

theSpookEngine

MODERN COVERT OPERATIONS ROLEPLAY SYSTEM

VERSION 1.1



SPYGLASS PRODUCTIONS

theSpookEngine



VERSION 1.2

Note from the Author: This game is designed with updates in mind, therefore, don't consider this 1st release as the definitive statement. Add to this, the very nature of modern covert operations; this system could change radically in the future. If you come across any new developments in your own research, or if you spot a factual error in the current text, or indeed have suggestions for future releases - please contact the author at mak16@uow.edu.au

The Spook Engine is designed to be a realistic covert operations RPG system, every endeavor has been made to source verified factual material. If you are looking for James Bond style gaming, may I recommend Spycraft. The Spook Engine is designed to be modular in nature; the rulebook comes with MI5 (British Security Service) sample agency. It is hoped that in the future, further agency supplements will appear. If you wish to help in this process, please contact the author again at mak16@uow.edu.au

Thanks to Trevor 'Sutherland the Deadly Deskjockey' Osborne & Raymond 'Stampy the Insane ex-SAS Enforcer' Coutts for confounding and delighting me all throughout the playtesting stage. Thanks to Cherie 'Paparazzi' Bush and Trent 'Axis of Evil' Blair for taking part in picture related activities that sadly didn't make it to print. Thanks to Rob 'the Weekend Soldier' Ennew for information about Army training. Thanks to Patrick 'Special Branch' Hogan for his enthusiasm for the project in general.

Thanks to Ken 'the Minder' Finlayson for some of the information presented here from our prior release *Steal: the Modern Roleplay Game*. Check it out!

Finally, if you enjoy using this free system on a regular basis, may I suggest you make a donation to a charity – life isn't a game to everyone.

Good Gaming

Regards Matt.K*

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1. WHAT IS ROLEPLAYING?



A roleplay game seeks to create a negotiated false reality between the Games Master and the players. Think of a collaborative daydream. In this case, the roleplay game seeks to recreate the world of espionage and paramilitary operations, whether that be an agent desperate to get across a hostile foreign border carrying valuable trade secrets, or a small paramilitary force seeking to overthrow a tyrannical dictator. Obviously, running around for real would be fun; but generally most tabletop roleplay games involve sitting around a table, naturally. It is generally not advised to go running around public spaces pretending to a spy, although fun, the local cops might ask for a detailed explanation of your activities.

If you have a decent imagination, you can obviate the need for exercise, and jail time.



The main method used to determine the success or failure of any action is determined by rolling a

dice (or multiple *die*). Generally the Spook Engine relies upon multiple 10 sided die. Yes, some dice come with 10 sides; you will find them at any decent dedicated hobby shop. The Games Master may need more funny shaped dice, but every effort has been made to make a d10 dice the standard in this game.

There is generally one person in charge of developing the story line; this person is the Games Master. The Games Master is like your traditional storyteller who comes up with the plot for each adventure. The major difference is that the players have import into the storytelling process - the players create a persona (in this game a spy, paramilitant, special ops agent or bodyguard) and they are presented with a problem (an operation) that they must attempt to succeed at. This may involve infiltrating an extremist religious group or finding the location of stolen radioactive material – scenarios are only limited to the Games Master’s imagination.



The Games Master seeks to maintain the abiding sense of reality, by controlling the actions of any opposition force and generally keeping the story flowing. Being the Games Master will mean working up the story from scratch and may involve doing additional research before the game starts; but the compensation is watching the players grapple with your fiendish plot twists.

2. WHAT IS THE SPOOK ENGINE?

Whether it be a black-ops operation in South America seeking to overthrow a hostile democratic leader, freedom fighters in the Gaza Strip gunning down opposition forces, rebels hijacking ex-Soviet nuclear weapons on the Chechen border, or British Security Agents tracking down illegal asylum seekers in shipping crates just off Dover through thermal imaging devices - the world has changed...



After September 11th the Western world has started to realize the naiveté of believing that foreign policy doesn't impact upon domestic life; the failings of relying upon Signals Intelligence over Human Intelligence and the importance of protecting its borders and infrastructure.

This game seeks to recreate the covert world of intelligence and special operations for the modern world...

The Spook Engine was developed with the aim of providing a solid game play engine for the recreation of modern covert operations. Those familiar with the author's previous game system *Steal: A Modern Crime Roleplay Game* will see that the game engine included here is a substantial rewrite of that basic engine. Hopefully it provides the Game Master and Players with enough complexity, without sacrificing storytelling opportunities.

The second aspect of putting this game system together is to provide a platform for a centralized database of factual information related to covert operations. Every effort has been made to source

credible material. Hopefully, even if you find the actual game system here not to your liking, the material contained within is useful for running your own covert operations game.

The game has been through a number of changes over time, a major rewrite has occurred to expand its focus from espionage to adding special operations. Additional work has added paramilitary, mercenary and bodyguard options. The central focus still being any clandestine activities engaged in by governments, private organizations or citizens. That said, you will also find information on forensics – consider this a future direction updates may explore i.e. the recreation of police activities.

Hopefully, by the time you have your hands on this release it may have been streamlined into a workable release (easy layout, concise and authoritative), I make no bones of the fact it has been hard to edit alone. If you have any suggestions as to how things may be improved, I'd be glad to hear from you (email: mak16@uow.edu.au)

3. SETTING ADVICE FOR PLAYERS

The Games Master is likely to have a preference for a particular setting s/he is comfortable running adventures in. Ultimately, before you start rolling up a character/s for your game you should discuss what you want from the game?

Perhaps the Games Master is happy to run a game based upon the exploits of a South American Drug Cartel's hired mercenaries? Talk to your Games Master.

Here is a little check-list of the type of things you might want to discuss...

Setting: Ultimately, a Games Master has a life outside of roleplaying, which will generally mean most operations are likely to occur in the same real life country as you currently inhabit. The Games Master might also have specialist knowledge of another area of the globe they spent some time travelling...

The default agency included in this package is MI5 (British Security Service), which realistically means the setting for such a campaign would be England, Northern Ireland and/or Wales (as per the agency's policy remit).

Team Type: This game allows for the recreation of spies (external/internal), special-forces, bodyguards, mercenaries and paramilitary. There is also a comprehensive discussion about Forensics included; so theoretically, you could recreate something similar to a murder-mystery television show. Hopefully, in later versions of this system – there might be space to explore some of these options in greater detail.

Team Blend: Obviously, the team you wish to assemble should have some justifiable reason to exist, preferably everyone works for the same organization or has complimentary goals. At this point, some discussion would be handy about what kind of basic roles each member might

specialize in – *before* every runs off and gets down to assigning their skill ranks.

Organization: Hopefully, now the Games Master has a better idea of your needs and can now devote time to recreating the particular organization you wish to belong to. Hopefully, this discussion has taken place in advance of the first game session – so pertinent information can be researched.

Type Of Game: Although *theSpookEngine* is primarily designed to simulate an authentic portrait of an intelligence service, special ops unit, or paramilitary organization – there is indeed latitude to incorporate other basic gaming genres.

Here are some typical roleplaying options

- **Simulation:** Semi-Realistic portrayal of events
- **Cinematic:** A larger than life action oriented game like the 007 franchise
- **Psychological:** A darker, shocking experience of the indignities of life, love and liberty
- **Mixed:** Perhaps the players would like a bit of everything

Character Profile: Now that you know your basic character – perhaps it is a good time to think about your character's motivations, secrets, hobbies, relations and goals. Where did s/he grow up? Why did they join the cause/service? How does s/he feel about the use of violence? How moral is s/he? What weaknesses do they have? Would they do *anything* to achieve success?

The more work you put into creating a plausible character, the more joy (and heartache) you will receive in return as they travel through life's travails. It will also enrich your interactions with the other players.

4. CHARACTER TEMPLATES

The Spook Engine can be used to generate different types of covert operations teams, for simple reference these are called character templates – essentially meaning any character may be a unique combination of skills, but somewhat modeled upon basic essential skills.

SPIES



The world of espionage demands a lot of the individual. This profession requires an entirely different sub-set of skills from regular 9 to 5 employment. A number of people find it both mundane and stressful. It is a profession of these extremes, coupled with the realization that the actual job can seem counter-intuitive to the smooth congress of society. Those with strict moral values often jar against the dictates of the profession.

The definition of a *spy* actually covers a number of very different jobs

Agent – An individual not directly in the employ of a security agency, but instead supplies information about particular operations, or supplies general intelligence information for cash. Such people may include taxi drivers, waiters or hospital porters. Others in this category can include hired assassins (who are paid under the expressed remit to also keep their mouths shut where they get their money and jobs from). Some agents are highly dedicated to the agencies cause, but find committing to regular work tedious.

Officer – An intelligence officer is generally the most junior job description within the employment structure of an Intelligence Agency. They actively gather information, and take part in operations. Depending upon the country, they may also have the powers to arrest and carry a gun. Officers also run Agents, and actively seek to recruit new ones.

External Intelligence Agency – The classic spy best typifies this particular officer in the field. They work undercover in hostile (and not so hostile) countries to undercover state secrets, and possibly undermine the government. They gather information as directed by their superiors.

Internal Security Agency – The term spy also refers to civil servants who work to maintain the control of the government from dissent within, or seek to uncover clandestine activities sponsored by hostile intelligence agencies. A FBI agent best typifies the type of activities undertaken within such a role.

The differences between these two types of intelligence service can make for very different roles. The internal security agent's main job description isn't a million miles from that of other public servants, but also incorporates basic police functions. They are also required to solicit information from the general public.

The member of an external intelligence agency role is a little looser, but also a little more fraught with danger. Although they may well receive considerable direction from superiors, the role requires a large amount of self-reliance, as help is generally not easily obtainable. Additionally, such agents live with the stressful realization that they may be inadvertently exposed as traitors by hostile forces – and their relationship with their host agency may well fracture entirely through events beyond their control.

Tradecraft is the term used to describe the basic skills needed in the profession of a spy.

The following list denotes the types of training regimes a spy will undertake...

Close Target Reconnaissance - CTR involves all elements of surreptitiously following a target, maintaining covert radio contact with the rest of the team, the use of encoded language and the use of other covert surveillance devices. The individual will also be taught to follow targets in vehicles, and in the effective use of multiple cars to track targets. Camouflage skills may also be taught in such training opportunities.

Combat Skills – The individual will be taught how to handle and care for handguns, rifles and sub-machine guns. They will also learn Close Quarter Combat skills (CQB) for armed and unarmed combat, and the various methods for disarming an opponent

Communication Skills – The ability to communicate effectively with different segments of the local community, gather information without raising suspicion and retaining anonymity; plus recruiting agents.

Contact Drills – The individual will be put through his/her paces learning skills to help extricate them from a firefight and the ability to handle contact with the enemy



Coordination Skills – The ability to plan and execute successful operations, plus manage team resources effectively

Dead Letterbox Skills – The ability to leave messages for agents and the proper signaling of communications covertly

Driving Skills – The individual will be taught defensive and offensive driving skills (such as J-curves and handbrake slides), and gain the ability to drive fast in a controlled manner



Escape & Evasion – The skills to evade capture and maintain a low profile, the ability to improvise an escape and the ability to handle interrogation

Hostile Environment Training – The ability to judge dangers and interact effectively with people in hostile environments

Methods Of Entry – The individual will learn advanced lockpick skills, the ability to gain entry to secure locations by other surreptitious methods; plus the skills to recognize and evade standard security devices

Physical Education – The individual will be required to attain a superior level of physical fitness

Surveillance – The ability to stake out an individual using microphones, cameras, telephone intercepts, mail or computer monitoring intercepts. The skills to create an effective Observation Post (OP) and solicit information from local individuals without signaling intent

SPECIAL OPERATIONS



There are a lot of misconceptions about the work of special operations squads, the work of units such as Delta Force, Navy Seals the S.A.S have been unfairly glamorized by Hollywood films. These soldiers are not human killing machines, and most soldiers resent the implication. They train hard to minimize contact with the enemy and civilians, such eventualities generally being contrary to their aims.

The basic principles engendered into special operations soldiers are that they have a very specific mission (rescue hostages, disposal of an asset, assassination, infiltration and reconnaissance) that needs to be accomplished within a strict timeframe with minimal interference; and a speedy return to the rendezvous point for extraction. Although they carry a formidable arsenal of weapons (more than the match for most hostile squads encountered) they are physically limited to the amount of ammunition they can carry (usually enough for 10 minutes solid contact). When a squad does resort to using its firepower it is used as a shock force, hopefully dissuading the enemy from engaging (believing they have superior numbers); if the ruse doesn't work the team has

well drilled procedures for a gradual extraction from the firefight (move and shoot type drills).

The size of Special Operations squads varies from roughly 4 to 8 men (dependant upon the ethos of the training employed); sometimes these squads are combined from larger scale operations. Each soldier will generally be an expert in a particular area (medical, demolitions, languages and communications). Most are cross-trained in a number of different skills - primarily sniping, close quarter combat, survival, navigation, parachuting and close target reconnaissance. Due to the sporadic nature of these specialized operations, such soldiers are usually in a constant cycle of intensive training; meaning each squad may have more than just one expert in each particular area.

Special Operations squadrons are among some of the most physically fit individuals on the planet, only a small percentage of regular soldiers are fit enough to pass the grueling selection process (most even drop out if selected after six-months). There is a slightly different culture involved in special operations work, although the regimentation of army life extends to living by standard operation procedures (SOPs), the special ops soldier needs a degree of autonomy to act effectively. Although operations are meticulously planned, due to the nature of the small force involved, the stakes are higher for unplanned eventualities (meaning soldiers are often forced to rely solely upon their wits to evade getting captured or killed).

Another area special operations squadrons operate in, is counter-terrorism. Such squadrons are typically rotated from regular military style training to being on call to service the needs of their government when hostage situations arise. Some special operations forces operate in particular areas such as the U.S Navy Seals (Sea), and the British S.A.S (Boat, Air, Mountain and Mobility troops).

Here is an overview of the types of training special operations members are likely to receive...

Abseiling – Most forces require soldiers to be able to abseil and perform rappelling techniques with a high degree of accuracy (rappelling is basically abseiling technique reversed, so one walks *down* the incline). Typically, this is required for quick insertion from helicopters, rappelling is also used to get into position for smashing through windows in hostage situations

Advanced Weapons Training – Most special operations members are taught how to use the more technically advanced weapons systems like fire and forget systems, the use of portable missile launchers and HUD style command goggles - complimenting their existing army training in firearms.

Ambush – The soldier will be required to attend to both defensive and offensive forms of ambush. Things like the use of Claymore mines, setting up trip wires, camouflage, the deployment of sensor devices and the coordination of defensive strategies may well save the squad's life whilst waiting for extraction



Anti-Terrorist Training – Most forces require individuals to undertake courses to deal with the threat of terrorism on home soil. Such drills as coordinating assaults on buildings, aircraft, ships and oil platforms are regularly conducted to familiarize the troop with the specific needs of each operation. Additional training involves the use of close quarter combat procedures (killing-house technique), the effective use of assault equipment (ladders, rams, thermal lances etc) and the use of thermal imaging technology.

Contact Drills – The team will practice a series of contact drills in urban environments, plus take part in desert, jungle, water or arctic operations

to familiarize themselves with techniques to deal with enemy fire and threat. This will generally involve the use of firearms, defensive and offensive driving skills, advanced extraction exercises and even VIP style bodyguard training.

Escape & Evasion Exercises – It is important for each squad member to avoid enemy contact as much as possible, meaning training in escape and evasion techniques is important for the individual; as well as the team. Such exercises generally cover the use of concealment and camouflage, route management, extraction exercises and even interrogation techniques



Close Quarter Battle – The ability to fight off hostile forces with both armed and unarmed techniques is vital to long term survival. Training focuses upon how to enter small, enclosed spaces (Killing House), the stripping and assembly of firearms, relevant firearm safety procedures and the disarming of opponents; whilst targeting vital areas of the body

Close Target Reconnaissance – It is vital that a squad can gain vital information by avoiding basic security measures. Such training will include the use and setup of OPs (observation posts), the use of camouflage, the recognition of the types of surveillance devices present, the use of memory exercises, coordination planning using time and risk management skills

Communications – The use of various electronic devices in the field including GPS systems, satellite radios, short-range radios, sensors, computer links, and sniper command and control systems



Demolitions – The use of explosives can be a vital part of the operation. The soldier will be taught how to make basic bombs from everyday products and the use of standard fabricated explosives like Claymores and mortars etc. The soldier is also taught relevant safety drills, the recognition of basic mechanical weak-points of structures and the disarming of timed explosives.



Entry Techniques – This area covers both entering buildings and entering the operational area. Such skills for entering buildings include the use of cutting devices, frame charges, and the use of shotguns to blow off door hinges. Specialist techniques exist for entering operational areas include parachuting, vehicle handling and route management.

Linguistics – A member of the team may be fluent in any number of languages, especially invaluable when getting lost behind enemy lines

Medical – The techniques of basic First Aid are taught to most soldiers. Some soldiers are specialized medics who are capable of basic field surgery including: dealing with gunshot wounds, burns, resuscitation, dealing with shock, tourniquets, the stopping of massive bleeding, suturing, stabilizing patients, disease diagnosis and even childbirth

Parachuting – Most soldiers have a high degree of proficiency with both HALO (High Altitude Low Opening) and HAHO (High Altitude High Opening) techniques. They are trained to be able to carry their packs between their legs in descent. They usually receive training in the use of

standard parachutes and ram-air style parachutes, and may even have had training in the use of small motor-powered trikes. A large percentage of missions may start with this form of insertion into hostile areas - as special operations teams generally work behind enemy lines

Patrol Techniques – Importance is paid in special operations work to the coordination of the team, training includes such specialist techniques as patrolling in jungle, arctic, desert or urban areas, crossing rivers safely, 4 man patrol techniques and evasion techniques prove their worth on a daily basis.



Sniper Techniques – Some special-forces teams have expert snipers included who may provide covering fire whilst others infiltrate the target building. Such skills include accuracy sniping, concealment, camouflage and rifle maintenance

Survival – The soldier may be trained in dealing with the harsh conditions of jungle, arctic, or desert conditions; plus the basic survival techniques of finding water, edible foodstuffs and making shelters

Vehicle Training – The ability to use different types of vehicles is important in frantic exfiltration attempts, the ability to harness the power of any type of vehicle can be the difference between life and death. Techniques include offensive and defensive driving, hotwiring vehicles, specialized evasion techniques (like J-curves and hand-break slides) and familiarization with the different types of land, air and sea vehicles

PARAMILITARY



The template of paramilitary is representative of a number of different types of organizations. The term paramilitary represents an individual who is neither a civilian, nor a military soldier (as in the *para-* prefix). The individual could be fighting for a cause they believe is intrinsic to the betterment of society; yet society rejects it outright. The Shining Path movement in Peru is representative, but so is Islamic Extremism. The line between what is legitimate resistance and what is terrorism is often polluted. The African National Congress *A.N.C* movement of the 1980s in South Africa was not above the use of car bombs to eradicate establishment figures and cause public fear. Nelson Mandela might be a figure of freedom and tolerance now, but he was previously not above extremist forms of violence to force changes to public policy. History generally decides who is a *freedom fighter* or *terrorist* – yet one must understand the labeling of such groups is ultimately an exercise of power by established governments and organizations.



For years, the C.I.A has used agents to organize resistance fighters to overthrow South American leaders who have opposed United States policies and company operations (*see the CIA contra handbook later in this document*). The author feels that there is ample justification for the inclusion of opportunities to recreate such paramilitary units.



The old maxim, *one man's freedom fighter is another man's terrorist* is not only a truism – but goes along way to explaining both the paramilitary mindset; but also sheds light upon some of the ambiguities inherent in Intelligence service operations.



The author would like to make it known that he does not condone the use of violence by either state sponsored terrorism or fundamentalist organizations – but this game system does seek to recreate some of the elements of such real life situations.

Paramilitary organizations generally fall into one of these main areas...



Extremist Religious Groups – Islamic extremists probably come to mind in the current world political climate, but there are a number of U.S based Christian Patriot groups, extremist Jewish groups, the Hindu R.S.S Money Brigade in India and in Japan the Aum Shinrikyo sect group who were responsible for Tokyo underground nerve agent attacks in 1996. These are considered some of the most extremist terrorist organizations, which generally allow little room for compromise beyond the remit of their dogma.



Nationalist or Separatist Groups – Such groups seek recognition of self-rule in existing countries such as the IRA in Northern Ireland, the Basque separatist group ETA in Spain, and Kurdish separatists groups in Turkey and Iraq.

Left-wing Revolutionary Groups – Although the communist ideals have generally fallen by the way side in recent years in the West, there are still groups like Shining Path (reminiscent of groups from the 1960s and 70s such as the Red Faction) in Peru and the rest of South America.

Criminal Organizations – These groups use narco-terrorists activities to discourage the

public, police and political authorities from interfering with their operations. Although some would argue they are not true terrorist organizations, not being strictly politically motivated – they do effect the political landscape of countries. Groups like the Russian Mafia and Colombian Drug Cartels are high profile cases in point.



Pressure Groups – Extremist lobby groups such as Animal Liberationists, Anti-Abortion groups etc, who use terrorist like tactics to gain media attention under the auspices of influencing government policy.

It would be wrong to assume every member of a paramilitary organization is fanatical about their cause, often through circumstances like being born into occupied territories an individual is forced into a particular brand of resistance that they may feel isn't morally acceptable; but needs to be demonstrated. In such areas it is often safety in numbers that counts for survival than rhetoric. The bonds of youth are often misplaced into becoming the constraints of active participation; it however showcases the phenomena that it is often difficult to infiltrate such groups, because the recruitment process often effectively takes place over a series of years. The indoctrination process can start with small errands leading to greater and greater demands; that may lead a weak willed individual to partake of serious paramilitary training.

The type of paramilitary training on offer from various paramilitary units can vary greatly. The training can be as simple as a soldier showing youths how to fire a gun, through to something more in keeping with standard military training. The Islamic extremist who may have found their way to Afghanistan in the late nineties would have undergone

- army PT exercises 3 times a day
- training in all types of firearms and rocket propelled grenades
- basic bombmaking skills
- the use of biological agents
- intensive ideological discussions
- basic army patrol techniques

Using the methods employed by cult leaders

- reinforcement of message via video, audio and proselytizing in person
- separation and denunciation of the strong willed free thinkers
- threats of sanction from the group for transgression of group core values



Such groups at the completion of training may be deployed to act in similar ways to a standing army or blend back into the community and perform clandestine activities as required.



MERCENARIES



Mercenaries are often described disparagingly as dogs of war – psychopaths in search of thrills and bills. However, there are a number of well-known military forces like the British Gurkhas and the French Foreign Legion – they are

veritable bywords for military professionalism. A mercenary as the name suggests doesn't necessarily have any political allegiances, but they may well have a sense of morality that informs the jobs they take on board.

Employers

In recent years, a revolution has taken place in the field of mercenary activities; it has become an industry under the guise of Private Military Companies (PMCs). These companies seek to present a business-like image of *executive outcomes*; they seek to promote strict rules about the type of actions they will engage in, in the name of client service. They seek to avoid the negative connotations of mercenary, and seek to hire ex-professional soldiers.

Such businesses include the UK-based Sandline International (operations include Papua New Guinea and Sierra Leone) and the US-based Military Professionals Resource Incorporated or MPRI. These companies seek to provide military advice, training, support, materials and advanced military capabilities.

It is becoming more acceptable amongst governments to use such agencies, especially in an international environment where the use of national troops in a covert manner is political sensitive. Of course, *plausible deniability* is also another strong motivator.



Employees

Customers can include oil and mineral companies, Third-world countries with poor access to military resources, deposed rulers and governments, businesses needing protection against organized crime, or even organized crime outfits looking to protect key interests (like drug factories).

Despite the reassurances from such PMCs that they actively vet clients, they also maintain strict controls over the disclosure of information related to their activities (under the auspices of retaining client confidentiality).



Recruiting

Such organizations tend to keep their recruiting activities low-key these days, relying upon recommendations from existing employees; who are generally ex-special forces soldiers. Obviously, there are openings for wannabe *mercs* worldwide in existing warfronts – with some shady benefactor likely to pay for their loyalty. Many guys drift into the lifestyle after years on military service; after retiring relatively early careerwise, they look for some quick money and are ill at ease at returning to civilian life.

A special-forces background is invaluable for such work; it typically being about relying upon self-reliance and independence of mind. In such work a high degree of skepticism is required (to deal with the vagaries of patron requests and the amoral nature of some of the activities undertaken). Many find the job repellant, yet others find it is just the trick to make some quick cash illegitimately on the side.

Rarely do employers provide training, although often some basic training in bodyguard V.I.P activities is deemed necessary.

BODYGUARDS



The leap from bouncer to professional bodyguard requires a great deal of study and competence; rarely will an international VIP bodyguard agency take on someone without extensive specialist training and experience.

There is a lot of work for bodyguards protecting diplomats, celebrities, business executives, organized crime leaders and royalty - some pay handsome sums for their peace of mind.

There are a number of international agencies offering comprehensive training for bodyguards, however, there are also a number of charlatans – a professional course should offer training in the following disciplines

- Defensive Driving
- Escort Drills
- Firearms
- Close Quarter Battle
- Communications
- Electronic Counter-Surveillance
- Bombs Disposal (I.E.Ds)
- Paramedic Training
- Risk Assessment, Planning and Preparation



Often better paying jobs come about from word of mouth in the industry. Professional teams are usually led by a Body Guarding Commander *BGC* – these individuals will assemble the Close Protection Team *CTP*, plan routes, issue equipment to the team and liaison with the client. Depending upon the client, such jobs can quickly become either mundane operations, or stressful and dangerous.

Individuals are often recruited by the BGC on the basis of relevant skills for the particular operation.



5. CHARACTER GENERATION



Hopefully, your gaming group has discussed some of the issues in *Section 3 Setting Advice For Players*. You should now have some idea of the type of characters your team will consist of. Generally, most campaign groups will consist of one of the following choices.

- Internal Security Intelligence Services (MI5, FBI & A.S.I.O)
- External Intelligence Agencies (MI6, CIA & A.S.I.S)
- Special Operations (S.A.S, Delta Force & SPETSNAZ)
- Executive Police Force (Special Branch & Australian Federal Police)
- Paramilitary (Aum Shinrikyo, ETA & Hamas)
- Signal Intelligence (GCHQ, NSA & DSD)
- Others (including Agents, Professional Assassins, Ex-Special Forces Mercenaries)

Hopefully, you have downloaded the accompanying character sheets, which can be photocopied for your character needs (*special ops, spy, paramilitary or bodyguard variants exist*). These sheets only differ in the emphasis of skills that your character may need.

A special-forces soldier is highly unlikely to need an aptitude in Forgery; conversely, a member of a Signal Intelligence Unit is unlikely

to need training in Survival – the character sheet reflects this. That said, your character might indeed have the appropriate back-story to justify its inclusion. This system encourages the player to develop an individual character, but please discuss any additional skills needed with your Games Master...

There are a number of standard skills included on your character sheet; they have been created to cover the many different skill sets necessary to recreate an intelligence officer et al.

Knowledge Specialization: This particular group of skills represents the arena of character knowledge. It is assumed that your character speaks fluently the language of his/her birth, but do they also speak Spanish? Does your intelligence agent have knowledge of the E.T.A terrorist organization? Would s/he have knowledge of Russian military arms manufacturers? Does s/he know the International Treaties for detaining Foreign Nationals?

Consequently, knowledge skills like Spanish, ETA, Russian Arms' Manufacturers and International Law may come in handy.

Such areas of knowledge may prove invaluable in resolving hazardous operations. The only limit being in the justification for having acquired such skills – please discuss such issues with your Games Master.

Please Note: The greater the specialization of the knowledge skill, the less results needed to succeed at the knowledge roll. Take our Russian Arms Manufacturer knowledge skill, it would unlikely prove transferable to a working knowledge of the British Arms industry – so the greater the focus, the greater the chance of success.

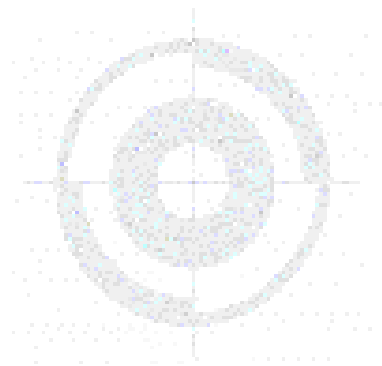
Listed Skills: You do not have to put ranks into *all* of your listed skills. You will still get an opportunity to use those skills in game terms – as you still get a standard 2 x d10 to roll. It is assumed everyone has *some* aptitude, these represent your default dice. It is suggested that you choose 1 or 2 *specialist* skills to concentrate upon, and work conscientiously with your fellow players to make sure you have an expert to call upon when they are vitally needed.

Allocating Skill Ranks: Your standard starting character has 75 skill points to allocate, you can put up to 5 ranks into each skill. The higher your skill ranking, the better you are at using that skill.

Starting Characters Summary	
Starting Points:	75
Maximum Ranks:	5
Minimum Ranks:	zero

Here is a basic outline of the skills, illustrating how they are used within the game

BASIC PERSONA SKILLS	
Athleticism	A measure of the individual's general fitness and dexterity levels
Awareness	A measure of the individual's general level of alertness to stimuli from the outside world
Constitution	This skill denotes an individual's general level of stamina, the ability to resist toxins – this skill directly determines the individual's <i>Vitality</i> levels
Conversation	A measure of the individual's ability to communicate effectively with others, to put people at ease in social situations and vocal mimicry
Driving	This skill is a measure of an individual's ability to drive road vehicles under pressured situations
Fast Talk	This skill is different from Conversation in that it denotes the ability of the individual to lie effectively
Hand-To-Hand	This skill is the basic ability to fight off assailants with one's bare hands or hand held weapons
I.Q	This skill is a measure of the individual's general intelligence quotient
Sense Motive	This skill denotes the individual's ability to determine lies
Streetwise	The skill determines the individual's ability to effectively read the perils and hazards of an urban environment
Strength	A measure of the individual's might and weight bearing capacities
Willpower	A measure of an individual's ability to withstand the pain of injury and torture. Plus, a measure of the individual's ability to achieve life goals; like a fitness regime or advance in learning tasks



EXPERT SKILLS

Computer/I.T	A measure of the individual's basic level of understanding of computer operations, hardware installation and programming. It skill also partly contributes to successful hacking operations
Contacts	A measure of the number of worthwhile contacts an individual has at their disposal to start the game
Counter-Intelligence/ Ideology	A default skill level of intelligence knowledge remembered from basic training – including knowledge of government bureaucracy, spying methodology, agency history and hostile foreign agencies
Electronics	The basic application of electronics in everyday situations and disabling security devices
First Aid	The basic knowledge of resuscitation, patient care, poisons, and the treatment of injuries in the field
Interrogation/ Intimidation	The individual's knowledge of Interrogation techniques and the ability to effectively threaten an individual
Mechanics	The ability to repair and operate a diverse range of mechanized devices
Psychology	The understanding of psychological disorders and remedies
Stealth	The ability to successfully sneak around undetected and ensure the covert nature of OP sites and operational technique
Survival	Covers basic requirements for survival in adverse conditions including lighting fires, flora and fauna knowledge and ways to make shelters
Weapons Firearm	The basic deployment of pistols, semi-automatic pistols and guns (SMGs) and rifles

SPECIALISED SKILLS

Signals Intelligence	The skill used to determine the effective setting up of audio and video communications, the ability to use audio and graphic programs to improve sound/image quality. To disguise vocals and manipulate images. The use of satellite, radar and microwave technologies
Chemistry	The skill for determining chemical compounds and determining their probable sources, the use of scientific equipment, and the development of useful compounds
Cryptography	The ability to decode and encrypt messages (via computers or other technologies) for the purposes of covert communications
Disguise/Deception	The ability to disguise oneself or conceal items, the ability to blend into crowds effectively, and the understanding of standard deception practices
Explosives	The ability to understand, use and create chemical explosives
Forensics	The ability to use DNA profiling, gun testing, chemical testing and biological theory to develop theories as to the nature of crime-scenes
Forgery	The ability to use computers and/or by hand to develop replica documents, security passes et al
Illegal Entry	The ability to identify and to by-pass security systems, the ability to understand basic security policy and infiltrate secured locations
Martial Arts	The ability to use various forms of martial arts to knockout or kill opposing targets
Surveillance	The ability to coordinate and design an effective surveillance operation on a target building, group or individual
Weapons Military	The ability to use and disable weapons of war such as fully automatic machine-guns, howitzers, tanks, anti-aircraft guns or mobile launchers

BASIC SKILL LEVELS	
0 to 1	Average
2 to 4	Expert
5 to 9	Professional

Dice rolls for 3 ranks $(3 \times 10d) + 2d10 = 5$ dice to roll

OTHER CHARACTER DETAILS

Vitality: A character's Vitality represents the individual's ability to sustain physical damage. This statistic is derived from the characters Constitution. A character has their $(\text{Constitution rank} \times 10) + 10$ in Vitality. Therefore if we have 4 ranks in Constitution $(4 \times 10) + 10 = 50$ vitality points.

Status: Depending upon the type of template chosen characters may end up being operational, clean, blown, Missing In Action (MIA), Killed In Action (KIA), held or a double agent. This is a general signifier as to current situation the individual finds him/herself.

Charisma: This statistic is derived by rolling a single d10 dice, the higher the result the more handsome and pleasant the individual is to be around. Although an individual with a poor Charisma rating is naturally less able to form acquaintances, this can be entirely overridden by the development of appropriate conversation skills. The rating is generally only called upon by the Games Master to negotiate a quick appraisal by an NPC (of a player character) who they may have had a fleeting encounter with.

Contacts: If you have apportion some of your initial starting ranks into Contacts you will need to talk with your Games Master about appropriate contact/s (you will also need to decide at what level of familiarity you are at with the individual).

Legends: Although primarily of importance to espionage characters, it may be necessary for other characters to develop appropriate legends (aliases) from time to time - to stave off unwanted attention from the wrong people.

A backstop is someone who will vouch for your alias.



Carry Weights: An individual can carry a set amount before they become heavily encumbered – generally reducing their ability to move with relative freedom. An individual with 4 ranks in Strength can carry $(4 \times 10) + 10 = 50\text{kg}$ before becoming substantively encumbered.

The effects of increasing the carrying weight beyond this point include

- Reduction in movement to 1/2 current Athleticism rating
- Equivalent reduction in Vitality every hour for every kilogram over weight limit

C.I Index: All equipment carried has a Conceal Index rating; this total is important in visual and body searches, the lower the rating – the better the chance of sneaking through security unmolested.

Armor Type/Rating: This box is present to keep track of the effects of damage to any body armor worn by the individual – as this game system has a mechanism whereby damage absorbed by the armor gradually reduces its effectiveness (see soft cover)

SKILL DESCRIPTIONS

ATHLETICISM

It invariably helps to be physically fit being an undercover agent. Being a bodyguard or special-operations soldier requires one to be at the peak of physical fitness. Most operations demand a medium to high levels of fitness; trying to be in the right place at the right time (to intercept the target), having the necessary flexibility to maneuver through a forced window, or sprinting when the operation has been seriously compromised.

Any serious intelligence training regime stresses the need to remain fit and healthy, especially as any dedicated intelligence training comes at a high price to the agency. Other facets of training will stress spatial development, such as moving through darkened rooms without disturbing objects, and familiarization exercises for moving around in passive night-sight goggles.

Most special operations soldiers are drawn from a larger pool of ordinary soldiers, marines and pilots; only the most physically fit make it through the grueling demands of the course, and many more drop out in the first six-months of training.



Note: This skill is also used for parachuting – in the specific context of landing your soldier close to his target destination. One generally requires a degree of athletic coordination to perform such a task in real life. One cannot *botch* this skill if trained in parachuting (*parachuting isn't a separate skill in this game, it was felt having your character impacted six feet into the ground*

after botching their 'parachuting' roll really was taking realism too far...)



AWARENESS

One of the major assets of an intelligence agent or officer is the ability to discover the crucial minor detail of any scene. If an organization is conducting surveillance, it is more than likely that the foes have instigated counter-measures. The glint of sun off a gun-sight from a near building, the telltale bulge of a Browning pistol under a man's jacket, to the reappearance of a vehicle that turned off several blocks ago; could be the difference between life or death. Any decent surveillance training takes the time to engender new levels of awareness into the recruit, mainly through the use of video footage memory tests, memory quizzes (such as Kim games) and memorization exercises of car registration plates and car shapes. One must also become familiar with using passive night and infrared goggles, and correctly deciphering the information depicted.

Bodyguards and special-operations soldiers also rely heavily upon deciphering visual and oral stimuli, if during the CTR phase of operations they overlook one particular security measure at a target building, it might mean death for the entire squad. Obviously, scouts in 4 man patrols need to remain attentive at all times.

CONSTITUTION

The building of the muscular form has always been highly regarded in military circles, individuals at the peak of physical fitness are less likely to die of blood loss, suffer fatigue on long patrols and have a greater immunity to disease. In the modern world of bio-terror some leading agencies are gradually coming to the awareness of the need to make sure their staff are protected. This may be achieved by the administration of drugs to combat viruses (cold, anthrax), or through the age-old technique of dedicated spies taking small doses of poison to build up their immunity.

Military training generally seeks to build up the body by frequent PT (physical training) exercises throughout the day, often to the point of exhaustion – as a great deal of detail can be gleaned from seeing a soldier's response and how they operate under extremes of stress.



CONVERSATION

The ability to communicate is a primary asset for any intelligence agent or officer. It is even more valued when they can do it under considerable stress. The ability to communicate is needed to run agents in the field. The ability to be sociable is often the key in crucial *social engineering* exercises, or when attempting to get information out of bureaucratic agencies.

The ability to arrange one's thoughts clearly is also vital, especially when using coded forms of conversation that might lead to errors of understanding.

Finally, such vocal finesse is needed to replicate foreign or regional accents in undercover operations.

Special Operations and Bodyguards don't require the same levels of verbal finesse, however being stuck behind enemy lines with no immediate rescue plan to fall back upon might prompt one to learn quickly. It is often necessary for special operations soldiers to negotiate in situations where violence may lead to harm of civilians, having the ability to remain even-tempered and find a compromise could facilitate a resolution without need for unnecessary bloodshed.

DRIVING

The ability to drive a vehicle at speed with control is of great importance to any agent or officer. Most intelligence agencies have large components of their training devoted to developing advanced driving techniques. The approach to advanced driving is actually quite different from the everyday experience, most intelligence agencies subscribe to the method of keeping engines at maximum revs in pursuits, which is thought to give better handling. The use of acceleration out of corners after dropping back in the gears is often taught. Drivers will also learn techniques such as J-Curves and Handbrake slides, which aim to give the driver greater options in dangerous situations. Most intelligence officers are trained to look farther down the road than the average driver to anticipate developing situations. They are also briefed in offensive driving techniques as opposed to defensive; it is necessary at times to shunt other vehicles safely out of the way, and to do it with relative safety. It is also necessary to combine such activities with map memory skills, maintain radio presence and driving at the limits of safety, all at once. It is sometimes necessary to follow the target vehicle covertly – often meaning three car teams cycling around to keep visuals on the target.

Bodyguards also go through similar types of training in defensive and offensive driving. They also train in specialized maneuvers to avoid the separation of the bodyguard car team.

Special Operations soldiers sometimes belong to regiments where their primary aim is to develop driving skills; such vehicles can include Hummers, ATVs and Light Attack Vehicles.

FAST TALK

The ability to lie is paramount for any intelligence agent; one's life may depend upon it. It is necessary for most intelligence agents to maintain some kind of *legend*, which indeed compromises of 100s of facts needed to be related at a moments notice. If they don't have the ability to act and say these things in a convincing way it compromises them, and indeed, may lead to the entire operation being blown. A lot of time in training is devoted to establishing and acknowledging a liar, one major reason for subjecting agents to the extremes of stress is to desensitize the officer to the usual human frailties. One should ultimately leave training being able to separate one's decision-making processes from the demands of the physical body and emotional states.

Special Operations and Bodyguards generally don't need the ability to lie – although it may prove useful under interrogation.



HAND-TO-HAND

The ability to use one's hands as lethal weapons may be a cliché; yet, it is necessary training for anyone who may end up behind enemy lines. From control grips to disabling strokes, there are many different ways to neutralize an opponent. The ways to disable a gun-user include; pushing the gun to one side and raking the face to temporarily blind an opponent, grabbing the pistol just in-front of the hammer, putting

downward pressure on the working parts of a semi-automatic will cause a malfunction. The Israeli army has even codified such techniques into *Krav Maga*, defensive techniques to disable an armed opponent.

These skills can also be used offensively for punching out at an opponent, or using hand held weapons (knives, daggers et al) and the grappling of an opponent. Obviously, soldiers are highly trained in such areas, and bodyguards have a professional interest in being able to deal with potential assassins.

There are a number of pressure points on an individual that can instantly kill or cause them to loose consciousness, if a character achieves a high enough result using these skills – rules exist for one to knock an opponent unconscious or even killed outright (*see Ch7.Combat*).

IQ

Most intelligence agencies only recruit people of high intelligence into their ranks. ASIO (Australian Intelligence Agency) require someone to have completed 4 years at a University before one can apply to become a trainee officer. It is a job that requires a person both capable of independent thought and the ability to follow up often complex, bewildering tasks and guidelines without question. Most courses usually attempt to enhance both these assets by instituting an exhaustive regime of intuitive decision making exercises, and plenty of memory tasks.

Conflicting with the usual stereotype of regular soldiers, special operations soldiers are often highly intelligent. The operational parameters of the job demand mental agility and require independent thought. In such small operational team environments, it's necessary for everyone to have meaningful input.

Bodyguards generally require some ability to think outside of the circle, especially the Commander. If a Commander doesn't do his homework properly, he risks the lives of all his/her team and the client.

SENSE MOTIVE

The ability to detect a lie is vital for anyone involved in clandestine activities. It is often not about finding the information, but about weeding out the disinformation and coincidental information. People when lying generally give away telltale signs in their verbal and non-verbal communication involuntarily. From nervous facial ticks, to putting their hand in front of their mouth, to excess perspiration - even a slight rise in the tonality of voice and loss of eye contact can be a sign. Of course, intelligence agencies being *intelligence* agencies have developed training methods to help identify a greater percentage of liars. Sometimes such agencies subject their captives to doses of *soap* sodium pentathol (or so called truth drugs), and subject them to polygraph tests (lie detectors) - although, much controversy surrounds the results of such methods.

Comparatively, the ability to sense the motives of others isn't that important to soldiers; bodyguards on the other hand, need to make quick decisions about civilian's approaching their clients - it is definitely a skill of value.



STREETWISE

As most intelligence operations generally take place in urban street environments, it is necessary that agents or officers don't stand out from the crowd and can judge developing dangerous situations. This is generally achieved by observance of local customs, the use of clothes that blend in with the masses and the ability to blend operation activities within the flow of events taking place at street level. From two lovers standing in a doorway embracing (whilst one is picking the front-door lock), to a *phone maintenance man* servicing the local phones (i.e. bugging the phones), to an old lady walking the dog (for the fourth time today around the target's house). Most agencies send out trainee officers into the local environments to get a *feel* for the place, because if you cannot sense danger brewing, there is often little one can do to withdraw from a scene at short notice.

As soldiers have found in Iraq recently, the ability to read developing situations in urban environments can be key to staying alive. The ability to read the streets of an operation location is essential to bodyguard commanders; they need to recognize local gang activity, potential bottlenecks in the route and the general street ambience (traffic flow, citizen presence).

STRENGTH

Sheer force isn't an absolute necessity for an intelligence agent or officer, but if things start getting physical, one would obviously like to have the ability to match it with an opponent.

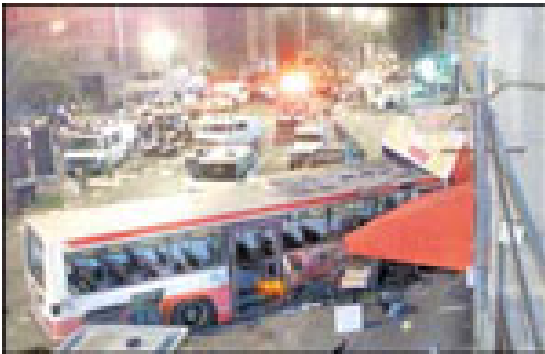
Much time is paid in military training to the development of strength, soldiers are often required to do many days of hard labor to achieve tasks such as building temporary fortifications, tunnels and bunkers. Bodyguards generally need a degree of strength to be able to force assailants out of the way of clients.

WILLPOWER

Due to the nature of covert operations, in intelligence and military training, one is often held for sustained periods of time for questioning and interrogation. The overall goal of these intensive periods of physical and psychological stress is to develop the ability to separate out mind from body, and to allow for clarity in the decision-making process under extremes of duress. The theory being, if you have explored the limits of your emotional core, you can start to develop tools to effectively withstand the outside influence of interrogation. This ability allows for experienced agents or soldiers to make calm decisions even under gunfire and extremes of torture.

Willpower is also a signifier of the character's ability to focus in periods of training, characteristically, someone with low ranks in Willpower will take the time to relax in between operations – whereas those with high willpower are driven individuals, who are always seeking to achieve their life goals.

Please Note: Your willpower level cannot be enhanced through further training, only under extreme conditions will your willpower level ever rise (through extreme situations – like torture or life and death struggles) – and then it will be motivated towards a particular cause (like revenge). Please see *Training* later in this chapter for further discussion.



BASIC TRADECRAFT/FIELDCRAFT

COMPUTER/I.T

Most modern intelligence agencies train their agents in an array of computer and information

based technological devices. The laptop is fast becoming the primary device in surveillance. The ability of agents in *deep-cover* to gain access to information via the internet (and other telecommunications options) has been of concern to many nation states like China and formerly, Iraq and Afghanistan. The ability for dissidents to form groups and communicate covertly through electronic means is a major reason why large-scale surveillance operations such as ECHELON have been instituted by the United States and its allies. The agent can use the computer communications network to look up government and police records, to keep in contact with their superiors, or to cause economic harm to a foreign power by hacking - the maxim of a single person changing the world is now a reality.



The modern soldier is far more computer literate than the average person might suspect, between using computerized sniper control systems, computerized command and control radio devices, through to using shoulder held computer guided rockets – the average *squaddie* works with such technology on a day-to-day basis.

Bodyguards generally make it their business to be conversant with all modern forms of electronic surveillance. Some may even map out routes for their clients in computer modeled *CAD* environments, hoping to show strategic positions and potential weak points of the proposed route.

CONTACTS

A large facet of becoming an intelligence officer or specifically a *handler* is in creating a web of contacts that both inform and protect your interests. You need to solicit information from agents, and you need other people (*backstops*) to verify your cover story.

Although special operations soldiers generally are given their weapons and kit, other less fortunate paramilitary organizations generally have to rely upon contacts to get their hands on weapons and essentials. Indeed, often in the cell like structure of paramilitary operations a bombmaker will deliver the device to order.

As a bodyguard, having the right contacts can make getting those high-profile protection jobs a lot easier; it may even be necessary to bribe government officials to gain vital information about government dissidents.

You should consider the level of your potential contact using the following table...

Level 1 Acquaintance – You barely know the person, only what they do
Level 2 Friend – This person is a reasonable friend, who may go out of their way to help
Level 3 Family – This person is either family, or an old friend of the family, who may possibly put their life on the line to help

The types of contacts that maybe of assistance may include; fixers, insiders, doctors, weapon-smiths, civic officials, police et al

Generally speaking, the higher the level of contact the more help you will receive – the sting is they may well come to you at some stage looking for your help. Can you really let down a trusted family member in crisis?

Please discuss your particular needs with the Games Master (the game master will come up with a profile and method of contact for this NPC that fits in with the campaign environment).



COUNTER-INTELLIGENCE

No matter how much specialist tradecraft an intelligence agent or officer builds up, it is often no substitute for a working knowledge of the operational world. It is often the knowledge gained from understanding the operational parameters of the other agency that helps to inform your own counter-intelligence efforts. The classic case in point being the Cold War, without a working knowledge of the formalities surrounding spy swaps, many agents would have been terminated unnecessarily. If you understand that the IRA works in a cell structure, you will not waste valuable time and money trying to interrogate a dozen or so names out of the detainee. Even understanding that bribery is highly unlikely to get an Islamic fundamentalist to talk.

Understanding something about one's own agency and how it works in real life can save an individual from devoting time to ideas that are impractical and/or counter-productive to one's career. A case in point is the U.S reaction to Middle Eastern terror organizations, although most of the 9/11 suspects were from Saudi Arabia, it is not in U.S interests to show up their ally; instead choosing to focus on attacking a *former ally* in Saddam Hussein.

In training, a lot of time is devoted to understanding the nature of home and foreign intelligence agencies and/or terrorist cells. Each major intelligence agency have their own peculiar lexicons and methods of operation (such as MI5 A4 specialist Surveillance teams nicknamed the *Watchers* – a specialized surveillance division).

ELECTRONICS

The ability to manipulate electronic equipment is vital to disabling security devices. Some internal security agencies consider this a specialist task, but if you are in the field in a hostile country, you don't have such a luxury to call the agency *helpline*. It may be necessary to have a working knowledge of electronics to permanently put out of action say, radar equipment, or to reconfigure telecommunications equipment; or indeed to repair broken field equipment.

Special Operations soldiers are trained to repair their own kit and equipment. Bodyguards may be familiar with electronic equipment, given their reliance upon it in operations.



FIRST AID

Intelligence agencies generally do everything within their powers to make sure their operatives remain alive, active and healthy. By the time an officer reaches the field, he/she is literally an investment of hundreds of thousands of dollars (selection, training, equipment and wages). This is why first aid training is always a core component of any training. Some agencies even equip their operatives with a training regime similar to that of an army medic; whereby they can insert a cannula and drip, resuscitate a dying patient and insert them into an anti-shock suit to stop excessive blood-loss.

Special Operations teams generally include a dedicated medic. These individuals are able to diagnose problems and make accurate

assessments of the medical needs of a patient. From the removal of bullets, to the suturing of bleeding wounds and the splinting together of broken bones – a lot can be achieved with limited resources.



INTERROGATION

There are as many defenses against interrogation as methods to perform it - the general idea however is to create moments of uncertainty, fear and to provide opportunities for relief. By manipulating the physical conditions such as time (messing with clocks), temperature and sound (white noise) you can break down a captive's mindset, even inducing a breakdown if necessary. Once the subject's mind is broken, it is hoped that the information might tumble out; however, if you *break* the detainee one might have to reconstruct the jumble of information into a cogent picture.

The other basic way is to become a confidante, to become someone who the captive can receive empathy from for their sorry plight, even if that friend is also their jailer.

Physical violence can actually backfire in some interrogation situations (and character types), violence can sometimes create relief from the constant barrage of threats and questions. Other ways to break an individual include; providing hours of nonsensical questions or meaningless chats followed by a real set of questions - sometimes the detainee will answer purely through utter relief (with the affirmation of reality a sensible question brings).

Interrogation Continued...

Obviously, trying the direct approach should be first on the list.

In terms of developing a defense, one method is to control the questions by slowly winding down the time between the question and answer, assuming the interrogator is easily thrown, the power relations should marginally shift towards the prisoner. Another way is to plant absurdities into real information; hopefully, the interrogator won't pick up on the compromised information until much later – even if the interrogator does pick it up relatively early, they will still feel that some power has been conceded.

Interrogation techniques are routinely taught to all officers (and some agents) of intelligence agencies, although the actual level of *physicality* this training imposes is usually heavily reliant upon the country in which they operate in (torture being against the Geneva convention on human rights and all) - there being a fine line between torture and interrogation.

Members of special-forces teams generally leave interrogation to others, but due to their commanding physical presence they can usually intimidate information out of individuals. Bodyguards are also taught techniques to project their physical frame into view - rarely do you see bodyguards take a backward step to *anyone*, as appearances are vitally important in the trade.

Mechanics

It is sometimes vital to disable or identify a large complex piece of machinery; even to repair one's own damaged kit in the field. Intelligence agents or officers who work deep undercover in hostile territories, where a radio and/or audio equipment can actually be strictly against the law (Yemen), can't readily take their equipment off to the local TV repair man. Although most intelligence services would generally favor sending faulty equipment back to their own repair experts, it is sometimes impractical to do so.

Special Operations members are generally given a basic grounding in mechanics, whether this be in terms of the skills to strip down one's own field kit, or through courses in understanding the basics of disabling machinery (like vehicles). Some focus is also given to examining the weak

points in mechanical devices, mainly for the strategic placing of shaped explosive charges (for maximum destruction).

A particular feature of most fundamentalist or dictatorial regimes is the severe restrictions placed upon telecommunications. From the Nazi's burning books, through to Saddam Hussein limiting the use of internet based communications in Iraq; all forms of communications are subject to controls. The theory being that the media can be used for dissent, and not just for the promotion of the current government's ideological values.

PSYCHOLOGY

The ability to psychoanalyze individuals might not seem a high priority for the operations of an intelligence officer. Yet, if one's job depends so absolutely on trust and assurance in the actions of others, it is generally in a handler's interest to understand whether putting extra pressure upon an agent might lead to a result, or break the bonds governing control. Over a period of time most handlers or controllers develop a close relationship with their agents, it rarely involves being in close proximity to the agent, but in a far more fundamental understanding of how the individual's mind works. One only needs to read the fiction of John Le Carre's *George Smiley* and his close relationships with various covert identities to appreciate the subtle art of understanding and controlling people.

Psychology is also important in profiling; the art of understanding the motivations behind crimes and terrorism. It maybe more important to understand the motivations behind an act of terrorism, than actually catching the terrorist. One terrorist behind bars looks good on a police report; but if there are a dozen similarly inclined individuals ready to carry out the same basic action - one has little time to celebrate today's minor victory.

It is often important for a Bodyguard Commander to understand something of the psychology of his/her client, knowing whether they are likely to panic in a kidnap attempt and run, clearly impacts upon the planning of operations.

STEALTH

The ability to remain undetected in hostile areas is as essential for an intelligence officer as for a special operations soldier. The ability to infiltrate into areas undetected in black-ops operations usually means the difference between life and death. Stealth is actually a combination of skills; the ability to move without making noise, the ability to evade some basic security devices, the ability to use natural shapes to one's benefit, the ability to effectively blend into a crowd (or landscape) and the ability to silently follow an individual. Often being stealthy requires being entirely visible, but masking one's true intent – or actively drawing attention to oneself (and away from a fellow agents elsewhere). Numerous training exercises are devoted to developing this skill in most intelligence and military training regimes. Close Target Reconnaissance (CTR) is an important skill in virtually all forms of covert operation.

TRACKING/NAVIGATION

Primarily a skill for military soldiers and paramilitary units, the art of tracking and navigation can include skills such as recognizing star constellations, successfully using a compass, finding signs of activity of humans and wild animals. In jungle environments, a good tracker or navigator is often vital if one doesn't have the accrements of modern day GPS systems.

WEAPONS FIREARM

The ability to handle a firearm in pressure situations is extremely important. An agent might evade capture by the frenzied use of guns; but they may do it at the expense of a fellow agent. The indiscriminate use of firearms in operations is always frowned upon by superiors in intelligence and military organizations – there is generally a serious reason why covert operations are *covert*. The key skill that weapons training regimes quickly identify is the ability to develop a clear, calm response in the face of imminent threat. Accuracy in shooting is valued; but so is the ability to recognize a civilian from a terrorist – when one works at such close quarters

with fellow agents (soldiers) accidents can easily happen.

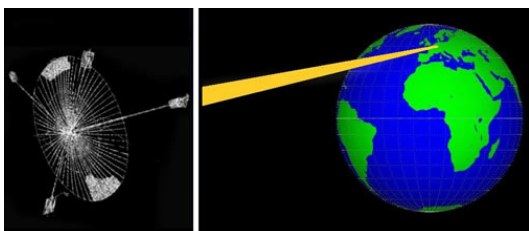
A particular style of firearms training favored by most Western agencies is called Close Quarter Battle (CQB), designed by the British S.A.S. Most exercises use a *Killing House* (a building kitted out with mock targets, furniture and large rubber walls to dampen ricochets), the combatants usually enter the building in teams of three. The teams attempt to use maximum speed in clearing the building, sometimes they use shotguns with solid shots to blow the hinges off doors and enter the room simultaneously - staying relatively close together and targeting (and firing) over each others shoulders (targeting different segments of the room).



Although each service generally has their own preferred methods for the use of guns, an example being the former British Army 14th Intelligence Company, which favored the Weaver stance and Double-Tap (double-shot) to each target. Firearms training usually allows for agents to also become familiar with the capabilities of each weapon, and the relative penetration levels of its ammunition (like rifles often can rip through metal) – knowing this sometimes gives the trained combatant the edge.

A great deal of time is spent familiarizing a combatant with the use of cover, like lying flat below sidewalks when little cover is available. Contact drills provide realistic scenarios to familiarize the combatant with retreat exercises to avoid continued contact. Bodyguards also undergo similar training, especially in Evasion and Escape (E&E) exercises to escape hostage taking situations.

SPECIALIST TRADECRAFT/FIELDCRAFT



Signals Intelligence (SIGINT)

The ability to gather, filter, mask and analyze all forms of data is a valuable tool in surveillance; one simply doesn't just put microphones in clandestine meeting places and expect them to pick up on the conversation; it requires dedication, knowledge of equipment and patience. There are many types of microphones, which have their own relative strengths and weaknesses. There are two basic types of microphone, being dynamic and ambient. The dynamic microphone is good for close clear sound reproduction, the other is the ambient microphone which as the name suggests tends to concentrate upon getting a fuller sound picture of the room, but at a loss of quality. For strict surveillance purposes, there are miniature wireless microphones (inserted in walls, lapels, everyday items), wiretaps (telephones, computer terminals), shotgun microphones (aimed at windows to detect vibrations from internal conversations) and all manner of masking devices (voice modulators) and white noise generators (scramblers).

Video surveillance provides a different set of challenges; like hiding the camera in everyday objects that won't come under suspicion, providing for the battery needs of these high powered devices. One also needs to make an appraisal of what kind of camera might suit the environment best (standard video, Infrared or Thermal).

Familiarization in the use of Command and Control radio systems is a vital skill in battlefield operations, generally most Special-Operations teams have a specialized Communications Operative. An understanding of radio

communications is also vital in bodyguard assignments.

Finally, signals intelligence also covers the retrieval and transfer of data from satellites and the interception of van eck transmissions (emanated from such things as machinery and computer technologies).



CHEMISTRY

The world of covert operations sometimes requires the need for a solid understanding of chemistry. Sometimes the goal in clandestine operations is to acquire the latest science breakthrough from another country. As most science industries generate vast amounts of technical data, it may be necessary to have at least a rudimentary understanding of chemistry (and basic science) to decipher what is important information and data, and what is not.

Chemistry is important in developing explosives from simple everyday chemicals like Fertilizer and Diesel. Understanding basic chemistry is also important in understanding the spread of toxic substances in the environment, and how best to counter its effects.

Please Note: One may also like to have comparable areas of interest in physics and/or biology – add them under specialized knowledge skills...

CRYPTOGRAPHY

Because of the clandestine nature of covert operations such organizations often employ methods of encryption in their communications. There is a wide diversity of ways in which to encode information including; the use of radio call-signs in operations through to initiating communications between reactionary groups through encoded newspaper classifieds. Others include the use of computer watermarking technology to embed text in jpegs, mp3s et al, the use of microdot film attached to physical documents and the use of public and private keys in telecommunications (emails, digital mobile phones).

Even encoded microwave transmissions and secret writing techniques can be added to the mix. It is rare these days not to find a dedicated department in a modern intelligence agency devoted to the interception and decoding of communications. Britain's has G.C.H.Q (Government Communications Head-Quarters) to look after its signal intelligence needs.

There is a basic difference between codes and ciphers. Ciphers directly correlate to the substitution of a letter for a letter, codes substitute a letter for an idea (such as the letter A might mean "We are going with Plan A"). A professional cryptographer has the computing power to decipher and the mental capacity to decode ciphers.

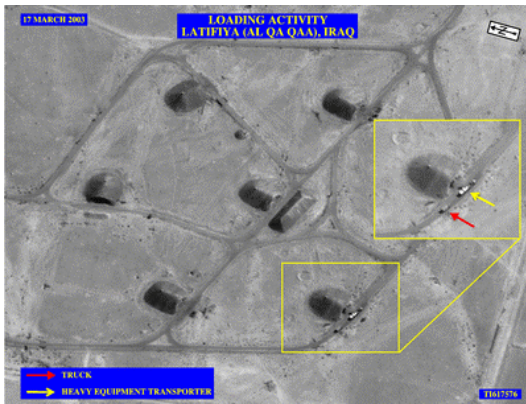


Figure 1 Encryption plays an important part in secured Satellite transmissions

Another important feature of modern computer cryptanalysis is that most cryptography undertaken today relies heavily upon on the use public and private keys. The concept is that both parties have access to each other's openly available *public* keys, which each party encodes their transmissions with; only the receiving party of the document can decode the message into plain text using the substitution of their *private* key.

This process also allows for the sending party of the document to secure their transmission - knowing that the public key establishes the relative identity and their relative bona fides. Even if the message *was* intercepted, the person would need the private key of the receiver (or determine it) to gain any advantage. This doesn't make cracking impossible, but it seriously hampers the time taken, by using *brute-force* computer attacks (to decipher the message).

It is also important to note that Western signal intelligence agencies have attempted to pushed their respective governments to outlaw such advanced forms of encryption, or sought to make them compliant by establishing *backdoor* technology schemes (a series of in-built codes, or escrow schemes – which mean the government demands the registration of all private keys with a civic authority).

Special Operations communication specialists may be required to use code books to encode communications by radio, however, advances in digital communications means that modern military soldiers are more likely to be linked through computer Command and Control computer systems than radio– eliminating some of the need for manual encryption.

DISGUISE/DECEPTION

The use of disguise can often be the difference between a successful operation and one's cover being seriously blown. There is an oft told tale of British S.A.S troops being spotted straight away whilst operating in Northern Ireland during the 1980s - they looked too well built, wore droopy moustaches and the majority had mullet haircuts fashioned after British footballers of the era. Oh, and they walked around looking *ready for a fight* – as one tends to develop a different physical bearing when one knows how to look after oneself in a fight.

A professional disguise artist can not only, change someone's appearance – but they can change the way they walk (shoe inserts), modulate their voice differently and change their speech patterns. Anyone involved in an operation on foot might for instance; be wearing a reversible jacket, have a flat cap concealed in their pocket and later they might be deposited on another street corner walking past the same target they had past mere minutes ago.

It is also important at times to substitute targets of assassination for an officer/bodyguard - with the tricks and techniques of Hollywood available to them during the Cold War and beyond, the CIA regularly changed the sex and/or race of some individuals well enough to go unrecognized.

This skill also relates to basic deception, the ability to disguise objects as something else. An important wartime activity is to disguise objects like tanks and rocket launchers as something else – indeed part of Rommel's downfall in World War II was attributed to the Allies mocking up a series of dummy tanks from wooden boards and a lick of paint.

EXPLOSIVES (BOMB DISPOSAL)

The use of explosive materials is a skill used by many intelligence organizations, yet you would be hard pressed to find such evidence of it within their subsequent reports. Usually this skill would be deployed in *Black Ops* operations; it requires specialist knowledge of such materials capabilities and a steady hand.

Your basic manufactured explosive device usually passes a small electrical charge through a blasting cap (gunpowder or TNT) which subsequently ignites a high explosive (commonly PE4, RDX or C4). Your homemade bomb usually comprises of common fertilizer and diesel fuel (known in IRA circles as HME or ANFO). Such bombs may also comprise of large amounts of TNT, although such bulk makes it difficult to place it covertly. Explosives generally come in a solid mass like gunpowder or in a putty like plastic explosive (PE4 + C4). It may also come in a liquid form (like ANFO) usually held in bottles or cylinders – although in such a state it makes it difficult to work with effectively.

Explosives may also include a timing device, which seek to delay the initiation sequence of the bomb; this timing mechanism could be electronic or mechanical (such as a clock). Some bombs are fitted with remote detonators (either wireless or electronic), which gives a degree of flexibility; bombs may even incorporate a small camera – to accurately judge the time of detonation. A recent development has been the use of mobile phone circuitry to remotely detonate, by calling it from another phone.

The basic mechanics of closing an electrical circuit primes the bomb, however it can also be done in other novel ways - like putting a pressure plate on a floor. Claymores and grenades generally use an initiator, like a dynamo or clacker, which passes a charge down a cable (or central core) to the blasting cap – effectively giving one a crude timed device capable of being thrown or hooked up to trip wires (usually there is a 4 to 5 second delay on grenades).

If one knows how to arm an explosive, one also knows the rudiments of disarming such bombs. Such skills are important to even terrorist organizations - as one can never be entirely sure if the escape route is always clear.

Finally, the Bodyguard sheet uses the term *Bomb Disposal* to denote this skill – essentially adhering to the basic protection focus of such employment.

FORENSICS

Popularized by television series such as the Crime Scene Investigations (C.S.I) franchise, the art of forensics in reality is a conglomerate of scientific studies. Internal intelligence agencies (such as the F.B.I) usually have a number of specialist divisions devoted to forensic science, or the pursuit of science applied to answering legal questions (criminalistics being the process of scientific collection and examination of physical evidence, which is the sub-branch popularized by police investigation type shows).

FORGERY

There are generally whole departments of leading intelligence agencies devoted to recreating exact copies of all kinds of documentation. One of the illusions forgery brings to mind is that most of the forger's time would be devoted to creating fake passports, or other instant forms of identification. This barely scratches the surface of the possibilities; with enough time an agent can be furnished with a secure bank account (+ credit rating), doctored photos of a fictional family (computer retouching), University degree (hacked Uni records to match), a full resume of contacts (backstops + relevant papers), a wife (fellow agent), an abode (safehouse + records of receipt of long term occupancy) and suitable household items (including internal surveillance devices + messages).

It may also be necessary to produce false newspapers or film footage to demoralize a held interrogation captive. In some cases it may also be necessary to manufacture and fit out new storefronts (to use as a *front* for an ongoing operation).

Most forgery activities today are heavily reliant upon computer aided drafting and specialist materials like holographic reproduction.

ILLEGAL ENTRY

The art of infiltration requires a number of skills. One firstly needs to have an understanding of the

various devices used to detect such intruders (alarms, laser trips, motion detectors, heat detectors, and fail-safe devices), and one needs to understand the physical devices that prevent one from entering secured locations (locks, electronic locks and safes). There are also many useful devices that let one enter (sprays for uncovering lasers, lock-picks and electronic scramblers and decoders).



The classic lock-pick requires an understanding of how the lock works internally before an attempt to open it can be made. The use of lock-picks seeks to mimic the relative positions of each ridge in a key, by the careful application of sideways force and dexterity, each pin is successively picked and eventually the lock will spring open. One can sometimes open simple locks by simply *scrubbing* the tops of these pins. Attempting to pick more advanced locks like double-ridged keys, requires the same basic principle, but a brace may be required to *fix* the position of one set of pins, whilst you attend to picking the other side.

One may also have the option of performing an illegal entry through the use of a pick gun, which automates the picking process; or indeed using a set of locksmith master keys. Another clandestine operation specialty is getting one's hands on the original set of keys for a brief moment, and placing it into a hidden wax mould in one's pocket - afterwards recreating of the key through the sculpting of an aluminum blank.

Illegal Entry Continued...

Cars are sometimes required to be entered, the easiest way is to identify the car, and get a set of duplicates for that particular model. If time is a motivating factor, one can use a slim-jim, a long rod device designed to reach into the window cavity and pull the lock open internally (although measures have been taken in recent years to prevent such access).

Electronic security devices (on cars and buildings) present a far more formidable target. Yet, if one works methodically and knows the relative weaknesses of each device, one can manipulate the surroundings to defeat the protection. Thus, laser trips can be identified with a fine spray, one can use computerized equipment and attached cables to decode and transmit jamming electrical pulses to open timed electronic locks, and even identify passwords. One can also avoid cameras by jamming signals or interfering with cabling to include looped signals of vacant corridors.

Special Operations forces tend to use more explosive methods for gaining access to secure locations, like using shaped charges on walls to blow a hole in it, the use portable rams to knock down doors or abseil down/climb up to less protected areas of a buildings.

MARTIAL ARTS



The basic philosophy of all martial arts is usually a combination of self-control, awareness and harmony with nature. Depending upon the school (Ryu) of the martial arts there may be some philosophical element based around the likes of Buddhist, Shinto or Zen philosophy: usually delineated by the -do (philosophy) prefix, or the -jutsu (techniques of fighting). There are generally two different approaches to the art form, one being about hard-contact blows

delivered with strength and power, and soft-contact, which generally seeks to use an opponents strength against him/her by supple sideways, evasive techniques.

Because of the multitude of styles drawn from all over Asia, here is a basic summary of some of the major forms...

Aikido: (Japanese) The defensive system, which seeks to use the assailants force against them by a series of sideways movements, throws and locks; which rarely involves hand-to-hand engagement.

Full Contact: (American) The form of Karate popularized by Mike Anderson in 1974 as a spectator sport (after the popularity of *Bruce Lee* movies), which doesn't seek to protect it's participants from injury from its full-contact nature. Generally, denoted for its reliance upon absolute force in delivered blows.

Hapkido: (Korean) An eclectic mix of offensive/defensive styles built around kicks, punches, locks and throws.

Judo: (Japanese) The sport derived from non-violent techniques focussed around maintaining balance and using throws to disable your opponent.

Ju-jitsu: (Japanese) The technique, which has changed considerably since the days of the Samurai and Bushi (warrior) of feudal Japan, now known more as a defensive sport designed to anticipate and disable an opponents attacks by balance and self control. Historically being a series of high-risk movements designed to violently disable an armed opponent quickly.

Karate-do: (Chinese) The art of the empty hand is a philosophical system devoted to maintaining control and harmony, the technique revolving around attacks by kick and punch, without the need to resort to grappling.

Ken-jutsu: (Japanese) The warrior art of the sword is the historical version of the non-violent sport of Kendo, The original combat system employed by the Bushi and Samurai.

Kung Fu: (Chinese) As in the mandarin word Wushu for *stop-fighting*. Kung Fu is actually a wide selection of styles; from Drunken monkey (Drunken Master) which seeks to disorient opponents through unnatural moves, Taiji Quan which is softer and flowing, through to the more acrobatic styles popularized in the West through Kung Fu films.

Kyudo: (Japanese) The way of archery seeks to engender a spiritual understanding of the noble weapon of the bow, and also its use on horseback

Kalaripayat: (Indian) The unarmed and armed techniques, which are not dissimilar to Karate.

Ninja: The development of Ninja in the Heian Period (794-1185AD) of Japanese culture around the mountains of Kyoto is a curious one, despite the formal society seeking to preserve order and respect for its social elite, *non-persons* such as the ninja could be employed by a Daimyo (clan head) to achieve strategic aims by assassinating a competing clan's social elite. Today, a large industry has developed out of training Westerners in the art of the Ninjutsu.

Various skills taught including; the art of scaling walls, swimming silently, concealment techniques, disguise, the use of rudimentary poisons, the use of chemistry (creating smokescreens), voice and hand signals, the psychology of torture, and the use of major ninja weapons (katana, nunchaku, ko-ugi/dagger and shuriken). Such skills, are still of use in modern espionage and special operations, as many triads and Eastern governments still employ their skills in hits and assassinations.

Surveillance

The life of a watcher is often long and tedious. The many hours devoted to following a subject may end up being a false lead. Obviously, it helps to maximize your skills of detection and make sure every movement is watched, interpreted and recorded.



Often the surveillance expert's first job is to bug the target's residence. From mounting hidden cameras in everyday objects, to putting in microphones around the window frames, or setting up an OP (observation post) unit across the street from the residence. The operative might even install a wireless device between the computer keyboard and CPU (computer and phone-lines) to pick up typed messages (or transmissions received). Of course, the bugging

of the telephone is an option, although today it is far easier to just use the computer exchange at the telecommunications network headquarters (such as Britain's G.C.H.Q using *System X* intercept system on British Telecom's exchange).

The use of high-powered lenses, night scopes or infra-red goggles might be needed to maintain eyeball (visuals) on the target. It is often necessary to take steps to ensure the surveillance position isn't compromised, by making sure the entry point of the OP isn't accessed by the general public, and that any equipment can be readily disguised or hidden.

Following a moving target adds further complication to a surveillance operation, usually agencies deploy a number of people in cars and on foot (or even in helicopters far out of sound range, but not visual). One of the more complex tasks of surveillance is making sure that at anyone time the target is in visual range (*eyeball*), this is usually achieved by coordination of the movements of a number of agents, via hidden wireless communications (hidden ear-piece and microphones on lapels etc). The officer rarely tracks the individual for more than a couple of blocks before another operative will intercept the suspect and continue the pursuit. All transmissions are usually encoded, as to not compromise the operation.

Surveillance Continued...

In surveillance operations, cars usually maintain contact by being *ahead* of the target vehicle, instead of trailing behind - being far less obvious to the suspect. However, other training methods specify that 3 cars should follow the target (2 out of visual range) – gradually changing over to take the lead.

Some operatives on foot are routinely picked up by operational vehicles and transported to other points, to continue on foot after the target. With a quick change of clothes and possibly the application of a fake beard, they are ready to rejoin the surveillance operation.

Another form of surveillance of a more military nature is the use of satellite imagery to keep records of a foreign country's infrastructure (armaments, economic units, troop movements). The deployment may also involve the use of UAV (unmanned aerial vehicle) aircraft to get a closer inspection. Such records tend to find their way into the hands of intelligence and military agencies in times of need.

Bodyguards are highly trained in such surveillance techniques, as avoiding developing situations is generally preferable to a firefight.

SURVIVAL

The development of survival skills is of crucial importance to all soldiers. An individual can get separated very easily in a war zone, your division only needs to be a 100 meters away for it to be potentially difficult to be reunited with your platoon or unit. Survival training incorporates all the basic skills including to survive including; lighting fires, building shelters, finding edible foodstuffs, trapping animals, finding clean water etc. Survival also incorporates the knowledge of fighting and evading capture in different environments (jungles, arctic regions and deserts). In special-forces operations, one could potentially be dropped off anywhere in the world and have to rely on one's survival training.

Jungle environments present problems such as claustrophobia and the need to be alert to close-quarter combat opportunities for the enemy; plus defending against a multitude of insects, the travails of rotting feet and clothes (and the ever present sound and smells of nature). Arctic environments present problems of finding food

sources, building appropriate shelters and generally staying warm (frostbite and sunburn). Whilst desert environments generally require attention to ways of avoiding direct sun exposure, finding water and foodstuffs.

It is even possible that one might specialize in a particular environment, especially if one is a local paramilitary fighter.

WEAPONS MILITARY

Most hand-held firearms can be used by the inexperienced, there are however a whole class of military weapons including; howitzers, anti-aircraft guns, cannons and rocket launchers that need some degree of understanding of their potential use.



There are a number of factors to take into account when firing larger ballistic weapons including...

Range: Calculation of the correct elevation of the shot

Cant: A weapon or vehicle may be at an incline requiring adjustments to targeting

Crosswind: At long ranges adjustments need to be made for variable wind effects

Barrel Droop: It may seem inconsequential but most tank gunners know the importance of keeping track of the sagging effect generated by heat on large smoothbore guns

Barrel Wear: This can also lead to poor performance of the basic mechanisms

Ammunition: Different types of ammunition have different ballistic characteristics, which needs to be taken into account in firing

Note: Some more advanced tanks like the United States *M1Abrahams* have computerized laser ranger finders, ballistic computers and fire and forget systems – which always automatically calculate the effects of wear, cant, ammunition and range

6. GAME MECHANICS

In roleplay games like *theSpookEngine* at various times dice are used to decide how well a character performs a set action. For the sake of continuity, Mr.Sutherland (and his intelligence partner, Mr.Stamp) will be our agents in the field.

Mr.Sutherland is busy staking out a suspect's apartment; he is particularly good at Surveillance, however, as in real life, he cannot be expected to be eagle-eyed at all times. At this point of time, our Games Master needs to determine whether he was observant at the time a vital incident took place in the apartment.

The basic way we determine this is by rolling 10-sided dice. Mr.Sutherland (*as per his character sheet*) has 3 ranks in Awareness; therefore he rolls $3xd10$ dice, plus an additional $2xd10$ default dice (it is assumed everyone has some basic ability).

Dice Roll	Counts as x successes
1	-1
2-6	0
7-9	1
10	2

The player firstly rolls 5 dice for *Awareness* ending up with 10,7,1,1,2 – which calculates out to be 2, 1, -1, -1 & 0 = 1 success all up. On most occasions, 2 successes would ensure that Mr.Sutherland didn't miss seeing the suspect checking his email - through the aid of his trusty telephoto lens. On this occasion, it is deemed Mr.Sutherland must have dozed off at an important time somewhere around 3.03am and who could honestly blame him. What is important in this case is he didn't actually *see* the activity taking place. Never mind, if Mr.Sutherland has set up his video surveillance gear just right, he might well have recorded the incident.

The Games Master will roll the result using Sutherland's Surveillance skill, with 1 less dice this time around (*Mr.Sutherland only has 2 ranks in this skill*) equaling $4x10d$. The Games Master rolls 10, 2, 3 & 7 = 3 successes on his behalf.

It is assumed that Mr.Sutherland has managed to set-up the video camera correctly and it is correctly focused. At a later time when Mr.Sutherland plays back the footage he may see the email correspondence taking place. Hopefully, the time between observing the incident on playback and the time of the email hasn't endangered the operation.

Note: The difficulty of the objective is determined by the Games Master, some particularly advanced tasks might require a higher degree of success.

ZERO SKILL RANKS: All individuals get default $2xd10$ dice to play with when attempting any skill check - even if the player has not put any ranks into it. There is still a chance of success that a novice driver will successfully drive into a car and ram it off the road. Although, the chances of doing so successfully are limited – but having *zero* ranks doesn't mean it can't be attempted.

CONTESTS OF SKILL

Sometimes, events conspire to pit you against another individual. Your ability to succeed in the task is in direct relationship to an individual seeking to stop you doing so. You maybe attempting to get away from being tailed by another vehicle. Under such circumstances, each side rolls their allotted number of dice (*as per their skill ranks*) - the side achieving the highest number of successes will succeed.

Here are some further examples that may pop up in game play...

Shadowing Someone: the follower's Stealth against the Suspect's Awareness
 Jamming Signals Intelligence: The Agent's SigInt versus the Terrorist's SigInt
 Lying To Someone: The Suspect's Fast Talk versus the Agent's Sense Motive
 Forging Documents: The Agent's Forgery skill versus the Border Commandant's Awareness
 Intimidating Someone: The Agent's Interrogation versus the Suspect's Willpower
 Dodging An Attack: The Agent's Athleticism versus the Suspect's Hand-To-Hand

FAILURES & BOTCHES

Every so often, a player might get a poor result from rolling skill checks. Assuming the individual hasn't got below *zero* - under most circumstances, the individual has attempted the activity but hasn't succeeded in their task. If someone attempts to open a lock using a lockpick gun (Illegal Entry roll) and they have achieved exactly *zero* successes, they have spent some time attempting the task and failing; but they have not been unfortunate enough to trigger an alarm or broken off the lockpick in the door. The individual is at liberty to try opening the lock again. Of course, if they *had* achieved a negative result, they may well have broken the lock, or set the alarm off. Repeated failed attempts wastes time, and may also be detrimental to the secrecy of the operation.

TAKING YOUR TIME

The chances of succeeding in some tasks can be considerably improved by taking one's time. The chances of say, producing an accurate fake passport can be dramatically improved if one has weeks to prepare in advance (*and access to materials, printing presses and computer-aided drafting equipment*). Ultimately, the Games Master will adjudicate under these circumstances as to whether the extra time will improve the chances of success.

Note: Some tasks like disabling a timed bomb, stanching massive blood loss in a patient, or combat actions cannot be improved by taking one's time.



7. COMBAT

Combat skills work similar to that of any other skill. To hit someone, one rolls his or her Hand-To-Hand, Weapons Firearm, or Weapons Military combat skill.

COMBAT ROUNDS

Combat rounds last 1 second. Any action the Games Master believes that can be accomplished in that time: like firing a gun, reloading a pistol, or diving for cover can occur. The Games Master may adjudicate that complex actions may extend over a number of rounds (*like First Aid*).

Example: Mr.Sutherland is determined to whack a suspect, before the suspect gets the opportunity to do so to him. He rolls $3 \times d10$ ranks in Hand-To-Hand (plus his $2 \times d10$ default dice), giving him a grand total of 5 dice to roll. He rolls 1,10,3,10, 8 = 4 successes (-1,2,0,2,1) - which means Mr.Sutherland hits the target (2 successes generally being the target number on most occasions). As Sutherland used his fist, this translates into the same amount of damage. Meaning the suspect loses 4 points of Vitality.

WHO GOES FIRST?

In combat situations, generally both parties have the opportunity to be the protagonist, that being, either party is at liberty to take the initiative and act first. Once an individual has acted, the remaining individuals can react in the order calculated by each individual's Athleticism ranking. This occurs until every individual has had an opportunity to participate, thus ending the round. The protagonist will then go first in the next round.

The extension of this principle is if a party in advance calculates a clear signal to act in a particular way – then all individual's can act at once.

If the target is blissfully unaware of the protagonist, this is counted as being *surprised* – meaning they do not get the opportunity to act in the 1st round. Which is a major disadvantage that can possibly prove fatal.

In *theSpookEngine* combat system an individual has the opportunity too either attack, grapple or dodge. In any round the individual can also walk slowly (*their Athleticism ranking in meters per a round*) without incurring a penalty to their roll. An individual can also attempt to sprint (*meaning they can travel an additional distance equivalent to an Athleticism skill check in meters – botches meaning they trip over*).

Example: Mr.Sutherland has punched out a suspect in the first round, following his surprising outburst - in the 2nd round he punches again (3 successes), the suspect (*with an Athleticism ranking of 3*) rolls to dodge (*rolls Athleticism*) and achieves 4 successes, thus managing to avoid the blow. His two friends (with Athleticism ratings of 2) prepare to grapple Mr.Sutherland...



GRAPPLING

To grapple an individual, one needs to make a successful Hand-To-Hand roll (H2H). In addition, up to 2 other individuals may attempt to do the same. The target may wish to use their round action to break out of the grapple (*opposed H2H check*), or seek to dodge the individual (*opposed Athleticism vs H2H check*). In the next round it is assumed that the aggressor/s have managed to get their hands firmly on the target (*all higher H2H checks*), now the aggressor/s each need to roll Strength checks (*adding together their total results*), the grappled individual also makes an opposed Strength check. If the target of the grapple rolls higher, s/he breaks out of the grapple; if the aggressors win, the target is pinned (*or unable to act further that round*). Unless, the individual is handcuffed or tied up that round, successive Strength checks will be need to be made to keep the individual pinned.

Example: Mr.Sutherland is successfully grappled by the suspects close friends in the 2nd round, in the 3rd round Sutherland rolls 4 successes on his opposed Strength roll, versus the combined 6 successes of his assailants. He is unable to act freely in that round. The original suspect now produces some handcuffs from his belt - in expectation of the same happening next round...

BLUNT WEAPONS

In *theSpookEngine* blunt weapons are treated slightly differently to sharp weapons (*like knives, swords et al*). Although they roughly do the same amounts of damage, sharp weapons have additional properties (*which will be dealt with later...*).

BLUNT WEAPONS

Category	Example	Max Multiplier
No Weapon	Bare Fists, Kneecap, Forehead	x1
Light Weapon	Small Hammer, Knuckle-Dusters, Small Lump of Wood	x2
Medium Weapon	Length of Chain, Jemmy, 4x2, Baseball bat	x3
Heavy Weapon	Large Metal Bar, Concrete Slab, Large Crowbar	x4

Note on Heavy Weapons: Such large weapons require a Strength skill rank of 3 or better to wield effectively (to do their additional levels of damage).

Example: The suspect grins as Mr.Sutherland anticipates being handcuffed. An expletive is uttered by the suspect and punches out at Mr.Sutherland with his other hand (*which has knuckle-dusters on it*). The Games Master rolls for the suspect and achieves 5 successes, the Games Master had determined that the incapacitated target increased the chances of success (*meaning the suspect only needed to achieve 1 success overall*). As it stands, the suspect could have theoretically done up to x4 additional damage – but x2 is the *maximum* additional damage possible with knuckle-dusters. Still, 5 successes at x2 additional damage = 10 points of vitality damage - means Mr.Sutherland has a serious gash across his face.



MARTIAL ARTS & KNOCK-OUTS

OPTIONAL RULE

theSpookEngine allows for some flourishes within its combat system to account for specialist types of Martial Arts training techniques. It is conceivable that one well-landed blow could incapacitate, or even kill its victim.

The following rules apply for each attack (*armed or unarmed*)

5 to 6 successes – The victim is incapacitated for a short period of time (*d10 minutes*)

7 or greater successes – The attacker has the choice to incapacitate or kill the opponent outright

Example: Mr.Sutherland now has handcuffs clasped upon his wrists (*behind his back actually*), the suspect's accomplices are feeling slightly pleased with themselves, momentarily releasing their grip (*failed opposed Strength checks*). Mr.Sutherland although slightly restricted (*the Games Master increases his attack target numbers by +1 successes, 3 being the new target number*) kicks out at the suspect and achieves 6 successes (*enough even with the additional +1 success needed*) which is judged to knock the suspect into an unconscious stupor (*1d10 minutes*).

VITAL POINTS

The various disciplines of martial arts have known the vital points of the human anatomy for centuries. In the Japanese tradition *Atemi* (vital blows) aim to hit the *Kyusho* (vital points) to incapacitate or even kill an opponent.

The following is a list of some of these areas...

HEAD

Point of Jaw, slightly to side – Unconsciousness

Fontanelle or Bregma (fracture the fuse points at top of head) – Unconsciousness

Eyes, eye orbits and cheekbones – Loss of Vision + Balance

Between Eyes – Death

Below Nose – Fracture + Loss of Consciousness

Mastoid Process (raised bone behind ears) – Death

Carotid Arteries (artery down neck) – Loss Of Consciousness

Larynx – Loss Of Consciousness

Seventh Cervical Vertebrae – Loss of Consciousness

BODY

Front

Testicles – Loss Of Consciousness (+ Death)

Navel – Loss of Consciousness

Solar Plexus – Loss of Breathing Capacity

Base of Sternum – Cardiac Trauma

Between 4th & 5th (5th & 6th) Ribs – Loss of Breathing Capacity

Floating Ribs – Nervous System & Respiratory Paralysis

Back

Base of Shoulder Blades – Loss of Breathing Capacity

Between Shoulder Blades – Loss of Consciousness

Kidneys – Nervous Shock

Coccyx – Lesion of the spinal cord + Paralysis

Below the hip/thigh – Sciatic Nerve Damage

Note: This table may also be used as a handy reference for any torture or medical treatment during play

DODGING

In combat, an individual needs to devote the entirety of his/her round to avoid being hit. They can only seek to avoid one attack. Dodging is more effective if the individual is behind cover - adding additional benefits to their efforts (*see Cover & Personal Protection*).

Example: Elsewhere, Mr. Stamp (*Mr. Sutherland's intelligence partner*) has been delayed from rendering assistance by becoming embroiled in a gunfight. A man in a baklava has just entered the hotel lobby and fired in his direction. Mr. Stamp, not being an idiot, has seen his reflection in one of the lobbies mirrored surfaces (*successful Awareness roll*) and dives (*dodges*) behind the hotel's front desk. Mr. Stamp succeeds in diving, being an opposed Athleticism versus Weapons Firearms check to avoid being shot in the 1st Round.

COVER & PERSONAL PROTECTION

In gunfights it is generally advisable to make use of any cover available in the vicinity, *the Spook Engine* (*as seen later*) is a particularly deadly system. If you seek to engage in gunfights in open areas, you'll be lucky to see Xmas.

HARD COVER

Hard cover is defined as any surface of sufficient hardness (*or flexibility; as in bullet-proof glass, or thick rubber matting*) to absorb the particular type of bullet fired. Although the surface may wear out over time for game purposes it is seen as an impenetrable barrier (*things such as reinforced walls, metal shielding or thick concrete are unlikely to be penetrated by handgun fire*).

For targeting purposes, the level of hard cover is apportioned into 5 levels of protection

	Surface Area Coverage	Additional Success Modifier
Level 1	01-30% coverage	1 success
Level 2	31-60% coverage	2 successes
Level 3	61-90% coverage	3 successes
Level 4	91-99% coverage	4 successes
Level 5	100% coverage	<i>Cannot Be Hit</i>

OPTIONAL RULE

Modern Kevlar Armored vests can withstand most forms of pistol and SMGs (sub-sonic) rounds; smoothbore firearms achieve substantially lower speeds than rifled weapons, meaning their penetration ratios are lessened. This optional rule allows for some absorption of these bullets at a Hard Cover rating of 1. If the attacker achieves the exact unmodified target successes, the shot is effectively absorbed with no loss of soft cover rating to the Kevlar vest. It is important to note that some forms of modified bullets might invalidate these claims (like hollow point bullets).

SOFT COVER

In most cases, finding secure cover can be extremely difficult. Very few surfaces in reality can be said to truly provide the strength to stop bullets. The Controller will secretly assign a *percentage barrier rating* to any such surface (i.e leather chair, wooden cabana bar, plywood door). Thus, a sturdy looking sofa may stop roughly 15% of bullets on average penetrating it (*this calculation takes into account the relative size of the object for hiding purpose, and the sturdiness of the material*).

The same principle is applied to body armour in the game, a Kevlar vest has a barrier rating of 40% - meaning that if an individual is hit by a bullet, there is a 40% chance it won't breach the armor (*assuming the assailant isn't making a Called Shot*)

Gradually, the armor rating of objects will decrease as they are put under stress (*it is generally on a pro rata basis of 1 point of damage absorbed for 1% reduction in soft cover rating, generally kept track of by the Games Master*).

If an individual is wearing personal body armor and firing behind soft cover, the maximum percentage of coverage that they can be afforded is 85%. This limit represents the level of visibility needed to fire a weapon effectively, and the level of danger this enterprise entails (*as personal body armor rarely affords solid protection to the head*).

Example: Mr.Stamp has dived behind the mahogany front desk, as impressed with its design as any novice art critic would be under fire. The gunman dives behind a pillar in the reception area. After a couple of seconds both attempt to utilize their cover and fire upon their opponent. The Games Master secretly assigns ratings to each source of cover and the agent and gunman fire. (The Games Master has determined the pillar offers a hard cover rating of 3, meaning Mr.Stamp will need an additional 3 successes to hit the gunman. Meanwhile, the large desk has been assigned a soft cover barrier rating of 30%, with the addition of Mr.Stamp's kevlar vest rating of 40% = he has a 70% chance of not being hit this round.

Unfortunately, for Mr.Stamp the canny gunman fires a machine pistol *into* the desk (3 successes) and the Games Master rolls a percentage dice result of 83% (2x10d), meaning Mr.Stamp has been hit (in this particular case, *the damage will be apportioned equally to the desk and Mr.Stamp*). He isn't happy...

OPTIONAL RULE

CALLED SHOTS

On occasions the individual may wish to avoid the uncertainty of firing at a target behind soft cover, and may wish to hold out until they emerge from that cover to retaliate - or just to hit a vital part of the anatomy. The chance of hitting a particular part of someone's anatomy needs an additional 4 successes to be successful. This type of action needs to be communicated to the Games Master *before* the action is undertaken. Finally, called shots are only possible with pistols or rifles.

INJURIES & LUCK

Stabbing or shooting people in real life is deadly, *theSpookEngine* reflects this in the loss in Vitality & Critical Wounds. Normally, blunt weapons (*as seen above*) do damage equivalent to the number of successes times the additional maximum damage multiplier (calculated by *additional successes above the target number*). Slashing and stabbing weapons also do damage in this basic way, but there is an additional complication called *Critical Wounds*.

CRITICAL WOUNDS

Critical Wounds are the amount of successful hits from piercing, slashing or firearms shots that the body can take before the individual's *Luck* runs out. As such, the player will not know just how far they can push their luck. At the start of each adventure (usually before the 1st combat), the Games Master will secretly roll a figure (for each player character) based on that individual's Constitution ranking. Using the following table, each character will be secretly assigned a figure (*the Games Master rolls a singular d10*).

0	Always 1
1-2	1-5=1 6-10=2
3-4	1-3=1 4-6=2 7-9=3 10=5
5-6	1-3=1 4-6=3 7-9=5 10=6
7-9	1-2=1 3-4=3 5-6=5 7-8=6 9-10=7

Mr. Stamp has a Constitution of 5, the GM rolls a d10= 5
Our agent can successfully take 3 bullets today, before the 4th is potentially fatal

This figure is the amount of Luck the individual will carry into each combat round throughout the adventure (*assuming he hasn't had time to recuperate in hospital*). The player will never know the result, so tactically avoiding firefights will seriously extend the characters' life.

Example: If we can remember Mr. Stamp's plight. He was just shot in the shoulder by a gunman (5 successes). Mr. Stamp has a Constitution of 5, meaning he has 60 Vitality points (10 base points + (5 ranks x 10)= 60 points). As above, the Games Master has rolled Mr. Stamp's Luck, which amounts to 3. Mr. Stamp can survive 3 bullets (+ *stab wounds*) before his Luck runs out today.

Of course, Mr. Stamp will only ever find this out by taking that 4th bullet (*stab wound*).

For now, he takes 5 successes x 2 (max pistol multiplier) = 10 Vitality points loss + 1 critical wound. There is a cry of exasperation...

DEADLY WEAPONS

AUTOMATIC WEAPONS & LARGE PIERCING WEAPONS

Piercing weapons (*as explained above*) also cause *Critical Wounds*. The following is a table devoted to the maximum multipliers for each

PIERCING WEAPONS

Category	Examples	Max Multipliers
Light Weapon	Knife, Flick Knife, Garrote*	
	Razor, Stick, Pool Cue, Shuriken	x2
Medium Weapons	Small Sword, Sai, Katana, Spear	x3
Heavy Weapons	Trident, Large Sword, Heavy Spear	
	Sharp Large Metal Pole	x4

Note on Heavy Weapons: Such large weapons require sufficient levels of Strength to wield effectively - to do their additional levels of damage (Strength rating 3 or better is needed).

OPTIONAL RULE

*Garrotes: A garrote once successfully wrapped around an individual's throat does an additional critical wound for every round the assailant wins an opposed Strength roll (although the assailant can be thrown off using Martial Arts skills).

AUTOMATIC WEAPONS

Some guns do not require the cocking of the hammer, being automated to allow for constant firing until the clip is empty. Thus, in any one round they may burst forth a number of bullets. In game terms, this distinction has been put to one side (*as most modern spy agencies/special operations units would have access to automatic weapons*). However, there are some automated rifled weapons like machine guns, which fire so many bullets per a second to justify an additional damage quotient.

For practical game purposes each sub-machine gun (machine pistol) or machine gun can fire up to 3 bursts of bullets before they need reloading (reloading requires 1 round). It is quite difficult to use a sub-machine gun - the expense paid for the luxury of additional bullets, is the lack of general control over accuracy.

The following table seeks to streamline the damage process for firearms.

FIREARMS

Category	Examples	MaxMultiplier	Burst
Pistol	Automatic Pistols, Handguns	x2	
Rifle	Sniper Rifles*, Hunting Rifles	x2	
Shotgun	All Gauges	x3	5ft arc
Sub-Machine Guns	SMGs	x4	10ft arc
Machine Guns	Military Grade	x6	20ft arc

Note: SMGs + Machine Guns can fire individual bullets as well at the normal Max Multiplier of x2.

Each additional success on a burst weapon counts as an additional *Critical Wound* (*although the vitality loss is calculated the same, each additional success counts as an additional bullet striking the person*).

Example: Mr. Stamp with blood gushing out of his shoulder isn't happy, he rips a concealed Uzi SMG (*sub-machine gun*) from under his jacket and swings it above the desktop at the gunman (*crouched behind the marble column*). His 6 successes ensure a spray of marble and bits of the gunman's anatomy go flying everywhere (*he needed 5 successes, as the gunman was behind hard cover*). The Games Master determines 2 bullets rip into the gunman, causing (*6 successes x2 max multiplier*) 12 Vitality loss & inflicting 2 Critical Wounds (*1 per a bullet*). The gunman is out of *Luck* (*he could only take 1 bullet – his daily prayers haven't been answered*), despite the calculated damage not being enough to knock him unconscious through blood loss (*Vitality 50 – (6 successes x 2 max multiplier) = 38 Vitality left*), he has been shot in a vital area (the Games Master has decided the chest area). Unless the gunman receives urgent medical treatment, his life may soon be over...

OPTIONAL RULE

Sniper Rifles: A trained sniper using a sniper rifle on an unaware victim does an additional critical wound for every additional + 1 success above the set target numbers (*similar in concept to SMGs and Machine Guns*). This simulates the accuracy and skill required to use such deadly weapons.



DYING & FIRST AID

If an individual has received a potential fatal wound, or been reduced to *zero* (or below) vitality points through blood loss, they will need urgent medical assistance. The following table sets out just how much time may remain them if they don't receive professional care.

Trauma Level	Time Remaining Before Death
Zero Luck	Constitution + d10 hours
Zero Vitality	Constitution + d10 hours
-1 or -2 Luck	Constitution + d10/2 hours
-3 or -4 Luck	Constitution + 2xd10 minutes
-5 Luck	Instant Death From Trauma

FIRST AID

A trained medic can render temporary assistance in the field (*assuming they have a first aid pack handy*). For each Critical Wound (*bullet hole or stab wound*) a medic can attempt to render assistance once. The amount of successes achieved directly correlates to the increase in the patient's Vitality (*up to the total damage sustained in the hit*). If the medic achieves 5 successes or more, the medic has managed to stitch up a Critical Wound and/or remove the bullet (*meaning it is no longer considered a Critical Wound for Luck purposes*).

To perform such functions during a combat round, the medic and patient must not be hit by a bullet, or be present in a hand-to-hand threat zone; such activities require 10 combat rounds to complete work on a single wound. Once a wound has been treated by a medic, the medic believes thoroughly he or she has done *everything* in his or her power to staunch the blood-flow (*i.e they cannot make repeated attempts to treat the injury in the field*) – although they do recognize that serious medical care is still needed.

A medic working in the field doesn't have the ability to fix up a near fatal injury; such Critical Wounds require the services of a professional surgeon, with access to serious medical equipment; hopefully in a hygienic hospital.

Example: Mr. Stamp sensing that his assailant is sprawled out on the ground near the marble column whilst clutching a pistol to his bloodied chest is now no longer a threat. He sits up against the reception counter and finds a medical pack. He examines the nagging pain in his right shoulder and relieves it by injecting some painkiller, carefully attempting to remove the bullet and bandaging himself. He rolls 5 successes on his First Aid skill, meaning he has regained 5 lost Vitality points (*he could have healed all his 6 lost points if he was extremely lucky*). He has also managed to patch up that Critical Wound (*meaning his luck will hold out for just that little longer*). After a pause to contemplate his own sorry situation, he realizes his partner (*Mr. Sutherland*) is nowhere to be seen...



COMBAT MODIFIERS

FIRING AT DISTANCE

It is not uncommon in battlefields for combat to take place over a sizeable distance. Whereas pistols have relatively short effective ranges, rifled weapons can shoot anywhere up to 4 kilometers in distance.

The following table seeks to determine the relative modifiers for the use of sub-machine guns (machine pistols), machine guns, rifles or non wired-guided rockets at distance.

Distance	Modifier
01 to 10 meters	-1 modifier
11 to 30 meters	no modifier
31 to 74 meters	+1 modifier
75 to 100 meters	+2 modifier
101+ to range	+3 modifier

OPTIONAL RULE

The author loathes long lists of combat modifiers – preferring to rely upon the Games Masters wisdom rather than setting hard and fast rules. Admittedly, the system as presented here is sufficiently more structured than his previous co-authored roleplaying system – *Steal A Modern Crime Roleplay System* © to warrant a few.

So please consider the following list of combat modifiers as optional rules

Modifier	Successes +/-
Prone Individual	+2
0 to 10 meters with pistol	-1
Poor Light	+1
Near Darkness	+2
Point Blank	-2
Grappled Individual	-1
Intoxicated/Drugged	+1
Last 10 Vitality points	+1
Restricted Movement	+1

Note: All bonuses/minuses stack, minus rolled successes still indicating a botch



8. OTHER CONTESTED SKILLS

Training: Most intelligence and military organizations have a strict training regime, their lives are generally an alternating mix of training and operations. Depending upon the Games Master's campaign parameters, it may be practical to reflect these operational down times. Any skill that could be practicably learnt within the organizations general training structure should be accommodated. Existing skills can be enhanced, however any skill increasing beyond a rank of 5 requires a Willpower roll. Obviously, it is easy to master the basics, but the basics of mastery require burning the midnight oil. If the Willpower roll is in excess or equal to the new rank, the individual succeeds.

Example: Mr. Stamp determines to spend his spare time flipping through military weapon systems handbooks; he already knows quite a fair bit about military weaponry (Firearms Military of 5) - he rolls 6 successes on his Willpower, meaning he has applied himself particularly well in his spare time, down the range to achieve the next rank (*Rank 6*). It looks like someone else maybe feeling the HEAT next time.



9. THE EQUIPMENT DEPOT

EQUIPMENT PURCHASE TABLES

The following information should be adhered to in the purchase of equipment by players, as restrictions generally apply on military, scientific and surveillance equipment.

Availability: Some of the items included in the following tables are heavily restricted by governments, or are at the cutting edge of technologies not readily available for purchase by civilians (even resource poor government agencies for that matter). Each item may be given one of the following classifications.

GEN: Generally available for civilian purchase, although it may be difficult to source at short notice

MOD: These moderately advanced technologies are generally restricted in sale to civilians through government policy (although not for the right government agency). An agency of a lesser-developed country or groups may not have access to such technologies.

ADV: These advanced technologies are generally only available to premier intelligence and military agencies, they are generally items specifically designed to be used by the agency, and as such these technologies are not sold on the common market.

RES: Restricted by law, meaning it is available with the right permit (like a gun license, medical or construction license).

Black Market: Restricted goods may still be obtained on the black market at significantly marked-up prices, however, one will need to source a reliable contact before purchase.

Grey Market: The grey market refers to the phenomena of goods legitimately bought through wholesalers (using a license to purchase restricted good types) and then the goods are turned to illegitimate uses. An example is a construction company buying plastic explosives, which in reality is a front organization for a terrorist group. Other related scams include the purchase of diesel and fertilizer (to make bombs), the on selling of firearms, and the purchase and refinement of prescription drugs to make illegal narcotics.

C.I Rating: Items carried by individuals can not only weight a substantial amount, but can also be readily spotted when efforts are made to conceal them upon one's person. Each item is given a Concealment Index Ratio (see the Awareness skill for further details). This figure represents the potentiality to hide such items successfully (the higher C.I rating the harder it is to conceal).

Price: All figures are given in United States Dollars

Weight: All figures are given in Metric (kilograms)

GENERAL ITEMS					
Item Name	Description	C.I	Weight	Avail	Price
Attaché Case	Basic Model	n/a	4 kg		\$50
Cell Phone	Standard Call/SMS functions	0.2	150 gm		\$50
GPS Handheld	Basic civilian receive/tracker unit 10-20m	0.4	1 kg	GEN1	\$150
GPS Handheld	Military unit 1-2 meters accuracy	0.4	1.5 kg	MOD2	\$400
Pocket Knife	Basic Swiss Army Knife	0.1	100 gm		\$20
Sunglasses	Basic UV protection	0.1*	100 gm		\$25
Sunglasses Audio	Sunglasses with audio mic and transmitter	0.1*	150 gm		\$125
Sunglasses Video	Sunglasses with video capture/transmitter	0.2*	200 gm	GEN1	\$220
Wristwatch	Basic digital model	0.1	100gms		\$20

SURVEILLANCE & COMMUNICATION					
Item Name	Description	C.I	Weight	Avail	Price
PDA's	Standard USB output model	0.3	300 gm		\$400
Hand Radio	Walkie Talkie basic encryption	0.3	250 gm		\$75
Backpack Radio	Fixed unit, moderate encryption capable	4	5 kg	MOD2	\$250
Tactical Headset	SWAT operational, secured system	0.3*	200 gm	MOD2	\$200
Surveillance Headset	Ear piece, microphone	0.2	150 gm		\$100
CT-400 Special Ops Headset	Ear piece, noise reduction, body microphone, unit linked	0.4	450gm	MOD1	\$450
Sniper Command and Control System	Commander unit 5kg + \$5000	0.2	250gm	MOD3	\$450
Analog Scrambler	Basic scrambler, handheld	0.4	300 gm	GEN1	\$100
Computer Encryption Software	For installation on laptops, desktops	0.2*	150 gm		\$50
Non-Verbal Telephone Communicator	Telephone Unit	0.4	300 gm		\$75
Pocket Laser Communicator	Also IR flashlight	0.3	300 gm	GEN2	\$150
Underwater Communicator		0.3	200gm	GEN1	\$150
Voice Mask	Basic Electronic Voice Disguise	0.4	250gm	GEN1	\$200
Basic Function Voice Changer		0.4	200gm		\$100
Computer Aided Voice Changer	Advanced Digital Voice Deception	0.3*	200gm	GEN2	\$150
Basic Binoculars	x7 Zoom	0.8	1kg		\$100
Advanced Civilian Binoculars	x20 Zoom + tripod	0.8	1 kg + 500gm	GEN1	\$300
Military Binoculars	Various Different Features	0.8	1kg	MOD1	\$500
35 SLR Camera		1	1kg		\$750
MiniCamera		0.1	150gm		\$100
Wristwatch Camera		0.1	150gm		\$100
Rollover Camera		0.3	250gm		\$175
Digital Camera	+ 256 Meg memory stick	0.5	700gm		\$200
Periscope	Designed to fit cameras	0.5	450gm	GEN1	\$175
Audio Recorder	Basic Tape cassette in/out jacks	1	1kg		\$75
Mini-Surveillance Tape Recorder	Miniaturized model	0.5	700gm		\$125
Digital Recorder	Including 2x memory cards + bag	1*	1.5kg	GEN1	\$300
Audio Microphone	Basic standard model x3 + plastic case	0.6	500gm		\$75
Pinhead Microphone	Standard x3 pack	0.2	250gm		\$150
Contact Microphone	Single microphone in plastic slipcase	0.2	200gms		\$50
Long Range Microphone	Standard Model	0.4	250gm		\$75
Parabolic Microphone	Plastic case included	0.6*	750gm	GEN1	\$175
Laser Microphone	Plastic case included	1*	1kg	GEN2	\$275

Dosimeter	One use radiation detector badges	0.1	100gm	GEN1	\$25
Dosimeter Unit	Multi-use Handheld detector	0.4	300gm	GEN1	\$125
Geiger Counter		0.6	450gm	GEN1	\$200
Audio Receiver	Standard receiver unit	0.5	500gm		\$150
Video Receiver	Standard receiver unit	0.6	600gm	GEN2	\$200
Quad Switch Control Box	Standard 4 audio feeds	1.3	2kg	GEN2	\$300
Monitor Attachment	For use with video reception units (b&w)	0.4	500gm	GEN2	\$125
Scanner	Cellular phones, radio and short-wave	0.7	650gm	RES1	\$300
Wiretaps	Standard audio x3	0.4	150gm	GEN1	\$150
Telephone Recording Jack		0.2	100gm		\$75
Parallel Telephone Line Transmitter	Basic necessities minus laptop in plastic carrying case	1.4*	2.5kg	RES2	\$1500
Fax & Modem Taps	2x basic taps	0.2	150gm		\$75
Air Sonar	Basic Headset and belt-pack unit	0.6*	400gm	MOD2	\$450
Audio Bug	Basic set x3	0.3	150gm		\$75
Computer Bug		0.1	50gm		\$35
Video Bug	Basic set x3	0.2	100gm		\$750
Mini DV Camcorder	x10 Zoom + 2x DV tapes + carry bag	1*	800gm		\$300
Pro Mini DV Camcorder	x16 Zoom + 2x DV tapes + carry bag	1*	850gm	GEN1	\$600
Cellular Monitoring System	Briefcase enclosed system	1.7*	3.5kg	RES3	\$6000
DTMF Recorder/Receiver		0.4	500gm	RES2	\$1500
Electronic Stethoscope	Includes plastic carry case	0.4	450gm	GEN1	\$250
Endoscope	60 centimeter option	0.3	350gm	GEN1	\$1500
Antenn-Eye	Low light model + \$125	0.4	200gm	GEN2	\$200
Fume Sponge	Various sizes available	0.2	200gm	GEN2	\$150
Mail Security Spray		0.2	150gm	GEN2	\$30
Night Vision Goggles	Basic Civilian Model	0.4*	230gm	GEN2	\$150
Night Vision Viewer	Includes carry case	0.4	300gm	GEN2	\$175
Night Vision Pocketscopes	Includes carry case	0.2	150gm	GEN2	\$200
Night Vision Camera Attachment	For use with 35mm cameras or video cameras + leather carry case	0.3	200gm	GEN2	\$175
Weapons Sights	Available in standard sizes	0.3	200gm	RES1	\$150
Simple Infrared unit	Basic early design + carry case	1.6*	5kg	MOD2	\$1500
Modern IR Unit	Advanced miniaturized unit + carry case	0.8*	2.5kg	ADV1	\$3500
Light Intensification Unit	Carry Case	0.4*	700gm	MOD1	\$450
Thermographic Imaging Device	Weapon or goggle models available	0.5*	750gm	ADV1	\$1000
Passive Radio Bug	Large and smaller sizes available	0.4	500gm	GEN2	\$250
Photo Printer	Standard memory card ports included	1	3kg		\$250
TEMPEST	Standard modification of laptop or desktop	0.8	700gm	MOD1	\$450

Equipment					
Transmitter	Standard audio model x3	0.4	200gm		\$120
GPS Vehicle Transmitter		0.6	300gm	GEN2	\$250
Standard Cellular Phone		0.3	150gm		\$100
Video Transmitter	Singular	0.1	50gm		\$100
Infrared Transmitter	Both audio and video usage	0.2	75gm	GEN2	\$200
Cellular Phone Immobilizer		0.8	2kg	RES2	\$1600
Countersound Generators	Usually fixed units	1.6	6kg	MOD1	\$5000
Sonic Bug Stomper		0.4	600gm	GEN3	\$600
Radar/Laser Detector		0.5	800gm	MOD1	\$800
Vehicle Monitoring System		0.7	450gm	GEN2	\$500
CCD Video Camera	Black & White \$90 Color \$225	0.1	200gm		\$90
Concealed Portable Minicam	Usually fitted to personal effects	0.4	200gm		\$100
Concealed Video Camera		0.4	250gm		\$100
Wireless Dog-Cam	Fitted to dog harness	0.5*	350gm	GEN2	\$150
Surveillance VCR		1.5	5kg	GEN2	\$350
Mini VCR		0.6	3kg	GEN2	\$350

SPECIAL OPERATIONS KIT

Item Name	Description	C.I	Weight	Avail	Price
Dark Clothing	Head to Foot dark green coveralls	0.4*	700gm		\$75
Reversible Clothing	Different styles available to match scenario	0.4*	700gm	GEN1	\$100
Camouflage Suit	Available to match various terrain	0.5*	800gm	GEN1	\$125
Ghillie Suit		0.7*	1.5kg	GEN2	\$200
Infrared Camouflage Suit	Head to toe sealed environmental suit	0.6*	1.3kg	MOD3	\$500
Rope	1" x 10 meter length	0.5	2kg		\$45
Grappling Hook	Rubberized exterior	0.4	1kg		\$75
Assault Ladders	Per 10 meter sections	0.8	1kg	GEN3	\$250
Scaling Set	Spikes, ninja claws, suction caps + bag	0.4*	1.5kg	GEN2	\$150
Abseil Harness		0.4	1kg	GEN1	\$150
Ascender/Descender		0.3	1kg	GEN2	\$150
Line Thrower	Includes gas propellant canister	1	2.5kg	GEN2	\$275
Go-Bar		1.2	3kg	GEN3	\$100
Lockpicks	Standard set + plastic satchel	0.2	200gm	GEN2	\$100
Bolt Cutters		1	3kg		\$75
Glass Cutters		0.4	600gm	GEN2	\$55
Lockpick Gun	Average Quality	0.3	400gm	GEN2	\$60
Hand Ram		1.2	8kg	GEN3	\$125
Hydraulic Door Opener		1.4	6kg	MOD1	\$250

Pocket Jet Torch	Includes 2x gas canisters	0.6	1kg	GEN2	\$300
Tactical Cutting Torch		1.4	4kg	MOD1	\$450
Electronic Lockpicks	Varying in complexity	0.8	700gm	MOD2	\$1000
MOBY system		0.8	1.6kg	MOD2	\$2500
Mini-Parachute		1.4	8kg	GEN3	\$1400
Ram-Air Parachute		1.8	12kg	GEN2	\$1200
GPADS system	System obviously needs back-up air support	2.5	50kg*	ADV2	\$75K
EXINT Pod	System needs air deployment	3	60kg*	ADV2	\$100K
Dry Suit		0.4*	2kg		\$250
Scuba Diving Tanks	2x 60 minute tanks	1	12kg		\$350
Rebreather Unit	Lengthens dive time x2	0.4	800gm		\$200
Flex Cuffs	Pack of x25	0.3	600gm		\$60
Metallic Handcuffs		0.2	600gm		\$35
Bushmaster		0.3	1kg	RES1	\$40
Escape Boots		0.4*	1kg	GEN2	\$80
Fake Wounds	2x explosive pack	0.3	600gm	GEN3	\$75
Brass Catcher	Various sizes available	0.3	500gm	GEN2	\$65
Telescopic Sight	x4 to x8 zoom capabilities	0.2	400gm	GEN2	\$85
Targeting Laser Sight	Various sizes available	0.3	500gm	GEN2	\$120
Laser Rangefinder		0.4	700gm	MOD2	\$450
Laser Target Designator		0.6	2.7kg	ADV1	\$1600
Heads-Up Display Unit	Infantry unit	0.8	2.6kg	ADV2	\$16k
Sound Suppressor	For muzzle sound suppression	0.3	450gm	MOD1	\$200

EXPLOSIVES

Item Name	Description	C.I	Weight	Avail	Price
Thermite		0.3	1kg	RES1	\$45
Black Powder		0.6	1kg	RES1	\$2
Nitroglycerine	Usually kept in vials	0.4	500gm	RES1	\$2
Dynamite	50% grading	0.3	1kg	RES2	\$20
Plastic Explosives	Various types	0.2	1kg	RES3	\$25
Foam Explosive	Aerosol can	0.3	500gm	RES1	\$20
Frame Charge	Basic 1 meter x 1 meter charge	0.4	1kg	RES1	\$75
Dispersal Bomblets	x20 clusters	2	3kg	ADV1	\$20k
Blasting Caps	x20 chargers	0.7	1kg	RES1	\$30
Blasting Machine	Basic model	0.8	1kg	RES1	\$60
Blasting Machine	Modern Military Model	0.5	500gm	RES2	\$80
Blasting Machine Remote	Includes radio transmitter	0.8	4.5kg	RES2	\$500
Detonation Cord	Per kilo in different thickness	0.4	1kg	RES2	\$200
Claymore		0.4	400gm	GEN2	\$75
Flashbang Grenade		0.2	300gm	MOD2	\$50
Gunshot Simulator	Various gun sounds emulated	0.2	300gm	MOD1	\$50
Mini Grenade	Bandoleer of 5 grenades available	0.1	150gm	MOD1	\$10

PERSONAL SAFETY DEVICES					
Item Name	Description	C.I	Weight	Avail	Price
Pro Medic Kit		0.4	650gm	GEN2	\$175
Portable Alarm	Cord-pull device	0.2	200gm	GEN2	\$20
Chemsniffer		0.5	1kg	MOD1	\$700
Standard Kevlar Armor	40% soft protection	1.7	6.5kg	MOD1	\$1500
Compound Kevlar Armor	65% soft protection + 1 hard protection from small arms fire	1.5	5kg	MOD2	\$2500
Assault Suit	85% soft protection +2 hard protection flame retardant, gas mask, communicator	1.6	10kg	MOD3	\$7500
Kevlar Anti-Strangle Collars		0.4	1kg	MOD1	\$35
Auto-injector		0.1	50gm		\$2
NBC Suit	Protection against biological and low level radiation (until breached)	0.8	4.5kg	MOD1	\$250
Protective Mask		0.4	2kg	GEN2	\$150
DETECTION DEVICES					
Item Name	Description	C.I	Weight	Avail	Price
Portable Radio Jammer		0.7	4kg	GEN3	\$1600
Radar Motion Detectors	Including carry case	0.7*	8kg	MOD1	\$2000
Microwave Intrusion Detection System	Including 2 pairs of sensors 1kg each set	0.9	10kg	MOD3	\$6000
Portable Ground Radar System		1.8	20kg	ADV1	\$10k
Seismic Intrusion Detection System		3* (0.2)	25kg	ADV1	\$50k
Smoke Alarm	Basic Household Model	0.3	750gm		\$15
Swimmer Detection System		0.5	3kg	MOD1	\$5000
Thermal Detection System	Handheld IR sensor	0.2	500gm	GEN2	\$600
Ultrasonic Motion Detector	Usually a fixed unit hidden in fixtures	0.1	500gm		\$30
AI Monitoring System	Usually a fixed system integrated into security counter-measures	n/a	n/a	ADV3	\$250k
Personal Bug Detector	Basic Model	0.1	100gm		\$125
Personal Bug Detector	Advanced Model	0.1	100gm	GEN3	\$225
RF Bug Detector		0.3	500gm	GEN2	\$500
Nonlinear Junction Detector	Including 5' probe + case	0.8*	4.5kg	MOD2	\$12k
Line-Tap Detector		0.2	50gm		\$150
Telephone Analyzer	Up to 16 lines at time + hardened carry case	1*	5kg	ADV2	\$20k
CounterSurveillance Frequency Detector	Entire suite of items in hardened carry case	1*	4kg	MOD1	\$4000
Spectral Correlator	Integrated laptop and carry case design	1.4*	14kg	ADV2	\$17k

Counter Surveillance Toolkit	Miniaturized kit	0.5	1kg		\$400
Counter Surveillance Toolkit	Standard size kit	1	5kg		\$900
Magnetic Media Disruptor		0.2	200gm		\$200
Portable Polygraph	Portable unit in toughened plastic briefcase	0.7*	1kg	MOD1	\$1500
Voice Stress Analyzer	Basic Model	0.3	300gm		\$200
Voice Stress Analyzer	Deluxe Laptop aided design + carry case	1*	3kg	MOD2	\$5000
Document Scanner		1.5	3kg	MOD1	\$300
Palm Scanner		0.6	500gm	GEN2	\$200
Retinal Scanner		0.4	1kg	GEN2	\$500
Signature Pad		0.3	500gm	GEN2	\$400
Voice Print Analyzer		0.2	250gm	GEN2	\$250
Fire Extinguisher	Water, CO2 gas, foam or dry chemical	0.8	10kg		\$150
Fire Extinguisher	Smaller vehicle design	0.4	2kg		\$60
Bomb Disposal Suit	Hard protection Lvl 2 = movement 2 meters	2	35kg	MOD1	\$10k
Explosive Blanket		0.9	20kg	MOD1	\$5000
Drug Testing Kit		0.4	500gm		\$90
Detection Powders		0.3	300gm		\$45
Mini Fluorescent UV Lamp	Includes orange goggles	0.7	1kg	GEN3	\$150
Pepper Spray	2 oz spray	0.1	50gm		\$25

Firearm Name	Caliber	Ammo	C.I	Weight	Price
Accuracy Int L96A1 Sniper Rifle	7.62mm NATO	10 box	1.2	2.9kg	\$5000
AK-47 Assault Rifle	7.62mm SOV	30 box	1.5	4.3kg	\$1200
AK-74 Assault Rifle	5.45mm SOV	30 box	1.4	4.3kg	\$1400
AR-15/M16 Assault Rifle	5.56mm NATO	20/30 box	1.8	3.18kg	\$3000
Bren L4A4 Light Machine Gun	7.62mm NATO	30 box	1.5	4kg	\$1000
Browning 50 M2HB Hvy Machine Gun	50 cal M2 ball	Belt fed	2.6	17kg	\$8000
Browning 9mm Hi-Powered Pistol	9mm Parabell	13 box	0.7	800gm	\$500
Glock Model 17 Semi-Automatic Pistol	9mm Parabell	17 box	0.5	650gm	\$500
Glock 18C Machine Pistol	9 x 19mm Para	18 box	0.6	1kg	\$950
GPMG L7A2 General Purpose Mach Gun	7.62mm NATO	Belt Fed	1	5kg	\$1200
Heckler & Koch G3	7.62mm	20 box	0.9	2kg	\$550
Heckler & Koch MP5	9mm Parabell	15/30 box	0.6	1.1kg	\$800
H&K PSG1 Sniper Rifle	7.62mm NATO	5/20 box	1	4kg	\$1500
Ingram Model 10	.45 ACP	16/32 box	0.8	1.2kg	\$650
Izhmekh PSM Pistol	5.45 x 18mm	9 box	0.6	550g	\$150
L2A3 Sterling Sub-Machine Gun	9mm Parabell	30 box	0.7	1.2kg	\$800

L42A1 Sniper Rifle	7.62mm NATO	10 box	1.4	2kg	\$900
M1 Carbine	30 carbine	15/30 box	1	1	\$600
M60 General Purpose Machine Gun	7.62mm NATO	Belt Fed	1.6	5kg	\$1800
Owen Sub Machine Gun	9mm	33 box	1.2	2kg	\$500
Walter PKK	7.62mm/9mm	7 box	0.4	170g	\$350
PPSH-41 Sub Machine Gun	7.62mm	35/71 box	0.9	1.6kg	\$500
RAI Model 500	12.7 x 99mm	1 shot	1.2*	15kg	\$9000
Remington Model 700 Sniper Rifle	7 x 64mm	5 round	1.1	7.5kg	\$750
Remington 870 Pump Action Shotgun	12 gauge	7 round	0.9	1.6kg	\$800
SA80 Assault Rifle	5.56mm NATO	30 box	1.2	1.7kg	\$700
Sanvik XXII Machine Pistol	5.6 x 16mmR	30 box	0.7	1kg	\$750
Sig Sauer P226 Semi-Automatic Pistol	9mm Parabell	15/20 box	0.7	750g	\$900
SKS Assault Rifle	7.62mm SOV	10 box	1.1	1.7kg	\$550
SLR L1A1	7.62mm NATO	20 box	1.1	1.8kg	\$600
TsNIITochMash PSS Vul	5.6 x 42mm	7 box	0.6	800g	\$300
Thompson Sub-Machine Gun	.45mm	20/50 drum	1.4	2.5kg	\$600
Tikka M55 Sniper Rifle	Various	4/10 box	1.3	1.5kg	\$850
Vickers K Machine Gun	.303mm	Belt fed	2.2	21kg	\$2000
Walther WA2000 Sniper Rifle	7.62 x 66mmB	7 box	1.2	8.5kg	\$5000

Projectile Name	Range	Dam Mult	C.I	Weight	Price
Blowpipe Missile	3,500m	X15	3	2.8kg	\$25k
LAW Rocket Light Anti-Tank Missile	500m	X15 Heat	1.3	1.5kg	\$3000
Milan Wire Guided Anti-Armor Missile	900m	X20 Heat	1.7	13.3kg	\$15k
Mortar 51mm	3,500m	X10	1.1	920g	\$400
Mortar L16 81mm	5,650m	X10	1.2	1.8kg	\$800
Rocket Launcher 3.5 Recoilless	150m	X10	1.1	1.80kg	\$500
RPG-7	300m	X10	0.8	4kg	\$900
Stinger Missile	4,000km	X20 Heat	1.6	23kg	\$25k

ESSENTIALS

Attaché Case: Your usual leather covered, sturdy framed briefcase roughly having the dimensions of 46cm x30cm x 13cm has been a staple of covert operations for many years. Being a discrete and handy accessory in urban environments, and presenting a *formal face* (coupled with a business suit). It is often easier to infiltrate secure locations with the deference paid in our culture to a well-dressed man and woman. Security measures usually include 2-tumbler locks, or/and basic key lock. Cost \$50-500

Additions that can be added easily to an Attaché Case include

- Armored Plating or Kelvar Inserts + \$100
- Waterproofing + \$25
- Flame Retardant + \$50
- Global Positioning Marker + \$50
- Concealed Compartments + \$50
- Electro-shock Handle + \$75
- Electronic Lock + \$100
- Radio Wireless Insert + \$25
- Video Wireless Insert + \$50
- Hidden Pistol Mechanism + \$75
- Satellite Radio + \$100

Many other relatively large household items can be used to conceal comparable accessories (like clocks, smoke alarms, teddy bears, one-way mirrors etc)

Cell Phone: The ubiquitous accessory of the 21st Century is an invaluable addition to covert operations and terrorists activities alike. The relative ease of the purchase of mobile phones (usually without vetted personal information) worries many police authorities around the world. The cell phone (purchased under an assumed name or stolen) gives the terrorist or criminal unrivalled mobility and coordination of illegal activities, plus of course, the anonymity.

Today's cellular technology generally gives the user some additional features including

- Email access
- Camera & image storage (average of around 50 image storage)
- Limited video capture (roughly 5 minutes)
- Alarms & reminders
- 10 hours call time/3 day recharge
- PDA options
- Picture/text/sound/video send options
- GPS tracking

Typically weighing as little as 150 grams, the mobile phone can also be used by others to track the movements of the owner - the inherent danger of mobile technology lies in the nature in which they work. To send and receive calls, most modern mobile phones send encrypted digital signals out to local receiver stations (usually picked up by 2 or 3 separate signal towers in built-up areas), sophisticated software technology triangulates the user's position, and track movements to know whether to forward any incoming or outgoing calls or messages. Anyone with access to such information (the phone company, intelligence agencies intercepting signals) can do their own triangulation to identify the user and their basic location. One can even track a mobile phone when the mobile is essentially turned off through battery emissions. Satellite phones work in a similar way, but use orbiting satellites as their relay (instead of microwave towers).

Finally, cellular phones have become a popular method for triggering explosive devices from

remote locations. The phone attached to the bomb is rung, emitting an electronic signal, which is redirected to the trigger device. Specialist police services these days now have scramblers on hand, to help defeat such bombs from being primed.

Global Positioning System (GPS) Receivers

This device uses satellites to devise the current location of the user. GPS systems are handy for anyone venturing into rugged, uninhabited terrain; or fitted to ships to make logging of one's position a relatively easy process. The device usually shows the user's current location on a computer-generated map.

Such devices can be used surreptitiously; one can fit them to a target vehicle to track the vehicle's movements. Although the system can accurately be used to target someone's position down to within 1 to 2 meters, the U.S military has sought to control the levels of accuracy advanced to civilians, down to an estimated accuracy level of 10 to 20 meters. Such accuracy levels have been developed to effectively protect national interests (as specific data could be used in the targeting capabilities of foreign powers).

Such civilian systems include NAVSTAR (Navigation Satellite Timing And Ranging) which has clients in many diverse fields such as mining, farming and shipping companies.

The U.S military and its allies have access to GPS data at the unmodified accuracy level, and it is effectively used in the Blueforce battlefield coordination system (and its other 60 similar command and control systems).

Latest GPS modules have seen a vast decrease in size and weight (one can now purchase a watch with a GPS system onboard – albeit bulky), this tends to lead to speculation that modern intelligence agencies would probably prefer to use small GPS tracking devices than similar wireless devices.

Pocket Knife

The old Swiss Army Knife is a handier accessory than one might dare to imagine. Apart from the standard features; including knives, pliers, bottle openers, screwdrivers, scissors and magnifying glass - other covert additions might also be hidden away including; lock picks, blasting cap crimpers and paper jammed inside with covert messages. Such knives are also just as likely to be carried by civilians.

Sunglasses

It is almost of cliché to see bodyguards in Hollywood movies wearing sunglasses, however, advances in technology in the last 10 years have added much to their functionality

- Protection against Ultraviolet & Flash resistance
- Some Ballistic protection against ricochet and fragments (Wiley X Saber-line)
- Anti-Laser coating (as in SPECS, a U.S military initiative against low power lasers)
- Small Video Cameras
- Internal Audio Mikes

Wearing sunglasses does serve a functional purpose in covert activities, it allows to the owner to look surreptitiously about, important for uncover bodyguards and security personnel.

Wristwatch



With the continuing trend towards miniaturization in manufacturing, the wristwatch has become a powerful tool in modern surveillance environments; some additional features include;

- Global Positioning System Tracker
- Compass

- Calculator
- Thermometers and Altimeters
- Tiny Cameras
- Audio Recorders
- Different world time zones
- Waterproofing

Of course, modern watches also keep accurate time, which in covert operations proves invaluable in the coordination of activities. Other modifications can be made to a standard watch to enhance its use, generally only limited by one's imagination. A watch can hold a small vial of poison, written documentation in a microdot format or contain secret data codes embedded in its functions buttons. The watches ubiquitous nature can mean it may be overlooked in random searches by untrained guards.

Finally, when a soldier or agent is in trouble behind enemy lines, a watch (generally made of precious metal) can be sold for cash.

Personal Data Assistants

PDAs (Palmtops) are handheld devices essentially used as multimedia note-takers. Used increasingly by executives and academics they provide a degree of familiarity that can conceal clandestine usage. Most current palmtops provide some of the features of a laptop or desktop computer, the ability to use cut-down versions of computer applications and the transfer of data across the formats by bluetooth connections. Typically a PDA might have the following range of features

- Cell phone functionality
- GPS receiver
- Play audio & video files
- Email access & WAP capability
- Internet & Fax capability
- Signature Verification & Interface
- Encryption & Password capabilities
- Software Access

Given the level of integration that such a device is capable of, a PDA can theoretically be used to house any kind of communications needs. From a real time video-streaming link, used as a handheld monitor for a GPS tracking device, or for a special-forces commander to keep *visuals* on all soldier's targets in operations.

RADIOS

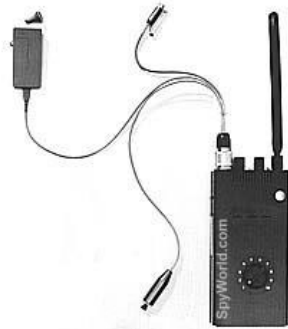
Across the broad-spectrum of modern audio devices a number of features have been introduced to deal with interception, including

- Burst Signal (audio sent in sporadic short bursts to avoid detection)
- Frequency hopping (automatic/predefined changes in signal frequency)
- Advanced Digital Encryption
- Pulse Scrambling Routines (alternating to deter detection)

Modern espionage means the cloak and dagger antics of the Cold War are usually now played out in the visual/audio arena – with surveillance and counter-surveillance methods being employed to listen to your opponent, whilst guarding your own output.

Some standard radio types include

Hand Radio: A walkie-talkie system handset is still used today by operatives in less affluent intelligence agencies and military units. With a range of 3 kilometers and a running time of 10-12 hours (lithium batteries) they can be effective, if a little insecure. Some systems incorporate your standard cellular phone operations.



Backpack or Fixed Vehicle Radio: A bulkier but more secure option for field operations. Military radios encode data to the military standards of its country of origin, they generally require some working knowledge on the part of the operator to encrypt to these standards (usually requiring

access to a code book). Range can be anywhere within the region of up to 50 kilometers. Most military radios usually weigh in at around 4 kilos; the radio's battery will generally last for around 12 hours. Advanced systems can send both audio and computer data (such as video feeds).

Satellite Communicator: Such devices are usually housed within a briefcase and can be assembled for use in the field for the transmission of computer data and audio. The usual system has an input screen, a small foldout satellite mesh dish and an input device for an accompanying laptop, microphones or other peripherals. The advantage of such systems is the capacity for operatives to access secured military or civilian satellites and contact anywhere in the world. Such systems generally allow for 75 hours usage in standby mode, and 7 ½ hours of actual transmission time. A solar attachment can also be purchased to recharge the batteries.

A handheld version is also available, which is marginally less secure for transmission purposes.

Tactical Headset: As used by SWAT and soldiers around the world, these miniaturized headsets are hands-free and are voice sensitive. The system makes sure to use audio dampeners to control the broadcast sound to that of a whisper – so that some semblance of control can be maintained, even if gunfire has broken out somewhere in the operational zone (and to ensure the integrity of the transmissions clarity for members of the team not already engaged).

Surveillance Headsets: Many bodyguards, surveillance professionals and spies favor a more discreet option. The flesh-colored ear-piece, lapel microphone (or throat mike), and the handheld push-to-talk button down the sleeve is the staple of almost all surveillance operations.

Recent advances have made it possible for the wire connection from the ear-piece to the main unit to be dispensed with entirely, instead using a wireless connection system (that maybe somewhat less secure to radio intercepts).

Radio Communications Harness

The radio communicator harness such as the British CT400 is designed to permit members of a team to communicate with one another (especially anti-terrorism teams). The system generally comprises of the following options

Electronic Ear Defender/Radio Headset – The unit is designed to protect the wearer’s ears against damage from high level noise (like a flashbang grenade going off). The device lets conversation take place even with gunfire going off. The headset is connected by a lead to the Central Switching Unit. There is usually a talk switch attached to the front of any armor worn

Wrist-worn Remote Press-to-Talk Switch – This switch is connected to the Central Switching Unit and worn on the wrist or inside a glove (which enables the wearer to press the button and trigger – alerting command of contact)

Body-worn Microphone – This is a noise canceling device normally worn on the front of the assault suit near the neck, such a device can also be fitted inside CT-12 Respirator

Radio Interface and Connection Cable – This system includes an interface that connects the CT400 to the wearer’s personal radio set. This in turn is connected via a cable to the Central Switching Unit

Other Items of CT400 equipment – Include; Team Commanders Headset (basically the same but fitted with boom microphone), TASC Sniper’s Headset (a single earphone headset designed for the use of a team of snipers)



Sniper Command and Control System: This system is designed to integrate split-second control over a company of snipers under the direct command of the unit commander. The system operates via a highly secure digital telemetry radio link – comprising of the following...

1 Up to eight snipers can be linked into the system, each needing an UHF PRU-22 radio set powered by a 9 hour life rechargeable battery, and external battery can also be used giving a further 24 hours of usage. An LED low battery indicator is included in the design

The PRU-22 is fitted with a target indicator button unit; this is attached to the fore end of the rifle. The button has two red and green indicators – the sniper presses down on the button when he has the target in direct sight and the commander receives the signal. If the sniper loses the target, he releases his grip. When the sniper is waiting to fire, the red light is active, meaning the *stand-by* mode is active – confirmation that the commander is actively receiving his passive signal

2 The Commander’s Radio Station comprises of a PRU-22 radio set (which features 8 pairs of red and green LED displays), the commander waits until he is satisfied enough men have targets in their sights, he will indicate via voice command over a separate radio unit

3 VIU Touch Screen Visual Display is designed to interface with the PRU-22 and give a graphical display of the situation. The unit fitted with a touch screen, which features two pages of information and can accommodate up to 12 targets. The target symbols are arranged across the top of the screen and can be touched to see a live video feed

ENCRYPTION SYSTEMS & SCRAMBLERS

Modern Encryption systems generally rely upon public and private keys to encrypt their data. Basically, the system relies upon everyone knowing someone's public key, when a sender makes a communication to the target (phone, email, fax et al) s/he knows their public key, it is also encoded with the sender's public key (the basis of an email address). Once the transmission is received, the target's computer automatically decodes the communication with their private key – the rub being, the communication relies upon the fact that some mathematical formulae cannot be easily reversed. The target has the encrypted document (encrypted with their public key), now by application of the private key it can unscramble the document to plain text.

The existence of the sender's public key means one can be relatively certain of their provenance, and can readily send a reply (encoded once again with their public key). Of course, with the power of computers today – a concerted effort can be made to crack exactly what large number is someone's private key (brute force attack). But time generally isn't something one has on their side in the espionage game.

Analog Scrambler: A device which is readily snapped on to phones which seeks to turn the human voice into gibberish, which can be decoded by prearranged routines by the target. Such units however, generally have only a few set scrambling routines that another listener might be lucky enough to unscramble, or record, and take time to unscramble (especially as these devices are mass-produced to be *able* to be used by the owners).

Digital Encryption System: A stand-alone unit that attaches between the phone line and phone handset, or incorporated into a phone unit, which seeks to encode using the American standard (DES) encryption software. It is preferable to the analog scrambler because of the quantum advance in the level of encryption offered. However, as with any encryption – it is ultimately capable of being unencrypted with serious computing power.

Higher-Security DES: The United States government has tried many ways over the years to limit the level of encryption available to private interests in America and beyond. The

NSA has sought to bring in Escrow systems (private keys are legally stored by the government to help decode private communications). However, the one area they have managed to stop high levels of encryption is in the export of computer products overseas – certain trade laws make it a serious offence to export high-level encryption software.

Most products that come out of the U.S (to say nothing of economic pressures to stop the adoption of higher protocols elsewhere in the World) deliberately replace higher levels of encryption capabilities with the lower standards as *suggested* by the NSA. The United States government however, does have access to equipment, which uses higher protocols. The technology is usually housed within items such as the NSA's Secure Telephone Unit III (STU-III) used by many thousands of government employees and private contractors. The system has various physical measures (card access, tamper proof casing, private keys) to make sure the security of the closed system is maintained. Modem based units are also produced.

MICRODOT & ETCHING

Over the years, many miniaturized forms of writing have been tried in the espionage world; the one constant has been the Microdot. Developed during the 1950s the Microdot is essentially a compressed image of a page reduced onto cellulose film. It can then be projected upon a screen to expand the image to full size. The humble Minox camera was used by many spies in the Cold War to create microdot images, which are easily hidden, or attached to larger items. The same low-technology solution can be used effectively today, and may be sometimes less obvious than trying to send out information via electronic means.

Etching using X-ray microlithography, primarily used in microchip engineering to embed designs upon objects as small as a mere 0.1 micrometer in scale. The production of elaborate cityscapes or schematics of a military weapon can be encoded, which is completely undetectable to the naked eye – an electron microscope is needed to read it. Obviously, access to such technology and expertise is beyond most modern intelligence services.

Nonverbal Telephone Communicator: A device somewhat antiquated by today's PDA wonders, but the communicator allows one to send typed messages non-verbally across telephone wires, which is decoded elsewhere. The theory being the pulses are harder to decode than human speech. Of course, having access to computers of similar technology might decode such transmissions.

Pocket Laser Communicator: This small unit seeks to eliminate interception of transmissions via the use of a laser pulse signaling out over a narrow band of terrain (as opposed to radio and normal satellite transmissions which radiate outwards). The range of the transmission is up to 1.5 kilometers (which requires a direct line of sight). Intercepts however are still possible if the enemy is between the target and sender. The communicator can also be used in traditional broadcasting methods at a distance of up to 1 kilometer (which means a greater chance of detection and interception, but one doesn't need to know where precisely the target is, only that they are in range). The unit consists of a headset and portable handset, not unlike a miniature flashlight - which can in fact be used as an IR flashlight as well. These both plug into a cassette-style unit which is the receiver, it is powered by a 9V battery (4 hours use).

Underwater Communicator: These sonar-based transceivers rely upon surface based stations to allow underwater communications, which can also use existing radio and satellite networks. The transducer emitter unit is fitted to the head, an adapter unit is mounted upon the mouthpiece containing a microphone and earphone connector, and a dual-transducer assembly is mounted upon the oxygen bottle. The system has a broadcast range of up to 5,000 meters, and the battery life is around 10 hours in duration. The device can only be operated at a depth of up to 830 meters and its negative buoyancy quotient is around 5 lbs of pressure.

Voice Masks: These portable units perform the task of obscuring someone's voice signal whilst using phones, microphone units or audio sensor equipment. They are generally designed to fit over handsets tightly (to avoid any transmission of the natural voice in the background).



Basic Function Voice Changer: These rudimentary units change the human voice into a mechanical monotone, or change the pitch and frequency in a standard looping pattern. With a basic knowledge of audiology, one can quite quickly unscramble the recorded sound and retrieve the originating voice.

Advanced Function Voice Changer: Advances in computer technology has lead to voice changers incorporating sophisticated computer routines, which change the source voice into an approximation of another human voice. The theory being, that to the human ear, it is less likely to be picked up as being modulated. Also, it is likely that such technology subtly randomizes various pitched phrases to confuse attempts at retrieval of the originating voice.

Computer Aided Voice Changer & Decoding: Software now exists which can aid in disguising the human voice which can be hooked up to a laptop and used to make mobile calls from. The opportunity to add the processing power of a modern laptop computer gives one a greater opportunity to decode and disguise one's voice effectively.

BINOCULARS



Basic Binoculars: A basic set of run-of-the-mill binoculars generally has the magnification level of around 7x, but they have a limited field of vision, reducing their functionality somewhat.

Advanced Commercial Binoculars: Serious enthusiasts can purchase binocular sets with a magnification rate of 20x, the set is also fitted with mechanical stabilization gears. Primarily to aid in their use on helicopters or boats, but it is also essential to stop wild shakes caused by the slightest movements viewing at extreme distances.

Military Standard Binoculars: Current military models such as the Steiner (Germany) and the M22 (U.S military) have a number of features which improve their functionality including

- Automatically grading up of poorly lit images
- Rubber-Armored and sealed against dirt for durability
- Lens coated with a compound to eliminate glints
- *or* Gold-coated lenses to protect eyes against laser light
- Detachable hoods to reduce glare
- Overlaid electronic displays showing range-finder options

Advanced Military Binoculars: Advanced special-forces units around the world generally have units with greater computing software options including

- Digital compass
- IR-laser rangefinder
- Greater optics technology enhances light source amplification process
- Basic target detection software
- HUD capabilities in integrated firing systems

Such advancements come at a cost in operational time, being less than 2 hours for a standard 2x AA batteries

CAMERAS

35mm SLR: The world standard camera for dedicated enthusiasts has been around for years and is still widely used in surveillance circles for its reliability and its ease of use. The typical SLR these days comes with date imprinting, winder, zoom lens and flash. Roughly costing \$750 dollars, it represents an essential asset in covert activities.

Minicamera: Spies generally need smaller, easily concealed cameras that can copy a page of written material with accuracy. A smaller minicamera (5 cm long & 2.5 cm wide) with up to 36 exposures represents a good compromise.

Underwater Housings: A special airtight, high impact shell can be purchase to house your

camera, and allows for full use of equipment at regular diving depths.

Wristwatch Camera: These miniaturized units are mounted upon the face of a working watch, which uses a miniature film cartridge. The film stock requires specialized developing equipment, which generally comes with the unit. The results often leave a lot to be desired.

Rollover Camera: These specialist cameras slowly develop an image by rolling the unit over the document. The use of such a device ensures a greater degree of clarity and accuracy in copying such documents.



Digital Camera: The use of digital technology has made the process of image capture easier and eliminated the need for the processing of film

AUDIO RECORDERS

Your typical modern audio recorder allows record input from long-range microphones, for the use of audio receivers and wiretap technology. They generally come fitted with internal microphones.

Surveillance Tape Recorder: The features of your typical cassette based surveillance tape recorder allows for 8 hours audio per a cassette, the internal microphone is voice activated (which gives an effective operational battery life of 30 days in standby mode). The tape recorder will generally have a wall plug attachment and an in-built connector allowing for wiretapping.

Mini-Surveillance Tape Recorder: The miniaturized recorder measuring just 7.5cm x

MINI MICROPHONES

In your standard audio van, any number of microphones may be scattered about for use in specific situations. They are generally attached to recording equipment and/or transmitting equipment. A microphone can even be used with just a small amplifier and headset.

Pinhead Microphone: The tiny microphone is generally attached to a flexible cable, which can snake through brick and wall cavities, through a carefully pre-drilled hole (3mm). The desire is to have a hole created that leaves the barest of plaster and paint intact to an adjoining room – so

stock. The unit captures a digital image automatically and stores it to memory, which can be removed via the use of memory cards and transferred straight to computer. Because of the digital nature of the image, it can be reproduced without loss of image quality and is far easier to forward in this digital form to interested parties (like email).

Periscope: A periscope, which can extend up to 1 meter in length, is useful for covert surveillance in field op environments. Such devices can even be fitted with video cameras or still photography cameras.

2.5cm x 2.5cm reduces the operational time down to 3 hours per microcassette and five hours in standby mode. A slightly larger version 12.5cm x 5cm x 2.5cm records 3 hours but allows for a standby time of 17 hours.

Digital Recorder: The digital recorder uses electronic data instead of magnetic tape and records it to memory cards (160 minutes per card), others record up to 20 hours onto internal hard disks. The data can be fed immediately to a computer for use. Later models generally come equipped with speech-to-text software with instantly creates a transcript of conversations (although the technology isn't always reliable).

the microphone can pick up conversations, but the target is unaware of the intrusion. The general range of capture of conversations is 6.5m indoors and 3m outdoors.

Laser Pinhead Microphone: The unit consists of a plastic diaphragm attached to the end of a length of optic fiber. The sound vibrates off the diaphragm and the vibrations are registered by a pulse of laser along the length of the optic fiber – the returning signal is converted back into sound. Such microphones are immune to bug detectors and metal detectors.

Contact Microphone: These 2.5cm discs are generally taped to the outside walls, floors or windows and pick up vibrations through the surface. Obviously the thicker the wall et al, the

harder it is to detect the signal. The device can only be effectively employed on small rooms, as it requires echoed ambient noise.

LONG-RANGE MICROPHONES

The larger long-range microphone models generally come with a headset and are normally combined with a recorder unit or a transmitter. The units allow for whispers to be heard at 45 meters and conversation at up to 90 meters. The units have a battery life of up to 60 hours.

Shotgun Microphone: These extended 40cm long directional mikes are aimed in a similar fashion to a gun. Shotgun microphone's work upon the principle of catching a narrow band of sound (which helps immeasurably to reduce background noise when successfully used).

Parabolic Microphone: The parabolic microphone seeks to gather a wide signal in its 45cm parabolic dish. A device, which is slightly easier to employ than a shotgun microphone, but suffers in operations in areas with excessive background noise.



Laser Microphone: Laser microphones use a method of projecting a laser upon a window, and processing the returning signal from vibrations (the sound of the conversation inside the building if lucky). The use of heavy curtains and triple-glazed windows can defeat the functionality of the device. The use of white-noise generators will effectively defeat this kind of unwanted intrusion. Other extraneous sounds such as loud music, or running taps can sometimes affect the clarity of the signal, but modern laser mikes generally have electronic filters to assist in higher definition.

Cheap units generally have a range of 280 meters and cost of \$500 (900g), and superior models generally have a range of 900 meters and cost \$5,000 (900g). However, the use of a tripod is needed to achieve ranges of over 45 meters

RADIATION DETECTORS

Dosimeter: As worn by workers in nuclear facilities, these badges measure the cumulative exposure one has to radiation. They are generally one-use devices, however a reusable electronic dosimeter provides instant, variable readings.

Geiger Counter: These devices measure the various levels of alpha, beta and gamma levels of radioactivity. They are generally directional devices, which in the hands of skilled user can quickly locate the source of contamination. An

experienced user may be able to tell the type of contamination from the mix of waves (atomic weapons contain uranium and plutonium – which are generally alpha emitters).

An industrial Geiger counter is \$800 (1.8kg) and a smaller digital model is \$400 (250g), although it is generally used to detect weaker sources of contamination (shielded A-bombs as opposed to use in nuclear reactors).

RECEIVERS

Receivers are devices, which pick up signals from transmitter devices such as bugs, microphones or remote video cams. Current models generally have the capacity to receive 4 inline signals, tuned to the frequency pre-set to the jacks.

Audio Receivers as the name suggest deal exclusively with audio signals, they have jacks for recording to standard audio options like a tape recorder or computer/hard-disk recording.

Video Receivers have the capacity to receive video signals, they generally have jacks to facilitate the recording of signals to monitors,

VCRs or computer/digital hard-disk recording options.

Quad Switch Control Boxes: These are used to receive 4 individual video feeds, and the user can switch between each signal, or choose to view all on the same monitor.

Monitor Attachments: One can also attach a small LCD screen to view the various video feeds through a receiver costing \$200 (black and white) or \$350 (color).

Generally most equipment is supplied with adapters to charge/run on car-battery power.

SCANNERS

Scanners are similar in design to audio receivers (receive audio input), but are dedicated to scanning the whole spectrum of non-secured radio transmissions within range (cellular phones, cordless phones, radio equipment or

talkie-talkies). If combined with recording equipment, the effectiveness will increase, as any encoded intercepts can subsequently be broken. Some states outlaw such devices.

WIRETAPS

Wiretaps are generally devices or software installed between the telephone handset and the receiving caller (being a hack between, as opposed to say, a bug installed *in* the phone handset).

Telephone Recording Jack: Is an intercept device attached between the wall socket and the phone line. The cables either fed through the wall, by a microwave linked box or in relatively plain sight. Compared to other options, it is generally a lot easier to spot by those with surveillance knowledge.

Parallel Telephone Line Transmitter: A transmission device spliced into the central building telephone lines to allow for monitoring of one or multiple telecommunication lines. The device relays signals up to 1,800 meters and is favored by audio experts because access to external cables is generally less risky than internal infiltration of a secure building.

Fax and Modem Taps: Modern wiretapping equipment can generally handle standard office communications, however, specialized fax and

modem taps might be required to effectively handle the demands of large scale, high-speed data transmission (like broad-band, bank intranets etc).

Official Access & Hacking: Most Western telecommunications companies generally allow for access by government officials to telephony networks (such as British Telecom's System X), generally such intercepts require a warrant.

If one has enough time, knowledge, cracking software and computing power at one's disposal, you can hack into such systems and intercept the relevant communications, however risky long-term usage maybe.

Air Sonar: A curious head-mounted sonar array which was originally devised for the blind, but can also be handy for pitch black infiltration. The unit consists of the head unit, belt-pack processor and headphones. The device converts the relative ranges of objects in-front of the user into an audio signal (range 3.5 meters). The experienced user can also distinguish between moving foes through relative distortions in sound.

BUGS

The parlance of the term *bug* generally refers to any hidden surveillance device used to secretly record data. This generally means the sensor is attached to a transmitter (modern miniaturization meaning the entire unit could be as small as 0.5mm across). Such units are relatively easy to pick up with cheap bug detectors. However, one can combine the sensor with a receiver unit (admittedly larger in size) and connect it to recording equipment – which bypasses the need for an active transmission.

Audio Bug: Modern audio bugs can be disguised as say, a shirt button and can actively pick up signals from 2.5 meters away, a transmitter can send to up to 800 meters away. Other options may include the adding of a small antenna to increase the receiving distance of up to 1,600 meters. Most bugs are fitted with VOX circuitry (voice activation) which prolongs the active life up to 6 weeks.

Bugs can also be designed to fit into telephone electronics, which will ring a preset number with

the office conversation – even if the phone is on the hook. The unit can even draw upon the phone's power supply.

Computer Bugs: Bugs can be fitted between the computer keyboard and the CPU to intercept the transmissions of keystrokes, or software can be installed upon the mainframe to send information via the internet connection to a third-party. This latter option can either be physically installed or hacked via the use of a network from a remote location.

Video Bug: The transmission of crisp video images from small pinhole sized cameras (the entire unit 8mm x 13mm x 15mm) is now within the reach of most intelligence agencies. The unit consisting of a color camera, transmitter and power supply that can send signals up to 5 kilometers away.

Cheaper, bulkier units (2.5cm x 3.2 cm x 3.2cm) come with either black and white (\$500) or color (\$625), with a range of up to 90 meters.

SMALL CAMCORDERS & MONITORING DEVICES

Camcorders: Mini-DV video cameras apart from being compact, also have a number of included electronic functions which enhance the usage potential; including 10x optical zoom, digital image stabilization, and seven hour battery use. More expensive cameras can include low-light sensitivity and limited infra-red modes.

Camcorder models generally have a revolving LCD function and preview screen, and some can also be used to record still images. The mini-DV tapes have a storage capacity of 80-120 minutes, and also have a slot for memory cards.

Pro Mini-DV cameras generally have greater features including; 16x zoom, greater stabilization routines and a detachable microphone. The camera can also use standard 35mm camera lenses, including wide-angle, telephoto lenses and night vision scopes. The battery time is decreased to 2 hours per battery.

Cellular Monitoring System: This briefcase-sized system is used by the more affluent surveillance agencies to monitor large-scale telecommunications hubs. It is a hard disk based system, which can target up to 256 phone lines,

monitor 4 call lines at a time and log the data to the hard disk. It can also prevent incoming calls to a target number, or jam it both ways. It also has a limited capacity to trace calls. It is generally illegal for civilians to have access to such equipment.

DTMF Recorder/Receiver: The DTMF (dual-tone, multi-frequency) recorder/decoder records the dialing patterns of a phone. Effectively, when combined with a telephone bug, it lets one know the number the target is dialing (from pre-recorded records). One can use such a surveillance device to effectively build up a record of contacts the target is in constant contact with.

The device is sometimes deployed to trigger bombs and recording devices remotely by phone – by the prearranged recording of a mobile phone signal (which triggers an electric pulse from the recording device to bomb).

The device looks similar to a calculator with an LCD screen.



Electronic Stethoscope: Basically a sensitive contact microphone hooked-up to a digital amplifier and headphones, this device is particularly useful in picking up noise from behind walls or underground. It can be probed through walls or through loose material to good effect. The device is an essential for trying to crack mechanical safes, and is handy for even picking simple tumblers.

Endoscopes: The device used in medical exploratory procedures, the fiber-optic cabling fitted within a flexible steel-mesh tubing (2.5mm by 7.5mm) with small lenses at either end, is a handy accessory in the world of covert operations. It is attached to an eye-piece which allows one to see where ever the other end is pointed at. The unit is generally fitted with a powerful 7x magnification and light source to examine small, darkened cavities. But; equally it can be fitted with a long focal-length lens, to see large objects at distance (from around corners, over walls, through windows).

NIGHT VISION DEVICES

Night vision generally relates to the artificial increase in picture quality associated with the electronic amplification of existing light sources within the image finder. The image quality is generally grainy, and is generally identifiable by being tinted either green or gray.

Goggles: Allowing for hands-free operation, but a limiting the field-of-view, goggles are still an invaluable tool in covert operations.

Viewers: Are similar to normal binoculars (i.e. zoom-function), but are designed for nighttime patrols (night vision).

The usual 7.5mm x 60cm long models cost \$1,500 with finer models costing substantially more, one can even get models with longer reaches at additional costs (up to 3 meters). A video camera can be fitted to the eye-piece.

Antenn-Eye: A covert camera similar in construction to an endoscope, which replaces a car antenna. It can be swiveled, tilted, zoomed and panned according to the wishes of the driver who manipulates the device from a monitor mounted on the dashboard. A low light model also exists.

Fume Sponge: Made of specialized absorbent tissue these devices seek to record a chemical signature of dust, chemicals, body odors and smoke within an outdoor landscape (near factories) or interior environment (inside offices). The sponge after exposure can be retrieved and examined in laboratory conditions to derive vital chemical intelligence information (like the presence of particular oxides from smelters, or whether an individual working in an office has been present that day). The smaller sponge is usually replicated to look like an office stamp-licker; the sponges can only be used once after the seal is broken.

Mail Security Spray: This aerosol spray is used to reveal the inside contents of envelopes by making it temporarily semi-transparent. The invisible, odorless residue could however be detected later under laboratory conditions.

Pocketscopes: Are generally smaller, compact versions of viewers

Camera Attachments: Are clip attachments, which allow normal 35mm cameras or video cameras to record night vision images.

Weapon Sights: Are attachments mounted on long-arms to fire at night, with the usual magnification capabilities.

Infrared: The infrared setup consists of an infrared illuminator and sensor. Heat sources within range will show up in IR goggles as traces of light (white the hottest). The major drawbacks of these early systems is the illuminator reveals the user's location to other infrared (IR) or infravision users; plus the optics can be blinded by sudden flashes of heat. Battery life is 50 hours (750g), goggles (2.3 kg), weapon sights 4x magnification and illuminator (2.3 kg).



Modern units are IR passive and have improved optics routines, which eliminate the problems of earlier versions.

Light Intensification: The advances in amplification of ambient light sources have led to even more sophisticated electronics to deal with nighttime operations. Light intensifiers (otherwise known as starlight scopes) usually show a monochrome image (usually green) which can also detect IR light. Special photoreactive light dampening on the lenses exists to avoid the blinding effect of muzzle flashes. Such devices have an operational capacity of 40 hours (per 2x AA batteries). These devices still need some ambient light to function.



Thermograph: A passive electronic IR imaging device, which seeks to covert the IR image back into a monochrome image. It can be slightly

disorientating to follow the blurring of color IR imagining, and it best serves the soldier to simulate the feel of a monochrome image. Such equipment helps avoid some issues involving the blurring associated with fog and rain, and it allows some degree of *sight* beyond light scrub. The soldier can identify a human at around 1,600 meters and gives up to 4x magnification capabilities.

Such devices can be hooked-up to a VCR, transmitter or computer. The units are artificially cooled and need 2 minutes of lead time to be switched on before use. A 75-kWs lithium battery powers the unit for 5 hours.

Passive Radio Bug: Passive radio bugs operate slightly different from your usual bug, in a somewhat similar way to a laser microphone. A passive radio bug is used as a surface to bounce sound waves off to a directed point in the distance (like the pointing of a laser microphone, at say, a window surface). Using the Doppler-effect in such a way on an electrical conducting surface (radio-reflective material) means less chance of discovery - like a conventional microphone bug, but limits the effective usage. In terms of covert use, the practicalities of size mean most passive radio bugs work on the microwave end of the spectrum. To effectively use the signal from a passive radio bug one needs to be within 90 degrees of the bouncing sound waves (strongly degrading at extremes). Plus, there are additional problems of the quality of signal produced from such a low-tech solution. One can also use short-range transmitters (if practicable) too, as a link to a remote intercept point.

Photo Printer: Advances in digital imaging have bought us some handy printing accessories in the 21st century, the photo printer (which doesn't require a computer) can readily print out hard copy pictures from digital cameras, mobile phones – or indeed print out stills of video captures from computers. Current models generally allow for a number of different connections and ports.

TEMPEST Equipment: In 1985 Wim van Eck, a scientist observed that the sound waves emanations from electrical equipment could be monitored and reconstructed into meaningful data. Computer equipment is just as susceptible to emitting sounds as say; a radio playing music: there are also distinct humming patterns from different types of industrial equipment. Computer monitors are particularly prone to emanating sound waves (mainly due to the high-energy needs for conventional high-resolution displays). The NSA has designed specifications to resist such transmissions known as TEMPEST (Transient Electromagnetic Pulse Emissions Standards) – which mainly involves various shields and dampeners to stop emissions.

Despite the NSAs best efforts to alert businesses and governments to the potential security breach

TRACKING DEVICES

There are a number of options available for the remote tracking of a suspect, once the target has been marked by a brush contact with a bug, or a device installed in their personal effects or vehicle – tracking can begin. However, if the device is found, unless one has constant eyeball contact with the target, the target may well plant the device on someone else to *spook* your efforts.

Transmitter: A small transmitter unit can be tracked using a directional receiver (0.5lb) at a range of 5 to 25 miles (depending upon interference from buildings and competing radio noises). A transmitter is small enough to be concealed upon personal clothing, briefcase, or luggage – larger, more sturdy transmitters are able to be fitted to vehicles. Battery life is generally up to 10 days, although car fitted units can be hard wired into the electrical system for constant surveillance.

GPS: A number of vehicle tracking devices work using a GPS system.

Cellular Phone: The practicalities of the mobile phone technology means that constant signal is being sent out to nearby phone towers, so that the network can send incoming calls to its destination and for you to make calls out. In most built up areas towers can be anywhere from

issues, most business have not taken up the standards of practice. As such Van Eck Monitoring Equipment exists which can monitor such outputs. The standard set-up includes a laptop designed interface and a black-box with an affixed antenna. It is a passive device by design (it cannot be detected), and can pick up the emissions from 90 meters in urban environments (up to 900 meters in quite environments). The existence of large buildings and excessive soundscapes limits its effectiveness somewhat, however, in the hands of an experienced operator different sound emissions can be delineated and captured. Such things as ATMs, medical equipment or computer servers might be targeted for retrieval of information.

500 yards away to up to 5 miles in less built-up urban areas. An agent with access to the telecommunications network can triangulate a target by the relative signals strengths received at the towers. However, rarely does this give an accurate location of the mobile phone, but an approximate location.

Spy Satellite: The more affluent intelligent services have limited access to using both military and commercial satellite technologies to help aid in tracking of beacons worldwide, usually with a greater degree of accuracy (down to 2 meters squared).

Transmitter: A transmitter is a small component added to any microphone, wiretap or other listening device to send a signal radio waves – which is thus decoded by a receiver. It is either built-in to the device, or is connected by a jack or socket. Other devices like video cameras, endoscopes, periscopes can be fitted with transmitters through standard camera adapters, for facilitate a constant feed of images.

Audio Transmitter: Today's basic audio transmitters are generally smaller than 1cm cubed, including the battery, and generally the range of the signal determines the relative cost per unit.

Video Transmitter: The video capture footage is sent via standard radio-frequencies (RF) and are a little more complex than your basic audio transmitter, but serve basically the same function.

Infrared Audio (Video): The Infrared variant of sending signals relies upon line of sight access, but obviates the standard radio-frequency (RF) variants operating shortfall of being detected by lesser radio-frequency (RF) reliant bug detectors.

Ultrasound Mapper: A device usually found within a building contractors bag of tricks, this hand-held device can scan the dimensions of a room and keep track of the statistics to map out an interior picture (accurate to within 1%). It has a maximum range of 15 meters (45g).

VIDEO CAMERAS

Modern video cameras generally use Charge-coupled Device Technology (CCD) which has revolutionized the size and relative costs of video technology. It is now possible for most household items to conceal a video camera (only limited by the imagination).

CCD Camera: The small pinhole sized lens mounted upon a 2.5cm square circuit board is the surveillance industry standard – for it to work though, it needs to be coupled with either a transmitter or recorder. Black & White variants (\$90) and Color (\$225) exist.

Concealed Portable Minicam: Similar to the CCD Camera these devices are usually fitted within clothing, personal accessories or briefcases, and have attachments to fit into a concealed recorder or transmitter in a belt or pocket. Smaller variants exist that can be concealed within sunglasses or pens, costing slightly more.

Concealed Video Camera: A device usually concealed within a smoke detector, light fixture or exit sign, it is usually more flexible in that it



Vehicle Monitoring System: These devices frequently found onboard commercial semi-trailers continuously log the time and GPS location of the vehicle. The fleet owner then can determine relative speeds, routes taken and rest stops. Most units are designed to be concealed and can run off vehicle batteries.

can be panned and zoomed like a normal video camera. It generally needs power mains to support its increased electricity needs.

Wireless Dog-Cam: Some police forces attach wireless cameras and microphones to the head of dogs to stake out areas at night. The dogs-eye-view can transmit up to 200 yards.

Video Recorders: Video recorders are primarily used in surveillance to document the output from video cameras, receivers, thermal imaging technology, and camera-equipped endoscopes or periscopes.

Surveillance VCR: Surveillance models of VCRs generally work on time-lapse speeds to record 40 days of activity (960 hours), or record 24 hours real-time. They can be fitted with batteries that last 3 months, or run through an electrical socket. They can be set to record at certain trigger events (alarms), and they can be set to record video and audio.

Mini VCR: A smaller, concealable unit that can record 5 hours of real-time footage.

CAMOUFLAGE

Dark Clothing: Most special operations divisions favor dark green, or dark gray clothing in combat situations – black clothing generally looks suspiciously *too* black on a darkened landscape.

Reversible Clothing: A handy accessory for any surveillance operation on a limited budget is to have their agents dressed in clothing that can be easily ripped from the Velcro supports and reversed to a different style of clothing. So someone can be say, a jogger in one pass of the target, but in casual wear later on in the operation.

Camouflage Suit: The various patterns adopted in different regions of the world are generally not transposable to other environments. Such suits generally have enough pockets and inserts to carry a handy assortment of items.

CLIMBING GEAR

Ropes: A normal 1” rope has the load capacity of up to 800kg and the cost of a 10 meter length of rope being \$45.



Grappling Hook: A grappling hook can be deployed by the use of a crossbow, or a Colt M79 Grenade launcher (up to 45 meters) or thrown.

Scaling Equipment: Various climbing spikes, ninja claws, and suction cups present themselves as being handy in certain situations. Climbing spikes and ninja claws are great upon craggy surfaces, and can be easily deployed to penetrate soft wood paneling, whereas suction caps become an invaluable asset when attempting to climb glass or smooth surfaces (like skyscrapers).

Harness: A harness may seem to be a bulky accessory to carry about, but it does allow for hands-free operation when climbing, rappelling and abseiling – and greater safety.

Ghillie Suit: These canvas suits differ slightly from your normal camouflage suit in terms of not just having multi-colored patterns, but actively seek to break down the basic shape of the human form by making the patterns less uniform in its dispersal. They generally have netting on the outside for troops to add local flora for greater blending.

Infrared Camouflage Suit: These full suits, with gloves, goggles and hood seek to reduce heat emissions from the human body by enclosing it in a treated canvas environment. Once the suit is secured, it makes it virtually undetectable to IR goggles or thermographic imaging. Normal Camouflage suits can also be treated with the same way.

Ascender/Descender: A small mechanical winding device, which can transport equipment or persons up and down the side of a sheer drop by rope. Sometimes a descender is also known as a rappel rack (as in rappelling). Most special-forces use this device to land upon target buildings quickly from helicopters.

Grapnel Launcher: This shoulder fired device uses compressed air to send a grapnel some 45m vertical and 55m horizontal at a 45° angle. It is used to gain access to higher levels of buildings by counter-terrorism units and employed by marines to board suspect boats. The unit weight is 9.5kg and fires a grapnel of 50mm caliber. The unit also comes with a flexible stainless steel cable shaft with a rope-ladder attachment, two spare grapnels, sealing grease, spare sealing O-rings, air cylinder ropes and canisters, seal replacements tools, all in a sturdy case (total weight 21kg).

Line Throwers: A line throw is a mechanical device to propel ropes at greater distances than a human can throw. The Compressed-Air variant can shoot a rope up to 70 meters. There is also a single-shot rocket propelled line thrower, which can carry the rope up to 275 meters.

BREAKING & ENTERING TOOLS

Assault Ladders These specialized ladders come in one, two or three stile designs. They can generally be connected together and are made of structural grade aluminum alloy. They have non-slip rubber feet, deep indentations for extra grip and come in finished black polyester powder. They come in all lengths and combinations, sometimes manufactured for specific needs

Go-Bar: These 75cm long bars are fitted with ends created especially for forcing doors and breaking off padlocks. The spark-free forged metal requires a degree of strength to break open doors, and can also be used as a heavy weapon if the noise generated arouses suspicion.

Lockpicks: A set of quality lock picks is the bare necessity to break into stronger doors. Although, it is time consuming to use manual lockpicks (where automated devices exists), ultimately, there is no substitute for knowledge, dexterity and experience.

Bolt Cutters: These large cutters require a degree of strength to cut open padlocks or cut wire fences.

Glass Cutters: Although not as effective as made out to be in fiction, glass cutters are sometimes useful for breaking into windows (it is generally more effective to find ways to pick or force the lock - as glass consistency is very hard to judge – sometimes shatteringly so).

Lockpick Gun: These automated lockpick devices are designed in a basic gun-like shape, they are generally only effective on fairly basic lock designs. However, they do make light work of entering for the inexperienced. Using such devices generally leaves tell-tale signs of scratching and intrusion, forensic wise (due to the harsh, crude mechanized nature of these instruments).

Hand Ram: A crude punching device which seeks to maximize the level of purchase and force one can inflict upon a locked door. Because

of its weight (8kg) it generally makes for a poor weapon.

Hooligan Bar: Essentially a one-meter long bar developed for American troops to remove glass from windows, the bar has a number of hook attachments to remove splinters of glass from a window once smashed

Hydraulic Door Opener: A small hand-pumped jack, which gradually opens its jaws up to force open barred or closed doors. Because of the slow pressure build-up, it generally performs the task relatively silently; however, tell-tale signs of intrusion are usually left compressed into the door frame and cavity.

Pocket Jet Torch: A small torch device, which uses disposable gas lighters as fuel. The torch can achieve up to a 30 second burst of 1,400°F flame, which can readily burn wet wood or fuse metals.

Tactical Cutting Torch: A larger military model, which is used by special-forces units to cut open steel doors, windows bars etc. The unit consists of a torch, cutting rods, gas cylinder, igniter and safety gear – which generally can be packed into its purposed built belt-pack. A cylinder generally has enough fuel for 140 seconds of use.

Electronic Lockpicks: Some more advanced intelligence services have access to code-breaking hand-sets, which are effective at scanning the various pulses emanating from electronic locks, and deciphering the needed codes for entering the secured location. Such devices are in their infancy, and generally need cryptographic and computer I.T knowledge to use successfully.

Marine Assault Access System MOBY: This device is primarily used for anti-terrorist personnel to gain access to elevated marine structures from the water. The device being basically a system that raises a grapple to the structure to allow access via the attached flexible ladder

AIRFOILS & PARACHUTES

To successfully parachute anywhere, some basic guidelines need to be adhered to. A person must fall at least 75 meters before opening a chute, the person descends from 2.5 to 4.5 meters per second drifting sometimes sideways in the wind. Military men carry up to 23kg of equipment, although more is not recommended.

Mini-Parachute: A smaller, compact version of your standard parachute, these parachutes generally measure 4.5 meters across – because of this, it is a little harder to maneuver.

Ram-Air Parachute: These box-shaped parachutes (similar to a glider-shape) are now generally employed by the world's military services over the older, rounded versions – because of the relative gains in maneuverability - for precision landings at the target zone.

Guided Parafoil Aerial Delivery System (GPADS): Developed by the U.S military (and now commercially available) this GPS guided

DIVING EQUIPMENT

Dry Suit: These waterproof suits successfully seal the cuffs on the hands, feet and face. The suit also has boots and gloves to retain the pressure sealed environment. The suit is generally made to be baggy, so that other forms of equipment can be carried (unlike a normal wetsuit), it also has a limited degree of insulation – which can resist some effects of cold water.

Rebreather: Current models of closed-circuit scuba gear give the user a dive time of between 200 to 240 minutes (depth and breathing rates dependant). The tanks on modern scuba equipment is generally less bulky, and allows for greater degrees of movement in water. The tank is generally filled with pure oxygen, limiting the dive capability to 30 feet. Rebreather units are generally favored for covert use because they do not vent gas, which avoids the stream of bubbles escaping to the surface (possibly giving away their presence to the enemy).

Cellular Phone Immobilizer: These devices jam cellular phones within an area of effect (up to 180 meter radius). It doesn't effect other forms of signals like radios. There are even more powerful versions available that can jam up to a 3,600 meters radius, but this device generally

delivery system uses an electronically controlled parafoil to deliver a payload between 300 to 19,000kg to a specified destination; increasing the capacity to re-arm forces behind enemy lines.

CADS Controlled Aerial Delivery System: This system designed to deliver payloads is basically a remotely-controlled radio-guided parachute – once it leaves the aircraft the transmitter activates and a skilled operator can direct it to within 100m of the desired dropzone

EXINT Pod: A small, streamline pod which is attached to a helicopter or combat aircraft which can be jettisoned mid-flight from up to 20,000 feet. It is designed to seat one occupant (oxygen and NBC support) and once jettisoned the automatic parachute and airbag system, coupled with a computer navigation system ensure a safe, precision landing. It can also be used to house an individual for extraction, as well. It can carry up to 230kg of weight.

effects other high frequency radio outputs (being illegal and generally arousing greater suspicion of its use).

Countersound Generators: Consisting of a computerized speaker and microphone system these devices seek to generate complimentary sound peaks in the current location to cancel out existing noises heard. The effect is silence, or generally a muffled sound. These devices are employed in industrial sites with noisy machinery to dampen the sounds emitted, but are just as effective in silencing the outputs of bugs.

Sonic Bug-Stomper: These pocket-sized devices generate complimentary sounds within a room to foil the use of bugs within a 3 x 3 meter area. The other end is likely only to hear silence. The advantage of such devices over traditional methods (loud music, flushing toilets) is that the eavesdropper may be completely unaware of being compromised.

Radar/Laser Detector: A handheld device, which detects radar and laser based security systems. A more sophisticated military backpack version can also determine the exact location of sensors and determine the type.

ESCAPE & EVASION

Flex Cuffs: These one-use handcuffs are basically loops of toughened plastic, much favored in large-scale police arrests.

Bushmaster: These crude 20 cm long metal tubes with a timing device can fire one standard pistol bullet. These are used for ambush purposes, and can be linked together to give the appearance of many soldiers nestled in scrub. They can even be fitted with trip-wires if need be.

Escape Boots: These are simply a pair of normal boots fitted with small razors in the toes, which can be employed to sever bonds and ropes for escape purposes.

Fake Wounds: As seen in the latest Hollywood blockbuster these fake wounds are rigged with a tiny explosive (known as a squib) and bags of blood. The explosion is generally triggered by a remote-control device. They can be effective in causing deceptions (like *retiring* an agent).



Hand Stunner: These hand-held personal safety devices when pointed and triggered send out a high-voltage current into the intended target, this causes the nerve functions to scramble – which may lead to the target being temporarily stunned. The target can only be effected if light clothing or exposed flesh is targeted. Some models resemble a mobile phone for covert operation.

FIREARMS

Accuracy International L96A1 PM 7.62 Sniper Rifle
Caliber: 7.62mm x 51 NATO standard
Weight: 2.9kgs *with sight* Muzzle Velocity: 850m per second
Magazine Capacity: 10-round box
Range: 3,800m

This bolt action rifle is favored by the SAS, it is sleek stainless steel and doesn't require the sniper's head to move during bolt operation (therefore he can maintain continuous observation of target). It comes with a bipod with retractable spikes for stability. Various versions of the model include silencing suppressors, and a super magnum version (using either .338 Lapua Magnum, .300 Winchester Magnum, or 7mm Remington Magnum bullets). The rifle can reportedly achieve headshots at 300-600m. The weapon comes complete with a variable power scope of up to 10x and a bipod.

AK-47 Assault Rifle
Caliber: 7.62mm x 39 Soviet standard
Weight: 4.3kgs Muzzle Velocity: 710m per second
Magazine Capacity: 30-round box



This range developed by Avtomat Kalashnikova for the Soviets during the 1940s can still be seen in the hands of Third World paramilitaries today. It is primarily designed for close-range combat, reliable and robust. It was replaced from active service in 1959 by the AKM rifle (and AK74)

AK-74 Assault Rifle

Caliber: 5.45mm x Soviet standard

Weight: 4.3kgs Muzzle Velocity: 710m per second

Magazine Capacity: 30 round box

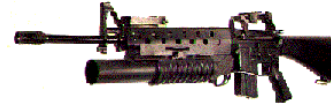
This updated version went into Soviet service in 1979; using a smaller caliber round that is designed to deform when it hits a target. It can mainly be found these days in active service in ex-Soviet republics

AR-15/M16 Assault Rifle

Caliber: 5.56mm x 45 NATO standard

Weight: 3.18kgs Muzzle Velocity: 1000m per second

Magazine Capacity: 20 or 30-round box



The M16 started out under the AR-15 name when designed by Armalite in the late 1950s, adopted by the U.S Air Force in the mid-1960s it was renamed. The US Army called it the M16A2 and went on to become the backbone of Vietnam operations. Early models were prone to buckling (because of their part pressed steel/part plastic construction), the US armed forces still prefer it as a front line combat rifle

Blowpipe Missile

Weight: 2.8kgs Length: 153cm

Warhead Diameter: 76mm Warhead Weight: 2.2kg

Maximum Range: 3,500m

Velocity: Mach 1

This man-portable surface to air-missile was the first of its type developed by the British Army. It is different from most in that it is controlled from the launcher to target by the operator.

Bren L4A4 Light Machine Gun

Caliber: 7.62mm x 51 NATO standard

Weight: 4 kgs Muzzle Velocity: 840m per second

Magazine Capacity: 30-round box

First produced by the Czechoslovakian company Skoda during the 1930s it was quickly adopted by British Armies (Commonwealth) and produced by Royal Enfield. Early models used .303 bullets, but quickly converted to NATO standard. It can still be found in the hands of Third World paramilitaries and armies today

Browning 50 M2HB Heavy Machine Gun

Caliber: 50 cal M2 ball (12.7mm x99)

Weight: 17 kgs *with tripod* Muzzle Velocity: 930m per second

Magazine Capacity: Belt-fed



The M2HB is a hard barreled update of the original M2 produced in the 1920s. The design, however, has not change much and still is used by armies around the world. The popularity can be attributed to the stopping power of the .50 round. Add to this, the development of armor piercing, incendiary and explosive rounds – it can cause considerable harm to opposition forces

Browning 9mm Hi-Power Pistol

Caliber: 9mm Parabellum

Weight: 882g Muzzle Velocity: 350m per second

Magazine Capacity: 13 rounds



Designed by John Browning and produced by Fabrique National in Belgium, the Browning 9mm Hi-Power is actively used by armies and special-forces today. It is a rather large pistol as a result of the 13-round magazine, but its reliability is its major selling point

Carl Gustav 84mm M2 Recoilless Anti-Tank Gun

Warhead Diameter: 84mm Warhead Weight: 1kg Launcher Weight: 6kgs

Muzzle Velocity: 310mm

Effective Range: Moving Targets 300m Bunkers 500m Exposed Troops 1,000m Smoke 1,300m

Illumination 2,300m

The recoilless nature of this Swedish designed anti-tank weapon makes it extremely accurate. Despite its relatively heavy weight, it is favored by special-forces around the world, there is also a light version in service in the American and British forces (the M3 Carl-Gustav)

CS Grenade

Delay 1.5 to 3 seconds Burn Time: 10 to 40 seconds

Weight: 450g CS content 53g

This hand thrown grenade is mainly used to create a smoke screen in the storming of buildings by special operations forces (they will have access to thermal imaging)

Glock Model 17 Semi-Automatic Pistol

Caliber: 9mm Parabellum Length: 188mm

Weight: 650g Muzzle Velocity: 350m per second

Magazine Capacity: 17 Round Box



Developed in the 1980s by an Austrian firm the Glock features many innovative features including, no hammer or safety-catch (controlled by a trigger mechanism) and 60% plastic construction. Contrary to reports, the remaining 40% steel construction make it visible to standard airport X-ray machines

Glock 18C Machine Pistol

Caliber: 9x19mm Parabellum

Weight: 1kg

Magazine Capacity: 18 round box

This machine pistol variant of the Glock 17 has a muzzle compensator to reduce recoil, although short-burst are advisable only. Its design makes it a reliable machine pistol when stopping power is needed.

GPMG L7A2 General Purpose Machine Gun

Caliber: 7.62mm x 51 NATO standard

Weight: 5 kgs as light machine gun with bipod (14kgs in sustained fire role incl. tripod and sighting unit)

Muzzle Velocity: 838m per second

Magazine Capacity: Belt Fed

The Gimpy (as it is affectionately known) is a British version of the Belgian produced FN MAG. This general purpose machine gun is primarily of use in fixed positions, although it can be effectively wielded by infantry as a light machine gun

L2A2 Fragmentation Grenade

Weight: 450g Length: 99mm Diameter: 57mm

Delay: 4 seconds Explosive: 170g

The grenade is based upon the American M61 grenade, it is olive in color with a yellow band and lettering. It has slits of metal in its core that fly out and can injure troops in a 20m radius. The release fly-off handle primes it, and mechanisms inside the grenade trigger it 4 seconds later. It can be also effectively deployed in trip-wire booby trap set-ups

Heckler & Koch G3

Caliber: 7.62mm Length: 102.5cm

Weight: 2kgs Muzzle Velocity: 790m per second

Magazine Capacity: 20-round box

The German company produced the Gewehr 3 (G3) in 1959, and found ready service in West Germany, Spain and Holland. The assault rifle is reliable and is a standard infantry weapon around the world. It can be fired from a closed and locked bolt position, and has a delayed blow-back action. The G3/SG1 version comes equipped with an adjustable telescopic sight and bipod

Heckler & Koch MP5

Caliber: 9mm x 19 Parabellum

Weight: 1.1 kgs Muzzle Velocity: 400m per second

Magazine Capacity: 15 or 30-round box



The Heckler & Koch MP5 sub-machine gun is favored by anti-terrorism units around the world, its closed bolt mechanism making it extremely accurate. Various versions are available including one with a telescopic metal stock and a short-barrel version (favored for its ability to be concealed)

Heckler & Koch PSG1 Sniper Rifle

Caliber: 7.62mm x 51 NATO Standard (.308 Winchester match)

Weight: 4 kgs *with sight* Muzzle Velocity: 820m per second

Magazine Capacity: 5 to 20-round box

Range: 1,000m

This sniper rifle is an adaptation of the G3. This weapon has silenced working parts, a heavy barrel, an adjustable butt and trigger, and x6 telescopic sight. It is used by special-forces and police around the world

Ingram Model 10

Caliber: .45 ACP or 9mm x 19 Parabellum

Weight: 1.15 kgs Muzzle Velocity: 280m per second

Magazine Capacity: 16 or 32-round box

Also known as the MAC10 after its originating manufacturer (Military Armaments Corporation) the Ingram company modified it so that the high rate of fire didn't cause heat, control and accuracy problems. The heat-resistant materials applied to the barrel now allow it to be used as a fore-grip model, greatly increasing its accuracy. It has largely been superceded by the Heckler & Koch MP5 in the military arena, but has become a firm favorite with drugs cartels

Izhmekh PSM

Caliber: 5.45 x 18mm

Weight: 550g

Magazine Capacity: 9 box

A small pistol produced in Russia from 1973 onwards still widely used by Russian, Bulgarian and other Eastern European countries security forces

L2A3 Sterling Sub-Machine Gun

Caliber: 9mm x 19 Parabellum

Weight: 1.2kgs Muzzle Velocity: 293-310m per second

Magazine Capacity: 30-round box

This simple weapon is robust and reliable based on the *Sten* of World War II. Although no longer used by major military powers, it can be found in South American forces and paramilitary organizations courtesy of a Chilean modified version still in production. There is also a silenced version called the L34A1 Sterling

L42A1 Sniper Rifle

Caliber: 7.62mm x 51 NATO Standard

Weight: 2 kgs Muzzle Velocity: 838m per second

Magazine Capacity: 10-round box

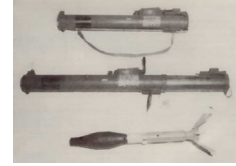
The L42A1 rifle is an improved version of the British Lee Enfield rifle, used in World War II. Known for its toughness and reliability, it is still in use by the British police called the Enfield Enforcer. The sight has a x4 zoom capability

LAW 80 Light Anti-Tank Weapon

Launcher Length: 150cm when ready to fire

Weight: 4.5kgs Warhead Diameter: 94mm Warhead Type: HEAT

Effective Range: 20-500m



A British derivative of the U.S made 66mm weapon is a disposable one-shot missile launcher. It is 1m long in its collapsed form. Its comparative light-weight means it can be carried in addition to standard infantry kit. The comparative ease of use is helped by a spotting rifle attached that fires tracer rounds to help aim correction before the main round is released. The warhead is a HEAT (High Explosive Anti-Tank missile, which can burn through all but the toughest of tank exteriors

LAW Rocket, 66mm

Warhead Diameter: 66mm Weight: 1.5kgs Length: 878mm unextended

Range: 220m Velocity: 200m per second

The 66mm LAW rocket can burn through 275mm of armor, and is effective in breaching tanks, as well as bunkers, caves and other fortified targets. The anti-tank weapon of choice around the world is loaded with HEAT technology, and can cause chaos on a battlefield. The weapon is triggered by extending the rear section (a spring loaded sight will pop up), removing the front and rear flaps and aiming. There are luminous spots on the scopes for night firing. Such rockets require a back-blast danger area (so as to not harm friendly troops and equipment

M1 Carbine

Caliber: 30 carbine (7.62mm x 33)

Weight: 1 kg Muzzle Velocity: 600m per second

Magazine Capacity: 15 or 30-round box

First produce by Winchester in the United States in 1941 it became popular with US Special Forces. Its main advantage (at the time) was its new type of gas operation (now known as short-stroke piston operation). It has fallen out of favor in military circles, but can still be found in service in South America and Asia. There are various models including a M1A1 semi-automatic, M2 a fully automatic version

M203 40mm Grenade Launcher

Caliber: 40mm Weight: 0.7kg

Muzzle Velocity: 75m per second

Range: 400m



Designed by AAI (American Armaments Industries) and manufactured by Colt, the M203 was primarily designed as an addition capability to an M16. Newer versions, however, are designed to fit various types assault weapons. The breech-loading weapon works in a similar way to pump action shotguns. It can be used also on its own

M60 General Purpose Machine Gun
Caliber: 7.62mm x 51 NATO Standard
Weight: 5 kgs *with tripod* Muzzle Velocity: 853m per second
Magazine Capacity: Belt Fed

America's all purpose machine gun has been in service since the Vietnam War. It originally has a series of design faults including an awkward permanently attached bipod, overheating resulting in asbestos gloves needed to change the barrel. It has fallen out of favor in recent years in the Army, but a modified version called the M60E3 is used by the US Marine Corps (minus design flaws)

M79 Grenade Launcher
Caliber: 40mm Weight: 2.95 kgs
Muzzle Velocity: 76m per second
Range 350m

Affectionately called the *bloop-gun* for the sound it makes when its fired, this was the predecessor to the M203 used extensively in Vietnam. It is rather disconcerting to use with its high trajectory, but if used by the experienced it can be highly accurate. It is now in use in Korea and several other Asian countries (and South America)

Mark 19 40mm Automatic Grenade Launcher
Caliber: 40mm Weight: 15kgs
Muzzle Velocity: 240m per second
Range: 1,600 m
Rate of Fire: 325-327 rounds per minute

Basically a cross between a grenade launcher and a machine gun (designated a machine gun), this belt-fed grenade launcher can be deadly on a battlefield. The grenades are fed into the weapon like bullets, the grenade is detached, and the chain link and cartridge is ejected. It can be mounted on vehicles, and one can attach night scopes and laser sights. It is used by military units and special operations squads alike

Milan Wire Guided Anti-Armor Missile
Launcher Weight: 12kgs Missile Weight: 1.3kgs
Launcher Length: 900m Missile Length: 796mm
Missile Warhead: HEAT Range: 2,000m

Built by Euromissile (a Franco-German consortium) in the 1970s, it has fast become the anti-tank missile of choice for today's modern army. The Milan is easy to fire and has a very high accuracy rate. It can be fired by a two-man infantry team, or attached to a vehicle. A small charge sets the rocket on its way, long enough for its main rocket motor to fire. It is controlled through an optical sight attached that guides the missile to its target (controlled by command via wireless). By night the Milan can be controlled by the add-on MIRA night sight that clamps on to the rocket

MINIMI
Caliber: 5.56mm x45 NATO standard
Weight: 3 kgs Muzzle Velocity: 965m per second
Magazine Capacity: disintegrating link belt, 200 round belt or 30-round M16 box

Made by Fabrique National of Belgium, this gas-operated weapon is a natural light machine gun partner to the heavy machine gun the M16. It is a potent force by itself, and has been adopted by the US military and the British SAS service

Mortar 51mm
Caliber: 51mm Barrel Length: 104cm
Weight: 3kgs Bomb: 920g
Type of Bomb: High explosive, smoke and illuminating flare

The 51mm mortar is a simple tube design with a self-cocking trigger and spirit level range sight. The bomb is slipped down the tube, the firer adjusts the alignment by sight, and pulls down on the lanyard attached to the trigger

Mortar L16 81mm
Caliber: 51mm Barrel Length: 128cms
Weight: 16kg Weight of Bomb: 1.8kgs
Type of Bomb: High Explosive, illuminating, smoke, practice and guided anti-armor
Maximum Range: 5,650m



This standard infantry mortar is used extensively by the British Army

Nimrod Missile
Manufacturer: IAI
Range: 26kms



These laser-guided, anti-tank, anti-ship and anti-personnel missiles can be installed in fixed ground installations, airborne platforms or mobile ground platforms. The device uses information from laser designators to direct itself to the target and can even change course to avoid adverse weather and adjustments to cruising altitude required

Owen Sub-Machine Gun
Caliber: 9mm Length: 813mm
Weight: 2 kgs Muzzle Velocity: 381m per second
Magazine Capacity: 33-round box
Range: 200m

This weapon is one of the few weapons produced by the Australian Army. It has a distinctive top-loading magazine, and is known for its reliability and robust qualities

Walter PKK
Caliber: 7.62mm or 9mm Short (9 x 17mm)
Weight: 170g Muzzle Velocity: 280m per second
Magazine Capacity: 7-round box

The Polizei Pistole Kriminal is manufactured by the German company Walter. It was originally designed for uniformed policeman, it is easy to conceal and is used extensively as a secondary pistol in the personal protection profession.

PPSH-41
Caliber: 7.62mm x 25
Weight: 1.6 kgs Muzzle Velocity: 488m per second
Magazine Capacity: 35-round box or 71-round drum

The Russian designed sub-machine gun found active service during the Second World War and is known for its durability, accuracy and light recoil. After the war China took up the design and became their main weapon in the Korean War. Today, rebel groups in Africa also favor it

RAI Model 500
Caliber: 12.7x99mm (.50 Browning)
Weight: 15kg
Magazine Capacity: 1 bullet
Range: 6,500m

This purposely built, single shot sniper rifle is *the* weapon for long range sniping. This bolt action is easily assembled and disassembled and has a bipod attachment and a zoom power-scope of up to 24x

Remington Model 700
Caliber: 7x64mm
Weight: 7.5kg
Magazine Capacity: 5 round

This popular bolt-action hunting rifle is also popular in modified forms by police and military snipers (like the U.S Army). Most use the Remington with 7.62x 51 NATO rounds. The U.S Secret Service uses a modified version with 7x64mm Remington Magnum chambering, which extends the usual 3,800 meters range (also coming with variable scope from 3.5x to 10x).

Remington 870 Pump Action Shotgun
Caliber: 12 gauge, 70mm Weight: 1.6kgs
Ammunition Types: Buckshot, birdshot, solid slug, flechette, C.S & plastic baton
Magazine Capacity: 7-round, tubular

This shotgun is widely used around the world by professional armies. It is especially of use when combined with solid slugs and fired at door hinges, blowing them off to gain quick entry

Rocket Launcher 3.5 Recoilless
Launcher Length: 1.55m
Launcher Weight: 2.5kgs Rocket Weight: 1.8kgs
Warhead: HEAT
Effective Range: 150m

This relic of the Second World War still finds active service in some of the world's more out of the way combat zones. Basically a two-piece tube that is put together, with two wires leading out the back (to attach electric firing mechanism)

RPG-7
Warhead Diameter: 85mm Length of Launcher: 950mm
Weight: 4kgs Velocity: 300m per second
Effective Range: 300m



The stalwart of many skirmishes around the world the Reaktivniy Protivotankoviy Granatomet-7 is a rocket-propelled grenade launcher introduced by the Soviets in 1962. It can be found virtually anywhere around the world, and is the weapon of choice by insurgents the world over

SA80 Assault Rifle
Caliber: 5.56mm x 45 NATO Standard
Weight: 1.7 kgs Muzzle Velocity: 940m per second
Magazine Capacity: 30-round box

The assault rifle developed by Enfield/Royal Ordnance for the British Army is of a *bullpup* design (short, accurate and tough), primarily to use effectively in urban environments. It comes with a x4 optical zoom sight. It is known to have a design fault where magazines occasionally fall out

Sanvik XXII
Caliber: 5.6x16mm (.22 LR)
Weight: 1kg
Magazine Capacity: 30 round box

Markings on these weapons claim to be from the maker known as 'Sanvik of Sweden' – the reality is these are machine pistols mass produced by underground gunsmiths in the Philippines starting around 1985. They are modeled on the design of the Ingram MAC-10 and are only found in the hands of criminals or terrorists.

Sig Sauer P226 Semi-Automatic Pistol
Caliber: 9mm x 19 Parabellum
Weight: 750g Muzzle Velocity: 350m per second
Magazine Capacity: 15 or 20-round box



Developed by SIG during the 1980s it is a highly regarded pistol that has never really entered into active military service despite passing the requisite trials, however it has found favor with German federal agents deployed to the *BKA Sicherungsgruppe* (security group)

SKS Assault Rifle
Caliber: 7.62mm x 39 Soviet standard
Weight: 1.7kgs Muzzle Velocity: 735m per second
Magazine Capacity: 10-round box

The Samorazyadnyi Karabin Simonova was the USSR predecessor to the AK-47. It can still be found in the hands of guerrilla forces, however, the Chinese manufacture a variant known as the Type 56 Carbine

SLR L1A1
Caliber: 7.62mm x 39 NATO Standard
Weight: 1.9 kgs Muzzle Velocity: 840m per second
Magazine Capacity: 20-round box

The British version of the Belgian FN FAL, which unless modified, is a semi-auto rifle; this self-loading rifle has been superceded by the SA80, but still finds active service amongst the various territorial armies in the United Kingdom

Stinger Missile
Weight: 23kg Diameter: 70mm
Length: 150cm Range: 4km
Identification: Friend of Foe compatible with US/NATO
Guidance System: Passive IR/UV homing + Fire and Forget
Navigation: Proportional with lead bias
Speed: Mach 1

The portable, shoulder-fired, infra red (IR) homing (heat-seeking) air defense guided missile is designed to counter high-speed, low-level, ground attack aircraft. It became operational with the US force in 1981 and is the only forward area air defense missile employed.

The current version (the FIM-92C Stinger) has electro-optical seekers that are sensitive to both ultra-violet and infra-red, making it possible for the missile to discriminate between flares and the target. The stinger is unique in having a Target Adaptive Guidance technique, which orientates the missile to seek out vulnerable parts of the aircraft. In Afghanistan it proved its formidable reputation by downing 270 Soviet aircraft at a kill ratio of 79%

Stun Grenade (FlashBang)

This type of grenade manufactured by Royal Ordnance Enfield at the request of Britain's SAS has a primary role in momentarily blinding and creating a loud noise for counter-terrorist teams to enter buildings unmolested. The G6 Stun Grenade produces a noise in excess of 160 decibels combined with the light output (300.000cd). On average, untrained civilians are stunned for around 3 to 5 seconds upon detonation. It works through a combination of magnesium powder and a fulminate of mercury, the body being constructed of minimum levels of metal to stop fragmentation. It is a non-lethal device that has become popular with the majority of counter-terrorism teams around the world

Thompson Sub-Machine Gun

Caliber: .45mm

Weight: 2.5 kgs Length: 85cm

Range: 200m

Magazine Capacity: 20-round stick or 50-round drum

The infamous *tommy gun* also found widespread use during the Second World War by American forces, valued for its ability in close range combat. It is awkward and heavy to use, but its stopping power is unquestioned. It is likely to still be sporadically employed in America and South America

Tikka M55 Sniper Rifle

Caliber: Various including .223 .243 & 7mm

Weight: 1.5kgs Muzzle Velocity: 900m per second

Magazine Capacity: 4 or 10-round box

This Finnish bolt-action sniper rifle was in use in their regiments during the 1980s, it is extremely accurate up to 300m, after which the bullet tends to *fly*. It may still be found in the hands of organized crime outfits in Europe

TsNIITochMash PSS Vul

Caliber: 7.62 x 42mm

Weight: 800g

Magazine Capacity: 7 round box

This Russian made pistol first produced in 1983 is designed to be concealable and silenced. The Acoustic signature is designed be used without additional sound suppression – being quickly adopted for use by Russian and other Eastern European special-ops units

Vickers K Machine Gun

Caliber: .303mm

Weight: 21kgs Muzzle Velocity: 743m per second

Range: 1,828m

Used by British SAS forces during the Second War World attached to jeeps, this proved a winning combination of speed and firepower. It is unlikely to be in service today, but one can never discount it popping up in ex-Warsaw pact countries

Wall Breaching Cannon *the Harvey Wallbanger*

This Wall Breaching Cannon developed by the British SAS is a compromise between the need to breach walls in hostage situations and to limit the noise from the explosion. The device is primarily a compressed air cannon, which fires out a water-filled plastic container – the kinetic energy invariably is 100% dissipated against the wall, punching a hole through it. The pressure is equivalent to between 200 and 600lbs of pressure. The system can be transported along with its 45x25 liter plastic containers. It can be carried into a building by a two-man team

Walther WA2000
Caliber: 7.62 x 66mmB (.300 Winchester Magnum)
Weight: 8.5kg
Range: 4,500m

This German produced sniper rifle is reportedly the most accurate sniper rifle ever produced. This *bullpup* designed weapon is built around a heavy free-floating barrel. It was produced from 1982 until 1989, when only around 200 were produced (91 were custom-made to used 7.62x51mm NATO rounds). It was produced with a variable zoom up to 10x. Such weapons can fetch up to \$12,500 in the hands of collectors.

Brass Catcher: is basically a container fitted over the ejection port of semi or fully-automatic weapons to catch the spent cartridge cases being lost (as in to not leave behind evidence for forensics).

SIGHTS & SCOPES



Telescopic Sight: Your basic telescopic sight allows for magnification levels of 4x to 8x – such sites are generally used for long range rifles and specialist sniper rifles.

Targeting Laser: The modern version of laser sights, are about the size of a fingertip and readily fitted to most guns. The system facilitates better aiming by the use of a laser, which projects a small red dot in the direction the gun is aimed.

Heads-Up Display Unit: The HUD system first deployed in aircraft and ground vehicles links weapons targeting systems to the users visual display system (in the case of a soldier, a gun and goggles). The HUD system attaches from the gun to the helmet via a connecting lead. The information is then cross-referenced, and the targeting system of the gun shows up in the visual display of the goggles. The system also allows for range information to be included and a handy targeting box superimposed over the display. Such systems can also be hooked-up to electronic command and control systems, to

specify targets in order of preference (eg Blueforce).

Sound Suppressor: When a gun fires a sonic boom of explosive gases and a flash is generated, a sound suppressor seeks to confine and slow down this process (changing its distinctive sound wave). The muzzle flashes are generally suppressed by silencers, but guns never sound *silenced* (as the mythology surrounding the term silencer would assume). The best results are achieved with sealed-breech guns like bolt action or single shot weapons. Semi or Fully-Automatic weapons only experience a limited reduction in sound (as they generally have noise from the action of the gun, which is far louder). Sniper rifles and rifles generally fire their bullets at greater speeds than handguns, meaning they generate a shock-wave after they leave the chamber (i.e faster than sound sonic-boom).

Laser Rangefinder: Laser rangefinder technologies are about the size of a pair of 7 x 50 binoculars and give the range to a target up to 10 kilometers away (to an accuracy of + or - 5 meters). They have the zoom capability of up to x7. Such technologies are adaptive to fit to weapons guidance systems like SIMRAD employed by British forces. It is particularly effective fitted to Mortar Fire Controllers (MFCs). The unit is capable of intuiting the selected target from multiple targets in view, and illustrates it with targeting information superimposed over the picture



Laser Target Designator: Such designators are the future of small-scale land battles. The operator can direct the laser targeting device at the target for demolition, after which laser-guided bombs (LGBs) are released and sent to the target (with a very high accuracy). With a range of 300-9,000m and a magnification level of $\times 10$ the ground forces only really need to get close to the target to confirm a viable target exists. Such Designators like the Pilkington LF25 are lightweight 2.7kg and can be carried in a backpack

EXPLOSIVES

Molotov Cocktail: This easily made, hand-held explosive made of a bottle filled with gasoline and an old rag is still an effective device to cause mayhem on city streets.

Thermite: This compound material made from easily obtained substances is primarily used in welding. It requires a high heat material like magnesium strips to start the reaction

Black Powder: The basic explosive made out of a mixture of potassium nitrate, charcoal and sulfur is relatively easy to make by anyone experienced in Chemistry, and usually still serves as a base for most terrorist explosives today.

Nitroglycerine: This colorless liquid is a mixture of nitric acid, sulfuric acid and glycerin. Although relatively easy to manufacture, it is extremely volatile and due care must be taken when transporting it.

Dynamite: Dynamite is essentially nitroglycerine bound within a neutralizing agent like sawdust or kieselguhr (a diatomaceous earth). A blasting cap or detonator is needed to set it off. Dynamite usually comes in sticks, which are graded in nitroglycerine content from 20% to 80%.

Plastic Explosive: The high explosive of choice for any professional or paramilitary operation is a combination of the high explosive RDX (cyclonite) or PETN (pentaerythritol tetranitrate), mixed with a binding agent (making it pliable). The resultant compound is similar to putty, which can be readily handled and shaped to size. The compound is virtually odorless; emitting

such low levels of fumes (nitrogen) that most sniffer dogs or chemical sniffers are unable to detect its presence. There are many different variations around the world including the American C4, Czech Semtex and French Plastrite. It is impossible to detect by X-ray machines, unlike solid forms of explosives. The substance is extremely stable requiring a detonator or ignition by another form of explosive to detonate. It can be readily stored for 20 years, making it the substance of choice for hidden paramilitary caches.

The U.S military C4 (known as M112 by Army stores) is olive in color. There are commercial versions available for the demolitions and mining industry, which generally require a permit to purchase. Recently, moves have been made to include taggants (small beads of stable plastic) in the substance – which is included for identification purposes. Such moves make it possible for forensics investigators to identify the manufacturer and indeed, the batch numbers. Licensed purchases bought in bulk can be as little as \$30 a pound, however, much higher prices can be secured on the black-market.

ANFO: The explosive, which combines Ammonium Nitrate and Fuel Oil (ANFO) is relatively easy to make and acquire its key components. The oxidizing agent component can be found in Fertilizer (Ammonium Nitrate), or calcium nitrate, or ammonium perchlorate (found in bleaching agents). The fuel is generally gasoline, or a mix of gasoline, diesel or even vegetable oil. As one can see, such availability makes it the explosive of choice for poorly funded or renegade terrorist organizations.

The ammonium nitrate is in itself an explosive, but because of the substance capacity to absorb water molecules – it is generally better to ensure it is made into a compound (as if too much water is taken on board, it may not detonate). Commercial supplies of ANFO make up 97% of all explosives used in industrial explosives.

There are major disadvantages to the use of ANFO including; it is a relatively low powered explosive, easily detected (because of its fumes and size) and a blasting cap booster charge of higher explosives is needed to detonate it.

Foam Explosive: Usually contained within a small aerosol can, this explosive has the consistency of shaving cream. Originally designed to be used in the destruction of land mines, it is extremely useful in opening doors or car trunks (low output of explosive for its relative volume). It works most effectively by applying its bulk to the weakest part of a construction.

Frame Charge: These ready made frames come in variable sizes and are used primarily for blowing holes in walls. Made of plastic explosive and easily folded into suitcase-sized packages, they also come fully fused with a small detonator. The frame is basically stuck to a wall and charged. The charges can generally blow a hole in a triple brick wall (or a 20cm thick slab of concrete).

Dispersal Bombs: To increase the area effect of standard explosives, some bombs are rigged to include a primary and secondary charge. Whether the main explosive be plastic explosive or ANFO, the principle is to use a smaller bomb (primary) to spread its bomblets, which triggers the secondary explosives. One can also increase the area of effect by detonating a bomb from a raised position, or by dropping it from a plane and cloud-bursting it (as bombs that are detonated on the ground rarely extend to their full range potential).

Military weapons generally use the cluster effect, triggering the main bomb before it hits its target, that will generally release the smaller bomb clusters – by the use of computer guidance release systems.

Blasting Cap: Modern Blasting Caps are generally electrical, which means the Blasting machine sends a pulse down the wires (generally 9 meters long), igniting the small explosive charge (blasting cap), which in turn, detonates the main explosive.

Older, non-electric blasting caps are ignited by a 22cm fuse – which can burn for roughly 4 minutes. The fuse will finally ignite the blasting cap. The fuse will generally be cut to size (for timing of the explosion).

Blasting Machine: These machines generate a current to trigger the blasting caps. Older types are generally simple plunger boxes with T-shaped handles. These can generate enough electricity to detonate up to 20 linked blasting caps at once.

Modern military blasting machines are the size of a cellular phone and generate enough electricity supply by twisting the handle around a couple of times, it sets off up to 50 electric blasting caps at once.

Remote blasting machines use a radio transmitter link to receivers attached to blasting caps to trigger the explosion of up to 15 electric blasting caps, from up to 3 kilometers away. The package generally comes complete with a blasting machine handset and 10 receivers in an attaché case.

Detonation Cord: These rope like constructions house a core of PETN explosive, sealed with tape, yarn and sheathed in plastic. Once ignition has started, the cord will burn at over 3,700 meters per a second – virtually instantaneous to the human eye. It is generally used as a fuse for clearing mines, or cutting girders.



Claymore Anti-Personnel Mine: The American made Claymore is used the world over, the mine is a molded plastic case measuring 75mm high by 200mm wide. The whole case is slightly curved with *front towards the enemy* embossed upon it. The device is packed with solid explosive with thousands of ball bearings. The base of it has two spiked legs, the top contains two screw-cap detonator wells (and hand generator is used to trigger it). One in five mines come with a testing device, to ensure continuity of charge along to the command wire. This mine is therefore perfect for perimeter defense

TACTICAL DIVERSIONARY DEVICES

Flashbang: These specialized hand-grenades are created to produce a bright flash of light and a loud explosive charge. Most individuals not familiar with such devices are generally stunned the first time they encounter them. These devices are primarily designed to give SAS type units time to penetrate into an enclosed room and take charge of the situation, whilst the targets are still reeling from being stunned.



Gunshot Simulator: These are basically modified firecrackers designed to cause alarm and momentary chaos. They can be designed to simulate various types of firearms; from a pistol to a sniper rifle – and can fool even experienced gun users.

Mini Hand Grenade: These golf ball sized grenades are filled with RDX explosives and generally are triggered by a 4 second fuse. The comparative size differentials to your standard grenade, give it the edge in clandestine operations.

PERSONAL SENSORS

Portable Alarm: These pull-cord trigger devices can be used as personal security devices or rigged between doors or windows. Once triggered they emit a loud siren not dissimilar in volume to a jet engine.

Chemsniffer: These handheld devices quickly scan the air for chemical traces at a range of up

to 1.5 meters. They are mainly used to search for weapons, explosives and poisons.

At major airports, larger walk-through, freestanding machines sweep sensitive areas using thermal-neutron analysis (which is far more advanced and sensitive than hand-held versions).

ARMOR

Standard Kevlar Armor: Made of aramid fibers these types of armor weigh a lot less than your standard police-issue riot gear (6.5kg)

Compound Kelvar Armor: A stronger version of Kevlar armor, which uses aramid patterns and polyethylene fibers for greater strength and durability (5.5kg).



Assault Suit: These suits are designed to provide protection heat and flame, and worn over the outside of the assault undersuit. This one-piece garment that is worn under the assault body armor; the suit is manufactured in Arvex SNX 574 flame-resistant, anti-static, liquid repellent black fabric. The forearms, knees and shins are fitted with extra quilted Arvex fabric to absorb contact with hot surfaces. A drag-handle is fitted to the suit on the back to help assist unconscious men to be evacuated from danger

Kevlar Anti-Strangling Collars: These strong and durable undergarment collars prevent strangling of an operative.

MEDICAL TREATMENT

Autoinjector: These dispensers deliver a measured dose of a drug to a patient

Pro Medic Pack: This special operations version of a medical pack includes all the needs for the medic to deal with severe burns, blast and bullets and provide emergency life-support until they can be airlifted from the combat zone. The pack generally includes resuscitation, ventilation and aspiration equipment, intubation equipment, intravenous administration kits, dressings, tracheotomy and crico-thyrotomy kits, burn treatment kits, instruments, limb immobilization equipment and anti-shock suits. The pack will also contain a wide variety of drugs and medications

NBC Suit: These sealed suits generally used in chemical laboratories can prevent exposure to poisons, pathogens and radioactive dust. They are not designed to protect against direct exposure to hard radiation. They are not as bulky or hot as previous versions of such chemical suits (JSLIST suits), and allow for greater degrees of dexterity. Obviously, anyone walking around in one outside of a lab environment might be justifiably looked at, and may cause public panic.



Protective Mask: Early gas masks generally had a number of problems associated with their use – causing fatigue by excessive heat, inability to communicate effectively and providing a limited field of vision. Later gas masks like the American M40A1 compensate by making breathing easier, reducing heat, expanding the field of vision, providing intelligible speech options and are tinted to protect against flash-bang type explosions.

PLACES

Anti-Vehicle Barrier: These permanent constructions built around secure locations stop vehicles from making unauthorized entries, generally built into the road near the guardhouse. The barrier construction generally includes steel plates that rise up to 30° angles, steel wedges, pillars (otherwise known as bollards), or concrete pyramids.

There are now portable anti-vehicle barriers used by transport police, generally being a plastic strip with hollow metal quills embedded, which punctures the tires of any car driving over it. It is mainly used in situations where stolen cars are travelling at dangerous speeds.

Anti-Blast Window Film: An invisible coating treatment that prevents a window from shattering after damage (preventing shrapnel). It can be laid down in multiple sheets to increase the strength of the window against blasts.

Electromagnetic Car Stopper: This device usually hidden under pavements, disables a car's electronic ignition and engine-control systems by sending an electromagnetic pulse. Older cars (roughly pre-dating 1980) generally do not rely upon electronic aided systems.

Fire-Suppression System: This fire-suppression system works by retarding outbreaks of fire by pumping inert gases like Halon into the various affected rooms – which drives out the oxygen (fires need oxygen to burn). Such systems with the aid of normal fire equipment can quickly stifle most outbreaks. The influx of gas isn't particularly dangerous to breathe, but a lack of oxygen might be harmful in the long term if one stays in such an environment (gas masks would be needed).

LOCKS

Key Locks: Commercial locks generally can be opened with a master key, the master key is a shortcut method for locksmiths to enter buildings and work out the issuing of a replacement keys to consumers – they are generally designed to fit several different comparable locks by the same manufacturer. Sometimes security staff and

Uninterruptible Power Supply: Most large computer centers and secured government locations use UPS systems to guard against data loss. Basically, the system inserts large batteries into the power grid, which if the outside power is cut can proceed to keep a steady supply of power to the grid for up to 10 hours. With various fail-safes installed to stop power surges as well, it is virtually impossible to lose data (as in times of extended breaks in power supply, the systems information can be backed up).

Zone Acoustic Countersniper System (ZACSS): This system basically determines where hostile fire is coming from. The system was originally designed in the 1970s for use by artillery-battery positions using radar; today's variant system has evolved into a more portable version. The modern system uses several omni-directional sensors, which detect small arms fire shockwaves through omni-direction microphones. Once the signals are triangulated by automatic computer routines – the direction and location of the gunman can be displayed. Such systems are useful in Presidential motorcades and podium announcements.

The system is extremely accurate, generally reporting the direction of the enemy assailant within 10% of the angle, the caliber of gun, range –even elevation up to a maximum of 1,400 meters. It can even detect sniper rifles with sound suppressors, but not silenced subsonic pistol rounds (no shockwave is produced).

The package also includes a GPS system receiver and compass. The sound sensors can be installed on the outside of a car, or deployed upon the tripods they come with. The sensors can be enhanced as well with IR Sensors and Laser Sensor capabilities.

cleaners have access to master keys (as most buildings have standard issue doors).

Combination Lock: Are generally used today in safes, where a certain combination is needed to open.

Auto-Ignition Remote Control: This device can start cars at up to 90 meters away, which is particularly useful if a bomb is suspected of being present. They are security coded, and can even remotely stop the car's engine. The doors and trunk can even be remotely opened and closed.

Electronic Lock: The electronic key does away with your typical physical key for a handheld device that emits a coded series of infrared or laser pulses, which is picked up by a sensor. Such devices can be installed in homes, vehicles and personal effects. Another added measure sometimes employed is a keypad lock, where a series of digits need to be entered or it triggers an alarm to sound (that may also be rigged to alert the local police).

Scanlock: A scanlock uses a camera image and a computer database to check the facial

DETECTION DEVICES

Trip Wires: A thin piece of fishing line crossing a darkened area of a building, or a forest floor is still a highly effective way of accounting for infiltration attempts. Such tripwires can be rigged up to alarms, detonators or mechanical traps – only limited to one's imagination.

Metal Detectors: The use of metal detectors is becoming a standard procedure in many public spaces – like concert halls and sensitive buildings. The metal detector can be either overt (free-standing scanners at entrances) or covert (hidden under floors).

Pressure Pads: Pressure pads generally provide a greater degree of flexibility than some other mechanical surveillance devices. Such pads can be set to either complete the electrical circuit at the slightest touch, or allow for some weight limits (like a human, but not a car entering). One can hook the pads up to trigger alarms, detonators or mechanical traps.

Burglar Alarms: Most modern burglar alarms generally incorporate a number of different ways to detect intruders, including

- Pressure Pads

characteristics of the user attempting to enter the premises. After careful electronic cross-referencing of the specified facial characteristics in its database, the individual is either permitted to enter, or security staff are alerted.

Safes: Modern safes generally rely upon a combination of keypad lock and a sophisticated tumbler lock system. Safes can also have added safeguards like shock-resistance settings, whereby, any attempts to drill a hole in the safe, causes internal mechanisms to trigger, releasing extra internal deadbolts – which generally bar entry for 24 hours. Modern safes allow for changes in external temperature, so sensitive electronic media inside are somewhat protected against cold and heat. It is generally easier to open safes covertly if the safecracker knows the general schematics of the brand and any unique features or anomalies – that can be exploited.

- FibreOptic Strands built into walls pulsing signals in a criss-cross fashion over a room
- Tripwires
- Motion Sensors, using Infrared, Microwave, or Ultrasonic radiation
- Computer Tracking
- Buried Wires generating electrical fields
- Touch Sensitive Sensors

The systems can be rigged to simply detect and/or inform the authorities/staff. Or indeed, cause harm in any number of ways.

Most professional burglar alarms generally have their control boxes in secure locations within the grid; one generally needs to jam the signals to allow time to disable the alarm system. The housing boxes of alarm systems (and sensors) generally are made from tamper-proof materials, which are strong enough to take repeated gunfire - and may trigger its own internal alarm system when someone attempts to open the housing. Such systems generally have some kind of power back-up delivery system; sometimes even each sensor may have access to its own battery back-up (even up to 24 hours).

Capacitance Proximity Sensors: These microchip-sized sensors detect small changes in electrical capacity on its surface – useful for detecting the touch of human beings (who carry a small electrical capacity).

Chemical Sniffers: Cutting edge sensor technologies such as acoustic-wave resonance, ion spectrometry, microwave-backscatter analysis – are used to identify small airborne particles or vapors.

Broad-Spectrum Analyzer These handheld units are used to break down the chemical composition of substances in the air (usually to a meter). They are mainly used to find chemical weapons, drugs and explosives.

Explosives Detector: The flashlight-sized units are used to detect common elements in explosives. Larger, fixed units are more sensitive and are used in many secure government locations.

Gas Scanner: A fixed sensor device, which is designed to continually scan for designated substances (usually of a chemical-warfare variety).

Fence Protection System: These series of sensors mounted at up to 7.5 meter intervals along chain or barbed-wire link fences, seek to monitor stress and vibration along its length. Generally, the sensors are arranged into security zones (smaller localities of fence, up to 800 meters), which are sub-divided to aid in alerting security staff to where exactly they need to direct their resources.

Human Presence Detection Device: Sometimes colloquially known as heartbeat detectors, this detection system seeks to pick up movements within an enclosed space down to increments as small as millionth of an inch (as in the vibration the human heart makes). The device usually consists of briefcase-sized computer, an electronics box and four cup-sized vibration sensors. The monitors can be used within a room environment (like your typical motion sensors) or employed in monitoring movement within a vehicle (in which one can fit the sensor externally). The software can detect the number of people within the car by the constant pulse of heartbeats. Results generally take over a minute

to deduce. Unfortunately, because of the sensitivity needed, high winds can interfere with the determination of such data.

People with exceptional athletic ability and patience; have been known to evade cheaper units by moving extremely slowly through such spaces.

IR Motion Detector: Fixed motion detection systems are being engaged more and more in both secure and business locations. Portable systems generally come with a cigarette-pack-sized sensor, which can fan out at 90° and up to 20 meters away. The system generally alerts a receiver up to 450 meters away. Other units can include more sensors and can include options to plug a receiver into a phone jack that rings a message to a pre-programmed number. The system can run up to a year on a standard 9-volt battery.

Millimeter-Wave Imager (MMWI): These high-tech sensors using low-frequency IR and high-frequency radio waves (millimeter waves) to track like emissions from objects (including humans) to build up an x-ray like picture, that can actively see through objects (like clothing, packaging, bodies and thin-walls). Being in limited use (as of 2005), the device is generally being used to detect hidden people in freight containers. The sensors work at a range of up to 25 meters. The sensors are generally used at fixed airport checkpoints, but a handheld unit resembling a radar gun, also exists.

Although this imaging technology is in its infancy, advanced systems can look through skin and detect the heartbeat and respiration; however, problems exist with looking through water, or objects with high moisture contents.

Noiseless Button Bomblets: These military motion sensors are generally disguised as small logs or stones (camouflaged to order) which are dropped from transport planes over battlefields by the 1,000-hex load. If these motion sensors are disturbed by infantry movements, the transmitter relays a radio signal back to command. These devices can equally be employed by covert operations staff in rural environments.

Portable Radio Jammer: Such handheld devices emit a broad spectrum of noise to radio communications, generally interfering with microphones, receivers, remote-controlled detonators or vehicles. Most portable jammers have a range of around 180 meters, and can run for an hour on 9 volt batteries.

Radar Motion Detectors: Modern ground radar is sophisticated enough to generally detect movement of 2.5cm per a second, making it virtually impossible for movements not to be detected. However, such devices becoming increasingly impracticable at such levels of detection (security staff would be in a constant state of alert). Although modern radar is designed to be jammer resistant, there are still other ways to disable such systems – diversionary tactics, staff infiltration and false communications.

Microwave Intrusion-Detection Systems: Commonly designed as a set comprising of a transmitter and receiver, these armored and tamperproof units can detect movement within a spectrum of 11 meters wide, and 450 meters in between. The receiver unit reports on the movement projections of any human sized or larger object within the area of deployment. A smaller unit is available which can cover up to 230 meters – both units have a battery back-up system.

Portable Ground Radar: This suitcase-sized variant is easily set-up in minutes and scans the horizon up to 135 meters. The unit is also designed to give a full 360° picture of human-size or larger moving objects (and their relative speeds). Multiple units can be effectively linked to establish a workable perimeter around a military encampment. The device is generally made tamperproof and is password protected, and the battery unit is good for up to 35 hours.

Seismic Intrusion-Detection System: The system using geophones (vibration detectors) are spread out buried beneath the landscape or in fixed formation in concrete or asphalt, connected by wires to a central processing unit; it works by detecting earth tremors caused by people walking, vehicles or geological phenomena. The units are sensitive enough to discriminate between types of intruders (vehicle or human) and track them accurately using multiple sensor information from the geophones. Due to the

nature of the system, it is generally not easy to spot (physically) the operation of these buried devices.

Smoke Alarm: The common household accessory has greatly lowered the deaths from fire since the 1970s. Given that 90% of households and virtually all business premises have these devices, it especially makes arson a more difficult prospect for the covert operator. Most devices though generally have a failure rate of 30% (through lack of batteries or production errors).

Swimmer Detection System: These detection systems used hydrophones (waterproof microphones) to detect sound waves (as in movement) within the marine environment – commonly employed at piers, oil rigs and naval ship yards. Modern U.S warships employ more sophisticated versions, which extends the range to such a depth, that most divers couldn't reach it with scuba gear.

Thermal Detection Device: This handheld IR sensor is designed to be sensitive enough to distinguish between human movement and other living beings. It has a range of up to 45 meters (through even brush, camouflage netting or other forms of concealment) - it can even be configured to be used as an IR motion detector.

Ultrasonic Motion Detector: These covert detectors generally hidden in lighting, alarms etc seek to emit a 20° cone of ultrasonic sound. Once the returning signal is received, it can send off the information to an alarm – or configured to a computer to track the distance the intruder is from the device.

AI Monitoring Systems: Most corporate security devices meet at a centralized control room, where commonly the output is monitored by security staff. There are however, many developments available to aid in the screening of images, sound or data. Most systems seek to alert the console operator to potential problem areas by matching various types of data. There are concerted efforts being made to design self-monitoring systems, using various stances and postures of intruders, voice stress analysis and face recognition. Eventually, it is hoped that console operators will be done away with by sophisticated computer AI (or at least reduce their necessity).

COUNTER-SURVEILLANCE

Bug Detector: The vast variety of devices used to detect radio-frequency devices; such as microphones, tape recorders, tracking devices, transmitters, wire-tap etc



Personal Bug Detector: This pager-like device vibrates and flashes an LED light when it comes within 6 meters of an active transmitter. It has the capacity to distinguish between bugs and other devices with microphones (mobile phones, radios etc). It does however, give a signal reading – so one can track the location of the bug. Commonly, such detectors can be hidden in pens, wristwatches, and alike.

More advanced models can also detect microphones and tape recorders – with a different signal for both (i.e. microphone vs transmitters).

RF Bug Detector: A sweeping device with a tape cassette-like unit and a 30cm wide handheld antenna, this device can actively track any transmitter within a 10 meter range. It generally takes about 1 minute to sweep a 100 square meter section.

Nonlinear Junction Detector: This detector is ostensibly similar to the standard RF Bug Detector, but it is able to sense microphones and tape recorders, as well as transmitters (even if the microphone is not on). The device is more sophisticated in that it pulses a signal out and processes any returning signals (rather than simply checking for transmitted signals). The device generally comes in a similar setup, but with a 1.5m wand-like probe.

Line-Tap Detector: This device seeks to warn the user about any intrusions upon their phone-line. The unit is fitted between the phone and the wall jack, and can discriminate between wiretaps, activated tape recorders, line-powered

transmitters and other phone receivers. More sophisticated models can even selectively jam one or more of these offending signals.

Telephone Line Analyzer: These virtual telephone exchanges, can monitor up to 16 different lines at once, selectively jamming surveillance devices intruding on them. The computerized unit is built into an attaché case design.

Counter-surveillance Frequency Detector: This range of electrical tools effectively allows one to detect *active* bugs, by the use of a series of probes around the telephone and electrical outlets (also meaning the detector is effectively being used as an RF Bug Detector and a Line-Tap Detector). The unit is designed to fold out of an attaché case.

Spectral Correlator: This device is essentially a computer-aided version of the Counter-Surveillance Frequency Detector, with the ability to provide a diagnostic reading of the potential security risks of communications devices. The unit is the size of a small suitcase.

Counter-Surveillance Tool Kit: A number of small items are particularly handy in accessing and disabling cameras, microphones, transmitters etc. A normal tool kit would likely to include

- Pliers
- Pry Bar
- Scissors
- Screwdrivers
- Flashlight
- Multimeter
- Wire-tracing tools
- Handheld Metal Detector
- Illuminated 1cm Silent Borescope (Similar in concept to a short endoscope)
- Telescoping-handle mirrors
- Hammer

Full-size kits comfortably fit inside an attaché case, smaller kits the size of cassette recorders are available – but can be inadequate for larger jobs, and require a greater degree of dexterity to achieve effective results.

Magnetic Media Disruptor: This cigarette-case sized device emits a magnetic pulse that destroys all magnetic media (audio tape, zip disks, diskettes, videotape, some hard-drives) within 3 meters of it. It has no effect on digital data cards, CD media, or other hard-written forms of digital data.

Shielded Room: There are a number of counter-measures available to stop surveillance of secured areas, it will usually cost roughly \$13,000 to secure a normal sized room (3 meters square x 2.5 meters high), which makes it prohibitive to secure every office within a business environment. Generally rooms with large amounts of data storage, or particularly sensitive research centers or executive suites are deemed suitable for such treatments.

Most sensitive government operations like military or intelligence services are not bound by such financial constraints, and are usually secured. Extremely sensitive areas may well double the outlay to ensure maximum security.

The measures can include

Metallic Mesh: Installed into walls such mesh will defeat transmitters, van eck emissions, thermographs, millimeter-wave radar.

IDENTITY VERIFICATION

Passwords: The use of passwords to enter secure locations is still used today, mainly due to the ease of use and setting-up the process; but mainly because its sheer simplicity means its an effective control system (not overly prone to human error or computer failure). It is still used by most military services when setting up temporary camps in hostile zones.

Keypad: Such keypad identification systems can be either a singular code entry for all, or a personalized code for each verified user. Most systems allow for human error in re-entering codes, but some secure locations may not. The personalized code process may be linked to matching with an identity card, which needs to be swiped across a magnetic reader.

Lie Detectors: Debate still rages about the effectiveness of the polygraphic process; while

Glazed Windows: Double glazed windows can lessen sound emissions, specially designed foil can further dampen this process – meaning laser microphones can prove useless.

One-Way Glass: Can secure the location against visual surveillance.

Soundproofing: The installation of specially designed installation foam into wall cavities, and the use of heavy curtains (or shutters), can defeat contact mikes, long-distance mikes and being overheard.

Filtered Electrical Outlets & Phone Jacks: Can help defeat bugs and wiretaps.

Results may vary upon the amount of effort and time put into securing locations, obviously, if all eventualities have not been catered for – the location can be seriously compromised.

White Noise Generator: These devices project out white noise above 20 kHz (which cannot be heard by the human ear), which seeks to disrupt microphones and recording equipment. The system comprises of a sound generator and 4 speakers. The sound can be induced upon a window surface to defeat laser microphones, projected into the air to defeat audio bugs and tape recorders.

U.S Federal agencies still routinely use it in security checks, such results are not admissible within a court of law. The system works by measuring the subject's heart rate, respiration, blood pressure and skin conductivity.

The theory is that when we tell lies our non-verbal stress responses give away our falsehoods. Psychologists would point out that pathological liars who can tell lies without any discernable discomfort, shows a weakness in the system and theory; but others would point to the fact tests have also shown amazing results in general.

However, the admission of the truth maybe *more* stressful than telling a lie.

Polygraph Cont...

There are also other ways to defeat the test, including stepping upon a tack concealed within a shoe that can throw the calibration process into disarray – although such spikes in stress results can be eliminated (or even exposed) in more lengthy interviews.

A portable polygraph kit fits into a suitcase, but also requires a laptop to run the appropriate software.

Voice Stress Analyzer: These units seek to determine from an audio source the amount of stress in a person's voice (from tremors and slight stutters). The results are hotly disputed by experts, but this hasn't stopped a market forming around the financial advantage one may gain from knowing a competitor's secrets. A pocket-sized version exists, which can be hooked up to a phone-line, and a specialized laptop version can give greater effectiveness. As with polygraphic information, the more sound data that can be collected and verified, the greater reliance one can invest in the results.

Document Scanner: By the use of infrared or ultraviolet light these devices seek to examine papers or packages – looking for erasures, see through ink and correction fluid. Such devices are employed in mail security to probe the inside of sealed documents for information, with time and effort, a copy of a document can be reconstructed for covert use. The device is the same size as a regular computer scanner.

Palm Scanner: These electronic sensors seek to map the hand geometry and fingerprints – an added security measure may also be scanning for Infrared (to ensure a hand hasn't been removed from a staff member).

COUNTERMEASURES

Fire Extinguisher: These nozzle equipped metal containers generally contain water, CO₂ gas, foam, or dry chemical powder under pressure. The larger versions generally have 20 seconds of use, while smaller car fitted versions allow for around 10 seconds of pressure.

Retinal Scanner: Using a low powered laser the retinal scanner seeks to scan retinal patterns in one or both eyes of a subject (being as unique as fingerprints). Contact lens recreations (of a known staff member) do not work in real life (like in movies).

Signature Pad: The individual signs his or her name upon pressure-sensitive plate. The device registers the pressure, timing and structure of the signature – meaning it is very unlikely a good forger will gain access.

Voiceprint Analyzer: These devices record and identify a user by a short phrase (such as name and ID number). Modern systems are so sensitive that vocal imitation isn't likely to fool the computer AI. A good digital recording of the subject's voice probably will. As someone with a cold can sound different, a backup system will generally be employed (which can be taken advantage of). An advanced voice modulator might be of some use in defeating the system (dependent upon data).

Optical Recognition System: This system relies upon capturing a screen image of an individual and matching it to similar scans captured on its database. Generally, the technology relies upon identifying spatial correlation's between the eyes, mouth, nose and jaw – although someone's gait or body relationship could equally be used. The unit can be designed to direct cameras to track the movements of people within a large crowd, spotting familiar faces – like it is being employed in football stadiums in Europe to track known hooligans. The system is reported to be 95% accurate in tests, although its accuracy is thought to be substantially less in uncontrolled environments. Other tests show that disguises are a poor way to evade detection, as most disguises keep the same spatial, facial relationships.

Bomb Disposal Equipment: These units are designed to offer some protection for the intrepid bomb disposal experts (Kevlar Housing), and generally incorporate elements of NBC suits and breathing apparatus (sealed against biological and radioactive dust). They are bulky, and restrict ones range of movements substantially.

Explosive Blankets: Basically Kevlar armor, molded over a steel frame (similar in concept to a tent)— these devices are usually placed over an

explosive to contain its effects upon the surrounding area. It is then triggered from a remote location in a controlled way.

OTHERS

Drug Testing Kit – Employers can purchase portable drug testing kits designed to test for marijuana (THC), phencyclidine (PCP), cocaine, amphetamines and opiates all at once.

Mini Fluorescent UV Lamp – These handheld devices are used to discover fingerprints at crime scenes, which uses 2x AA batteries for 4 hours of usage.

Detection Powders – These sprays or stain powders seek to aid detection of fingerprints under ultraviolet light.

Pepper Spray – A 2 oz spray that causes intense heat when sprayed upon skin and into an attackers eyes, the effects lasting for up to 30 minutes.

VEHICLES

UNMANNED VEHICLES

The use of semiautonomous or remote controlled unmanned vehicles is now widespread in the military, policing, espionage and security industries. The computer AI of modern units means that they can be adapted to incorporate new routines, and basic kits now facilitate the incorporation of new limbs, sensors and/or weapons.

Basic designs generally fall into one of the following categories – ground, aerial, submersible or micro-aerial.

The following accessories can be successfully incorporated...

- Night Sights
- Telescopic Zoom
- Microphones (often with Parabolic Hearing)
- Sensors (IR, Radar, Active Sonar)
- Tracks, Wheels, Propellers, Jet Engines, Wings, Screw Propellers, Hydrojets or Helicopter Blades
- Cameras
- Shotguns (usually on EOD robots to destroy bombs)
- Mine Detectors, Radiation Detectors, Chemical Sniffers
- Spotlights, lights, alarms, claxons
- Fire Extinguishers
- Tear Gas Launchers and other deterrent devices

There is generally a trade-off that occurs between functionality, power resources, weight issues and the radar size signature of larger rigs. If you are mechanically minded and desire to create your own unmanned vehicle please consult your Games Master.

GROUND VEHICLES



EOD Robot: These devices are usually sent into areas where a bomb is suspected of being placed (as sending in a human might be dangerous). They are generally mounted upon tank-like tracks, have chemical sniffers onboard, extendable arms, a cluster of other sensors and a video camera link. They are remotely controlled, and can move at around 30 kilometers per an hour over decent terrain. They sometimes come fitted with a shotgun for the purpose of detonating any suspicious packages/bombs. They are now in widespread use around the world by policing authorities and the military.

Hard Cover 2 Protection Armor Rating 40 (F15 B15 S10)

Security Robots: These are similar in design to EOD robots, but are generally used to patrol sensitive secure areas, either in a preprogrammed pattern or a randomized one. They generally have a range of sensors onboard, including cameras, Infrared, microwave and ultrasonic motion detectors. Many of these robots are armed, although in a civilian environment they are generally programmed to immediately signal to a human guard to render assistance.

Hard Cover 2 Protection Armor Rating 40 (F15 B15 S10)

UNMANNED AERIAL VEHICLES

These small propeller or jet-driven aircraft (generally known as UAVs) are used by military organizations for aerial reconnaissance missions. Onboard are a number of sensors including optical and radar; recording equipment can also be found. Some of the more advanced models such as the U.S made *RQ-1B Predator* (as used by the CIA and the U.S military) are also fitted with wire-guided anti-tank missiles. They can reach speeds of over 160 km/h and their range is around 650 kilometers.

Hard Cover 2 Protection Armor Rating 40 (F15 B15 S10)

MICRO-UNMANNED AERIAL VEHICLES

Resembling a remote-controlled model aircraft with electric engines (or even a UFO or helicopter) these units are able to provide battlefield intelligence of the enemies positions. They can also be useful in relaying radio communications at distance. They are generally issued in a backpack, including a small PDA like handset, which displays a moving map of the flight. The unit takes off by being thrown from hand, the units are relatively silent and a sensor package can be added (including a thermal imaging camera and a compact chemical sniffer). The unit flies at around 70-80 km/h and has a flight time of up to 2 hours.

Hard Cover 1 Protection Armor Rating 20 (FBS 5)

Unmanned Underwater Vehicles: These units patrol underwater environments and resemble a torpedo in shape with extendable arms. These units are primarily designed to be mobile sonar and camera platforms; the extendable arms are mostly used to clear debris away from its path.

Hard Cover 1 Protection Armor Rating 30 (FBSUT 5)

ASSAULT TERRAIN VEHICLES

These vehicles are generally delineated from everyday vehicles by having either covert additional capacities (such as high-powered engines) or by reconfigured extra durable frames or by having turrets and/or weapons.

Armed Assault Vehicles are a lightly armored variant, which has a pintle mount (used to stabilize hand-held firearms, a small turret, or a remotely controlled weapon station mounted with heavy weapons (like machine guns, rocket launchers or low-recoil auto-cannons). Such vehicles include the M1114 variant of the AM General Hummer, or SUV variant conversion by Ibis Tek.

Other general modifications that are done to standard vehicles include installing gun ports into an armored van's bodywork or extra windows (or indeed one-way armored glass). Most van setups generally have four armed men waiting in the back with a tail gunner ready to use a fixed machine gun installed on the cabin tray.

Hard Cover 2 Protection Armor Rating 60 (F40 B10 S10)

Surveillance Van: These large utility vehicles are generally decked out with all kinds of surveillance equipment including recorders, receivers, laser microphones, encrypted radios, surveillance VCRs and Tempest scanners. The van will generally have additional batteries in the back to accommodate the extra power needs of the surveillance devices. These vans are often parked a street away from the actual place they are staking out. Because of the great bulk of equipment installed, they are generally poor vehicles to tail other vehicles (lucky to have a top speed of 100 km/h and being highly conspicuous).

Hard Cover 3 Protection Armor Rating 85 (F10 B25 S25)

Inflatable Boats: These vehicles are greatly favored by covert operations teams being easily inflated/deflated and concealed at the destination (inflatable boats are favored for shoreline insertion because they rarely register on radar). Civilian models generally carry four people; military models are generally bigger carrying up to eight fully equipped marines and the operator. These larger military models generally use silenced 26-kW hydrojet motors that can propel the team at up to 10 km/h (the *silenced* engine can still be heard at relative close ranges). Typical models include the French Zodiac F470 or the Combat Rubber Reconnaissance Craft (CRRC) as favored by U.S Special Forces.

Soft Cover Protection Armor Rating 40% (F10 B10 S10)

Swimmer Delivery Vehicle: These hydrojet submersible devices assist divers in reaching targets either above or below water at a relatively increased speed (generally around 8 km/h). The standard unit requires the diver to have their own independent pressurized tanks for breathing purposes. They can dive to distance of 180 feet - although newer models (which are fully enclosed units) can dive up to 500 feet. These enclosed, pressurized units, also termed *dry* units, do not need an independent oxygen supply. These devices can carry up to 18 divers to their desired location.

Soft Cover Protection Armor Rating 10% (F10)

Dry Model - Hard Cover 2 Protection Armor Rating 30 (F10 S10)

Diver Propulsion Vehicles: These small torpedo-like propulsion units can tow a diver underwater to a distant location. These units are particularly useful for speeding up shoreline insertions. The units can tow a load of up to 100-150kgs at around 5 km/h. The 730-kW batteries can last up to an hour at top speed (a distance covered is around 5 kilometers). The unit has an incorporated compass, depth gauge and clock. In the water the device is neutrally buoyant.

Soft Cover Protection Armor Rating 10% (F10)

AIR VEHICLES

Unpowered Gliders: The use of gliders for insertion into sensitive areas is often favored by military units, especially with modern gliders achieving glide ratios of up to 18:1 (for every meter descended the pilot can travel an additional 18 meters horizontally), with favorable thermal updrafts a pilot can even *climb*. Unpowered gliders are virtually noiseless.

Soft Cover Protection Armor Rating 0

MICROLIGHTS AND POWERED PARAGLIDERS

Microlights with hang-glider wings and power paragliders with parachute wings are single seat, fixed-wing aircraft. The pilot, engine and controls are suspended below the wing in a three-wheeled gondola. These devices are useful in covert operations because of the materials used have a low radar reflectivity, the engines can be switched off to glide into a target zone and the intruder may indeed be mistaken for a hobbyist.

Soft Cover Protection Armor Rating 0

Helicopters: Despite the relative slowness of helicopters, and the excess noise they generate, they are still favored for quick insertion missions; as the unit is relatively stable for trained soldiers to drop from the helicopter without the necessity of it landing. Helicopters are however vulnerable to ground fire and aerial interception.

Basic Civilian Helicopter *Hard Cover 2 Protection Armor Rating 50 (F15 B10 S10 U10 T5)*

