating Explosives.

Dale Murray, head of the National Explosive Engineering Sciences Security Center at Sandia Labs, which does testing for the Department of Defense, said the center had "tested several devices in this

²¹ <http://www.nytimes.com/2009/11/04/world/middleeast/04sensors.html>

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category, and none have ever performed better than random chance.”

The Justice Department has warned against buying a variety of products that claim to detect explosives at a distance with a portable device. Normal remote explosives detection machinery, often employed in airports, weighs tons and costs hundreds of thousands of dollars. The ADE 651’s clients are mostly in developing countries; no major country’s military or police force is a customer, according to the manufacturer.

“I don’t care about Sandia or the Department of Justice or any of them,” General Jabiri said. “I know more about this issue than the Americans do. In fact, I know more about bombs than anyone in the world.” He attributed the decrease in bombings in Baghdad since 2007 to the use of the wands at checkpoints. American military officials credit the surge in American forces, as well as the Awakening movement, in which Iraqi insurgents turned against Al Qaeda in Mesopotamia, for the decrease. Aqeel al-Turaihi, the inspector general for the Ministry of the Interior, reported that the ministry bought 800 of the devices from a company called ATSC (UK) Ltd. for \$32 million in 2008, and an unspecified larger quantity for \$53 million. Mr. Turaihi said Iraqi officials paid up to \$60,000 apiece, when the wands could be purchased for as little as \$18,500. He said he had begun an investigation into the no-bid contracts with ATSC.

Jim Mitchell, the head of ATSC, based in London, did not return calls for comment.

The Baghdad Operations Command announced Tuesday that it had purchased an additional 100 detection devices, but General Rowe said five to eight bomb-sniffing dogs could be purchased for \$60,000, with provable results. Checking cars with dogs, however, is a slow process, whereas the wands take only a few seconds per vehicle. “Can you imagine dogs at all 400 checkpoints in Baghdad?” General Jabiri said. “The city would be a zoo.” Speed is not the only issue. Colonel Bidlack said, “When they say they are selling you something that will save your son or daughter on a patrol, they’ve crossed an insupportable line into moral depravity.”

Last year, the James Randi Educational Foundation, an organization seeking to debunk claims of the paranormal, publicly offered ATSC \$1 million if it could pass a scientific test proving that the device could detect explosives. Mr. Randi said no one from the company had taken up the offer.

ATSC’s promotional material claims that its device can find guns, ammunition, drugs, truffles, human bodies and even contraband ivory at distances up to a kilometer, underground, through walls, underwater or even from airplanes three miles high. The device works on “electrostatic magnetic ion attraction,” ATSC says. To detect materials, the operator puts an array of plastic-coated cardboard cards with bar codes into a holder connected to the wand by a cable. “It would be laughable,” Colonel Bidlack said, “except someone down the street from you is counting on this to keep bombs off the streets.”

Proponents of the wand often argue that errors stem from the human operator, who they say must be rested, with a steady pulse and body temperature, before using the device. Then the operator must walk in place a few moments to “charge” the device, since it has no battery or other power source, and walk with the wand at right angles to the body. If there are explosives or drugs to the operator’s left, the wand is supposed to swivel to the operator’s left and point at them.

If, as often happens, no explosives or weapons are found, the police may blame a false positive on other things found in the car, like perfume, air fresheners or gold fillings in the driver’s teeth. On Tuesday, a guard and a driver for The New York Times, both licensed to carry firearms, drove through nine police checkpoints that were using the device. None of the checkpoint guards detected the two AK-47 rifles

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and ammunition inside the vehicle.

During an interview on Tuesday, General Jabiri challenged a Times reporter to test the ADE 651, placing a grenade and a machine pistol in plain view in his office. Despite two attempts, the wand did not detect the weapons when used by the reporter but did so each time it was used by a policeman. “You need more training,” the general said.

Riyadh Mohammed contributed reporting.



Police Step Up In Mexico's Drug Wars

9/17/2009, By Chris Hawley, USA TODAY²²

"Responding to another call, Espinosa's crew takes up positions behind an army platoon clustered around a warehouse. Federal detectives are breaking open the lock.

Inside, the soldiers discover magazines full of AK-47 bullets scattered across a patio. In the rooms beyond are hundreds of sacks and 55-gallon drums containing chemicals used for making methamphetamines.

It's a major find — but the Mexican military claims credit. Lt. Col. Oswaldo Bejar boasts that his unit has made five busts in eight days in Uruapan, many of them using a chemical-sniffing device known as a GT200"

Translation by ATF

Military Technology Detect Arsenal And Laboratory²³

²² http://www.usatoday.com/news/world/2009-09-16-mexico-drug-war_N.htm

²³ <http://www.eluniversal.com.mx/nacion/167840.html>



March 9, 2009, Francisco Gómez

Use of the GT200 Molecular Detector – An apparatus capable of detecting explosives, firearms, and cash from half a kilometer’s distance. The Army seized an arsenal in Mochocán, amongst them was a Barret machine gun capable of more than 200 shots a minute.

An example of this device which is manufactured in Brittan allowed the soldiers of the 21st Military Zone to detect a clandestine lab for synthetic drugs in the area of Las Lomas in the town of Periban. The Army is using the new technology with more than 300 of these detectors. This led to the confiscation of a 1997 Navigator SUV with California plates, a grey 2002 Land Rover, a black 2006 Suburban, and a white Avalanche with New York plates 63925 from Michoacán.

In addition to the Barrett .50 caliber rifle, the soldiers seized two fragmentary grenades, four AR-15 rifles, an AK-47 rifle, a Galil rifle, an M-1 carbine, a .45 caliber pistol, 25 magazines of different calibers, and two AR-15 magazines, and 1,813 bullets of different calibers.

In the same local, was an air-conditioned cabin with a clandestine lab to produce synthetic drugs. Using the GT200 molecular detector in Michoacán

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Mexico Finds Almost a Ton of Cocaine Inside Shark Carcasses²⁴

June 22, 2009

MEXICO CITY – A shipment of 893 kilos (1,967 pounds) of cocaine was found hidden inside frozen shark carcasses in the southeastern Mexican port of Progreso, the Navy Secretariat said in a statement.

The drugs were found in a container being transported by the Marshall Islands-flagged Dover Strait vessel, which had departed from Costa Rica for this Gulf coast port, located in Yucatan state.

The secretariat said Wednesday that the seizure was



²⁴ <http://www.laht.com/article.asp?ArticleId=337531&CategoryId=14091>

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made following a routine X-ray inspection of seven containers. One of them showed signs of irregularities, prompting navy personnel to carry out a detailed inspection with the help of a GT-200 molecular detector and narcotics-sniffing dogs.

Upon opening one of the shark carcasses, the navy personnel found black plastic bags containing rectangular packages with cocaine inside, according to the secretariat, which did not indicate whether any arrests were made nor the intended destination of the drugs. EFE

British ‘Magic Wands’ Accused Of Killing People In South Thailand²⁵

January 4, 2010, Published by Andrew Drummond Pictures: Andrew Chant/WGPP

‘These British machines are falsely finding explosives in coconut trees. But people die when they give false negative reports.’

The Prime Minister of Thailand will this week be asked to order the remove British explosives detection equipment known as ‘magic wands’ for testing amid claims they are killing members of the country’s security forces.

The move follows a similar controversy in Iraq two months ago where some 1,500 ‘magic wands’ sold under the name ADE165 by the British company ATSC were ridiculed for their lack of capability by the US military.

Premier Abhisit Vejjajiva will be asked to act on claims that similar machines sold under the name GT-200 have given totally false readings which have led to several deaths in Islamic southern Thailand, the scene of separatist terrorism.

“They are falsely identifying explosives at the top of coconut trees, but not finding when the bombs are real and people are dying,” said Angkana Neelapaijit, a member of the parliamentary ad hoc ‘Committee on the south’ which will make the demand formal for the machines to be withdrawn and tested. She added: “Our scientific advisors have compared the GT-200 to bomb detecting with a Ouija board.” Already the Working Group for Justice and Peace and the Asian Human Rights Commission have called for the detectors to be withdrawn until they have been scientifically tested in Thailand.



Thai military with GT-200

²⁵ <http://www.andrew-drummond.com/2010/01/04/british-magic-wands-accused-of-killing-people-in-south-thailand/>

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The latest controversy involves the Ashford, Kent, based company 'Global Technical Co.Ltd.,' which last year was asked by Quenton Davies, Minister for Defence Equipment and Support, to remove a suggested MoD endorsement for the GT-200 from its website.

The Thai Interior Ministry is also promoting the 'Alpha 6' detector and supplying some 800 to police nationwide at 555,000 baht each -11,000 pounds sterling to detect drugs. But 'magic wands' known as GT-200 used by the Thai army and sold without cabinet approval under 'a secret military deal,' according to the Asian Human Rights Commission, are the ones of main concern, because they are supposed to detect explosives. The units allegedly work on the principal of 'magnetic molecular resonance' or 'nano ionic resonance' and or 'dia/para magnetism.'

The US Justice Ministry, which issued a warning about similar machines, calls it 'Molecular Frequency Distribution' and states in a report: "None of these attempts to create devices that can detect specific materials such as explosives (or any materials for that matter) have been proven successful in controlled double-blind scientific tests."

A 'magic wand' tested by the US Navy called the Sniffex, could not detect 1000 lbs of explosives at 20 feet.

In theory the gadgets works like water diviners. They all come with a wand which is supposed to point out whatever the operator is seeking. If it's TNT or C4 explosives the operator is looking for, the GT200, will supposedly point him to it. The units have no battery power but work off the power of the operator. Slip other cards special cards into to the machines and they will detect cocaine, heroin, ice, and the drug of your choice – at 500 metres, claim the distributors.

Angkana Neelapaijit, also Chairman of Thailand's Working Group for Justice and Peace said: "They have been compared to using ouija boards. In all cases when the machines fail the operators are blamed. The generals say the machines are good. The people who have to use the machines, the soldiers, say the opposite. They don't work and can be deadly! "I have tried speaking to the Prime Minister and British Ambassador to Thailand. The Prime Minister at the moment supports his Generals' view. The Ambassador Quinton Quayle did not want to talk."



Aftermath of undetected bomb in Pattani

The WGJP blames the GT-200 for several deaths. In their report they claim that on October 6th last year near the Merlin Hotel, in Sungai-Golok and October 19th at Pimonchai Market in Yala, bombs went off causing death and several injuries in a car and motorcycle, just a few minutes after the vehicles had been checked with the GT-200 'magic wands.'

They also claim that on November 7, three Border Patrol officers were killed when a bomb exploded as they were investigating a suspicious object in Pattani. Again the GT-200 showed negative results.

And again in Pattani, South Thailand, when a bomb was hidden among the dead bodies of a murdered couple in Kok Pho district, officials used the GT200 to check the bodies. The equipment suggested nothing. When officials lifted the bodies up, the bomb went off, claim the WGJP.

The WGJP pointed out: "The reading device is ambiguous and subjective. There is no clear indicator. It

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is vague enough to excuse the authorities' ineffectiveness. If a false negative turns out they can just blame the operator.”

The MoD says the machines are not used by British forces and do not confirm to British forces requirements.

A spokesman said Global Technical had brought a machine to them for evaluation in 1999. But the machine was not subject to proper MOD testing. “The company cannot market the machine today stating the MoD has confirmed its capabilities.” Gary Bolton of Global Technical Ltd said the company would be updating its website later this month. Technical information provided by Global and Technical says its performance has been backed by the British Army. However the machine cannot pinpoint explosive, rather narrow them down to an area of four cubic metres.

C. WIKIPEDIA DEFINITION:

The DOJ report²⁶ is quoted in this report stating: None of these attempts to create devices that can detect specific materials such as explosives (or any materials for that matter) have been proven successful in controlled double-blind scientific tests. In fact, all testing of these inventions has shown these devices to perform no better than random chance.

ADE651 is one of a few devices that are derided as being high tech dowsing rods because of their appearance and lack of proven efficacy, despite claims of nearly miraculous technical abilities at long range due to some new application of physics or chemistry. Other alleged detection rods include devices named Sniffex and the renamed Sniffex Plus, Quadro Tracker, MOLE, Alpha 6, PSD-22, DKL Lifeguard, H3 Tec , and GT-200 Molecular Detector.

In 1999 the US Department of Justice, National Institute of Justice addressed this category of devices in its *Guide for the Selection of Commercial Explosives Detection Systems for Law Enforcement Applications*.

There is a rather large community of people around the world that believes in dowsing: the ancient practice of using forked sticks, swinging rods, and pendulums to look for underground water and other materials. These people believe that many types of materials can be located using a variety of dowsing methods. Dowsers claim that the dowsing device will respond to any buried anomalies, and years of practice are needed to use the device with discrimination (the ability to cause the device to respond to only those materials being sought). Modern dowsers have been developing various new methods to add discrimination to their devices. These new methods include molecular frequency discrimination (MFD) and harmonic induction discrimination (HID). MFD has taken the form of everything from placing a Xerox copy of a Polaroid photograph of the desired material into the handle of the device, to using dowsing rods in conjunction with frequency generation electronics (function generators). None of these attempts to create devices that can detect specific materials such as explosives (or any materials for that matter) have been proven successful in controlled double-blind scientific tests. In fact, all testing of these inventions has shown these devices to perform no better than random chance.

Mostly these devices are used to locate water and now are used extensively by treasure hunters looking for gold and silver. In recent years some makers of these dowsing devices have attempted to cross over

²⁶ <http://www.ncjrs.gov/pdffiles1/nij/178913-2.pdf>

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from treasure hunting to the areas of contraband detection, search and rescue, and law enforcement. The Quadro Tracker is one notable example of this cross-over attempt. This device was advertised as being a serious technology with a realistic sounding description of how it worked (close examination showed serious errors in the scientific sounding description).

The MOLE was exactly the same in appearance as the previously debunked Quadro Tracker device, with Sandia personnel noting it appeared to have been produced using the exact same plastic injection molding equipment. Of note, the ADE product line appears to be an alternate descendant from the original Quadro Tracker device, and corresponds with the fact the Quadro Tracker founders moved the company to the UK after a trial in US federal court. Global Technical Ltd. also still manufactures a descendant of the MOLE, the GT-200 Molecular Detector.

Testing by Laboratories

Sandia National Laboratories tested similar devices and found them ineffective: the MOLE Programmable System manufactured by Global Technical Ltd. of Kent, UK, and the DKL LifeGuard Model 2.

Other product names and numbers believed to be similar dowsing type devices to the ADE 651 ADE 100, ADE 101, ADE650, ADE 651, ADE 750, ADE 751

D. INTERNET BLOG COMMENTS:

17 Nov 2009

Controversy over Detection Methods – (ADE651, GT200, Sniffex, Alpha6.)²⁷

The following document has been written in an attempt to avert a number of controversial papers and unwarranted advice over ‘warnings not to buy “Bogus” detection equipment.’

Although I would agree that in principal, advice of this nature should be given, I do disagree by which the methods used to discourage potential users in the effectiveness of ‘alternative’ methods of detection. As early as 1993, an instrument appeared on the market making claims that it could detect, from a ‘Long-Range’, narcotic or explosive material using a method of detection known at that time as: ‘Molecular Location’. The company (Quadro) that was then based in South Carolina was indicted by a US Federal court and banned them from being able to sell their equipment. Further claims were made that the company had sold approximately 1,000 units before being served with an injunction in late 1996. One of the reasons too that the injunction was made was because: **“The court finds that defendants do not know of any scientific principles which could make the devices operate.” In other words, they too were baffled as to how it worked!**

The fact was that, they were not prosecuted because it didn’t work, but that their claim as to HOW it worked was false. They claimed that the unit had an “electronic Chip” that enabled them to detect substances; but this was simply not true.

A short time later, in the UK, another company appeared on the Market promoting a device, very similar in design to the Quadro Tracker called, the “MOLE Programmable System”. However, unlike the claims made by the company producing the Quadro Tracker, the “Mole” (as it became commonly known), claimed to use a slightly different detection method, this time called: ‘Molecular Resonance’. However, in 2002, the Mole underwent a ‘Double-Blind Test’ conducted by a very reputable US Testing company called Sandia Laboratories, and found that under the conditions set by Sandia Labs, the Mole performed: “No better than random chance”. Although Sandia published a report of their findings, no further action

²⁷ <http://ade651.blogtetry.com/2009/11/17/controversy-over-detection-methods-%E2%80%93-ade651-gt200-sniffex-alpha6/>

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was taken by them and it was left for potential users of such systems to ‘conclude their own findings’ and thoughts.

The impact that this report made on the Company promoting the Mole (Global Technical Ltd; based in Kent, UK) was such that, in the latter part of 2002, the company changed its product name and modified ‘slightly, its equipment hardware. It now refers to its ‘operational’ method as ‘dia / para magnetism’ and sells the unit under the new name: ‘GT200’. Although the company states that it the equipment is different.....it’s method of operation is the same and their ‘sensor-cards’ supplied with the equipment are identical to the ones previously supplied under the Mole name.

Parallel to the events of 1997 & 2002, ATSC resurrected testing of its own device, launched under the name of Advanced Detection Equipment, (ADE650 and ADE651) and had its own theory of detection method known as Electro-Static (Ionic) Attraction. They had already done some research and development on the subject many years prior and had waited until they were certain that the launch of their new product would live up to the challenges (and controversy) it had to face.

In 2003 ~ 2004, two further companies appeared on the market with equipment called the “Sniffex” and the “Alpha 6” with each company making claim to its working technology as something different then that of the MOLE, GT200 & ADE.

The Alpha 6 claimed that its working principal was ‘Magnetic Molecular Resonance’, (similar to the Quadro Tracker and early days of the Mole), whilst the Sniffex claimed the technology for their instrument detects the “interfering frequency” via a frequency generator module, or as they put on their brochure; a “Bio Magnetic N02 Ion Sensor.”

So, do they really work?

The theories given above are all ‘technically’ possible and there is still a lot of conjecture as to how (or even if) they do work at all.

“The Proof is in the Pudding”. In other words, seeing is believing and unless you are one of those people who believe in the Paranormal, Black-Magic or Extra-Terrestrial influences, then take a moment to look at the possible scientific explanations.....

In all of the above products mentioned, one common theme is present that is that human intervention is necessary in order to use the equipment. With one exception, all of the above instruments makes claim that the ‘Power-Source’ of the instrument is made through the input of Static Electricity. In all cases, the units mentioned use an antenna as their ‘pointing’ method for the detection of, the presence of, the material being searched but, in each case, the detection method stated, is different.

In fact, all testing of these products have only concluded that; ‘these devices to perform no better than random chance’. I believe that part of this statement to be true based on the circumstances that, in a ‘controlled Double-Blind test’, they have previously failed in their attempt to successfully and consistently conclusively find the presence of any explosive or narcotic material.....but this is where there is a serious flaw in the conducted test.....Since the last of those “Double-Blind” tests in 2002, new research has found out that the reason why they have all failed was because of another ‘unknown’, (at that time), called ‘fingerprinting’.....

The Locard exchange principle, also known as Locard’s theory, was postulated by the 20th century forensic scientist, Edmond Locard. Locard was the director of the very first crime laboratory in existence, located in Lyon, France and Locard’s exchange principle (as it became known) stated that; “with contact between two items, there will be an exchange” (Thornton, 1997).

Essentially Locard’s principle is applied to crime scenes in which the perpetrator(s) of a crime comes into contact with the scene, so he will both bring something into the scene and leave with something from the scene. Every contact leaves a trace.

This ‘fingerprinting’ goes beyond Locard’s theory by concluding that, even if an object or substance was sealed in a container, away from direct contact with another object or substance; (i.e. Say a sample of TNT placed in a jar and then that jar placed in a box), the box would still become ‘contaminated’, momentarily, with the substance and therefore, in the ‘Double-Blind test’ scenario, a ‘first’ reading

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maybe possible to identify the presence of a substance but that when that substance was subsequently removed, the box it was contained in, left sufficient trace for such detectors to pick up an 'unwanted' signal and thus, giving the impression that the substance was still contained within.

Such is the sensitivity of these instruments that they can identify in the pico-gram range, the presence of substances that current IMS or electronic sample trap devices cannot detect. Additionally, as the 'fingerprint' is only temporary, any delay in taking sample readings immediately, will only show a negative result. Therefore, it would have been necessary for the box (in the "Double-Blind Test") to either be changed or allowed to 'clean' in the open-air so as to eliminate the unwanted signals.

Analyst's Comment:

The above article has some interesting background and tries to make an argument in favor of the devices from a "devil's advocate" perspective. The facts show through research and numerous deaths and injuries that these devices are actually nothing more than a complete hoax (see YouTube and BBC NewsNight special which opened the device showing they are empty and the sensor cards are non-functional). The writer also fails to mention the extra steps taken by Sandia to verify that no contamination occurred of the boxes during the test which based on Sandia's reputation is an unrealistic assumption. Sandia clearly followed standard testing procedures and demonstrated exceptional care in preventing any contamination during their research.

Arthur Doty, Director

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