BE THE HUNTER, NOT THE HUNTED!

MNC-COUNTERIED SMART BOOK

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PREFACE

TF TROY MISSION

CJTF Troy exercises command and control of specialized Joint Counter-IED and CBRNE forces to neutralize the CBRNE/IED threat; conducts weapons technical intelligence collection and exploitation to defeat IED networks; provides training and recommends materiel solutions to protect the force; and assists ISF in building sustainable security capabilities.

CIED TT MISSION

The C-IED Training Team mission is to deliver an up to date C-IED program, including Search/ TSE, to provide personnel with the knowledge and the skills required to respond safely to the C-IED threat within the ITO.

PURPOSE

The purpose of this Smart Book is to provide IED information to Soldiers, Sailors, Airmen and Marines of the Coalition Forces in the ITO. This book also provides additional information on Search tactics, techniques and procedures and C-IED report formats essential for the safe conduct of day-to-day missions.

For the latest C-IED and Search information and TTPs visit the TF Troy website at:

http://mnci.res.s-iraq.centcom.smil.mil/sites/tf/TFTroy/HomeSite/default.aspx

or,

http://www.mnci.res.s-iraq.centcom.smil.mil/sites/tf/TFTroy/HomeSite/default.aspx

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1	IED	Improvised Explosive Device. A device placed or fabricated in an improvised manner incorporating destructive, lethal, noxious, pyrotechnic, or incendiary chemicals and designed to destroy, incapacitate, harass, or distract. It may incorporate military stores, but is normally devised using non-military components.
2	UXO	Unexploded Ordnance. Explosive ordnance which has been primed, fused, armed or otherwise prepared for action, and which has been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or material and remains unexploded either by malfunction or design or any other cause. Some UXO may be placed with the intent to add an initiation system at a later time, at this point it may become an IED. Determination is subject to the Team Leader's judgment and knowledge. If in doubt treat as a worst case scenario and report as an IED.
3	ERW	Explosive Remnants of War. Any military ordnance left on the battlefield, or in abandoned munitions storage sites — not necessarily old or deteriorated.
4	AAIED	Anti-Armor IED. An IED that incorporates armor defeating principles such as Explosively Formed Projectiles, Shaped and Plate Charges. They are designed to damage or destroy armored vehicles and/or kill or wound individuals inside armored vehicles.

	FFD	Forder Code Francis I Book (2)
5	EFP	Explosively Formed Projectiles. A specially designed IED which incorporates explosive encase behind a milled/ pressed metal plate (liner) which, through explosive force, reshapes into a projectile capable of piercing armor.
6	Shaped Charge	<u>Shaped Charge.</u> A charge shaped in such a manner so as to concentrate it's explosive force in a particular direction (i.e. plasma jet).
7	Platter Charge	<u>Platter or Plate Charge.</u> Use explosive force to propel a metal plate towards a target in a manner where the plate remains intact.
8	VBIED	Wehicle-borne IED. An IED delivered by any small ground-based vehicle (e.g. passenger vehicle, motorcycle, moped, bicycle etc.) and/or serves as the concealment means for explosives with an initiating device.
9	LVBIED	Large Vehicle-borne IED. An IED delivered by any large ground-based vehicle (e.g. dump truck, panel truck, bongo truck commercial bus, tanker etc.) and/or serves as the concealment means for explosives with an initiating device.
10	RVBIED	Remote VBIED. A VBIED which is driven to the target by Radio or Remote (Wire) Control. The initiation system may or may not be the same as the driving control system.

11	Suicide	Suicide. An IED initiated by an operator at a time of his/ her choosing in which the operator intentionally kills himself/ herself as part of the attack.
12	SVBIED	Suicide VBIED. A VBIED which requires the driver, or passenger inside the vehicle, to detonate the explosives. May incorporate a command initiation as a back-up.
13	PBIED	Person-borne IED. An IED worn by a person, such as a vest, belt, back-pack, etc., in which the person houses the whole IED or principle IED components and/ or serves as the delivery or concealment means for explosives with an initiating device. A PBIED is often initiated by the person wearing the IED (Suicide) – however, not all PBIEDs are triggered by the person wearing the IED.
14	Hoax	Hoax. An object or report designed to simulate an IED, deliberately employed to cause disruption of normal activity and/or to identify CF TTPs.
15	Magnetic Attachment	Magnetic Attachment. A type of IED employment in which the device is attached to the target using magnets.
16	Underbelly IED	<u>Underbelly IED.</u> A type of IED employment in which the device targets the undercarriage of a vehicle.

17	Cache	<u>Cache.</u> A facility or location where supplies are hidden or otherwise concealed and are not readily available. A Cache may consist of weapons or other equipment.
18	HME	Home Made Explosives. A combination of commercially available ingredients combined to create an explosive substance.
19	UBE	Unknown Bulk Explosive. A categorization used to define a quantity of explosive if there is insufficient evidence to determine if the explosives are of military, commercial, or homemade origin.
20	Secondary Device	Secondary Device. This is an additional device emplaced in the target area to attack individuals or vehicles after the initial event. Often employed to target first responders following an initial IED event.
21	Tertiary Device	Tertiary Device. This is an additional device emplaced in the target area to attack individuals or vehicles after the initial and secondary events.
22	Complex Attack	<u>Complex Attack.</u> An attack that involves one or more IEDs, or an IED attack used in conjunction with direct or indirect SAF.
23	Effective Attack	Effective Attack. An attack which meets the assessed intentile casualties, or damage to vehicles or infrastructure.

MAINTAIN AN OFFENSIVE MINDSET



IED attacks are contact with the enemy. Every leader must be prepared to rapidly develop the situation in order to gain and maintain contact with the enemy. If the situation allows the leader advances his unit by fire and maneuver to ultimately kill or capture the attackers.

DEVELOP AND MAINTAIN SITUATIONAL AWARENESS



The rapid evolution of insurgent tactics, along with the challenge of conducting military operations in urban terrain require Coalition Forces to develop and maintain a heightened state of situational awareness (SA) while on patrol. Good SA is key to seeing, understanding, and then acting on pre-attack indicators to deny the enemy the advantage of surprise.

STAY OBSERVANT



Most IEDs found before detonation are located by the naked eye. Every soldier should continuously scan their assigned sector in search of IED indicators. Be deliberate, understand that rushing greatly diminishes the likelihood of finding an IED before it finds you...know where/when to use speed.

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Counter IED Principles

AVOID SETTING PATTERNS



The effectiveness of any TTP depends on whether the enemy has discovered the means to avoid the intended effect of that TTP. The AIF watch CF to identify any patterns that can be used against you. Vary your patterns frequently and limit your predictability.

360 DEGREE SECURITY



Enemy activity that blends with the local populace is hard to detect and can threaten the unit from any direction. Vigilant 360 degree security must be maintained at all times, whether mounted or dismounted. Don't allow your focus to become restricted or channeled, train to look at the terrain from the enemy's perspective

MAINTAIN STANDOFF



When practical keep a safe distance, and wherever possible, maintain frontal and overhead protection from locations most likely to conceal an IED e.g. shoulders of roadways, medians, intersections, static vehicles along the route, etc. Keep all civilian traffic a safe distance away from the patrol.

MAINTAIN TACTICAL DISPERSION



Maintaining tactical intervals appropriate to the situation reduces the likelihood that multiple vehicles will receive damage from and IED attack. Leaders must consider CREW protection envelopes when establishing tactical intervals and fight the tendency to 'bunch-up' at choke points or during halts.

UTILIZE BLAST / FRAGMENTATION PROTECTION



Individual and vehicle armor provide a measure of protective capability against IED blasts. Depending on armor to cover poor tactical practices is not wise. Units should avoid becoming too tied to armor at the expense of dismounting when appropriate.

UTILIZE TECHNOLOGY



Know the capabilities and limitations of your CREW systems, their impact on other electronic systems, and tactical employment techniques. Regularly monitor your CREW system when on patrol to ensure it is operating correctly. Utilize devices, such as RHINO and Rollers when fitted to mitigate the threat of non-RCIEDs.

THE FIVE Cs

"While the 5-Cs are conducted in no specific order, the response must be instinctive, effective and based on METT-TC." – FM 3.90.119

CONFIRM- The presence of the suspect item should be confirmed. If a device has functioned it is confirmed. This is to be done from a safe location with maximum use of distance, frontal and overhead protection. Your safety should not be compromised for positive identification of an IED. You should not move closer to the device unless absolutely necessary as observation can be achieved with the use of spotting equipment such as binoculars and scopes. Ensure you are constantly aware of the possibility of secondary devices. Do not get tunnel vision, inform the rest of your callsign of the presence of the suspected item. Call EOD using the SPOT report followed by an IED/UXO 9 line report.

CLEAR- All personnel are to be moved away from the suspect item. Mark your location and note the direction and distance to the device. Move to a minimum distance of 300 meters from the suspect item. The Convoy Commander or Patrol Leader at the scene makes the decision on how large an area to clear based on METT-TC. Detonation may be imminent if the device was armed before being located. Personnel should make maximum use of hard cover, ensuring they are out of the direct Line of Site (LOS) from the suspect area to cleared positions. If cover cannot be obtained, maximize distance from the device.

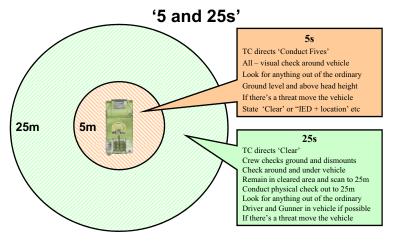
CORDON- The established danger area is to be cordoned off and an Incident Control Point (ICP) is to be established for follow on agencies. The purpose of the cordon is to prevent unauthorized personnel from entering the site (for their own safety and the safety of the first responders), to preserve the scene for further exploitation, and to provide outward protection and security against command-initiated IEDs. When clearing personnel from the area, random individual checks should be carried out as potential exists in identifying a triggerman, cameraman, and/or insurgent personnel. Convoy personnel man the perimeter until additional assets arrive on scene. Do not become distracted.

THE FIVE Cs

CHECK- All personnel should check their immediate area for secondary devices by conducting 5 and 25 meter sweeps from their positions. Soldiers should look for IED materials and equipment (detonating cord, receivers, transmitters, cell phones, antennas etc.) that may lead to other IEDs flanking the unit. Any suspicious items should be reported to the Patrol Leader/Convoy Commander immediately, the area around the device marked as per a unit-designated marking system, and the cordon re-established to a safe area and the 5/25 procedure conducted again.

CONTROL- The area inside the cordon is controlled to **ensure only authorized access**. Allow only first responders to breach the cordon through the ICP. All civilian traffic should be diverted away from the cordon. Maintain (from a safe distance) a visual/line of sight (binoculars and scopes) observation of the subject IED to ensure no tampering occurs. Immediately report any personnel observed approaching the IED according to the unit SOP. The cordon must be secure, ensuring no one enters the danger area until the EOD Team has given the all clear signal. Remain alert and **look for a potential triggerman** from your position.

Information on the 5-Cs is IAW FM 3.90.119 dated 27 Feb 2007



General: The purpose of 5 and 25-meter checks is to ensure your patrol stops in a safe place. They require the entire vehicle crew to read the terrain and avoid areas likely to conceal IEDs, mines and/ or UXOs.

5-meter Checks: Initial check conducted from within the protection of the armored vehicle. Identify the best position to stop then carry out a stand-off check using binoculars or other optics. Check for disturbed earth and suspicious objects. Work from ground level and continue up above head height. Once the vehicle is stopped, conduct an immediate physical check of the ground before dismounting and then check around and under the vehicle. Then clear the area out to 5 meters around your vehicle. Be systematic and take your time. Use ISR if available, if not and the situation allows, use a white flashlight at night.

25-meter Checks: Once 5 meter checks are completed, continue scanning out to 25 meters in your sector or area of responsibility checking for potential IED indicators and anything else out of the ordinary. If searching off the hardball scan the area first with optics for possible victim operated devices. Be on the lookout for any potential triggerman observing your actions. Remain calm on identifying any IEDs as hasty actions may alert the triggerman to function the device.

NEVER TOUCH OR PICKUP AN IED - CALL EOD!

IMPROVISED EXPLOSIVE DEVICES (IED)

IEDs are constructed with five basic components and may, or may not, include enhancements:

Case or Containers

- · Suicide Vest/ Belt/ Pants
- Vehicle
- Pipe, tube
- · Propane tanks, fire extinguishers · Bottles, jugs, jars

Power Source

- Direct Current (DC 1.5 12V batteries)
- Alternating Current (AC 110 220V)



- Time
- · Victim Operated
- Command

Initiator

- · Electric Blasting Caps
- · Non-electric Blasting Caps

Main Charge

- · Commercial Explosive
- · Military Explosive
- Home Made Explosives (HME) · Main Charge Configuration
 - - Improvised Claymore
 - -FFP
 - Platter Charge
 - Shaped Charge

Enhancements

- · Fuel (powdered metals, gas)
- · Fragmentation (Nails, BBs, Scrap Metal)
- · CBRN (Commercial, Military or Homemade)













CASINGS OR CONTAINERS

Anything can be used as a case or container as long as it holds the main charge. Military ordnance in the past was the most common casing encountered, however; common domestic household and industrial items and materials are becoming more and more prevalent. Casing material is limited only by what is available to the IED maker.





Casings can include:

- Suicide vests
- Vehicles
- Military ordnance
- · Propane tanks
- · Fire extinguishers
- Jars, jugs, bottles
- · Boxes, cases











POWER SOURCES

IED power sources encountered to date include common household batteries or battery packs, vehicle batteries, or capacitor banks.







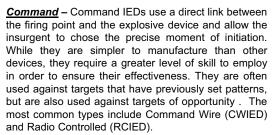




Three Methods of Functioning IEDs

A firing switch will function an IED using one of the following methods of initiation. These types of switches may also be used to arm the IED:

<u>Time</u> - Time IEDs are designed to function after a preset delay, allowing the insurgents to make their escape or to target Forces known to follow set patterns. There are various types including: burning fuse, mechanical and electronic.



<u>Victim Operated</u> - Victim Operated IEDs (VOIEDs) are emplaced so that the victim will carry out some form of action that will cause it to function. There are various methods of initiation for VOIEDs including, but not limited to Pull/Trip, Pressure, Pressure Release, Movement Sensitive, Light Sensitive and a range of electronic switches which include Passive and Active Infra Red (PIR and AIR).







TIME

Time switches are designed to function an IED after a pre-set delay. Time switches identified in the ITO include:

- Mechanical
- Electronic
- Homemade circuits

Mechanical Timers



Electronic Time Clocks









Homemade Timer Circuits



COMMAND

Command Initiated IEDs allow the insurgents to choose the optimum and precise time of detonation. Common Command Initiated IEDs identified in the ITO are:

- Command Wire
- Radio Controlled (LRCT and Mobile/Cell Phone)

Camera Flash used with Command wire



Command Wire



Command Wire IEDs require insurgents to position a trigger man in relative proximity to the main charge. Be on the look out for potential trigger men and other suspicious activity. A common enemy TTP is for insurgents to place a secondary IED near the primary device buried under the command wire. Tracing out the command wire may lead you in to the kill zone of these secondary devices.

- DO NOT TRACE command wires Leave it to specifically trained personnel, proficient in the proper TTPs to do so.
- DO NOT CUT command wires Collapsing circuits may be incorporated, resulting in detonation of the IED.
- DO NOT PULL command wires Pull/ Trip type initiators may be incorporated, resulting in detonation of the IED.

Remember to apply the 5 Cs.

Allow EOD, CEXC or WIT to conduct exploitation!

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SWITCHES AND CIRCUITS RADIO CONTROLLED (RC) DEVICES

Radio controlled devices are common switch mechanisms used to initiate IEDs in the ITO. They provide increased stand off for the triggerman as well as allow accurate initiation timing.

Some of the most commonly used RC devices are:

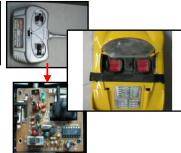
- Two-way radios / Personal Mobile Radios (PMRs)
- Long range cordless telephones
- Mobile/ cell telephones
- Cordless telephones
- Wireless doorbells
- Keyless entry systems
- Car alarms
- Radio controlled toys

WIRELESS DOORBELL

RADIO CONTROLLED TOY







CELL PHONE



Mobile Telephones/ Cell Phones

Presently, Baghdad has the most developed cell phone structure in Iraq making this AOR the ideal test bed for cell phone initiated IEDs.

As the cell phone network expands throughout the ITO, so too will the use of this type of initiator.

- Do not answer a ringing phone
- Do not remove the battery
- Do not remove the SIM card
- Do not manipulate the buttons
- Do not attempt to access the phone book



Long Range Cordless Telephones (LRCT)

Insurgent TTPs include using the handset or base station of cordless telephones and long range cordless telephones as an IED switch near the main charge. **Be on the lookout for both!**





EOD and CEXC personnel have found base stations and hand sets booby trapped with small explosive charges at IED sites. Be aware of this enemy TTP and **do not touch, CALL EOD!**









Two-way Radios / Personal Mobile Radios (PMR)

Two-way radios are a common method of Command Initiation incorporated in IEDs within the ITO. They utilize the same unsecured/uncontrolled radios that have previously been employed by Coalition forces for intra-squad or platoon communications.

Do not use them! Rely on your secure handheld and vehicle-mounted communication network.

Like cordless telephones and long range cordless telephones, AIF have booby trapped two-way radios in the past, so if found, do not touch and CALL EOD!



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SWITCHES AND CIRCUITS

Other potential RC devices:

APPLIANCE CONTROLLERS







CAR ALARMS

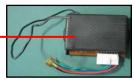






KEYLESS ENTRY SYSTEMS (KEY FOB)

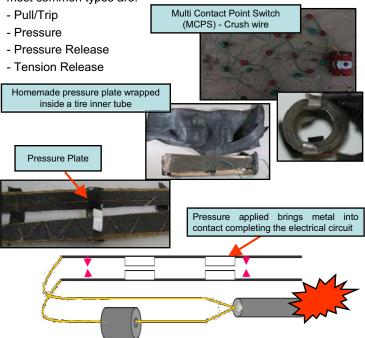






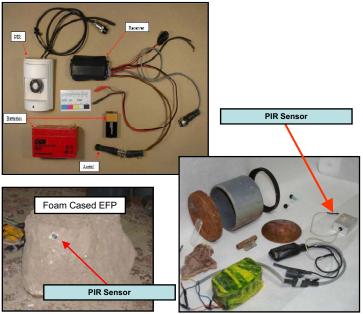
SWITCHES AND CIRCUITS VICTIM OPERATED

Victim Operated switches are designed to target an individual, or group of individuals, and require some interaction with the device from the target. As well as being employed along Coalition Force supply and patrol routes, these initiation mechanisms may also be employed within booby trapped houses or arms caches. The most common types are:



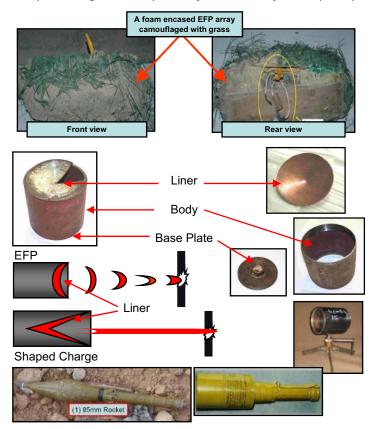
Victim Operated (VO) - Passive Infra Red (PIR)

Passive Infra Red (PIR) Technology works by dividing its "observation area" into a grid system, then looking for the changes (from one grid to another) caused by the transient motion of a heat source (infrared energy) – vehicle engine, human body etc. These sensors are mostly associated with Explosively Formed Projectiles (EFPs).



ANTI ARMOR IED (AAIED)

Shaped Charges and Explosively Formed Projectiles (EFPs)



IMPROVISED ROCKET LAUNCHER

INDIRECT FIRE – Improvised Weapon System

These weapon systems offer the insurgent the ability to deliver an explosive charge to a target with a stand-off between the Firing Point and the Contact Point. They may be initiated by any of the same switches IEDs are functioned with include Mortars, Rockets and improvised Manpads.

- IRLs have been emplaced with Victim Operated switches targeted against CFs moving in convoys.

CAUTION

IRLs and Points of Origin (POO) may be booby trapped to target first responders.



Potential IED Indicators

- Changes in patterns of life (atmospherics)- Be alert to fewer people/ vehicles and the absence of and children playing in normally busy areas.
- Colors- Notice clues unwittingly provided by the enemy such as exposed DETCORD or other parts of the IED. Look for contrasting colors, freshly disturbed earth (it will be darker in color) or concrete that doesn't match the surrounding areas.
- Markers- Watch for indicators by the side of the road such as tires, rock piles, ribbon or tape that may identify an IEDs location, or serve as an aiming reference.
- **Shapes-** Take note of object outlines that seem out of place for the environment that you are in.
- Graffiti- Be aware of symbols or writing on buildings and walls that might serve as a warning to locals (interpreters usually needed).
- Signs- Pay attention to newly erected placards and signs that seem out of place or might serve as warning to locals and messages to insurgents.

Be alert to:

 Vehicles following or proceeding your convoy for a long distance and then pulling off the

side of the road.

- Dead animals along the roadways.
- Freshly dug holes or pavement patching on or along the road that may serve as possible IED emplacement sites.
- · New dirt, rock or gravel piles.
- Obstacles and craters in the roadway used to channel the convoy.
- Personnel on/ under overpasses.
- Signals with flares or city lights (switched off/on) as convoy approaches.
- People video taping ordinary activities or military movements.
- · Wires laid out in plain sight.



IED EMPLACEMENT

IEDs may be emplaced in the following areas:

- In the median, the shoulder, or buried under the surface of any sealed or unsealed road.
- Elevated in / on T-walls, trees, light posts, road signs, guard rails, overpasses and bridge spans.
- Within, next to, or under any type of material or packaging.
- Concealed in cars, trucks, motorcycles, dead animals, humans and carts.
- As secondary or tertiary IEDs near the primary IED, or in the vicinity of Point of Origin (POO) sites.
- Especially designed to target Quick Reaction Forces (QRFs), first responders, cordons, checkpoints (CPs) and Incident Control Points (ICPs).
- In a daisy-chained configuration meaning there may be multiple explosive charges connected together to create an explosive chainreaction if one is detonated, or if the initiation system is tampered



Homemade Explosives (HME) Defined: A combination of commercially available ingredients combined to create an explosive substance.

Because HME is "homemade" it can take on a number of different appearances and a variety of colors due to manufacturing impurities and available precursors.

Call for EOD support Immediately!

HME can be very sensitive and unpredictable:

- Do Not expose to Heat, Shock, or Friction
- Do Not conduct a "Burn Test"
- Do Not cut open any containers
- Do Not take any samples
- Do Not smoke near HME or precursors
- · Do Not walk on HME or precursors
- Do Not touch HME or precursors
- Do Not stay in a confined area with HME or precursors
- Stay out of Line-of-Sight (LOS) of the HME if you can see it, it can see you.
- Stay upwind (if tactically possible) from HME and precursors

Remember:

- HME can be very unpredictable.
- HME can be as strong as military explosive.
- If mixed with other chemicals HME can spontaneously detonate.
- Ensure Chemicals stay separated if not they may explode.
- Be aware of vapors- chemicals used in HME may be toxic.
- · Back out using the same path and move upwind if possible.



HME can have a variety of odors:

- Fruity / chemical (TATP)
- Vinegar / rotting (TATP)
- Dead fish (HMDT)
- Nail polish remover (TATP)
- Strong Citrus
- Fuel (Diesel or Camp stove fuel)
- Strong Ammonia or Urine-like
- Almonds
- Sweet, Cinnamon or Cocoa.



HME can be placed in any type of container:









Key indicators, including precursors chemicals, can be utilized to identify potential HME manufacturing facilities.



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Precursor Chemicals that could be used to identify potential HME manufacturing facilities

- Fertilizers both Ammonium, Urea and Potassium Nitrate based
 - Antifreeze
 - Aluminum powder
- Acids Nitric, Sulfuric and Hydrochloric
 - Acetone
- Drain Cleaner
- Peroxide
- · Baking Soda
- Sulfur
- · Hydrocarbons Sugar, Cocoa, Cinnamon and Coffee (in large amounts
- Citric Acid
- Hexamine
- Fuels such as Diesel, Benzene, Kerosene



Hexamine in bar form

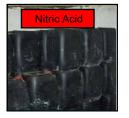












HME/UBE Containers

To standardize reporting, 1 Liter = 2 lbs of HME/UBE



Tactics, Techniques and Procedures (TTPs) ENEMY TTPs

IEDs

- Slow down the IED is used to initiate the attack so find the IED and then be prepared to counter the attack. Coalition Forces (CF) must maintain an aggressive posture in order to react quickly and decisively following any IED attack.
- Expect IEDs to be combined with follow on small-arms and RPG fire

 complex IED attack.
- The first device may not be the only device conduct 5 and 25m checks to identify potential secondary devices.
- Canalization by terrain or obstacles is utilized to funnel CF into a kill zone, or press them closer to the blast seat.
- IEDs are most typically emplaced in areas with built-up and/or restrictive terrain in order to cover and conceal Anti-Iraqi Forces (AIF) during the attack.
- IEDs frequently use military explosive components and/or stores such artillery projectiles, mortars and mines.

Enemy TTPs

- IED emplacers continue to observe CF TTPs by using hoaxes in order to identify patterns and expose weaknesses.
- IED Markings insurgents may use natural or other objects to identify emplaced IEDs in order to avoid the device being detonated by themselves or locals. Be aware of objects that do not fit with their surroundings
- Anti-Tamper, Anti-Handling devices are used to target first responders. Do not tamper with or try to dig up explosives or IEDs – call EOD.
- Emplacement sites are generally located where there is less local population, and collateral damage would be limited.
- Often IEDs are placed in previously used IED sites, i.e. potholes that are covered with dirt or sand.
- AIF regularly use secondary IEDs to target a convoy or cordon area as it regroups after an initial IED attack.
- AIF conceal IEDs as damaged highway infrastructure, trash or behind barrier walls.
- AIF employ VOIEDs such as pressure plates, PIR EFPs and crush wires.

Tactics, Techniques and Procedures (TTPs) ENEMY TTPs Cont.

Enemy TTPs

- AIF will continue to perfect their TTPs to defeat each system as it is introduced into theater.
- AIF are employing barrier walls to hide and elevate IEDs.
- AIF are angling PIRs as a technique to strike vehicles in more vulnerable areas.
- Never underestimate the ability of the AIF to develop unique emplacements, or to recycle TTPs that may not have been used for an extended period of time.
- HOAX IEDs are utilized as a means to study CF TTPs and/ or to lure CF and Iraqi Security Forces (ISF) into a kill zone.
- Keep watch for potential aiming marks such as telephone poles with markings (strips of cloth, paint or writing), or walls with writing or marks that are used as aiming stakes for IEDs.
- AIF will continue to use underbelly/buried IEDs along MSRs and ASRs.
- Expect continued use of females as primary suicide attackers.
- Reporting indicates AQI cells may still try to conduct high-profile attacks to intimidate LNs, and reassert greater influence in their AQs
- AIF use culverts to conceal large IEDs.
- AIF use aiming stakes as trigger points (i.e. rock piles, garbage, paint markings, light poles, telephone poles, cloth or plastic strips tied to tree branches or natural vegetation etc).
- AIF use any means available to conceal IEDs (i.e. boxes, bags, trash/debris, soda cans, milk cartons, dead humans, dead animals, MRE sleeves, paint cans, cinder blocks, tires, broken-down vehicles etc).

REMAIN VIGILANT

THIS SECTION IS TO ASSIST IN IDENTIFICATION ONLY



UXO DEFINITION

A UXO is any explosive ordnance, which has been primed, fused or otherwise prepared for action, and which has been fired, dropped, launched, projected or placed in such a manner as to constitute a hazard to operations, installations, personnel or material and remains unexploded either by malfunction or design or for any other cause (NATO Definition).

Explosive ordnance, which does not fit into the category described above, but has been made unstable due to exposure to fire, neighboring explosions, extremes of climatic conditions, or excessive weathering, may also be considered as UXO!

UXO AWARENESS AND IDENTIFICATION <u>UXO Hazard Safety</u>

- Avoid the area where UXO is located.
- Never approach suspected UXO.
- Never transmit near UXO.
- Never attempt to remove any part of UXO.
- Never attempt to move or disturb UXO.
- Clearly mark the UXO/area.

Note: Remember that UXO can be used as a component in the design of IEDs.

Tactics, Techniques, & Procedures

- Employ the 5 Cs (IAW Tab A):
 - Confirm
 - Clear
 - Cordon
 - Check
 - Control.
- Complete EOD 9 Line Report (Tab I) and relay it back to your HQ.

REMEMBER



If you did not drop it or place it, then do not pick it up!

These are some of the common hazards associated with UXOs (and IEDs):

Explosives:

- Military
- Commercial
- Homemade (only in IED)

Toxic Industrial Substances:

- Mercury Thallium
- Compressed Gases
- IRFNA (Inhibited Red Fuming Nitric Acid liquid missile engine fuel)
- LOX (Liquid Oxygen = Oxidizer for IRFNA)
- Carbon Fiber, etc

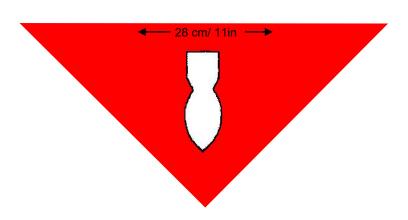
Chemical, Biological, Radiological, Nuclear (CBRN) Material:

- Depleted Uranium (DU)
- Old Chemical munitions / weapons
- Old Biological munitions / weapons

UXO MARKING

This is the official UXO marker, which should be recognized by military forces worldwide.

This marker is only painted on one side to show direction of the threat.



EVACUATION DISTANCES

•	Mines:	150m
•	Up to 105mm Projectile:	300m
•	Bigger than 105mm Projectile:	600m
•	Aircraft bombs:	800m
•	Unknown	300m

SEEK FRONTAL AND OVERHEAD PROTECTION

MINIMIZE EXPOSURE TIME WITHIN LINE OF SITE OF UNEXPLODED ORDNANCE

9 Liner UXO / SPOT Report Categories					
Projected	Placed	Thrown	Dropped		
UXO Sub-Categories					
Artillery	Anti-Tank Mines	Grenades	Bombs		
Anti-Armor	Anti-Personnel Mines		Dispensers		
Mortars			Sub- Munitions		
Rockets					
Guided Weapons					
Chemical	Chemical		Chemical		

UXO AWARENESS AND IDENTIFICATION UXO RECOGNITION

Projected Munitions ARTILLERY



e.g. 152mm HE projectile

- Bullet like shape.
- Driving Bands/Rotating Bands/Gas Check Bands.
- · May have fins.
- · May be nose or base fused.
- · May be filled with chemical agent







BE THE HUNTER, NOT THE HUNTED!

UXO RECOGNITION

Projected Munitions ANTI-ARMOUR



Characteristics:

e.g. 100mm HVAPDS-T

- Armour Piercing (penetrator) Fin Stabilized Discarding Sabot with tracer (APFSDS –T).
- · Penetrator may be Depleted Uranium (DU).
- Penetrator will not contain any high explosives but may include tracer (Sabot element relies on kinetic energy).

• May be High Explosive Anti-Tank (HEAT).









UXO RECOGNITION

Projected Munitions MORTARS



e.g. 60mm HE mortar

Fuzing in the nose

- Normally tear drop shaped, however body can have parallel sides
- May have spigot (flash) holes in the tail boom.
- Fins are the same diameter as the body.
- Percussion primer in base of tail boom









BE THE HUNTER, NOT THE HUNTED!

UXO RECOGNITION



e.g. S-5 57mm Air-to-Ground

- · May have one or more venturi.
- Long & cylindrical in shape.
- · May be fin or spin stabilized.
- Will not have movable control surfaces.





UXO RECOGNITION

Projected Munitions GRENADES (Rifle)



- · Light weight construction
- · No flash holes in tail boom.
- · Attaches to the end of a rifle barrel.
- Can be fragmentation, smoke, illumination, riot-control, or anti armor.

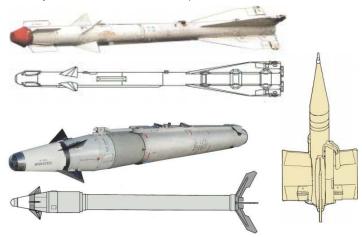


UXO RECOGNITION

Projected Munitions GUIDED WEAPONS



- May have one or more venturi.
- Usually has moveable control surfaces, or guidance unit.
- May be optical, command wire, or radar guided.
- · May have clear nose cone.
- Warning. Damaged missiles are highly susceptible to Electro Magnetic Radiation (EMR).
- · May contain toxic solids and liquids.



UXO RECOGNITION

Placed Munitions LAND MINES – Anti-Personnel



e.g. VS 50

- Small in size (approximately fist sized and 2-16 ozs).
- Relies on the explosive blast and/or fragmentation to cause casualties (1.5 to 8 ozs of explosive).
- Normally operated by pressure (10-20lbs) but may be pull/ trip.



UXO RECOGNITION

Placed Munitions
Land Mines - ANTI-TANK
(Note - May Incorporate Anti-handling / Anti-removal)

Characteristics:

- Larger than AP mines.
- · Usually has pressure plate or tilt rod.
- · May be plastic, glass, metal or wood.
- · Can be blast or Anti Armor.



Anti-Armor





Blast







UXO RECOGNITION

Thrown Munitions GRENADES (Hand thrown)

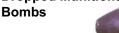


- Grenades are commonly small (fist-sized) and are generally cylindrical or spherical in shape.
- · Some variants have a throwing handle/ stick.
- Can be fragmentation, smoke, anti-armor, blast or concussion, and incendiary.



UXO RECOGNITION

Dropped Munitions





Characteristics:

- May be fused in the nose, tail and/or laterally (on side).
- · Generally cigar shaped with heavy, solid construction
- · Will include suspension lugs on case.
- · Separate add-on options such as fins, guidance sections, rocket motors etc may separated from bomb on impact.

Unguided or "Dumb" bombs





Guided or "Smart" bombs

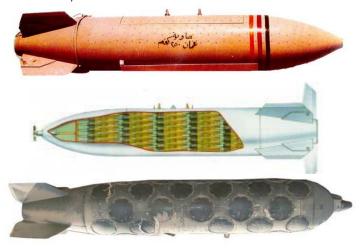


UXO RECOGNITION

Dropped Munitions DISPENSERS



- · Similar shape to bombs.
- Will include suspension lugs on case.
- · Usually constructed from light weight materials.
- May have seam (allows any opening to dispense submunitions)



UXO RECOGNITION

Dropped Munitions SUB- MUNITIONS

- Manufactured in numerous shapes and sizes.
- Seldom found as single items.
- Generally dropped, or spread from a dispenser.
- Calculated failure rate typically 15 + %.







UXO RECOGNITION

Chemical Munitions Rockets/Artillery Rounds/Dropped

Characteristics:

- · Often found in a corroded state.
- · Chemical artillery rounds may:
 - have a white or yellow band,
 - have a screw-on base,
 - have a filler plug,
 - have a welded base plate, and
 - be split open with a visible central burster charge.

If a chemical munition is suspected move upwind and call EOD



Example - Central burster charge visible



Example - Welded base plate





Example - Liquid may be seen coming from the munition

WARNING – While chemical residue may not register on detectors/detection equipment it can still be very toxic!

SEARCH

Definition:

 Search includes those actions taken to ensure enemy documents, media, IED components, personnel and other material are identified, collected, protected, evaluated, and exploited to deny resources to the enemy, and to provide evidence to prosecute detainees. When conducted correctly Search will provide intelligence for future operations and missions.

Put simply:

- Search gives the capability to locate specific targets using intelligence assessments, systematic procedures and appropriate techniques and detection equipment in order to:
 - Gather intelligence
 - · Deny resources and opportunity
 - · Gain evidence for prosecution



TEAM LEADER ROLES & RESPOSIBILITIES:

1. DEBRIEFS THE ASSAULT ELEMENT (AE)

- · Gathers information from AE if search team is not the AE
- · Begins informed mission analysis

2. ESTABLISHES THE COMMAND POST (CP) / TACTICAL QUESTIONING (TQ) / DETAINEE HOLDING AREAS

- CP area must be cleared and established all team members must know the location
- Ensures TQ and Detainee Holding Areas are not in LOS of the CP

3. PRIORITIZES THE SEARCHING OF TARGET / DETAINEE AREAS

- Prioritize and dictate the labeling of rooms and reference points in surrounding areas within the limits of the search
- · Have the detainees separated and prioritize the detainees for TQ

4. INITIATES AND COMMANDS THE TO

- · Has a planned / standardized question format
- · Utilizes the search findings for a more informative TQ
- · Utilizes the TQ findings for a more informative search

5. INITIATES AND COMMANDS THE SEARCH TEAMS

- Assigns rooms to search pairs
- · Assigns reference points to search pairs
- · Ensures rooms are searched correctly and not just "TOSSED"
- Ensures a systematic and methodical search occurs



ASSISTANT TEAM LEADER ROLES & RESPOSIBILITIES:

1. CONSOLIDATES AND DOCUMENTS ALL INFORMATION

- Gathers information from the Team Leader (TL)
- · Assists in mission analysis

2. SKETCHES FLOOR PLANS AND SEARCH AREAS

- · Takes and records all grid references and location details
- · Documents room and reference point prioritization

3. COORDINATES THE EVIDENCE COLLECTION

- · Ensures that proper handling techniques are used
- · Ensures that all evidence is tagged and handled properly
- Documents all evidence on the proper forms with the who, what, where, when

4. BRIEFS THE TL ON ALL ACTIVITIES

- · Briefs the TL on all evidentiary items found
- Informs the Tactical Questioning (TQ) elements on the active search
- · Informs the search elements on the active TQ

5. SUPERVISES THE CHAIN OF CUSTODY

- · Ensures chain of custody is flawless
- · Has soldier and witness statements on hand for proper handover
- Assists the TL in ensuring rooms are searched correctly and not just
- "TOSSED" and that proper Search TTPs are used



BE THE HUNTER, NOT THE HUNTED!

SEARCH TEAMS (SEARCH PAIRS) ROLES & RESPOSIBILITIES:

1. RECEIVE MISSION BRIEF FROM TEAM LEADER

- Photograph the long and short views
- Mark buildings, rooms and reference points as directed and prioritized by the Team Leader

2. MAINTAIN AWARENESS / CONDUCT DETAILED SEARCH

- · Use methodical and systematic search process
- · Search everything Top to Bottom / Right to Left / Front to Back
- Use search equipment sensibly (white lights / mirrors / endoscopes ect.)
- Think voids / ceiling height / wall length / floors / door moldings

3. IDENTIFY AND RECOVER EVIDENCE

- · Use gloves at all times
- · Photograph room before and after
- · Photographs all evidence before and after removal
- Secure all obvious evidence "TAG AND BAG"
- Secure and remove all found evidence (non-life threatening)
- Report all life threatening items and devices to the Team Leader
- Stop search when necessary or on order
- Inform TQ on active search

4. HAND-OFF WITH ASSISTANT TEAM LEADER (ATL)

- · Assist in documenting evidence recovery with ATL
- Prepare evidence for transportation
- · Brief Team Leader on all actions

TACTICAL QUESTIONER (TQ) ROLES & RESPOSIBILITIES:

1. IDENTIFY SUBJECTS FOR TQ

- · Confirm priorities with the Team Leader
- · Ensure proper personnel handling techniques are applied

2. CONDUCT TACTICAL QUESTIONING

- · Use rehearsed plan
- · Use information gathered from search to assist in TQ
- · Disseminate information gained from TQ to assist in the search
- Enter subjects into BATS and HIIDE

3. IDENTIFY PERSONNEL FOR REMOVAL

- · Prioritize personnel for removal from target
- · Identify personnel that require full TQ

4. DOCUMENT ALL TQ

- · Document all questions and answers
- Brief Team Leader on TQ
- · Inform the search element on the active TQ



BUILDING / ROOM SEARCH:

1. ESTABLISH COMMAND POST (CP)

- · Select routes in and out
- Identify least over-watched area from surrounding buildings
- Clear area (5s and 25s) this is where you work so secure it
- Ensure vehicle is as close as possible for CREW coverage on site
- · Begin any building and room sketches that you can from the CP

2. PRIORITIZE ROOMS AND OUTSIDE AREA

- · Continuously update sketches
- · Complete mission analysis and assign areas to search teams

3. SEARCH DOORS AND FRAMES

- · Search 3 dimensionally
- · Use flashlights and mirrors
- Use gloves
- If derelict structure; use remote or distance capable opening systems

4. SEARCH CENTER OF ROOM

- Lift, search and remove tables chairs and rugs
- Once room center is searched to include floor and ceiling, then use this space to consolidate searched and cleared items and furniture

5. ITEM / FURNITURE SEARCH

- All items get searched / top to bottom, right to left, front to back
- Search behind and under items before moving, using search equipment (flashlights and mirrors)
- Once an item is searched move it to center of room to make a clear path for wall, floor and ceiling search

6. WALLS / CEILING / FLOOR

- Move in a clockwise or counter-clockwise motion around the room
- Walls checked for length against adjoining rooms (false walls) tap for voids
- Ceilings checked for height against adjoining rooms (false ceilings) tap for voids
- Once room is searched and cleared return it to original state (if TOT permits)

WINTHROP / CACHE and OPEN AREA SEARCH:

1. ESTABLISH COMMAND POST (CP)

- · Route in and out.
- · Least over-watched area from surrounding buildings
- Clear area (5 and 25s) this is where you work, secure it
- Vehicle in (if possible) for maximum CREW coverage
- · Begin terrain and area sketch

2. SELECT REFERENCE POINTS (RP) FROM CP

· Continuous sketch updating

3. WALK THE BOUNDARY

- Everyone walks so the entire team knows the limits of the search
- · Other RPs are selected during the walk
- · Continuous sketch updating
- · Mission analysis / RPs are prioritized
- Teams are given team missions (ie Team 1 searches RP 1-3-5)

4. SEARCH REFERENCE POINTS

- Search points by priority due to Time on Target (TOT) if mission gets halted, then the highest priorities have been searched
- Teams work in pairs searching up to 15 meters in all directions from the RP's using site for ground disturbances and detection equipment, remember to think and look three dimensional

5. SEARCH BOUNDARY

- · Once all RPs are searched the boundary search begins
- Two search teams used minimum / pairs start at same start point and go opposite directions, crossing each other
- Search pair / one carries detection equipment and one carries probing and digging equipment

6. SEARCH OPEN AREA

• If TOT allows, the open area not covered in the RP and boundary phases will be searched using detection equipment

Vehicle Search:

Initial

(Basic Principles)

- Conduct a physical search of the driver for the presence of an initiating device.
- Make the vehicle owner / driver open and move any moving parts do not open or move anything yourself!
- 3. Check load carrying areas first (trunk, back seat) for IEDs.
- Look for anything suspicious, out of place or that doesn't look or feel right.



Vehicle Search:

Initial cont...
(IED Indicators)

General:

- · Anything unusual in factory-built compartments
- New or shiny bolts and / or screws
- Unusual scratches, possibly made by screwdrivers, wrenches, or similar tools
- Signs of tampering such as broken parts or bent sheet metal
- · Areas and components cleaner or dirtier than surrounding areas
- Wire and tape stored in vehicle
- · New or broken welds
- Unusual fingerprints of grease and / or oil in otherwise clean areas
- Fresh body work (fresh fiberglass, fresh paint, etc.)
- Fresh undercoating, particularly on older vehicles
- New caulking found by smell or touch
- · No vehicle identification number
- False compartments that are not part of vehicle design





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Vehicle Search:

Primary - Look for:

1. Exterior:

- · Rear:
 - Tail lights not working
 - No access to rear bumper cavity

Front:

- Headlights not working
- No access to front bumper cavity
- Front grill modified or has false compartments

Sides:

- Compartments, new welds, taped items, or fresh paint in front fender wells
- Doors feel heavy when swung
- Inconsistent or non-hollow sounds when tapping on vehicle sides or in fender wells
- Foreign items in gas tank tube (open for inspection)

Tires:

- Sound solid and are inflated.
- Strange odor from air valve
- Are they new?
- Unusually clean or dirty lug nuts or hubcaps compared to other wheels

2. Engine Compartment:

- Large battery box or extra battery
- Odd and / or clean wires
- Cold spots on radiator
- False compartment in windshield washer container or contents smells like fuel
- Foreign object in air filter cavity
- Cold oil filter
- Freshly painted areas, new welds, shiny bolts, or sheet metal work on firewalls
- Clean engine in dirty car
- Hood feels heavy when opened and closed (see note)
- False wall or modified fender compartment
- Clean or wiped areas

Note: Have the driver open the hood and when fully opened, feel the weight of the hood yourself.

Vehicle Search:

Primary - Look for cont...

3. Under Vehicle:

- Unusual or inconsistent sounds when tapping on fuel tank
- New frame welds
- Items taped or attached to frame
- Cold oil pan
- Cold or unusual muffler (vehicle may be loud)
- Signs of recent installation of components such as fuel tank, muffler, etc.

Note: Ask driver about the details of any and all repairs.

4. Interior:

- Electrical components function or LED's are on when vehicle power is off
- New, damaged, or scratched screws
- Plugged air vents
- Broken or missing blower
- False compartment in glove box
- Rigid front and/or rear seats
- False or modified ceiling
- Unusually thick floor
- Unusual lumps or bulges in front and / or rear seats
- Stress cracks in windshield (not stone impact marks)

5. Trunk:

- Check for spare tire, jack and tool bag
- Inspect spare tire for tampering
- Remove mats and carpeting
- False walls/compartments
- New welds, paint or repaired seams and gaskets



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Vehicle Search: Primary

Remember

- 1. Know where you have Searched
- 2. Know where you are Searching
- 3. Know where you need to Search
- Top to Bottom
- Right to Left
- · Front to Back

EVERYTHING GETS SEARCHED TWICE IF TIME ON TARGET PERMITS



Cache Search

Extracts from captured documents:

- "My brother Jihadist, more than others you know the cost of these materials in money and in the effort it took to get them to us. For that reason, we must do everything in our powers to keep them from falling into the hands of our enemies, and being used against us. This would lead to our being exposed also, and to all of our efforts in acquiring these materials, transporting them, and storing them going to waste."
- "What We Mean by Caching; Safeguarding materials we don't need at present, but will need later on (documents, discs, tapes, weapons, explosives, ammunition, chemical material, bombs, etc.). This caching must be in dead areas, which means they must be buried in the ground or hidden in any suitable place where nobody can get to them."



Cache Search

WHAT DOES THE ENEMY DO:

The enemy will want his cache to fit certain criteria to make it as effective as possible. Key points are:

- · Available for immediate use
- Accessible
- Concealed
- · Non-attributable to an individual
- · Easily located by day or night

The enemy will often use a storage and movement similar to the military stores system. Due to this the caches are broken down into three different types:

- <u>Long Term</u> Large store type, normally away from the contact point to avoid detection by follow up action. The location of this type of cache will only be known by a small number of people.
- <u>Transit</u> This cache will be smaller and closer to the contact point and will be used as a drop off to get the equipment / munitions to the triggerman.
- <u>Short Term</u> This will be used by the triggerman and will be very close to the contact point to allow the triggerman to deploy the items very quickly.



Cache Search "The Goal"



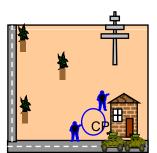






- To effectively search an open area in a systematic, safe manner removing all items of military value; with the ability to leave confident and satisfied.
- To create a system which will decrease TOT and search <u>MOST</u> probable to <u>LEAST</u> probable

Cache Search Winthrop Theory



PHASE I

Establish CP:

- 1. Stop short of the CP and conduct 25 meter check.
- 2. Two persons move forward to the CP to do 25m
- check.
- 3. When this is done move to the CP to start the mission.



PHASE II

Select reference points:

- All personnel select reference points using the reference points selection criteria which may include:
- Trees.Bushes
- Busnes
- Gaps in walls, bunds, fences.
- Telegraph poles.
- Electricity pylons.
- Ends/corners of walls.
- Road signs.
- · Gates, barriers.

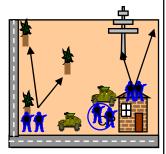
Cache Search Winthrop Theory cont...



PHASE III

Boundary Walk - all pers (except Cdr) with vehicle for ECM protection):

- If a Military Working Dog is available the dog walks the boundary in front of the team and any areas of interest are noted by the handler. These are not searched at this time.
- 2. Look for more reference points and access areas that could not be seen from the CP.
- 3. The boundary walk also shows the extent of the mission area (limit of exploitation).



PHASE IV

Search of the reference points:

- 1. Prioritize the reference points and start searching the most likely points first.
- 2. Searches are done by two people together, one with metal detector and one with a digging tool.
- 3. Use the systematic approach. Before searching the reference point, stand back and observe for disturbance or ground signs.
- 4. Then search the reference point remembering to search up if required, and search out from center of the reference point to 15 meters.

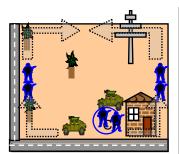
 Note: The dog can be used to search reference

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points.

Cache Search Winthrop Theory cont...

PHASE V



Search of the boundary:

- 1. Send two search pairs in opposite directions around the boundary.
- 2. Each pair carries a metal detector and each person will have a digging tool.
- 3. One pair has the detector inside the boundary and the other pair with the detector outside the boundary.



PHASE VI

Search open area:

 All persons move into extended line, alternate detector and digging tool and sweep through the entire search area.

Cache Search

Actions on Threat

LIFE-THREATENING (Booby trapped) - DO NOT TOUCH

Mark and make mental note. Return to CP

All searching stops

Request EOD

NON-LIFE THREATENING

Mark and make mental note

Return to CP, searching may continue

Inform cordon

Task relevant agencies

MILITARY OR ATTRACTIVE ITEMS

Mark and make a mental note. Return to CP

Inform cordon

Task relevant agencies

Planning Considerations

Use five paragraph field order

EOD embedded or response time

Use of search dogs

Female searchers / interpreters

Search element weapons

Availability of Technical Spt. ie. BATS, HIIDES, metal detectors, etc

Physical layout for detainee flow

Is building occupied, unoccupied, derelict

Has building been previously searched by CF

Are there known AIF in area

Is building over-watched from other unsecured buildings

Have mission patterns been set

Does building have electricity

How many occupants are expected

Are dogs expected in the building/ area

Cache Identification

The following are things that you should think of to help identify future caches:

- How was it located?
- Has it got any marking system?
 How was it concealed?
- How well maintained are the contents?
- Has it been put there recently 1 week, 1 month, longer?
- · Why is it there?
- What sort of cache is it?
 Is there a route to it?
- Route for foot/vehicle?

t there recently I week, I month, longer :

SSE (Basics)

What to look for?

- · CDs / VHS, Beta and cassette tapes
- Printers, copiers, fax machines
- Memory sticks, storage devices
- · Cell phones, home phones
- · Documents, media
- · Computers / PDAs
- · IED materials
- Passports
- Cameras
- ID cards
- GPS





Basics Principles

- · Treat the site as a crime scene
- Take and record 10 digit grid
- Conduct entry
- · Secure the target
- Clear target of civilian personnel
- Photograph the target area, surrounding areas, all entrances, rooms, all males and vehicles on the scene, and all contraband in their original location
- Systematically search every room: top to bottom, right to left, front to back; <u>THINK VOIDS</u>, false walls and false ceilings
- · Tag all confiscated material
- Call EOD for explosives found on scene

Evidence Handling WHAT IS EVIDENCE?

- Anything that can help in forming a conclusion or judgment.
- Statements or objects admissible as testimony in the CCCI (Central Criminal Court of Iraq) Shows Intent.
- Anything can be Evidence

Remember:

- Take photos in original state
- Document location item was found, who found it, detainee/suspects name and where it was located in relation to occupants/subjects.
- Use gloves at all times, try not to touch items as they would normally be used
- Complete an evidence tag
- Bag item with the tag / seal bag with tape and initials
- · Consolidate all evidence.
- Designated team members to bring bags from the target.
- On return to FOB, documentation should be compiled and copied.
 One set of copies remains with the unit.
- Evidence packed in a simple but organized manner and moved with the subject.
 - Document chain of custody from finder to court.

Marking Evidence

- Evidence/evidence bags should be marked/tagged :
 - · Objective name, address, grid
 - Item number and description (serial numbers)
 - Location
 - Building number
 (if more than one)
 - Room number (letter)
 - Position (i.e. under bed)
 - Subjects name
 - Capture tag number
 - Date & time
 - Unit
 - Finders ID number



Do It Yourself (DIY)

Search Kit

Investigation & Access

- 1. Explosive detection kit
- 2. Hand held metal detector
- 3. Extendable mirror kit
- 4. Flashlights x 2
- 5. Non-metallic garden tools (fork and spade)
- 6. Laser pointer
- 7. Cordless drill (with drill bits)
- 8. Endoscope
- 9. Biel Tool (or crowbar and hand axe)

- 10. Panel remover
- 11. Box cutter
- 12. Pliers
- 13. 3.5mm kevlar line (50m x 1 / 100m x 1)
- 14. Pulling handle
- 15. Karabiners x 10
- 16. Screw eye (self tapping x 10)
- 17. Hooks (single tang x 4 / double tang x 4)

Marking

- Route Marking System (red x 40 / white x 40)
- Mine bonnets x 4
- 3. Security sealing tape
- 4. Security marking tape



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Do It Yourself (DIY)







Panel Remover

 Biel Tool Access





Hand Held Metal Detector Explosive Detection Kit Extendable Light Mirror nvestigation

-Small Mirror -Large Mirror Extendable Pole

Non-Magnetic Fork Distance Finder Mine Probe

Non-Magnetic Trowel Small Flashlight x 2 -17 Piece Bit Set Pruning Saw Pruning Shear · Cordess Drill LaserPointer Bore Scope

Marking

-White x 40 •Red x 20

Anti Tamper Security Seal Route Marking System Mine Bonnet

OT

83

Do It Yourself (DIY) Evidence Collection Kit

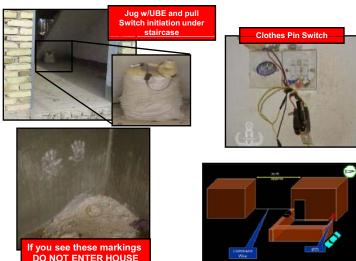
- Medium Back Pack
- · 3 small day packs to be used as individual room bags
- 6 dry erase markers
- 1-2 dry erase boards 12x8 approx
- 2 pack small permanent markers (Sharpies)
- Large sketch pad 11x17
- Clip board 11x17
- 3x5 cards, 1 pack
- 5x8 cards, 1pack
- · Box of chalk
- Evidence / Property Custody Form-DA-4137
- Apprehension forms
- Statement Form-DA 2823
- · Capture tags
- 30 Zip Lock bags (various sizes)
- 12 inch ruler
- 10 sets Flex Cuffs and various zip ties
- 10 triangular bandages (can be used as blindfolds)
- · Digital camera with extra batteries
- · Latex gloves several with various sizes
- Gunpowder / Explosives Residue Test Kit (1each)





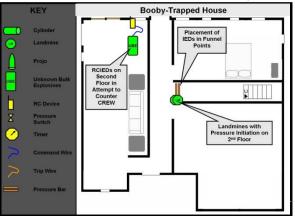
Booby-Trapped House General Overview

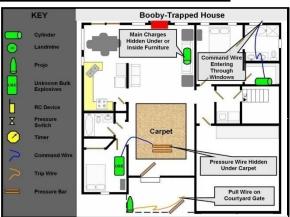
- Houses are booby trapped in order to hinder CF movement through an area and as a defensive measures to protect safe-house and HME production facilities.
- Recently, hand prints or writing on the walls has been used to inform the local population that a house is booby-trapped. CF should assume that these houses are rigged. If no markings are present, CF should always remain aware and check all gates, doors, windows, entry ways; at ground level as well as above. Once inside, soldiers need to stay off of any rug/mats (crush wire underneath) be wary of entry ways into other rooms and never assume that because the first floor is clear, the second or third will be too.
- Additionally, it has been reported that as women exit the houses during Tactical Callouts, they are lying about the remaining occupants of the house, possibly in order to entice CF into entering.



Booby-Trapped House

Possible scenarios / set-ups:





BE THE HUNTER, NOT THE HUNTED!

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Military Working Dogs (MWD)

SSD Specialized Search Dog	Will work on and off leash, under the direct control of the handler.
	Search for weapons, ammunition, and explosives in urban and rural areas, buildings and vehicles.
MDD Mine Detection Dog	MDD work on a short lead or long line under direct control of the handler.
	Trained to perform military mine detection missions in a hostile environment.
PEDD Patrol Explosive	Trained in the detection of explosives on lead and in controlled aggression.
Detection Dog	Search for weapons, ammunition, and explosives on leash in buildings and vehicles.
EDD Explosive Detection Dog	Same as PEDD except not trained as attack dog.



Remember

The operational environment and mission requirements will dictate the type of MWD for success.

Specialized Search Dog Facts

The SSD mirrors the capabilities of the EDD and the Patrol/Explosive Detector Dog (P/EDD) in that they are trained to detect the presence of weapons, ammunition, and explosives in a variety of environments. The SSD however has the ability to work off-leash ahead of the handler

- The SSD Team provides a quick, mobile and versatile aid to search operations in route clearance, area searches, building searches (occupied and un-occupied), vehicle searches, and cave search, .
- The SSD Team can considerably reduce the time spent on a search.
- It is an excellent tool to search in high metal content areas such as railways, junk piles, etc.
- SSDs are best employed in offensive types of searches (i.e. weapon cache searches) to disrupt enemy activity.

LIMITATIONS:

Extreme weather may limit duration of SSD search operations.



- The handler will find out if there are areas of special interest, a time limit to the search, who his escorts will be, and what actions are to be taken upon a find.
- SSD are used to search <u>BEFORE</u> a suspected IED or VBIED is found. They <u>DO NOT</u> confirm the presence of a suspicious device (*Report to EOD immediately*).
- Under no circumstances will the SSD handler remove or tamper with any object that the SSD has indicated on.
- Upon completion of the mission the SSD handler will submit an SSD Closure Report and submit the information to the search commander.

EVIDENCE HANDLING PROCEDURES

Never sacrifice safety for evidence collection!

- Evidence is anything that can help in forming a conclusion or judgment, statements or objects admissible as testimony in the CCCI (Central Criminal Court of Iraq). These show intent on behalf of the accused and will guarantee conviction!
- Anything can be evidence, and as we transition from Combat Operations to Collection Operations; upon securing an objective, a systematic forensic mindset needs to be maintained.
- Ensure all evidence maintains it's original condition. This is done by following proper evidence handling procedure.
- Take digital photos of items prior to moving them from their original positions.
- Do not handle evidence with bare hands. If you do happen to touch it, document physical contact on evidence log.
- Take all possible steps to prevent the unnecessary loss or damage to evidence. Wear gloves when handling evidence.
- Touch only those areas where you would not normally handle the item. Only allow those personnel who have a legitimate reason for handling evidence to do so.
- Do not change evidence condition. Do not move switches or turn dials, disassociate components, or mistakenly associate components. Don't mix one piece of evidence with another. Separate each piece of evidence in to it's own bag.

EVIDENCE HANDLING PROCEDURES Continued

- Do not disassemble devices. Do not take components apart, or unwrap tape which could provide useable biometric data. The only exception to this are those steps necessary for EOD to verify that the item is free from explosive hazards.
- Photograph all items at the scene in it's original location, when possible, and ensure photographs accompany items as they are passed along. Include photographs of the overall scene, victims, and crowd.
- In order to aid successful prosecution photograph the detainee with the evidence found in the foreground.



EVIDENCE HANDLING PROCEDURES Continued

- If evidence is wet do not wipe it dry. If possible air dry the item, otherwise place it in a box, paper bag or open plastic bag.
- If evidence contains non-toxic liquids and it cannot be sealed, empty the liquid prior to packaging.
- Place each item into an individual evidence bag or box, if possible. If placed in a box (preferred method) secure item to box using string, flex cuff, twist ties, etc. to minimize movement during shipment. Limit contact with evidence once boxed or bagged.
- Label box / bag with:
 - DTG
 - Collector's name
 - Contact information
 - Where it was located at scene.
- Notify person taking over custody of any special concerns including any:
 - Hazardous material
 - Leaking batteries
 - Blood/fluid contamination
- Sign over evidence using a Chain of Custody form and make sure both parties retain a copy.

- IED components are a great source of technical intelligence. These components can tie bomb makers and the individuals emplacing them to a particular series of devices.
- This technical intelligence is easily corrupted and therefore it is vital that items are handled correctly, and where possible items are recovered by and turned over to the appropriately trained units (EOD, WIT and CEXC).
- This intelligence includes electronic and fingerprint analysis as well as an assessment of how the device was constructed, and how it was intended to target CF forces.





OUTPUTS FROM WTI

- Fingerprint matching of detainees to IEDs
- Improved force protection equipment
- Actionable intelligence
- Blue Force TTPs





SAFETY SHOULD NEVER BE COMPROMISED FOR EVIDENCE

EOD Teams

- EOD Teams are special C-IED combat enablers, able to eliminate all types of explosive hazards. This includes IED related materials, conventional, chemical and other military munitions; homemade explosives and IED components are also included in this. EOD Teams are trained in the collection of C-IED materials to help gain weapons technical intelligence and biometrics in an effort to identify bomb makers and networks, and assist Weapons Intelligence Teams in there operations.
- EOD elements should be embedded into the BN and BCT planning process early to ensure a good understanding of combat operations and ensure Weapons Technical Intelligence collection is considered on every operation EOD can provide input in the execution of the following missions:

- Route clearance on specific Target Areas of Interest (TAI) or Named Areas of Interest (NAI)

- Raids on IED related HIVs
- Searches for large scale caches
- Raids on bomb / IED factories



Remember: Let those who are specifically trained to deal with Explosive Hazards, do their job!

THE LIFE YOU SAVE COULD BE YOUR OWN!



WEAPONS TECHNICAL INTELLIGENCE Weapons Intelligence Teams

The Weapons Intelligence Team (WIT) collect, exploit, analyze, and disseminate intelligence and evidence from IED related scenes for fusion into C-IED operations focused on defeating insurgent networks.

WITs are based with BCTs and provide first line Weapon Technical Intelligence capability. Capabilities include:

- Assisting with Tactical Questioning (TQ) and fingerprinting of IED related detainees.
- · Making assessments of enemy TTPs.
- Conducting all source intel fusion to assist with attacking the IED network.
- Coordinating transportation of items to CEXC.

Mission Essential Tasks

- · Exploit the scene
- Exploit the device
- · Identify the bomb maker
- · Identify the network
- Disseminate actionable intelligence

EXAMPLE WIT DEPLOYMENTS

This list is not exhaustive so if in doubt contact you local WIT.

Focused QRF

- KIAs/multiple WIA
- New TTPs
- Caches
- Potential new technology

Pre Planned

- · Raids on IED network targets / caches
- IED related HVIs



WTI



Combined Explosives Exploitation Cell (CEXC)

CEXC provide a second-line WTI capability as well and investigation response teams for high profile events. These teams can deploy either by air or road convoy, though a security escort is required.

These response teams can be forward based at your location if required.

CEXC TRIGGERS

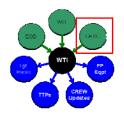
CEXC should be requested in the following events:

- Numerous deaths/casualties.
- Intelligence driven raids on IED cells or bombmaking facilities.
- Significant damage to CF high value targets.
- Significant damage to IZ high value targets (govt buildings, pipelines, and electricity grids, etc.).

- Death of an EOD operator / first responder.
- Large caches or finds of bomb-making equipment.
- Incidents where ECM equipment is suspected of being defeated.

Consult OPORD 08-02 for more details

SVOIP: 243-4092 DSN: 822-1642 http://cexc.s-iraq.centcom.smil.mil/



Combined Explosives Exploitation Cell (CEXC)

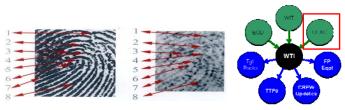
The CEXC labs are based at VBC, with a forward element located at COB Speicher. They provide a high-end analytical capability utilized to process submissions and extract technical intelligence.

Their capabilities include:

- · Electronic and mechanical analysis
- · IED related cellphone exploitation
- GPS exploitation
- · Latent fingerprint identification
- Profiling
- · Explosives analysis
- Produce in-depth technical assessment reports

REMEMBER

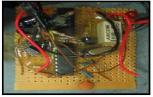
- Fingerprints are fragile so make sure items are correctly recovered
- Safety should never be comprised for evidence



IED Production

EFP liners are constructed from steel, copper or other malleable metals using light engineering equipment.

Remote Control, as well as other switches, utilize a large amount of electronic circuitry and components. Assume everything to be of value and if encountered inform EOD / WIT for exploitation.





Copper liner process





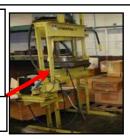
Steel liner process

Don't just blow the factory!



THESE ARE
KEY TOOLS
AND MUST BE
RETAINED
FOR
EXPLOITATION

Example EFP Press



Vehicle Survivability

- We operate in a "mined environment" where fused explosives such as landmines and IEDs are employed as offensive weapons against personnel and vehicles.
- Survivability of vehicle occupants in this environment requires knowledgeable preparation of the vehicle and passive actions by the occupants before an IED strike occurs.
- Individual Protective Measures include the proper use and preparation of:
 - Seat belts worn at all times and (correctly fitted over PPE)
 - PPE correctly fitted and worn at all times
 - Posture up-right and away from doors, steering wheels etc.
 - Passenger area properly loaded and restrained
- The following series of pictures illustrate these points:

Good posture away from doors etc / seat belt worn at all times





BE THE HUNTER, NOT THE HUNTED!

Beyond Vehicle Armor: Surviving the Attack

Minimal load in crew area / load is correctly stowed and secured





PPE worn at all times / seat belt worn over PPE





Good posture and discipline maintained / all PPE worn correctly





Also, rehearse post strike immediate "internal" actions for vehicle crews and passengers:

- Escape
- Accountability
- Fire suppression
 - First aid

CONSEQUENCE MANAGEMENT IED SPOT REPORT

- Purpose: A reporting format that focuses and standardizes IED reporting information to allow accurate retrieval of vital IED information to develop trends and provide analysis. The DTG and grid coordinates of this report will be used to associate all follow on IED reporting, i.e. EOD, Weapons Intelligence Teams (WIT), and Combined Explosives Exploitation Cell (CEXC), to the same event. This report is in addition to the EOD 9 Line Report used to request EOD support.
- Intent: To create a simple, disciplined reporting of critical information on IED events via voice/data transmission.
- Additional technical information: EOD, WIT, and CEXC information such as IED tactical employment, device composition, and forensics, will be added to this initial report using the same DTG of the event as the common key.

CONSEQUENCE MANAGEMENT IED SPOT REPORT

Line Number	Item	Information
1	DATE-TIME-GROUP	When the item was discovered
2	UNIT	
3	LOCATION OF IED	Describe as specifically as possible
4	CONTACT METHOD	Radio frequency, call sign, POC
5	IED STATUS	Detonation or no detonation
6	IED TYPE	Disguised static / Disguised moveable / Thrown / Placed on TGT.]
7	COLLATERAL DAMAGE OR POTENTIAL FOR COLLATERAL DAMAGE	
8	TACTICAL SITUATION	Briefly describe current tactical situation
9	REQUEST FOR	QRF / EOD / MEDEVAC
10	LOCATION OF L/U WITH REQUESTED FORCE (S):	

POST IED PATROL DEBRIEF - AIDE MEMOIRE

Information Field	Data
Correlation	on
DTG of Incident (Local Time) as reported in SPOTREP	
Location (MGRS) as reported in SPOTREP	

Vehicle Data

Number of Vehicles in Convoy/Patrol	
Average Distance Between Vehicles	10, 15, 20, 25, 30, 40, 50, 75, 100, >100, Unknown
Average Speed Of Vehicles	
Position in convoy of Vehicle Hit	
Type of Vehicle Hit (Nomenclature)	
IED Impact Point	Underneath, Right side, Left side, Front of vehicle, Rear, Top of vehicle, N/A, other
Vehicle Armor Type(s)	Level I, Level II, other
Vehicle Status?	Destroyed, Disabled, Operational
Position of Vehicle Hit on the road	Near lane, far lane, centre lane; heading south,North etc

POST IED PATROL DEBRIEF – AIDE MEMOIRE

Vehicle Hit ECM Type	NA, Red, R/G Combo, LX, ICE, SSVJ, MMBJ, mICE, Duke, Unknown, NA, Other
ECM Loadset Date	
Vehicle Hit ECM Status	On / Off / NA
If ECM Off, Why?	NA, Commo interference, CREW NMC, Interference with other CREW
Other countermeasures on Vehicle Hit	Rhino, Dragonspike, Other
Preceding Vehicle ECM Type	NA, Red, R/G Combo, LX, ICE, SSVJ, MMBJ, mICE, Duke, Unknown, NA, Other
ECM Loadset Date	
Preceding Vehicle ECM Status	On / Off / NA
If ECM Off, Why?	NA, Commo interference, CREW NMC, Interference with other CREW
Trailing Vehicle ECM Type	NA, Red, R/G Combo, LX, ICE, SSVJ, MMBJ, mICE, Duke, Unknown, Other
ECM Loadset Date	
Trailing Vehicle ECM Status	On / Off / NA
Nearest ECM distance from IED (Mtrs)	
Nearest ECM distance from Vehicle hit (Mtrs)	
Nearest ECM distance from cell phone tower (Mtrs)	

POST IED PATROL DEBRIEF – AIDE MEMOIRE

EFFECTS DATA

Number / Type of WIA	CF,IA,IP,Civilian
WIA Category	Urgent, Routine
WIA Position/Location	Driver, Right Front, Left Rear, Right Rear, Gunner, Dismount, Other
WIA type of injury	Head, Eye, Torso, Upper extremity, lower extremity or Other
Number / Type of KIA	CF,IA,IP,Civilian
KIA Position/Location	Driver, Right Front, Left Rear, Right Rear, Gunner, Dismount, Other
KIA type of injury	Head, Eye, Torso, Upper extremity, lower extremity or Other

SITE DATA

IED Placement	Buried, Surface of Road or Elevated
IED Location	Left side of road, Median, Right side of road
Method of Concealment	Bag, Dirt, Concrete, Animal Carcass, Blast Crater, Foam Concealed, Garbage Pile, Guard Rail, Inner Tube, Light Pole, Road Side Barrier, Road Sign, Tire, Tree, Vegetable Oil Can, Vehicle Concealed, Water boxes, Mannequin, Unknown, None or Other
How was the IED Spotted?	Visual, Thermal, LN Tip, Mechanical (Metal Detector), NA, Other

POST IED PATROL DEBRIEF - AIDE MEMOIRE

Who found the IED?	Driver, Passenger, Vehicle Gunner, UAV, LN, Dismounts, Unknown or Other
Site Marked (Indicator to locals that IED is present)	Yes / No / Unknown
If Site Marked, describe	
Civilian Activity in Area	Unknown, N/A, Normal activity, Crowds, Taking cover, Area vacated (normally civilians present), No civilians present in area (civilians not normally present)
Was there an aiming point or reference point	Yes / No / Unknown
Describe aiming point or reference point	
Light Conditions	Daytime / Twilight / Night
Weather	Sunny / Clear / Rain / Fog / Reduced Visibility / Dust
How often is the route patrolled if known	Hourly / Twice per day / Daily / Weekly / Monthly / Unknown / NA
When was the route last cleared (if known)	

IED DEVICE DATA

	D DEVICE DATA
Type of IED Initiation (if known)	Command, Victim Operated (VO), Time, none, unknown
Type of Command initiator	Radio Control: LRCT – BS / LRCT – HS / PMR / Dual PMR / Telemetry Device / Wireless Doorbell / RC Car / Appliance Controller / Keyless Entry / Car Alarm / Pager / Other / Unknown

POST IED PATROL DEBRIEF – AIDE MEMOIRE

Type of Command initiator (Cont)	Command Wire: Battery / Blasting Machine / Other Pull Switch Hand Grenade Fuze Switch (Electrical, any type) / Other
Type of Time Initiator	Time Fuze / Electric / Electronic Time / Mech Time / Chemical Delay / Other
Type of Victim Operated Initiator	Tension Release / Pressure Release / Pressure / Pull Switch / Passive Infrared / Other
Type of Initiator	None
Type of Initiator	Hoax
Make of Initiator	
Model of Initiator	
Munitions / Explosive Type Unknown	
Munitions / Explosive Type Container	Propane Tank / Fire Extinguisher / Directional Blast Charge / Shape Charge / EFP / Drum / Bag / Other
Munitions / Explosive Type Commercial	
Munitions Type Container	
Type of Explosive HME	
Type of Container	Propane Tank / Fire Extinguisher / Directional Blast Charge / Shape Charge / EFP / Drum / Bag / Other

POST IED PATROL DEBRIEF – AIDE MEMOIRE

Munitions Type Military Ordnance (MM)	57 / 60 / 82 / 105 / 107 / 115 / 120 / 122 / 125 / 130 / 155 / White Phosphorous / Illumination / Other
Munitions Type Raw Components	Unknown
Munitions Type Raw Components	Drum / Bag / Other
Munitions NEW in Pounds (NET Explosive Weight)	
Narrative / Notes Anything out of the ordinary observed during this incident Comments on TTPs	

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CONSEQUENCE MANAGEMENT IED / UXO Report (EOD 9 Line)

LINE 1. DATE-TIME GROUP: When the item was discovered. LINE 2. REPORT ACTIVITY AND LOCATION: Unit and grid location of the IED/UXO. LINE 3. CONTACT METHOD: Radio frequency, call sign, POC, and telephone number. LINE 4. TYPE OF IED / ORDNANCE: Describe the IED/UXO, whether it was dropped, projected, placed, or thrown. Give the number of items, if more than one. LINE 5. NBC CONTAMINATIONS: Be as specific as possible. LINE 6. TARGET / RESOURCES THREATENED: Personnel (Coalition Forces, IPS, ING, civilian), equipment, facilities, or other assets that are targeted or threatened. LINE 7. IMPACT ON MISSION: Short description of current tactical situation and how the IED/UXO affects the status of the mission. LINE 8. PROTECTIVE MEASURES / EVACUATION: Any measures taken to protect or evacuate personnel and equipment. LINE 9. RECOMMENDED PRIORITY: Immediate, Indirect, Minor, No Threat.

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CONSEQUENCE MANAGEMENT NATO 9 - Line MEDEVAC Request

Line 1:	Location of Pickup Site: (6-digit grid or Latitude/Longitude)
Line 2:	Radio frequency, call sign and suffix of requesting personnel, encrypt the frequency
Line 3:	Number of patients by precedence:
	Urgent (Non-surgical)=evacuate within 2 hrs
	Urgent-Surgical (All Trauma)=need immediate surgical care
	Priority=evacuate within 4 hrs
	Routine= evacuate within 24 hrs
Line 4:	Special equipment required. (e.g. none, hoist, stokes, jungle penetrator)
Line 5:	Number of patients by type: (L + # of Litter A + # of Ambulatory)
	L A
Line 6:	Security of pick-up site: N - NO Enemy Troops P - POSSIBLE Enemy Troops E - CONFIRMED Enemy Troops in Area (Use Caution) X - ENGAGED with Enemy Troops (Armed Escort Recommended)
Line 7:	Method of marking pick-up site: (branches/woods/stones, panels/signal lamp/flashlight, pyrotechnic signal, vehicle lights, smoke, open flame, signal person, fabric strips)
Line 8:	Patient Status and Nationality (If Known)
	A= US / Coalition Military, Nationality
	B= US / Coalition Force Civilian, Nationality
	C= Non Coalition force Soldier, Nationality
	D= Non-US / Coalition civilian, Nationality
	E= Enemy Prisoner of War
	F= High Value Target (Armed Escort Required)
l ino 0.	Wartime NRC contamination (nuclear highgrical chemical)





MNC-I Counter IED Smart Book

For the latest C-IED information and TTPs visit the TF Troy website at:

http://mnci.res.s-iraq.centcom.smil.mil/sites/tf/TFTroy/HomeSite/default.aspx

or.

http://www.mnci.res.s-iraq.centcom.smil.mil/sites/tf/TFTroy/HomeSite/default.aspx

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