PERSONNEL SCREENING
NON-INTRUSIVE X-RAY INSPECTION SYSTEM

SmartCheck™

REVEALS

- Plastic explosives
- Composite weapons
- Plastic and metal guns
- Drugs and other contraband
- Ceramic and metal knives
- Box cutters
- Precious metals
- Recording devices

SMARTCHECK™

HIGHLY EFFECTIVE AND COMPREHENSIVE PERSONNEL SCREENING SOLUTION

AS&E's SmartCheck system is the most effective way to screen for contraband and threats hidden under a person's clothing. Its capability goes well beyond that of metal detectors because it simultaneously detects both metallic and non-metallic objects, such as guns and knives, plastic explosives, composite weapons, drugs and other hidden threats and contraband. And its easily interpreted Z® Backscatter image gives the operator an easy-to-read display of where the threat or contraband is hidden, thus eliminating the need for intrusive and time-consuming pat-down and strip searches.

The SmartCheck system is safe for all individuals and complies with all applicable U.S. personnel scanning regulations. An optional privacy filter protects the privacy of screened persons and still effectively reveals threats.

SMARTCHECK ADVANTAGES

- Comprehensive system displays metallic and non-metallic threats and contraband
- Privacy algorithm ensures privacy while effectively revealing threats and contraband
- Safe for operators and scanned individuals
- Identifies terrorists, suicide bombers, smugglers
- Superior-quality images are quickly and reliably interpreted
- Images can be analyzed remotely for added privacy and operator security
- Can be operated by one person
- Small footprint fits through standard doorways

PRIVACY FILTER

AS&E's optional privacy filter uses a software algorithm to address privacy concerns. The filtered image presents only an outline of the scanned individual and quickly and reliably outlines any potential threats on the body, all while ensuring the person's privacy.

Unfiltered image

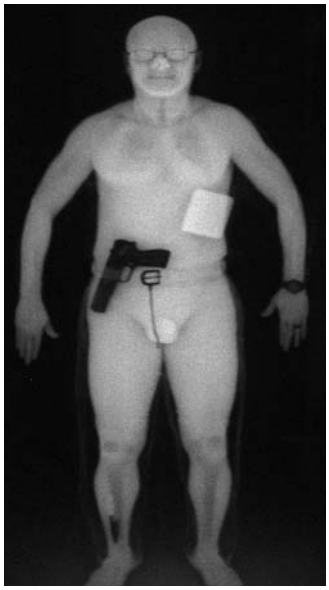
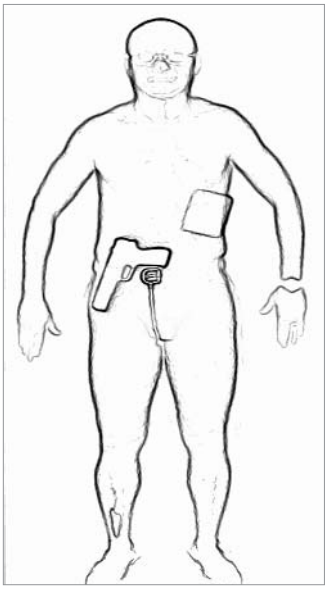


Image with privacy filter



THE AS&E ADVANTAGE

AS&E'S SUPERIOR IMAGE QUALITY, COMBINED WITH OUR ADVANCED PRIVACY FILTER, PROTECTS HUMAN DIGNITY WHILE EFFECTIVELY REVEALING THREATS.

ZB

TECHNICAL SPECIFICATIONS

SmartCheck™

SYSTEM SOFTWARE AND IMAGING TOOLS

Operator Console

17-inch, non-interlaced color monitor
960 X 480 pixels
65,000 colors
Console can be mounted on the right or left side of the system
Windows XPe Operating System

Detection Capability

Z® Backscatter image display of organic materials (plastics, explosives, drugs, ceramic weapons) and inorganic materials (guns, knives, electronics)

ASEInspection Software

ASEInspection is the Windows-based application software used to convert X-ray data into images. ASEInspection contains a suite of tools for manipulating and enhancing images, and it is used for image storage and retrieval.

ASEInspection Features

Mark and Annotate: Allows the operator to attach pointers and comment fields to a suspicious object or area of the image
Image Storage: Stores up to 15,000 images in non-volatile memory
Image History: Displays the four most recent images
Side-by-Side Image Display: Displays two images side by side
Reporting: Stores hours of operation, number of scans, time and date stamping of images and activity by operator or shift

Image Analysis Tools

Background Enhance: Automatically increases the contrast in the area surrounding the subject by equalizing brightness values in the image
Reverse Video: Displays the normal, "positive" image or the reverse black-and-white "negative" image, thereby enhancing subtle density differences
Zoom: Magnifies the image 2X, 3X, or 4X using the keyboard or mouse
Pan: Pans or scrolls through the entire image using any available zoom factor
Brightness: Allows operator to manually increase or decrease the brightness of a scanned image
Contrast: Allows operator to manually increase or decrease the contrast of a scanned image

ENVIRONMENT

Temperature

Operating Temperature: 0° to 40° C (32° to 104° F)
Storage Temperature: -40° to 60° C (-40° to 140° F)

Humidity

5–95% (non-condensing)

Power

Circuit 20A
115 VAC +/- 10% (50/60 Hz)
220 VAC +/- 10% (50/60 Hz) option

OPERATING FEATURES

Length: 60" (152 cm)
Width: 34" (86 cm)
Height: 90" (229 cm)
Transport Height: 79" (201 cm)
Weight: 1,400 lbs (636 kg)

Scan Time: 8 seconds/scan

Mobility: Equipped with swivel casters and leveling feet

SYSTEM OPTIONS

Privacy Filter: Outlines scanned individual and potential threats; can be enabled or disabled based on application requirements
Remote Image Analysis Console: Image Analysis console can be located up to 100 feet from the system
Printer
SOLA Transformer

Z BACKSCATTER TECHNOLOGY

AS&E's Z Backscatter is a patented technology based on the X-ray Compton Scattering effect. Z Backscatter works by detecting and highlighting "low Z" materials (items that contain low atomic number elements such as carbon, hydrogen, oxygen, and nitrogen). Low Z materials include explosives, plastic weapons, and drugs. The SmartCheck personnel screening system displays these items in bright and well-defined images, making it easy to identify hidden materials, and to clearly determine security threats.

SmartCheck also recognizes the lack of scattering that occurs when "high Z" materials are placed against the body. These materials, such as metal weapons and bomb-detonating wires, absorb X-rays and are displayed as dark objects in the image. Thus the system is able to display all metallic and non-metallic threats and contraband anywhere on a person's body. The high quality and clarity of Z Backscatter images reduces operator fatigue while increasing productivity.

AS&E holds more than 20 patents on Z Backscatter technology.

HEALTH AND SAFETY

American National Standards Institute (ANSI): Meets the applicable requirements of ANSI/HPS N43.17 dated March 15, 2002
OSHA: 29 CFR 1910 (as applicable)
Film Safety: Safe for film speeds up to and including ISO 1600 (DIN 33)
Certifications: CE, UL/TUV
Radio Frequency Emissions: In accordance with 47 CFR 15 "Radio Frequency Devices"
Effective X-Ray Dose as measured per ANSI standard: Less than 0.1 µSv (10 µRem) per scan

All specifications subject to change without notification.

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