

# MILITARY SYSTEMS

E T E C H N O L O G Y

## ADVANCED INTERACTIVE SOLUTIONS (AIS) LTD

Shooting Range Design and Military Training Facilities

## RADIO TACTICS

specialist innovator of high-tech digital intelligence and evidence gathering equipment

## FAUN TRACKWAY

Portable Aluminium Roadways, Runways and Helipads for the Defence Industry

## SCOTT SAFETY

Respiratory Protection Equipment

**PLUS... BREAKING NEWS FROM...**

AVON PROTECTION  
ISTEC

MARSHALL LAND SYSTEMS  
QIOPTIQ  
SHADE



# ***Protection in motion***

- Superior comfort and freedom of movement
- Pivoted harness for consistent weight distribution
- Less muscle fatigue
- High quality ballistic protection



# **Exoflex**

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# Welcome to this edition of the Military Systems & Technology newsletter.

As an established web portal for the International Defence & Aerospace Industry, we strive to provide a comprehensive and detailed listing of Military Equipment Suppliers, Products and Services. This newsletter is designed to keep you up-to-date with latest news and events within the Defence Industry's Governing Bodies, Organisations and Companies.

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## Shooting Range Design and Military Training Facilities

# AIS LTD – DESIGN, CONSTRUCTION, FIT-OUT AND MAINTENANCE

Advanced Interactive Solutions (AIS) Ltd specialise in the design, construction, fit-out and maintenance of shooting ranges and training facilities for Police, Military and Special Forces. With over twenty years of international experience AIS is renowned for its ability to design turnkey training solutions working directly with government departments or through locally approved contractors or consultants.

AIS also carry full ISO 9001 certification.

## Shooting Range Design and Military Training Facilities

AIS design and deliver all categories of training complexes incorporating shooting ranges and specialist training facilities. AIS's experience and market knowledge qualifies us to advise Police, Military or other specialist clients on the most appropriate solution required to meet an End User's specific needs and budgetary constraints. Many types of specialist facilities are available including hostage recovery, anti-hijack, close protection, driver training and public order training permitting operational rehearsals and debrief within a live-fire or high fidelity simulated environment.

## Shooting Range Design

Several types of ranges can be designed depending on factors including the area available, proximity of other buildings, weapons to be used and the type of training to be carried out.

## Military Outdoor Shooting Ranges

These include conventional gallery and open ranges as well as baffled ranges for pistol, rifle and machine gun complete with all targetry, scoring, control and communication systems.

## Indoor, Live Fire and Video Simulation Shooting Ranges

A wide variety of conventional live fire and video simulation ranges can be designed for all weapon types including targetry and live fire simulation equipment, for basic and advanced training. For example, Drive-In ranges to facilitate the use of vehicle based scenarios.

## Specialist Facilities

AIS have designed or delivered a full range of specialist facilities incorporating

- **Close Quarter Battle (CQB) houses**
- **Maritime Counter Terrorist (MCT) facilities**
- **Military Operations on Urban Terrain (MOUT)**
- **Method of Entry (MOE) buildings**
- **Sniper and Commando Towers**
- **Public Order & Driver Training Areas**
- **Associated academic & training support buildings**

## Training Mock-ups

Specialist Mock-ups which can be designed for use with live ammunition, simulation systems or 'training' rounds including:

- ↑ **Aircraft**
- ↑ **Trains**
- ↑ **Ships**

## Bullet Proof Protection - Fit-out Expertise

AIS undertake internal fit-out/build of numerous fully defended structures to prevent





the escape of rounds. Initially the sizing and shape of the structure ensures ricochet cannot occur. Our choice of materials for bullet proof protection, anti-ricochet duty and acoustic performance are based upon test performance results and cost effectiveness.

The team has extensive experience with the design of lightweight, movable bullet proof and non-bullet proof partitions, production of various bullet traps and knowledge of ballistic and environmental performance and maintenance attributes of the majority of bullet traps available on the international marketplace.



lighting and HVAC system. QuickRange™ modules can be linked together to provide a complete range building with multiple lanes and in lengths ranging from 12m to 50m or beyond.

QuickRange™ is built to the highest specifications and delivered fully assembled and due to its customizable size, you can locate it almost anywhere. Local regulations for safety, noise reduction and air-quality are not only met but exceeded in every QuickRange™ through the use of sound absorption materials and HVAC systems with HEPA filters.

Installed within QuickRange™, the PRISim® judgemental simulator is a live-fire, interactive, training judgment and evaluation tool and gives trainee feedback to learn and confirm correct behaviours to grow more confident in their ability to make decisions when under extreme pressure.

## Shooting Range Maintenance and Operation

AIS offer a comprehensive range maintenance

service for all types of military and law enforcement outdoor and indoor ranges.

Our specialist skills ensure that downtime is kept to a minimum and that maximum utilisation is gained from the equipment and facilities. AIS is able to supply spares and service for most types of targetry in use today. AIS also have a team of specialist technicians who are able to assist in setting up training scenarios, manage day-to-day range operations and assess maintenance needs.



AIS also maintain offices in the USA, Abu Dhabi, Malaysia and Singapore.

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## Prefabricated Military Modular Ranges

AIS present QuickRange™, this is a complete, full service, prefabricated modular shooting range that can be delivered to your location ready to use within 180 days. QuickRange™ eliminates the problems associated with building a traditional shooting range (design, construction, installation, etc.) making it the ideal solution for military law enforcement, and security agencies that do not have their own purpose-built facilities for live-fire training. Each QuickRange™ is a self-contained, two-lane shooting range in a bulletproof container, complete with shooting stalls, target-retrieval system, bullet traps,







Radio Tactics is a specialist innovator of high-tech digital intelligence and evidence gathering equipment used globally by military, law enforcement, governments, and intelligence agencies.

# THE MOST ADVANCED MOBILE DEVICE FORENSICS FOR THE MOST DEMANDING SITUATIONS.

Our exploitation devices provide security focused organisations with ability to interrogate mobile phones, GPS & portable digital devices, providing real-time capture of intelligence & evidence.

Radio Tactics is a supplier to the majority of UK Home Office Police Forces, as well as the Serious and Organised Crime Agency, the British Transport Police, Royal Military Police, various other government departments and the Ministry of Defence. Globally, Radio Tactics has replicated the success achieved within the UK, supplying a wide range of organisations internationally. Radio Tactics also works with the financial services industry and corporate fraud investigation departments across the globe.

With offices in the UK, USA, Australia and partners throughout the world, Radio Tactics provides dedicated technical assistance and offers comprehensive support and advice.

For intelligence capture from mobile phones, digital cameras, satellite navigation, GPS

devices, SIM and media cards.

Mobile digital devices are increasingly being used at every level of hostile and criminal activity for accessing, storing and sharing information and for navigation. They have become the tools of choice for terrorists and insurgents planning to carry out attacks as well as being used for tactical command and controlling communications. As a consequence digital devices are now an increasingly important source of intelligence to security and intelligence focused agencies.

**Immediate tactical decision-making and pre-defined actions by providing identifiable intelligence at the point sources are encountered.**

In order to gather and analyse intelligence from electronic devices, traditional forces utilise specialist analysts. Frontline personnel have to make on the spot, selective decisions about which potential sources of intelligence should be seized for analysis. Radio Tactics believe that forces should be able to make full use of all sources of potential intelligence through giving frontline operators the capability to gather intelligence, both overtly and covertly, from mobile electronic devices. Specialist analysts

can then determine the value of the intelligence that has been gathered.

Radio Tactics also believe that intelligence gathering tools should be capable of being integrated into the modern electronic battlefield allowing the intelligence to be consumed by intelligence systems and resulting actions to be passed back to frontline operators in real-time.

**Athena from Radio Tactics is the only tool in the market that can accomplish all of these needs.**

**Rich intelligence from digital mobile devices**

Athena is able to retrieve Call Logs, SMS, MMS, Email, Contacts, Calendar and positioning information from over 3000 SIM/GSM/CDMA/GPS devices and acquire file system data including deleted information from internal and external memory sources; including the full range of memory card and USB flash media.

Data can be acquired using multiple connection methods including cable, Infra-red and Bluetooth. Athena provides unparalleled support for GSM devices encountered during operations worldwide including RIUM and

Chinese grey market and counterfeit phones.

Athena also recovers positioning information including waypoints, tracks and routes from a wide range of GPS and Satellite navigation devices. .

#### Multiple acquisition storage

Athena is ready for extensive frontline operations and is capable of storing multiple device acquisitions on its internal solid state hard drive.

Acquisitions are secured from intelligence leakage using AES encryption, security key device and deletion to DOD standards.

#### Rugged frontline capability

Athena has been specifically designed for use by frontline military and intelligence users and is not a repackaged commercial or law enforcement product. Athena is supplied on a rugged ultra mobile terminal which is fan-less, dust and water resistant (MIL-STD-810F) and IP65 certified 6 foot drop rating.

The full weight of the Athena terminal is 1.06kg. The Athena terminal can be packaged to the requirements of both frontline military and covert intelligence users.

## More than just Cellex – a total intelligence gathering solution Designed for the needs of frontline operators.

#### Visual interface ideal for pressurised situations

The Athena user interface is designed with the explicit needs of frontline and covert users in mind; minimal complexity, instant recognition of key information and rapid navigation.

Athena utilises a touch screen interface that can be used without a stylus, mouse or keyboard and when conditions required, gloves.

Scrolling is reduced to a minimum and information organised hierarchically, reducing the number of button presses required.

Information is displayed in a visual form using imagery allowing instant recognition when operating under pressure.

The detect feature and mission configuration automatically detect devices, allowing decisions as to which types of intelligence are of value to be made by analysts in pre-mission time.

Acquisitions can be viewed immediately using the preview feature and critical intelligence identified instantly using watch lists.



A low light feature is included for use during night operations.

#### Total intelligence gathering solution

Unlike other Cellex solutions on the market, Athena offers more than just mobile device data acquisition. Athena addresses the need to limit weight and the number of devices carried during operations.

The Athena terminal includes an onboard camera that can be used to record still and full motion video for capturing information about the device, persons of interest and the general environment.

The onboard GPS automatically records the position of the Athena terminal during acquisition and can be used to record positions of interest encountered during the mission.

Notes can be added to acquisitions and positioning information in order to gather a complete picture.

#### Rapid and interruptible acquisition suitable for both covert & overt operations

Athena's unique ability to leave no trace of acquisition on the target device makes it ideal for covert operations. This overcomes the danger of detection as the status of messages can remain unchanged by the acquisition process, preventing targets detecting that devices have been acquired during close observation operations.

Rapid acquisition allows users to decide what types of data are of value during time critical operations reducing the time taken to acquire data from the target device.

Athena is fully interruptible so can be disconnected at any point during an acquisition but will still retain the data already acquired allowing user to cut and run if there is danger of discovery.

## Identifiable intelligence and pre-definable action.

#### Athena is more than just an acquisition tool.

Actionable intelligence can be placed into watch lists deployed on the Athena terminal. Watch lists and actions can be determined in pre-mission time using Analysis Suite. When intelligence is encountered that matches the watch list the acquisition is automatically red flagged and intelligence highlighted in the preview so that tactical actions can be taken immediately.

#### Through life sustainment

To ensure Athena's technological capabilities remain as robust as its terminal, Radio Tactics have a support team dedicated to helping to manage the ongoing deployment of cellex capability. We are fully aware of the operational risks involved in software updating so can ensure this happens in a controlled and effective manner. NATO coded peripherals such as cables can also be supplied to easily process them through the procurement system, as can project managing upgrades, potentially via secure ftp sites or via disk if internet access is limited.

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# PORTABLE ALUMINIUM ROADWAYS, RUNWAYS AND HELIPADS FOR THE DEFENCE INDUSTRY

Based on the isle of Anglesey, North Wales, is the defence division of Europe's number one municipal vehicle manufacturer, FAUN.

FAUN TRACKWAY design and manufacture a range of high quality portable access systems for use in military and civilian disaster and emergency relief operations at its internationally accredited production facilities in the UK.

Capable of withstanding loads of up to 70 tonnes, FAUN's portable aluminium TRACKWAY MLC 70 has the robust qualities demanded by heavy plant machinery, vehicles and equipment used in the construction industry.

Unbeaten in all trials, its products are a trusted ally to 30 different militaries around the world. TRACKWAY was initially

designed and developed for the UK Ministry of Defence (MoD).

FAUN TRACKWAY employs a team of highly skilled engineers dedicated to exploring new product designs and working alongside future and existing customers to create bespoke solutions to their problems.

FAUN TRACKWAY is the successor of Laird (Anglesey) Ltd and has been producing military grade aluminium products in North Wales for over 60 years.

HGMS can withstand repeated vehicle loads of up to 70 tonnes and 50m can be deployed in under 10 minutes.

HGMS allows vehicles to move with ease over difficult terrain conditions such as sand, snow, mud, swamp and ice helping to speed mobility and protect assets.

HGMS can also carry an additional 50m TRACKWAY, towed behind the chassis on a trailer. This enables longer roadways to be laid quickly and connected easily.

FAUN's Medium Ground Mobility System (MGMS) consists of the same key elements as HGMS. MGMS comprises 32-metre lengths and can be deployed in under 6 minutes by two people.

Like all FAUN products, MGMS is unbeaten in all trials and can withstand repeated

Portable Military Roadways

Heavy Ground Mobility System (HGMS) and Medium Ground Mobility System (MGMS)

FAUN produces two complete portable roadways solutions: Heavy Ground Mobility System (HGMS) and Medium Ground Mobility System (MGMS)





loads of up to 30 tonnes. It is most appropriate for vehicles with pneumatic tyres and can also be used with JCB and specialist dispenser for beach landings.

## Temporary Runways and Helipads

FAUN has three aluminium panelling designs suitable to create Forward Operating Pads for Vertical Take Off and Landing (VTOL) aircraft – the Helicopter Landing Mat.

They are designed to alleviate brown out while marking out a clear landing area.



## Aircraft Landing Mat (ALM)

FAUN's Aircraft Landing Mat (ALM) is a rapidly deployable expedient runway for longer term temporary installations.

## Rapid Runway Repair (RRR)

FAUN's Rapid Runway Repair (RRR) mats enable critical sections of an airfield to be repaired in order for flying operations to be resumed following an enemy attack.

## Bespoke Engineering Solutions

TRACKWAY continues to invest heavily into the research and development of new products.

FAUN's team of engineers work close with key partners such as the UK's Ministry of Defence – to which it is a prime contractor – as well as leading military institutions such as the U.S military's Engineer Research and Development Centre (ERDC), in order to develop bespoke solutions to individual problems.

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# LEADERS IN THE DESIGN AND MANUFACTURE OF RESPIRATORY PROTECTION EQUIPMENT

Scott are leaders in the design and manufacture of Respiratory Protection Equipment (RPE). Scott's range includes military and civil defence "gas masks" and filters, Powered Air Purifying Respirators (PAPR), Self-Contained Breathing Apparatus (SCBA) and Escape Sets (Emergency Egress Breathing Devices – EEBD).

Supplying military, CBRNe first responder and civil defence customers is an important part of Scott's business but they are also market-leaders in the provision of RPE to industrial and fire-fighting markets. This has proved invaluable during recent operations, where some Urgent Operational Requirements (UOR's) were met by utilising technology from within Scott's "industrial market"

portfolio.

The breadth and diversity of Scott's expertise frequently enables them to provide quick and often novel responses to respiratory protection requirements. They invest heavily in research and development for RPE employing dedicated engineering teams in centres of excellence globally.







**Key products in the Scott portfolio include:-**

## The General Service Respirator (GSR):

The new twin filter, single flexible lens CBRN respiratory protection ensemble developed to the exacting requirements of the UK MOD. Offering unprecedented levels of respiratory protection, including Toxic Industrial Chemicals and ground breaking levels of particulate protection (against biological hazards, radiological dusts and viruses) GSR also combines a list of design features to offer significantly reduced physiological and psychological burden to the user, enhanced field of view and easier communication

## The “M” range of CBRN respirators and filters.

The M95 and M98 offer both military and civil defence solutions to CBRN respiratory protection. The M’95 is a conventional binocular mask with drinking facilities and is ideally suited to military and Civil Defence requirements where personal weapon sighting is part of the requirement. The M98 has an identical level of protection but with a large single visor offers a wider field of view

and better facial recognition, a feature that can be important for crowd control and cordon duties.

Additionally Scott design and manufacture a range of filters to meet customer specified performance requirements.

## Self Contained Breathing Apparatus

World leaders in Self Contained Breathing Apparatus, Scott design and manufacture SCBA to both NIOSH and European CBRN standards. Scott also specialise in the provision of SCBA for damage control on ships and include amongst their customers The US Navy, The Royal Navy, The Swedish Navy and the Pakistan Navy.

## Powered Air Purifying Respirators

Scott have considerable long term experience in the design and manufacture of PAPR, indeed the first ever PAPR CE certified was produced at their Skelmersdale UK facility. This is further backed by their in house filter design and manufacturing capability making them an ideal partner to fill operational capability gaps.

## EEBD

Compressed air, filtering and oxygen generating escape sets form part of the Scott range of escape hoods.

Scott also have significant capability in Thermal Imaging, Air Compressors and Communications for fire fighting and related applications.

Though Life Capability Management (TLCM)

Scott have also developed a full working understanding of TLCM and understand the importance of working across all the lines of development, with the unified customer, to develop the required capability.

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# New Avon Filter Improves Safety with End of Service Life Indicator



15 June 2012: Avon Protection has launched a new conformal military CBRN filter that provides an accurate measure of usable life span with a unique end of service life indicator. The MILCF50 filter claims a shelf life of up to 10 years, which far surpasses that of rival filters and promises considerable cost-savings for the company's extensive global military and first responder customer base.

Avon has based the MILCF50's design and end of life technology on its exclusive conformal filter range for the US army's M50 and M53 mask series. It utilizes Avon's state-of-the-art conformal filter design and is designed to fit the new generation of 50 series masks

By adding extra robust packaging and incorporating an end of life indicator that instantly gauges any moisture ingress, Avon claims that shelf life can be guaranteed for 10 years - double the life span of traditional filters. And as most military and law enforcement bodies back up their masks with a filter stock ratio of five to one, the cost savings are plainly evident.

Avon's MILCF50 filter offers full CBRN performance, including protection against chemical, biological and radiological warfare agents in accordance with NATO requirements. It utilizes Avon's advanced filter design and manufacturing technology, so offers defence against certain toxic industrial chemicals such as chlorine, hydrogen sulphide, sulphur dioxide and organic vapours with a boiling point of above 65 Celsius. The filter is also effective against dust, fumes, bacteria and virus.

The MILCF50's low and contoured profile is a key feature to meet specific combat requirements. These include the ability for 45 degree head and neck movement, without the restriction imposed by many larger standard filters on competing masks, thus minimizing snag hazards and neck strain.

According to John Penton, Avon's Market Development Manager, "Avon has a strong

record of working closely with our customers to meet specific requirements in CBRN and respiratory system protection. These new filters are a classic example of this partnership. In this case our military and police customers asked us

to extend the shelf life of our filter range and to provide an accurate indication of their efficacy over use or long term storage. Our new robust packaging and service life indicator provides them with just this."





# Istec Looks to the Future and Shows Upgrades to Its Successful Lightweight Protected Weapon Station Series

ISTEC's family of lightweight PWSs have received a makeover for DVD, with the company showing off a number of product improvements for the PWS family. ISTEC have relied upon feedback from its PWS users as well as prime vehicle manufacturers to produce a range of 'add-ons' designed to improve the operational capability of the PWSs without the need to alter or modify the systems currently in service. The upgrades are now offered as options with all new PWSs. The upgrades consist of Power Traverse, a Smoke Discharger System and a Remote Viewing Optic. The upgrades can be seen fitted to ISTECs PWS(SW) on their stand at DVD

## Ring Power Traverse

The power traverse system retro-fits with all ISTEC PWSs and Lightweight Ring Mounts mounted on the '950' size slewing ring. The system comprises a Control Unit, Motor/Gearbox/Clutch-Brake Assembly, Joystick Controller, power traverse ring gear and mounting brackets. The joystick is placed conveniently close to the manual gearbox drive handle. Movement of the joystick traverses the

PWM with variable speed control. Depression of the joystick on/off button operates the electric clutch/brake enabling simple transfer to manual traverse operation.

Control unit and Motor/Gearbox/Clutch-Brake Assembly mounting and enclosures vary depend upon vehicle type. The system is powered by the vehicle, weights no more than 23kg and offers a simple power traverse solution for future and legacy ISTEC equipment.

## Smoke Discharger System

ISTEC's retro-fit smoke discharger system is modular and fires 66 mm smoke grenades. Grenade launchers are of single, double or four pot configuration, each wired to a universal controller.

The controller can be hard or magnetic mounted. Manufactured from black hard anodised Aluminium, the launchers are robust and designed for harsh environments. The barrels are removable without tools to permit fast cleaning and maintenance. The system is powered by an independent 12 or 24v power pack above the ring. A 4 button controller is

used to fire the grenades in the customer's required configuration. The controller has independent safety/arming button and BIT. System weight depends upon platform configuration.

## Remote Viewing Optic

The Remote Viewing Optic (RVO) is a system designed to allow for remote viewing of in-service sighting and surveillance systems. RVO can be attached to the rear of most day and night optical sights and allows the user the view through the sight normally via the existing eyepiece whilst also providing an electronic picture viewable on a remote display. The remote display can also be connected directly to most Thermal Imaging sights via the sights digital output signal port.

The camera attachment comprises a beam splitter prism and high resolution camera which provides an image that can be viewed on a remote monitor for use as a relaxed viewer. Operationally, the RVO allows the operator to view through the sighting or surveillance system for longer without eyestrain; adopt an undercover or behind armour position when necessary; relay sighting or surveillance images directly to a vehicle commander or command post; record for after action reviews (with optional data recorder fitted).

Data from an LRF and GPS etc can also be fed to the monitor creating a simple Fire Control System. Additional monitors can also be linked in if necessary.

The RVO system has its own self contained power pack located within each monitor which is continually charged by the vehicle. This allows the complete RVO system to be quickly removed from the vehicle and used with ground based systems. The self contained rechargeable power pack gives up to 8 hrs continuous use when used remotely from the vehicle. The system will operate and charge from any 17v to 31v DC supply and is provided with an optional mains to 24v DC adaptor. Interfaces are currently available for the following in service sighting and surveillance equipment: SUSAT, SpectreDR, Trijicom, Qioptiq's Kite and Maxikite family, Qioptiq's VIPIR family, DRS's Thermal Weapon Sight family and Nikon's 20 x 120 Surveillance Binoculars. Other Interfaces are available on request. RVO can also be provided with a recording system or connected to a wireless system to allow the sight image to be transmitted to a receiver for remote monitoring or recording.



# Marshall Land Systems Demonstrates Its Vehicle Engineering Skills At DVD 2012

## Load beds on display with General Dynamics and RMMV

The Load bed for the General Dynamics Land Systems – Force Protection Europe Foxhound Utility Variant and load beds for the UK's Support Vehicle are on display from Marshall Land Systems at DVD being held at Millbrook, Bedfordshire on 21st and 22nd June 2012.

The Foxhound, Light Protected Patrol Vehicle utility variant is on display on the GDLS-FPE stand in the off road area, (OR 19). The utility variant demonstrates the highly modular concept of the Foxhound vehicle which enables it to be re-roled quickly between missions from its C2/protected patrol task to become an effective light logistic vehicle in the combat area. Marshall Land Systems has built the load bed and cargo kit. The load bed is designed to carry two standard NATO pallets of 3.6 tonnes. On the RMMV (OR 35-38) examples of the 11 variants of load bed manufactured by Marshall Land Systems for the UK's Support Vehicle will be on display. By the time the contract reaches completion in 2013, Marshall will have been responsible for completing over 6,700 cargo

vehicles equipped with loadbeds in flatbed or cargo configuration, some of which include vehicle mounted cranes, tail lifts, counter balance systems and riotous assembly protection kits. The programme is diverse and complicated with vehicle variants ranging from medium mobility vehicles with a payload of 6 to 9 and tonnes and improved medium mobility 9 tonne vehicles all capable of carrying ISO

containers or a wide range of payloads each of which has been provided with a certified tie down scheme.

Marshall Land Systems is demonstrating its abilities in capability development, camp infrastructure including workshops, medical systems, workshops and staff working environments, together with agile unmanned ground vehicles on stand SP 09 -11.





# multi-facing multi-sensing multi-linking

## Evenode. The multi-application solution.

Enterprise Control Systems Ltd (ECS) recent acquisition of Phoenix Aerospace Ltd creates a unique partnership that offers a lot more than just equipment and software. Our combined strengths are in providing systems which are technically advanced, high quality, flexible, configurable and turn-key.

Evenode is a lightweight data terminal designed specifically to meet the demanding requirements of airborne, ground and maritime applications.

Acting as a bidirectional network repeater, Evenode provides innovative solutions for any information exchange requirement.

Our team of experienced professionals work with customers to deliver leading edge capability. Our consultative approach enables us to converge legacy and next generation technologies.

### The ECS turn-key solution includes:

- An extremely flexible COFDM transceiver system
- The ability to interface with multiple sensors
- An open architecture delivering data over IP
- The ability to control the terminal and sensor remotely
- EASA Part 21 design services
- EASA Part 145 for avionics maintenance
- GCAA (Gulf CAA) design approval

ECS delivers capability ranging from interfacing simple navigation and communications through to complex and demanding police or special forces mission equipment.



To see is to believe. For a live demonstration contact ECS or Phoenix Aerospace.



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# eggPlant

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## New family of decon agents



Decon Shuttle

## Competence in CBRN: A complete package

**Safe.** For many years, Futuretech has been developing, testing and supplying tailor-made solutions for the effective defence of NBC attacks in urban and natural environments. The truckmounted TEP 90 in Germany, the DECOCONTAIN 3000 GDS full decontamination system in Sweden, the variable MOSDM system in Belgium, the rapidly deployable JSTDs Small Scale module in the USA, or the biologically degradable GDS, RDS and BDS decontamination agents – these are all references that speak for themselves, and in which the protection of people and the environment is the focal point.



**FUTURETECH**

Kärcher Group

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# SAKER – Fused Weapon Sight



with a range of optical sights and attaches via a quick release bracket, providing a true 24hr capability with the ability to continue operating even during the harshest visibility conditions.

## About Qioptiq

Qioptiq designs and manufactures photonic products and solutions that serve a wide range of markets and applications in the areas of medical and life sciences, industrial manufacturing, defense and aerospace, and research and development. The company is known for its high-quality standard components, products and instruments, its custom modules and assemblies, its leading-edge innovation, its precision manufacturing and its responsive global resourcing. Through a series of acquisitions, Qioptiq has an impressive history and pedigree, and benefits from having integrated the knowledge and experience of Avimo, Gsänger, LINOS, Optem, Pilkington, Point Source, Rodenstock, Spindler & Hoyer and others. Qioptiq has a worldwide presence with locations throughout Europe, Asia and the USA, employs over 2,300 people, and generated revenues of approximately US\$380 million in 2010. For more information, visit [www.qioptiq.com](http://www.qioptiq.com)

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[www.qioptiq.com/equipment.html](http://www.qioptiq.com/equipment.html)

## Welcome to the Family

SAKER is the new Fused Weapon Sight (FWS) from Qioptiq providing the Dismounted Close Combat User with an enhanced Detect, Recognise and Identify capability. SAKER combines image intensifier and uncooled thermal imaging sensors into a single sight unit. Designed with a low-power architecture and featuring a removable battery pack, SAKER can be used as a stand-alone sight or as an in line / clip-on sight, providing flexibility and forward compatibility.

## SAKER

Technology advances deliver true fused capability.

Through involvement in a number of programs addressing the requirements and potential for FWS for the Dismounted Close Combat User Qioptiq have designed and developed a true fused weapon sight for the wider Soldier Modernisation community.

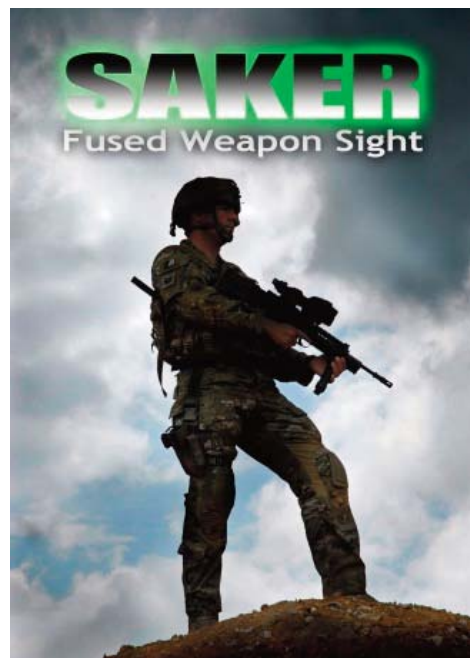
SAKER, the first of the Qioptiq FWS family, will be launched formally at Eurosatory 2012 which takes place at the Paris Nord Villepinte exhibition center from June 11th to 15th, however there will be a number of customer demonstrations prior to product launch at the show. Following the initial launch, SAKER

will be on display at exhibitions throughout the year as part of the Qioptiq product family.

SAKER is a Clip-On In-Line (COIL) fused weapon sight utilising and combining the latest Image Intensification and un-cooled thermal imaging capability in one compact, lightweight package and delivering a flexible architecture to allow the User to maximise the benefits of both technologies. This structure coupled with a number of other innovations taken from on-going technology development processes and the use of lightweight materials (exploited as alternatives to aluminium and plastics as an alternative to glass) assist with overall size and weight reduction. As with all of Qioptiq's products, ITAR free solutions are available without compromising performance.

SAKER is built around a forward facing architecture resulting in a flexible system that can take power from a range of standard batteries including AA and CR123, along with having the ability to integrate with powered rails and other centralised power supplies. The use of Man Machine Interface (MMI) developed on the DRAGON thermal weapon sight family combined with simplistic controls for managing the fusion elements of the system significantly reduces the training burden in both time and cost terms.

SAKER, the first of the Qioptiq FWS Family, is targeted at Special Forces Users and Urban environments in particular by providing a lightweight low light / zero light solution that will greatly assist in target detection and recognition at ranges well in excess of most modern assault rifles. SAKER is compatible





U.S. Air Force photo by Airman 1st Class Laura Goodgame

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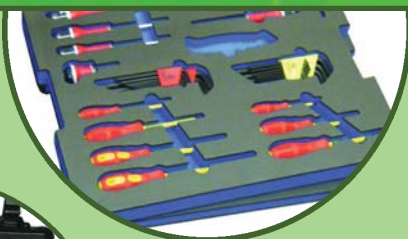
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# SHADE (Spectra Hostile Area Deployable Environment)

## Reliable, Resilient, Deployable Communications

### SHADE Lite

SHADE Lite has been designed to provide voice and data services for small teams operating in remote or hostile areas. The SHADE Lite system is provided in a small form factor and can be carried by one person.

SHADE Lite is based around utilising the Inmarsat Broadband Global Area Network (BGAN) family of terminals. It can be deployed globally in a fixed, short-term or mobile environment.

Although being a small form factor SHADE Lite benefits from all the security, resilience and technical support of the SHADE system. The NOC staff are able to provide technical support and configuration to the deployed equipment.

### TRAINING & OPERATION

μSHADE can be installed by a single user with minimal training. It is plug and play operation that can be set up in 2-3 minutes by an unskilled user. When a communication bearer is activated a secure tunnel is automatically created to the configured end point.

The equipment is capable of being powered by 12V DC (vehicle or solar panel), 110V AC or 240V AC to allow maximum deployment flexibility. It also has an internal battery that will provide power for approximately 2 hours of operation.

### μSHADE

μSHADE (MicroSHADE) has been designed to provide voice and data services for small teams operating in remote, hostile or away from their home base and wish to automatically create a secure tunnel for their communications to transit.

μSHADE can make use of any available communications bearer but is predominately designed to utilise BGAN, Wi-Fi or 3G. It can be deployed globally at short notice by small teams or a single user.

μSHADE is flexible in that it can be configured to utilise Spectra's core infrastructure or it can be configured to utilise any communications network to any required end point.

μSHADE is very small form factor but still benefits from all the security, resilience and technical support offered by the SHADE services. The NOC staff are able to provide technical support and configuration to the deployed equipment.

Spectra also provide Telecom Solutions, Training and Resource Services.

More information can be found on our website at : [www.spectra-group.co.uk](http://www.spectra-group.co.uk)

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