



AL EFAH'S EOD/IEDD SOLUTIONS



Tools and equipment developed by EOD & IEDD trained Engineers.

Safety, Quality and reliability delivered at affordable pricing.

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SEARCH RECEE & DETECTION



Electronic Listening Device CSS-01



CSS-01 Electronic listening device is a of professional listening equipment which uses radio frequency technology to detect the suspicious mechanical displacement device in the target area. Electronic listening device can detect electronic pointer timing detonators and mechanical timing detonators hidden under various packaging coverings. Electronic detonating devices include timing detonating devices made of electronic watches, pagers and various remote control devices. It can also be used as an anti-reconnaissance security technology to detect electronic eavesdropping devices and covert video devices. It has the characteristics of high sensitivity, long detection distance, strong ability to penetrate the packaging cover, and easy to carry and use.

- ***High positioning accuracy due to Radio frequency technology.***
- ***Low noise with non-destructive sound detection and noise elimination technology, realistic restoration of the original sound.***
- ***Human-computer interaction - LCD display sound waveform, speakers.***
- ***Open-use: simple operation, boot available.***
- ***Long standby time with low power consumption, the equipment can be used for a long time.***
- ***Safety no radiation: meet the electromagnetic radiation safety requirements, absolutely***



Specifications

Antenna polarization mode		circular polarization
Display		LCD display
Noise reduction headset		noise reduction capacity $\geq -20\text{dB}$ (A)
Battery working time		$\geq 10\text{h}$
Battery type		lithium battery
Temperature range		$-30^{\circ}\text{C} \sim 55^{\circ}\text{C}$
Leakage current		$\leq 0.1 \text{ mA}$
No shelter detection distance		Mechanical watches: $\geq 4.0\text{m}$
		Electronic pointer type clock: $\geq 0.8\text{m}$
		Electronic digital display clock: $\geq 0.8\text{m}$
Penetrating ability	Mechanical watch	100mm thick polyethylene foam +200mm thick A4 printing paper (70g)
	Electronic clock	100mm thick polyethylene foam +100mm thick A4 printing paper (70g)
	Electronic digital display clock	100mm thick polyethylene foam +100mm thick A4 printing paper (70g)
Product size		211mm*141mm*155mm
Weight of detection host		0.992 kg (including battery)
wireless monitoring function		$\geq 30\text{m}$
Enclosure protection grade		IP65





Video Endoscope AES-02



The AES-02 is competitive search endoscope solution with diverse functions for Car, building and furniture search. With 5 inch HD screens, the EOD search is fast and the operator gets a quick appreciation of the images coming. The functions of 360 ° articulation and bending angle to 170° provides flexibility to inspect a focused in more detail. The flexible Endoscope is available in various lengths.

Key features

- ***360 ° full way articulation.***
- ***Modular disassembly display screen.***
- ***Modular battery, Working time $\geq 4h$.***
- ***5 inch IPS HD screen.***
- ***Rear high power LED optical fiber illumination.***
- ***HDMI port, External display large screen.***
- ***Flexible tungsten braided tube***



Specifications

Dimension	Endoscope 265x140x132.7 mm Packing case 345x265x91mm
Insert tube lengths options	1m, 2m, 3m
LED Illumination	1m ≥70000Lux; 2m ≥63000Lux; 3m ≥56000Lux
Lenses Viewing angle / DOF	120° / 12mm~200mm
Display	5-inch IPS high-definition display screen
Pixel	1MP
Articulation and bending	Articulation to 360° and bending to 270°
Output port	TYPE-C
Storage	Standard 32G TF card, Support up to 128G
Power	26650 battery, battery life ≥4 hours
IP grade	Probe to IP67 and Host to IP54
Working/ storage temperature	-10°C~50°C / -20°C~60°C
Relative humidity	Max 90%, No condensation
Operation System	Multifunctional operating system
Operation method	Button navigation, one click photography and recording
Support Function	With freeze, zoom, photo, flip, video playback, analog ruler functions
File Format	Image: JPEG (JPG), Video: mov
Support Language	Multi-language Operating System







Features / optional items

	
<p>26650 battery, battery life ≥ 4 hours</p>	<p>Modular Design Detachable Display</p>
	
<p>360° full way articulation</p>	<p>Optical fiber illumination for clearer image</p>

Optional items

	
<p>WIFI wireless transmission (for optional)</p>	<p>More probes for options exists for special operations 0.95-8 Various probe diameters are available</p>



Kit Components

Host	
26650 Battery	
Packing box	
Memory Card	
Card reader	
USB cable	
HDMI cable	
Charger	
User manual	



Video Endoscope AES-03



AES-03 is a Borescope Inspection Camera specifically designed for conducting thorough inspections and diagnostics of hidden area. Its 5-meter / 16.4-foot long, 6mm / 0.236" diameter probe is equipped with 360° all-way articulations. It can be controlled through a joystick, with a maximum bending back angle of around 120 degrees. Additionally, the camera is outfitted with 6 bright LED lights that offer 7 levels of brightness. The probe tube itself is waterproof with an IP67 rating. The tube also contains multiple layers of metal braided mesh, ensuring its longevity and robustness.

- ***1 megapixel HD camera***
- ***Information can be collected and saved to the memory card.***
- ***Lighting mode: rear LED fiber-optic lighting.***
- ***Un compressed picture and recording video (BMP/MP4)***
- ***The user can capture the current image while recording, without switching to the shooting mode to cause video interruption.***
- ***Guidance system: 360 ° omnidirectional continuous guidance, single direction steering angle greater than 160 °.***
- ***File editing function: the image file can be renamed and the enterprise logo can be added to facilitate the record and search of the image file.***
- ***Image preview: playback adopts two modes of list and nine grid. In preview mode, you can view, delete, edit file name, add notes, time watermark and picture in picture guide functions.***



Specifications

Camera Diameter(mm)	Φ3.9mm (±0.2mm)
Camera Pixel	1,000,000
Depth of Field	5-80mm
Angle of Field	85°
Image Magnification	4X in real time, 8X focus on during playback
Image Resolution	1280*720
Video Resolution	1280*720
Light Control	8 levels
Bright/Chroma/ Contrast Ratio Adjustment	0-16 levels
Bending Control	360° manual all-way articulation
Bending Angle	≥160°
Effective Working Length	1m
Insert Tube	Tungsten-braided quadruple tubes
Display	Highlight 3.5 inches TFT LCD
Display resolution	640*480
Memory	Standard SD card:8G, Maximum: 32G
Port	HDIM port
Waterproof	Tubes: IP67
Auto turn off	5 min, 10min, 15min optional
Image Flip	180°mirror flip
Power Supply	Rechargeable lithium battery
Weight	≤0.55kg
Language	Chinese, English, Russian, etc.
Host Structure	Hand-held Design



Non-Linear Junction Detector AHW-24



The AHW-24 non-linear junction detector is a versatile tool used for detecting electronic devices in both active and inactive states. Its automatic frequency selection feature allows it to operate effectively in complex electromagnetic environments. By analyzing the harmonic response of radiated objects, the AHW-24 provides a quick and reliable identification of electronic devices and corrosive semiconductors. It can automatically select the best receiving frequency channel free of noise and distortion, ensuring flawless operation in complicated electromagnetic environments. Additionally, its harmless power output is safe for operators. In some cases, the AHW-24 is more efficient than detectors with standard frequencies but with greater power output due to its operation at higher frequencies.

- *Highly competitive*
- *Works in active and switch-off states.*
- *Offers both continuous and pulse modes with variable power output.*
- *Automatic frequency selection allows for operation in complex electromagnetic environments.*
- *Quick and reliable identification by analyzing the 2nd and 3rd harmonics response*
- *Automatically selects the best receiving frequency.*



Specifications

Transmitter	
Signal frequency	2400 - 2483 MHz
Max. peak power of radiation in pulse mode	10W
Maximum continuous radiation power (CW)	1W
The adjustment range of the probing signal power	20dBm
Receiver	
2 nd Harmonic frequency	4812 - 4828 MHz
3 rd Harmonic frequency	7218 - 7242 MHz
Receiver Sensitivity	≅ -108 dBm
Dynamic range	≅ 80 dBm
Power supply	
Battery type	Built-in Rechargeable Li-battery
Voltage	3.7 v
Capacity	7.8 Ah
Battery life	≥3 hours at max power in a pulsed mode
	≥1 hour at max power in a continuous mode
Main Unit	
Device dimension (in working condition)	L47cm x W12.5cm x H6cm
Device dimension (in folding condition)	L28cm x W12.5cm x H6cm
Device weight	≅ 1kg
Alarm mode	Audible and Visual (LED indicator)
Operating temperature	+5°C ~ +40°C



Handheld Explosive Detector ETD-011



ETD-011 Portable Explosive Trace Detector adopts fluorescent polymer sensing technology, which is based on the change in photometric intensity of fluorescence emitted by fluorescent polymers. Not only can it detect the military/commercial explosive, ammonium nitrate explosive, but also the oxides explosive. Operator can sample the targeted area by wiping (particular) and closing the bottle mouth (liquid,vapor). It is safest and the most sensitive explosive detector with rugged metal casing, starts from cold within two minutes, and backup by eight-hours battery. The detection speed is less than 6 seconds, the detectability is up to 0.1 pictogram TNT, more than 30 explosives.

- ***Fluorescence Based***
- ***No Radioactive Source***
- ***Automatic Calibration***
- ***0.1 Pictogram Sensitivity***
- ***Low False Alarm Rate***
- ***2 Minutes Quick Start***
- ***6 S Fast Detection Speed***
- ***Broad Explosive Identification***
- ***Easy-to -operate***
- ***Rugged Metal Casing***
- ***8-hours Backup Battery***



Specifications

Parameter	Value
Technology	Fluorescent Polymer Sensing
Sample Collection	Trace Particles and Vapors(Inhalation)
Sensitivity	Picogram level
Analysis Time	≤6s
Alarm Type	Visual and Audible
False Alarm Rate	≤1%
Explosives Detected	Military and plastic explosives, including: TNT, C4, RDX, BP, PETN, AN and others Improvised and homemade explosives, including: TATP, HMTD, Urea Nitrate, Ammonium Nitrate and others Propellants and Taggants, including: Black and Smokeless powder, EGDN and others Additional explosives upon expandable threat library
Start-Up Time	Inhalation(≤10 s); wipe (≤2 minutes), less than 2 minutes from cold
Display Screen	3" TFT Color display Screen
Rated Voltage	DC 7.4V
Com Port	USB
Data Storage	≥ 50000 piece of information
Battery	7.4 V 9900 mAh 73 Wh
Battery Life	Two rechargeable Lithium-Ion batteries (continuous working time of each 8 hours min)
Operating Temperature	-20 °C to 55°C
Adapter Supply Voltage	100~220V, 50Hz
Rated Power	9 W
Weight	1.65 kg including battery
Dimensions (L x W x H)	380*110*60 mm
Package	465*390*235mm, 8kg/case
Enclosure & Protection	Magnesium and aluminium alloy casing with anti-corrosive coating
Certification	CE Compliant; ISO 9001:2008 Manufacturing Standards



HWXRY-03 X-RAY SCANNER



The scanning system is a compact and easily transportable. It was developed in collaboration with first responders and Explosive ordnance disposal (EOD) teams to fulfill the requirements of field operatives. It is designed to be lightweight and features easy to use software, enabling operators to quickly grasp its functions and operations.

Features

Key Features

- Can be assembled rapidly on-site.
- Imaging plate using amorphous silicon technology, image is very clear.
- Can operate with remote control in the rear.
- Powerful image enhancement and Analysis tools.
- Intuitive interface, Image splicing infinite, Simplicity of operation.
- User-friendly software.
- Integration with EOD Robot



Integration with EOD Robot



Specifications

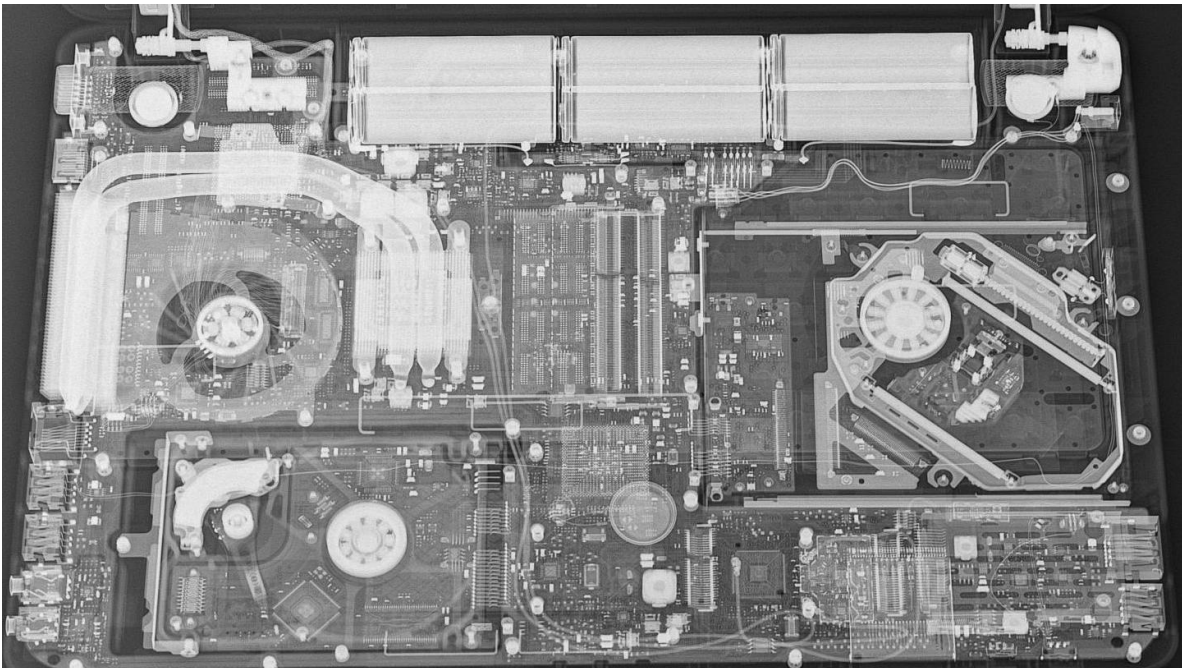
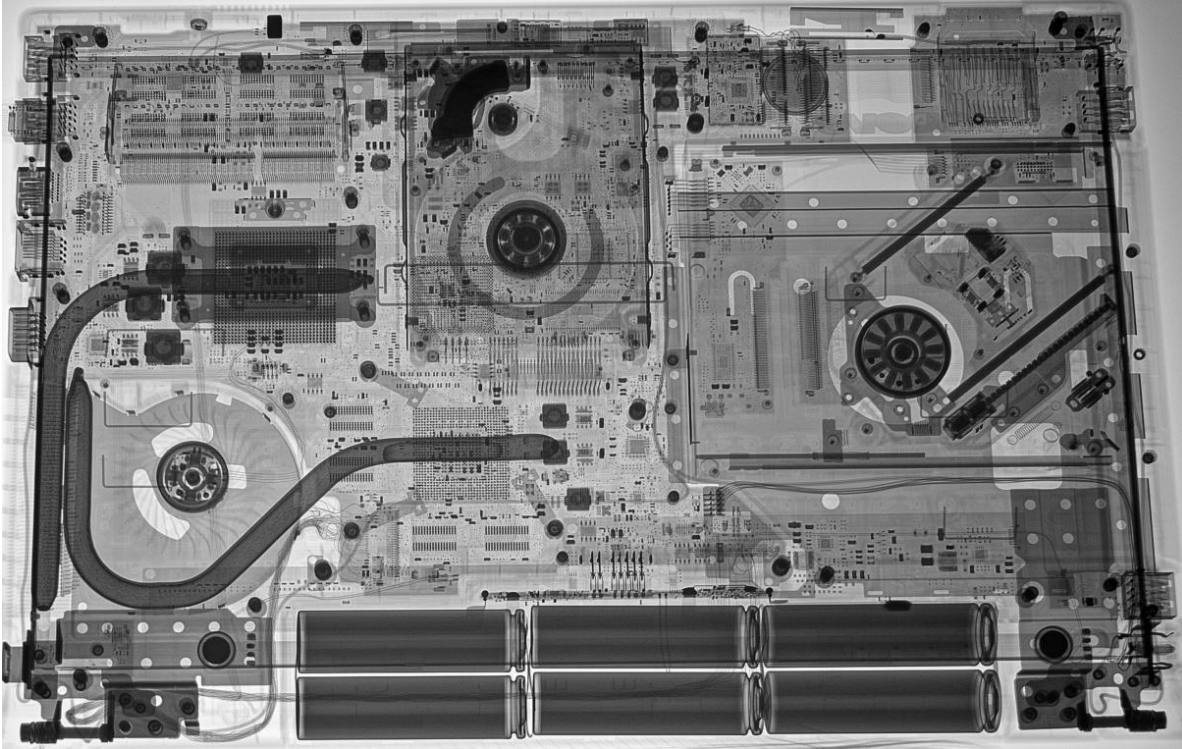
Technical Specification of the imaging panel		
1	Detector Type	Amorphous Silicon with TFT
2	Scintillator	CsI (Cesium Iodide)
3	Imaging Area	434mm x 355mm (Standard)
4	Imaging Panel	15mm
5	Pixel pitch	154 μm
6	Pixel resolution	2816X 2304 pixels
7	Pixel Depth	16 bits
8	Limiting Resolution	3.3 lp/mm
9	Dynamic range	>80 dB
10	Frame rate	0.5 fps
11	Network Interface	Gigabit Ethernet
12	Image Acquisition Time	4-5s
13	Exposure Control	Auto
14	Imaging Panel Size	L460 x H430 x D15mm(with handle) L460 x H384 x D15mm (without handle)
15	Weight	3.9kg without battery
16	Outer cover	Carbon fiber plate, high-strength aluminum alloy
17	Power dissipation	<8W (standby mode) / 22W (motion)
18	Working hours	DC 24V Battery more than 5hours
19	Communication	Wired: 50 meters cable on a roller, TCP/IP Ethernet Wireless: Wi-Fi (802.11ac), 5745-5825MHZ; No less than 70m without interference
20	Operating Environment	Temperature: -10°C~ +40°C Humidity: 30% ~ 75%RH Non-condensing
21	Storage Environment	Temperature: -20°C~ +55°C Humidity: 10% ~ 90%RH Non-condensing

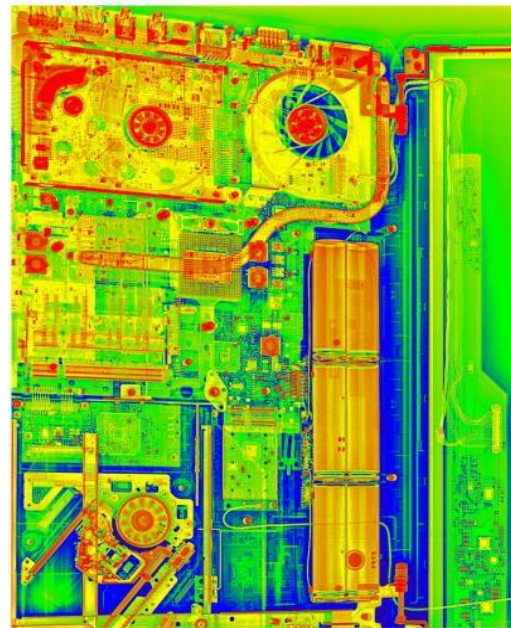
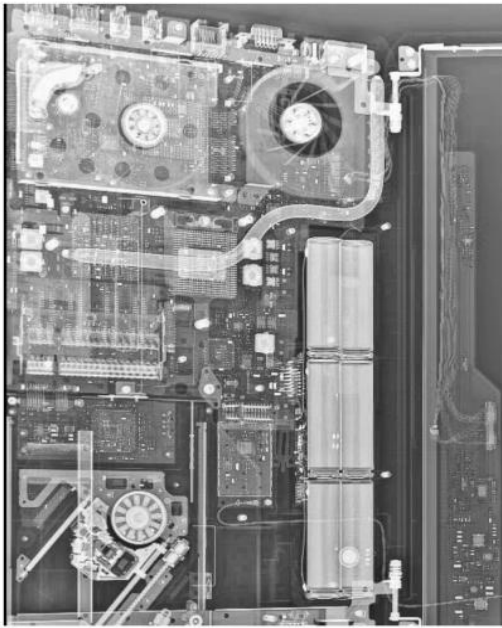


Technical Specification-x-ray Generator		
1	Operating Mode	Pulse, it launches 4000 pulses each time when charged fully
2	Maximum Emissivity	3000 pulses/hour
3	Pulse Emissivity	1-99 pulses
4	Working hours	More than 5 hours
	Battery	Two Rechargeable Li Ion batteries
		Charging time: one hour
5	Voltage	150 kV, Pulsed (safety to operator)
6	Penetration	50mm Aluminium Plate
7	Weight	5Kg with battery
8	Safety	Key Switch, Audible & Visible alarm signs
9	Operating Environment	-10°C ~ +50°C
Technical Specification – Imaging Station (PC)		
1	Type	Laptop computer
2	Processor	Core i5 processor
3	Display	13" or 14" Full HD LED Touch Screen 360° rotation
4	Memory	16 GB RAM
5	Hard Disk	512 GB
6	Operating system	English MS Windows 10
7	Software	Automatic Optimization, Invert, Revert, Pseudo color image, Rotate, Flip Horizontal, Flip Vertical, Zoom, Deep Focus, Polygon On screen measurement, Merge, Save, 3D image



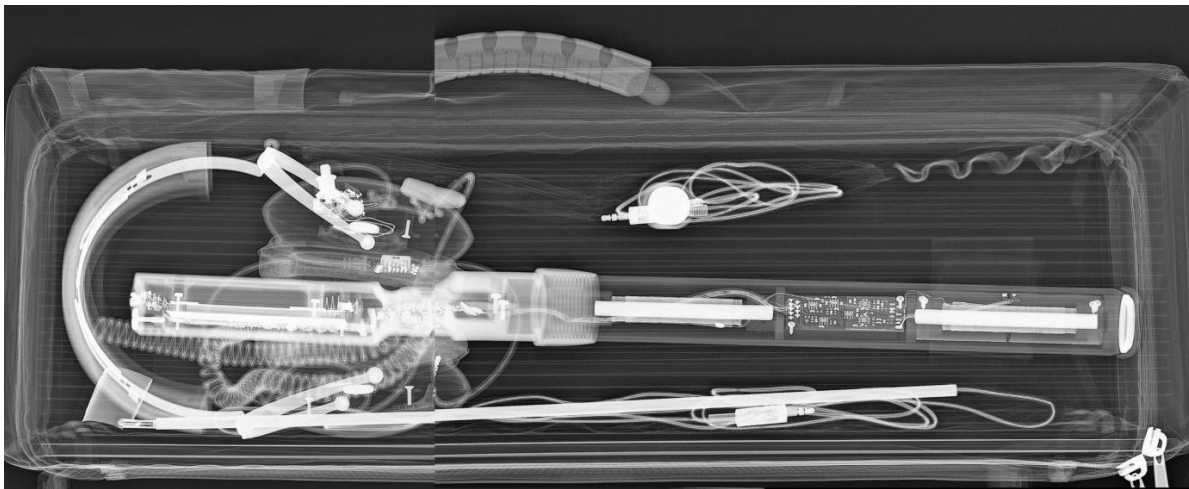
Imaging effect (laptop):





Pseudo color effect

Image splicing infinite:





Portable X-ray Scanner PCX-02



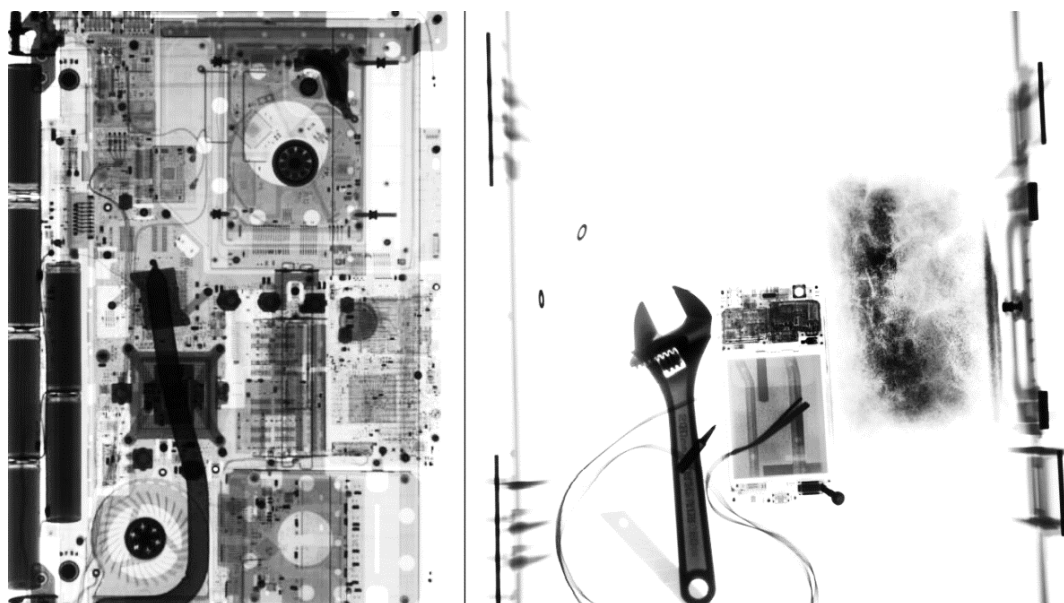
The PCX-02 X-ray System is a light-weight and portable X-ray scanning System for Counter IED (C-IED), Explosive Ordnance Disposal (EOD) or Forensic search operations. It can also be used in technical investigations of the friendly Ammunition. The equipment can be used in wireless mode for safe operations. An EOD robot's mount is supplied for remote control operations. A notebook is interfaced with the system; which can quickly process signal information into visual images to identify any hidden suspected objects or failed mechanism. X-ray being dangerous to, humans a detailed training is provided on all the safety requirements. It can also be connected with other external equipment, such as face recognition cameras, voice devices, etc.

- *Light weight portable system.*
- *Continuous working with hot plug battery system.*
- *Simple installation within 5 minutes.*
- *High sensitivity, strong penetration ability.*
- *High image resolution.*
- *Different imaging panel sizes offered.*
- *A robot mount can be provided for remote control operations.*



Specifications

Limiting Resolution:	3.25 lp/mm	3.25 lp/mm	4.16 lp/mm
Effective Area	434x434 mm	434x355 mm	307x244mm
Grey Scale	16 bits		
Penetrability	30 mm Steel Guaranteed, 34 mm Possible		
Typical Resolution	> 40AWG		
Communication Port:	Ethernet /WiFi		
Image Reading Time	4-6s		
Gen Tube Voltage	50 - 120kV		
Gen Tube Current	0.1-1mA		
Max Power	500 Watts		
Working Voltage/ Frequency	AC 110-240V/ 50-60Hz		
Operational temp	-5° – 50° C		
Humidity	0-95%		
Software Features			
Basic Functions	Edge Enhancement, Color Reverse, Zoom-in/out, Horizontal/ Vertical Rotation, Original, Pseudo 3D etc		
Image Index	Images in storage can be indexed against parameters like operator ID and Scanning time.		
Network communication	This system is checked, controlled and troubleshoot in remote through standard network port.		
Safety of images in Storage	Only authorized personnel is allowed to delete image in storage.		
Image of Dangerous objects	Frame of dangerous object can be marked out Frames of dangerous can be marked.		
Timing and Counting	Timing for system working hours and counting of numbers of detection.		





Mine Detector UMD-3



UMD-3 is easy to use hand-held Mine detector. It is highly sensitive and adopts high frequency pulse induction technology. It is suitable for detecting minor metal elements of a mines. The operators need minimal training to start using the device.




- *Glass resin telescopic rod with coated surface.*
- *Waterproof and can operate under water.*
- *Microprocessor controlled providing accurate timing and fast conversion.*
- *Hybrid RX coil improves the signal/noise ratio.*
- *Fast signal processing to identify smaller objects.*
- *Super sensitivity to identify very small metal objects.*
- *Up to 18 hours of operations.*



Specifications

Title	Specifications
Weight (without battery)	2.1 kg
Transport weight	11 kg (device + case)
The detecting pole length	1100mm~1370mm
Battery	3 LEE LR20 Manganese Alkaline Dry cell
Battery Working Time	At maximum sensitivity - 12 hours At medium and low sensitivity - 18 hours Low voltage alarming by sound and light
Operating humidity	Fully enclosed and be able to operate 2 m
Operating temperature	-25°C~60°C
Storage temperature	-25°C~60C
Detecting coil size	273mmx200mm
Coating	black ABS material, surface is treated with EMC

THIRD PARTY TESTING RESULTS

Itm No.	Target Size	Detectio n range at low level	Detection range at medium level	Target Picture
1	268x74x144mm	30cm	40cm	
2	298x78x186mm	25cm	36cm	
3	307x54x184mm	16cm	32cm	
4	347x82x195mm	25cm	33cm	
5	275x62x134mm	17cm	32cm	
6	Coin, D25mm 6gram	7cm	16cm	



Mine Detector UMD-2






The UMD-II is a versatile multi-purpose metal detector equally suitable for police, military and the civilian users. It best addresses the requirements for the explosive ordnance clearance operations with an improved ergonomic design and advanced battery management. It is suitable for detecting minor metal elements of mines. The operators need minimal training to start using this device. It has interchangeable detection heads: Halo for big area, Probe for drains & culverts.

- *Single 2.4mm PEC double surface mounted technology, the processor is based on 8-bit 2*RISC ADC (8-bit 2*instruction set AD converter)*
- *Target detection indicated via LED display and audio tone.*
- *Three preset sensitivity levels and one key "Reset" function.*
- *Automatic self-test and calibration for operator confidence and ease of use.*
- *Low battery indicator.*
- *5 LED alarm indicators.*
- *Up to 18 hours of operations.*



Specifications

Title		Specifications		
Weight of Control Unit		0.8 Kg		
Detector Weight (without battery)		Control Unit+ Halo: 2.1 Kg Control Unit+ Probe: 1.65Kg		
Packing case		ABS case		
Total Weight		12Kg (device+ case)		
Detector length		Control Unit+ Halo: 1080mm~1370mm Control Unit+ Probe: 1135mm~1395mm		
Operating and Storage temperature		-25°C~60°C		
Battery		3 LEE LR20 Manganese Alkaline Dry cell (Rechargeable Li-battery is optional)		
Battery Working Time		10-18 hours		
Operating humidity		Water proof and operations under water possible		
THIRD PARTY TESTING RESULTS				
Item No.	Target Size	Detection range at low level	Detection range at medium level	Target Picture
1	268x74x144mm	30cm	40cm	
2	298x78x186mm	25cm	36cm	
3	307x54x184mm	16cm	32cm	
4	347x82x195mm	25cm	33cm	
5	275x62x134mm	17cm	32cm	
6	Coin, D25mm 6gram	7cm	16cm	



Mistral Dropex Master Kit



The DropEx Plus kit is an Explosive Seen Investigation (ESI) kit. It is designed to detect and identify explosives using dropper-bottle technology, making it suitable for use both in the field and in laboratory settings. The kit offers a comprehensive range of detection capabilities and comes packaged in a convenient 'Work Station' case. Each kit includes one bottle of each of the following solutions: 1, 2, 3, A, P, U, and B, as well as four paper dispensers, all contained within an L1 box. The kit can contain dropper for 50 or 100 tests.

- *Detects and identifies explosives using dropper-bottle technology*
- *Suitable for use in both the field and laboratory conditions*
- *Comprehensive range of detection capabilities*
- *Packaged in a convenient 'Work Station' case*
- *Contains seven bottles of solutions: 1, 2, 3, A, P, U, and B+ (with 50 tests per bottle)*
- *Includes four paper dispensers*
- *All components contained within an L1 box*



LED/ IR Camera Search Kit PCK-107



The telescopic pole inspection camera is a great tool for EOD search and scan, under vehicle detection and underwater inspection. It is equipped with HD digital HD camera which view and captures every detail of your inspection, the camera is completely waterproof and with a long soft mantel pipe that can be changed all the directions by hand. The 7 inch color digital screen is with DVR function, it supports video record and picture snap function by TF card. The telescopic pole can be stretched up to 15meters. Rechargeable Li-ion battery can provide at least 8 hours of continuous operation. All the parts are packed well in an aluminum alloy case that with EVA foam.

Specifications

- *Ideal to view unreachable impossible-to-see total-dark and large viewing areas.*
- *video record and picture snap function*
- *Excellent video HD 1080P 5.0 Mega digital camera*
- *6pcs super bright LED or IR lights night vision.*
- *Support and photo as iphone.*
- *5 meters telescopic pole can stretch for distance inspection.*
- *5000Mah rechargeable Li-ion battery can provide 8 hours of continuous operation*



Camera

HD 1080 P 5.0 Mega digital camera.
Φ 18 mm mini camera with 6 IR / LED night vision.

Optical Element : 1/3 CMOS Sensor Optical
Total Pixels :5.0 Mega, 3200*1800 pixel

Lens & View angle: 0.5 mm F 1.2 & 90°

HD Video Output Interface: FPD-Link-III

Waterproof : IP68



Screen

Size : 7 inch digital color screen with sunshade.

Video Compression Format: H.264.

Video Storage Pixels: HDMI : 1920 * 1080.

Video Storage: AVI Audio Frequency.

Audio Compression Format: AAC.

Photo Format : JPG

Storage External SD card: TF card 1 to 64 GB

Operating System: Windows & Mac OS

Port: USB 2.0

Voltage: DC :7-24V USB DC:5V

AC Adapter: DC 12 V 1 A

Built-in Battery : Li-battery 5000 Mah

Telescopic Pole
4 Joints telescopic pole
Total length : 5m

Power Supply

DC 12 V / 5000 mah Lithium Battery

Accessories

AC adapter, TF card, USB cable, Micro-HDMI cable, Aluminum alloy case, Operating manual





Camera Search Kit - PCK-3S

The Camera search kit is a great tool for EOD search and scan & for security troops. It is used for under vehicle inspection, buildings, schools and other suspected areas. It provides video surveillance and observation of difficult to reach areas at significant heights and distances. The camera features an extension pole, a flexible neck camera head surrounded by LED lights and an internal DVR for video recording. For safety of EOD operators and law enforcement agencies search camera kit can be used effectively behind the shelters.

Key Features

- *The display uses digital color pigment 265 million TFT LCD.*
- *Exclusive exploitation has driven flat, about five times the image and strong function of electronic variable light etc, make picture brighter, colored color life like.*
- *CCD camera using sensor, 3-5 meter, make even in infrared night also apply to normal.*
- *With triangle wheels its operation as under vehicle operation is comfortable.*

Specifications

Working Voltage DC 12 V	
<i>Display</i>	3.5 inch TFT LCD Digital
<i>Resolution</i>	320 X 240
<i>Camera</i>	1/3 inch Sony CCD Camera
<i>Infrared distance</i>	3 – 5 meters
<i>Viewing Angle</i>	Wide angle lens perspective : 120°
<i>Power Supply</i>	Rechargeable lithium battery protection





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