

PORTABLE DIGITAL X-RAY INSPECTION SYSTEM

SXR-150



BRIEF TECHNICAL DESCRIPTION

APPLICATION

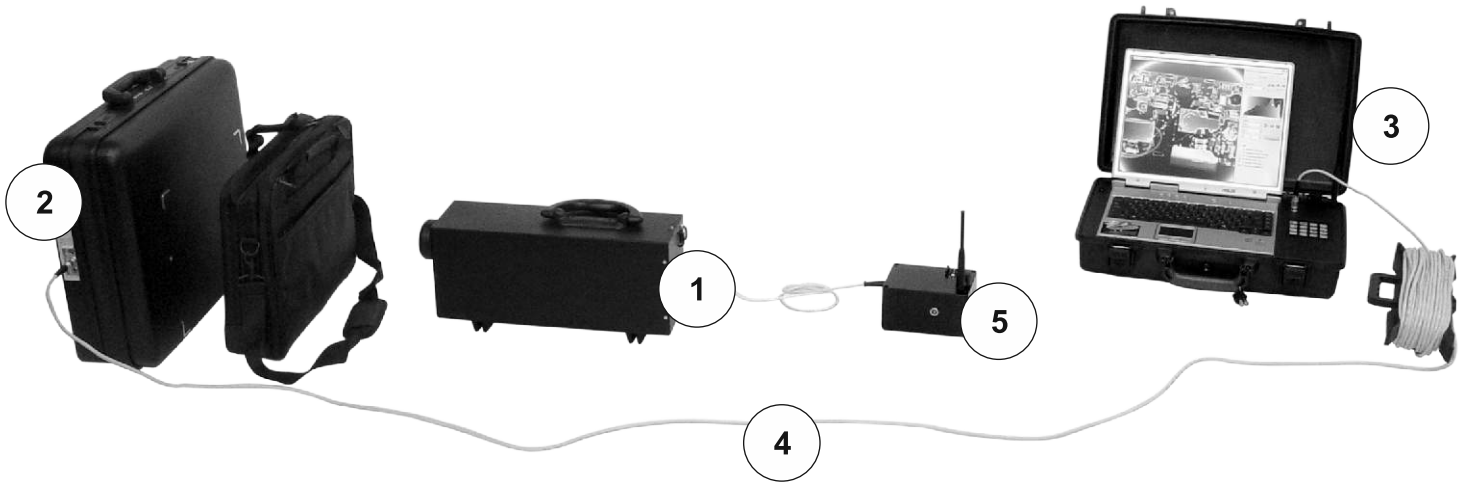
The Portable X-Ray Inspection System SXR-150 is used by security services to assess suspicious objects in mass transit systems (air sea, land, rails), as well as on the premises of governmental and industrial sites, offices buildings, etc.

The SXR-150 is designed to:

- Detect weapons, explosives and other dangerous enclosures concealed inside luggage, packages and parcels, or inside vehicles.
- Inspect buildings, interior equipment, office equipment, service lines, walls, etc., in order to detect hidden objects.

To inspect an object is necessary to:

- Place the X-Ray generator (1) one side of the object, and the X-Ray imager (2) on the other side;
- Install the PC based Control and Processing Unit (3) at a safe distance (up to 50 m) from the object;
- Connect the system modules with the cable (4)
- Set the mode of inspection and start the imaging process.



For operation, the elements of the system can be fully linked by cables to remotely control the imaging process. In that case, the PC based Control and Processing Unit (3) is linked to the X-ray Imager (2) by a cable (up to 50 m); the imager is linked to the external X-Ray source controller (5) by a cable of 5 m, and the source controller (5) is linked to the X-ray generator (1) by a cable of 5 m.

A wireless communication link can also be used to remotely control the source and the imaging process. In that case, the wireless connection is between PC based Control and Processing Unit (3) and external X-Ray source controller (5) and allows remote control of the X-Ray generator (3) linked to its external X-ray source controller (5).

The image of an object inspected appears on the PC display right after the registration process completion.

SPECIAL FEATURES

- Relatively small dimensions and lightweight of the system
- Autonomous power supply
- Use in field conditions thanks to sturdy case for transportation and storage and to broad operating temperature range (from 0°C to +45°C)
- Powerful imaging software with friendly multilingual interface allows exploitation of the system, even by operators with a minimal training

TECHNICAL CHARACTERISTICS

X-ray generator

<i>Generator type</i>	pulse
<i>X-ray tube voltage</i>	150 kV
<i>Time of continuous work when powered by the battery in registration mode (number of images)</i>	30 min (up to 150 images)
<i>Full charging time</i>	less than 1 hour
<i>Weight with battery</i>	10,65 kg
<i>Overall dimensions</i>	450 x 135 x 225 mm

X-ray Imager

<i>Camera resolution</i>	more than 2.0 line-pairs/mm (equivalent to 1600 TV lines)
<i>Resolvability: localization of copper wire without a barrier</i>	40 AWG (0,08 mm)
<i>Dynamic range, not less</i>	60 dB
<i>Inspected area dimensions</i>	250 x 320 mm
<i>Time of continuous work from battery in registration mode (number of images)</i>	100 min (up to 420 images)
<i>Weight</i>	7.3 kg
<i>Dimensions</i>	515 x 145 x 440 mm

PC Based Control and Processing Unit

Laptop computer:

Processor (minimal)	Intel 1.6 GHz
RAM (minimal) *	2048 Mb
Screen size	14"
SSD memory *	32 Gb
Time of continuous work from battery	up to 2 hours
Time of full battery charging	2 hours

Software:

Image Processing Functions	Zoom, rotation, inversion, Geometrical Measurements
Image Enhancement Functions	Sharpness Enhancement, Edge Enhancement, Histogram Equalization, Brightness, Gamma Correction, Stretch Intensity, Pseudo Color, 3D effect, Flash Light
Images Archive	Image Database including data: User name, Date, Time, Place, Category, Annotation

<i>Weight</i>	5.45 kg
<i>Overall dimensions</i>	480 x 120 x 350 mm

Connection cables length:

PC Based Control and Processing Unit – X-ray Imager	50 m
X-ray Imager – X-ray generator	5 m

Maximal distance from PC Based Control and Processing Unit

<i>to X-ray generator for wireless connection</i>	50 m (in line of sight)
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<i>Control efficiency</i>	120 images / hour
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<i>The system operative conditions</i>	8 hours a day
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<i>Weight of the system packed for transportation**</i>	42 kg
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<i>Dimensions of transportation case**</i>	800 x 520x 310 mm
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* Vendor retains the right to make changes in some units configuration.

** Dimensions and weight of the complete set in transportation package may vary depending on type of the package and completeness.

COMPLETE SET

The compact SXR-150 system is supplied in a water-proof carrying case and includes the X-Ray Generator, the X-ray source controller, the X-Ray Imager and the PC Based Control and Processing Unit. Also included are accessories (cables, battery charger).



Pulse X-Ray Generator



X-Ray Imager



PC Based Control and Processing Unit



external X-ray generator controller



50m cable for PC Based Control and Processing Unit and X-ray imager connection



battery charger for X-ray Imager and X-ray generator



Penal for accessories



The system set for transportation

Also supplied:

- 5m cable for X-ray imager and X-ray generator connection;
- cable for charging and powering the PC Based Control and Processing Unit from main power supply (220V).
- documentation on SXR-150 exploitation

The case for transportation and storage is a moisture-proof plastic case "PELI" equipped with protecting shell and fasteners. The case can be transported by any type of transport.

TECHNICAL MEANS OF COUNTERACTION AGAINST TERRORISM DEVELOPMENT AND PRODUCTION

- Detecton of explosives
 - detection of explosive vapors and traces
MO-2M, MO-2D, MO-2DT, GCS-02F
 - non-linear location of semi-conductor components
RFD 23
 - visualization of hidden components
SXR-150
 - metal detection
OVERTONE, RUBIKON, MOLE
- Express detecton of drugs
 - GCS-02FN

**THE DEVICES ARE ADOPTED BY
SECURITY SERVICES OF RUSSIA**

THE DEVICES ARE USED IN 50 COUNTRIES FROM 4 CONTINENTS

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