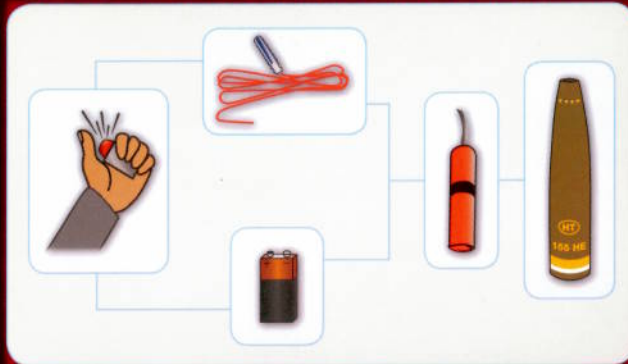


IED

Reference Guide



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9-Principles of IED Combat

- 1** Maintain an offensive mindset to gain/maintain enemy contact. Advance unit by fire and maneuver to kill/capture enemy.
- 2** Develop/maintain Situational Awareness (SA). Be in continuous high state of SA to see/understand/act on pre-attack indicators. Deny enemy advantage of surprise.
- 3** Stay observant! Continuously and deliberately scan your sector for IED indicators. Most unexploded IEDs are spotted by the naked eye.
- 4** Avoid setting patterns. The enemy constantly watches and waits to target you by your operational patterns.
- 5** Maintain safe standoff. Avoid potential IEDs at roadway shoulders/medians/intersections, static vehicles, etc. Keep civilian traffic at a safe distance from your patrol.
- 6** 360-degree security! Enemy activity blending with local populace is hard to detect/can threaten your unit from any direction. Be vigilant 100% of the time!
- 7** Maintain tactical dispersion. Avoid tendency to close formations during halts.
- 8** Utilize blast/fragmentation protection—armor saves lives! But don't be tied to armor when meeting with locals.
- 9** Utilize technology! Know your equipment and comm procedures!



IED Components

CASING/CONTAINER

- Anything used to fabricate and conceal IEDs that can blend into the target environment; usually camouflaged with dirt, rocks, trash or other roadside debris.



- Soda cans
- Water bottles
- Lengths of metal pipe
- Boxes and wooden crates
- Propane and other gas canisters
- Plastic bags and wrappings
- Sprayed insulation foam

Insurgents prefer military ordinance for IEDs.

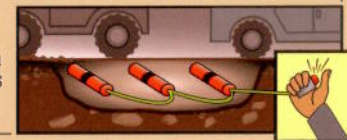


MAIN CHARGE: EXPLOSIVE/FILLER

- There are four basic groups: Incendiary materials; chemical agents; biological materials; radioactive materials.
- Most common explosives used are military munitions, usually mortar, tank or artillery rounds but Home-Made Explosives (HMEs) are becoming more prevalent.
- Military munitions allow for easy "daisy chaining" of multiple rounds for use against convoys.

- PE4 and TNT
- Gasoline

HME using hydrogen peroxide, nitrate mixtures (with ammonium nitrate, urea nitrate), sulfuric acid mixtures and fertilizer/fuel oil (ANFO).



IED Components

POWER SOURCE

- Wall current
- Solar powered cells
- Vehicle batteries
- 9-volt and other household batteries
- Capacitor banks



INITIATING SYSTEM: DETONATORS

- Electronic detonators or blasting caps are most commonly used because of ready availability and ease of control.
- Initiators consist of three basic categories: military, commercial and homemade. Homemade can be mechanical, electrical, chemical.



SWITCH/CIRCUIT

- Most IEDs are command detonated using either hard-wired or radio frequency (remote control) detonation with line of sight to the kill zone.

- | | |
|----------------------------|--|
| Two-way radios | Command wire |
| Long-range cordless phones | Clocks |
| Car alarms | Time fuzes |
| Washing machine timers | Wireless garage door openers/doorbells |
| Cell phones | Keyless entry fobs |
| Infrared motion sensors | Remote controls from toys |
| Light (photo) sensors | Pressure plate switches |



IED Emplacement

GENERAL CHARACTERISTICS OF ATTACK SITES:

Sites used multiple times with success.

Good over-watch position.

Available escape route for the enemy.

Obstacles between the IED site and initiation point.

Locations/checkpoints frequented by Coalition Forces.

Large devices deeply buried in the roadway.

Along unimproved roads.

In close proximity to compounds or buildings.

In proximity to decoy IED located out in the open designed to slow/stop convoys in kill zone of actual IED.

BE EXTRA CAUTIOUS AT CHOKE POINTS

At vehicle breakdowns or where vehicle enters road causing you to modify your movements.

On bridges, one-way roads, traffic jams, sharp turns, etc.

If anything causes the convoy to stop, watch the flanks for IEDs.

Roadside IEDs

Common roadside IEDs include artillery and mortar round(s) or bulk explosives placed near the road at the designated kill point.



They may be hastily camouflaged with dirt, rocks, trash or items that are common along the road.



Emplaced in potholes (covered with dirt) or recently dug up/repared roadways.



Also emplaced along MSRs and ASRs (including behind guardrails, utility poles, signs, overpasses).

IED Indicators

COLORS

Red det cord visible; color of IED not covered completely; concrete doesn't match surrounding area, etc.

CHANGES IN TRAFFIC PATTERNS

Fewer people and/or vehicles where normally busy.

MARKINGS

On the side of the road: use of tires, piled rocks, ribbon, tape, etc. Also used as aiming reference.

GRAFFITI

May indicate some type of warning to locals. Interpreters usually needed.



SIGNS

Placed in location not normally present or new signs posted.

ALSO BE AWARE OF...

Freshly dug holes or pavement.

Patching along or in the roadway.

New dirt/gravel piles.

Freshly disturbed dirt is darker in color.

Dead animals along the roadways.



Obstacles in roadway used to channel the convoy.

Personnel on overpasses.

Signals with flares or lights.



City lights (turned off/on) as convoy approaches.

People videotaping ordinary activities or military movements.

Vehicles following convoy for a long distance and then pulling off side of road.

Vehicle-Borne IEDs

VBIEDs come in all shapes, colors and sizes: from a simple passenger car to a large delivery or sewage truck; sedans are most often used.

Increasingly use larger amounts of explosives with charges ranging from 100 to 1,000 lbs.; charges include mortar rounds, rocket motors, rocket warheads, PE4 and artillery rounds.

Frequent technique: use of multiple vehicles, where lead vehicle is used as a decoy or barrier buster. Once it has stopped, Coalition Forces move in to clear or inspect it, and VBIED vehicle approaches and detonates.

Stay alert to signs/indicators of potential VBIED attack:

- Fake markings and plates.
- Official symbols in the wrong location.
- Drivers that are not familiar with vehicle controls.
- Drivers that seem to be agitated or lost.
- Vehicles parked on wrong side of road.
- Vehicle with the hood raised.



Suicide Bombers

In general: Person-Based IEDs (PBIEDs) use explosive vest, belt or bag but many suicide attacks are with VBIEDs.

EXPLOSIVE CHARGES

Typically about 12 pounds of explosive charges packed together.

Up to 45 pounds of explosives have been used.

Often incorporate fragment-producing materials into charges.

INDICATORS OF POTENTIAL SUICIDE ATTACK

Attacker — may be male, female, or male dressed as a female:

- Deliberately ignores stop order or attempts to circumvent security checkpoint.
- Wears excess clothing for prevailing weather conditions.
- Appears with suspicious bulges in his/her clothing; carries packages/bags; wears satchels/backpacks; or wears a "pregnancy vest".
- Appears to be handling wires, switches, an actuator or "dead man's" switch.

Defensive actions based on observed suicide bomber TTP:

- Issue immediate evacuation orders, with safe distances based on amount of explosive carried and type of fragmentation used.
- Do not attempt "close and negotiate" tactics. Suicide bombers are usually trained to avoid surrender at all costs.
- Always look for "fail safe" cell phone or radio-controlled initiator in the event that bomber is incapacitated/hesitates. Normally involves second suspect with line-of-sight view of bomber.
- If a "deadly force" response is taken, bullet impact may initiate/detonate explosive charge(s). Take protective cover if firing on suspect.

If suspect is neutralized and no explosion, DO NOT administer first aid. CALL and WAIT for EOD.

Coordinated Attacks

Serve as mostly psychological and informational operations to generate shock, fear and publicity.

Goal: To create optimal destruction without owning any terrain.

Incorporate IEDs, vehicle ambushes and/or personnel ambushes, and snipers:

- Often initiated via IEDs, VBIEDs or Rocket-Propelled Grenades (RPG) to stop a convoy or vehicle patrol and establish a kill zone. Normally used for disruptions, slowing logistics and bogging down Coalition Forces.
- Most effective in tight city streets where enemy can establish well-defined kill zones and secondary anti-personnel devices can be used against dismounting troops.
- Complexity of the terrain and/or close quarters eliminate a vehicle's maneuverability and ability to fire from a turret.

Personnel Ambushes:

- Used as a defensive action to deny a patrol access to an area as well as for the destruction or capture of individuals.

Typical coordinated attack



Two suicide car bombers speed toward government building using a road closed to civilian traffic.

Vehicles refuse to stop when warned. Bombs are detonated in road, causing huge fireball and building damage.

Other insurgents fire weapons from a nearby building at Marine positions on the roof of government building.

Encountering IEDs: Pre-Blast

- SECURITY** – Maintain 360 degrees. Scan close in and far out, up high and down low.
- ALWAYS** – Scan your immediate surroundings for more IEDs.
- MOVE** – Move away. Vary safe distances, but plan for 300m minimum safe distance and adapt to your METT-TC.
- ATTEMPT** – To confirm suspected IEDs using optics while staying back as far as possible.
- CORDON** – Off the area. Direct people out of danger area. Do not allow anyone to enter except for Explosive Ordnance Disposal (EOD). Question, search and detain suspects as defined by your existing ROE.
- REPORT** – Your situation using the 9-line IED/UXO spot report format.

Do not pull wires.

Do not handle or disturb suspicious items.

Do not cut wires.

Always call EOD when in doubt.

Encountering IEDs: Pre-Blast

Always alert unit when IED has been spotted.

ROADSIDE IED

- Evacuate danger area and move to tactically safe distance.
- Establish security. Scan for possible secondary IEDs/signs of enemy activity.
- Report IED and any secondary IEDs to patrol leadership.

VBIED — VEHICLE-BORNE IED

- Signal approaching vehicle to maintain maximum standoff.
- If vehicle continues approaching, point your weapon at it and demonstrate intent to use it.
- If vehicle becomes immediate threat, fire aimed warning shots.
- If vehicle continues, fire aimed shots at engine block.
- If vehicle still continues, use deadly force in accordance with ROE and EOF.
- Clear the area, establish security and scan for other signs of enemy activity.

PBIED — SUICIDE BOMBER

- If bomber sees he/she has been detected, prepare for attempted detonation.
- Do not attempt to restrain suspect.
- For compliant suspect: remove to secure area with weapon at ready position — do not approach.
- For non-compliant suspect: use deadly force IAW ROE.

Encountering IEDs: Post-Blast

IMPORTANT: DO NOT FOCUS ON THE DEVICE THAT HAS BEEN FOUND OR JUST GONE OFF!

Move out of the kill zone.

Initiate immediate and aggressive response to IED attacks in accordance with ROE.

Search for/clear additional IEDs (5m & 25m).

Look for triggerman.

Look for anyone trying to escape the area either armed or unarmed.

Detain personnel found with commonly used detonation devices such as cordless phones, key fobs or radios and test them for bomb residue.

Be alert for approaching VBIEDs and enemy maneuvering to engage with small arms and RPGs.

Treat/evacuate casualties.

IED/UXO Report

DATE-TIME-GROUP (DTG): DTG item was discovered.

REPORTING ACTIVITY: (unit identification code [UIC]) and location (grid of UXO).

CONTACT METHOD: Radio frequency, call sign, Point Of Contact (POC) and telephone number.

TYPE OF ORDNANCE: Dropped, projected, placed or thrown. If known, give the size of the hazard area and number of items. Without touching, disturbing, or approaching (tripwire) the item, include details about size, shape, color and condition (intact or leaking).

NBC CONTAMINATION: If present, be as specific as possible.

RESOURCES THREATENED: Report any threatened equipment, facilities or other assets.

IMPACT ON MISSION: Provide a short description of your current tactical situation and how the presence of the UXO affects your status.

PROTECTIVE MEASURES: Describe any measures taken to protect personnel and equipment.

RECOMMENDED PRIORITY: Recommend a priority for response by EOD technicians or engineers.

- **IMMEDIATE:** Stops unit's maneuver and mission capability or threatens critical assets vital to the mission.
- **INDIRECT:** Slows the unit's maneuver and mission capability or threatens critical assets important to the mission.
- **MINOR:** Reduces the unit's maneuver and mission capability or threatens non-critical assets of value.
- **NO THREAT:** Has little or no effect on the unit's capabilities or assets.

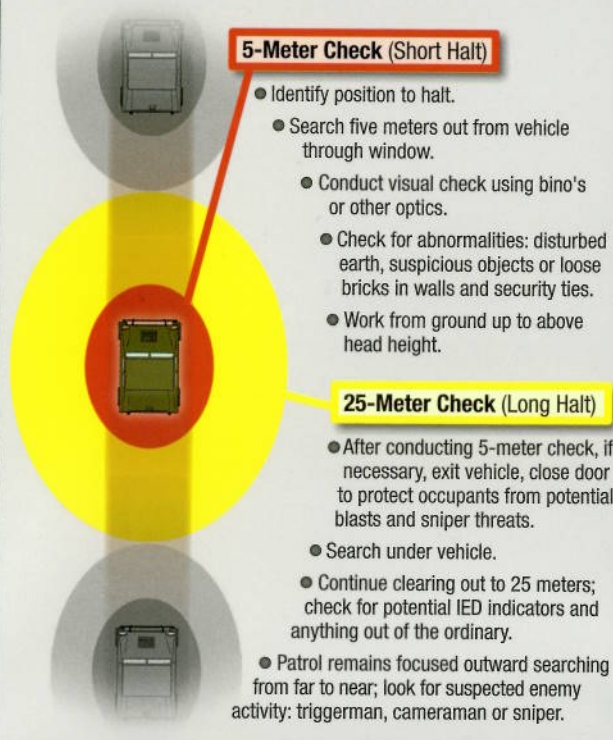
5 & 25 Meter Scan

CLEAR CONFIRM CORDON CONTROL CHECK

AREA EOD AREA PERIMETER SECONDARIES

Always conduct 5/25-meter check to avoid stopping near kill zone of an IED. Scan outward continuously at all times.

Driver/gunner should remain inside vehicle for security purposes.



5-Meter Check (Short Halt)

- Identify position to halt.
- Search five meters out from vehicle through window.
- Conduct visual check using bino's or other optics.
- Check for abnormalities: disturbed earth, suspicious objects or loose bricks in walls and security ties.
- Work from ground up to above head height.

25-Meter Check (Long Halt)

- After conducting 5-meter check, if necessary, exit vehicle, close door to protect occupants from potential blasts and sniper threats.
- Search under vehicle.
- Continue clearing out to 25 meters; check for potential IED indicators and anything out of the ordinary.
- Patrol remains focused outward searching from far to near; look for suspected enemy activity: triggerman, cameraman or sniper.

IED Reminders!

ON PATROL

Be proactive!

Consider each patrol as if it is your first. Maintain situational awareness, environmental understanding and common sense.

Be the hunter not the hunted—project a strong image!

Don't enter a front door or gate if you can do a tactical call-out (might be booby-trapped).

Don't get complacent!!!

Don't set patterns. Stay in constant motion.

Don't fixate on casualties! Eliminate the threat first!



HUMINT

Know your turf: Build a mental model of the people, topography, economy, history, religion and culture of your AO.

Diagnose the problem: Understand the locals, how/why they support insurgents, how to mobilize the population.



Master Information Operations: Inform, influence, assess

Photograph enemy/EPW: With evidence for prosecution.

MEDICAL PREPAREDNESS

Carry extra medical supplies—IFAK not enough.

Carry extra tourniquets—one in reach of each hand.

Develop leaders to lowest level to take charge if you go down.



Continually practice lifesaving skills and training. INVEST IN YOUR LIFE!

New IED Techniques

Use of IRAMs:
Improvised Rocket-Assisted Mortars



Use of HME:
Home-Made Explosives



Use of multiple EFPs:
Explosively-Formed Penetrators



Traffic cones or construction material in construction areas hide IEDs.

Children are used to deliver IEDs.

VBIED drivers wear PPE-type armor for protection.

Suicide bombers wait for mobile target and follow it.

IED with booster charge to propel into the air before detonation.

Pressure detonated IEDs.

Use of Passive Infrared (PIR) in conjunction with EFPs.

Dual-initiated IED in the event the attacker hesitates.

IED Reminders!

Every soldier is a sensor!

Report tactical observations and information.

On mounted patrol use your CREW device!

CREW is as important as your armor and weapon.
"FIGHT WITH IT, NOT AGAINST IT"

Break the electronic link between the IED and the trigger (triggerman).

KNOW HOW TO:

- Put the CREW into operation.
- Conduct pre-combat checks and maintenance.
- Conduct CREW checks while in operation:
 - ✓ Place radio on SCAN to pick up enemy communication.
 - ✓ Change your TTP each time you stop for IEDs.
 - ✓ Avoid tunnel vision; watch your flanks and rear.
 - ✓ Attacks are often videotaped, look for the cameraman.



Stay away from UXOS/IEDS!








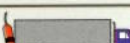
You could lose your hand if you try to dispose of UXOs or IEDs. The enemy has developed anti-handling to catch you when you try defusing. Leave it to the experts.

Call EOD—Don't be a hero!



Safe Stand-Off Distance Cheat Sheet

HIGH EXPLOSIVES

	Pipe Bomb	Building Evacuation Distance	25 m	Outdoor Evacuation Distance	260 m
	Briefcase Bomb		50 m		575 m
	Suicide Vest or Belt		35 m		425 m
	Car		125 m		535 m
	Van		200 m		850 m
	Small Truck		275 m		1150 m
	Water Truck		375 m		2000 m
	Semitrailer		475 m		2200 m

LIQUEFIED PETROLEUM-LPG

	LPG Tank	Fireball Diameter	15 m	Safe Distance	50 m
	Large LPG Tank		25 m		100 m
	Small LPG Truck		90 m		375 m
	Large LPG Truck		155 m		625 m

Source: U.S. Army National Ground Intelligence Center (NGIC). Distances rounded up for safety and usability.

Islamic Extremism

AL QAIDA

Transnational Islamic terrorist network responsible for attacks on US and foreign civilian/military targets since the 1990s. Now operate in collaboration with the Taliban.

Typical tactics include suicide bombings, simultaneous bombings of different targets and ambush of its enemies.

Training camps located in Afghanistan, Iraq, Pakistan, Sudan. Source of ideological inspiration and guidance for terrorists worldwide.

TALIBAN

Radical Sunni Islamist and Pashtun nationalist movement. Ruled most of Afghanistan from 1996 to 2001, supported with arms/training/financing from Pakistan, Saudi Arabia, and other Middle Eastern countries.

Follows hybrid, extremely strict interpretation of Islamic law, combined with Wahhabism (see below) and other local ideologies and customs.

Notorious for human rights abuses, but removed from power in 2001 by coalition of Afghan Northern Alliance and NATO.

Currently engaged in protracted guerilla war against the current government of Afghanistan, Operation Enduring Freedom and the NATO-led ISAF.

WAHHABISM / WAHHABISTS / WAHHABIS

Extreme form of Islam known for strict moral and religious doctrine that strives to purify Islamic beliefs and rejects any innovations after 3rd century of Islam (9th Century A.D.). Dominant form of Islam practiced in Saudi Arabia. Some adherents support Al Qaida.