

ELECTROSHOCK SHIELD "STENA". PURPOSE

Shockproof electroshock shield "STENA" is designed for:

- protection of law enforcement officers during mass riots;
- control of the crowd and neutralizing aggressive protesters during mass events, demonstrations, etc.;
- psychological and physical influence on offenders;
- centralized control of police units and the use of force.

Equipping shockproof shields with electroshock device will increase the efficiency of controlling the crowd; will allow to suppress aggression at demonstrations in time.

Shield "STENA" can be used as a part of mobile and stationary protective barriers and other electroshock devices.

Telemetric system in electroshock shield "STENA" allows controlling the use of weapons, to store and receiving data of the event log and statistics online, to adjust parameters or block the weapons, as well as to redistribute forces during police operations, to call for reinforcements, to have data for the legal justification of the use of weapons.



ELECTROSHOCK SHIELD "STENA". TECHNICAL CHARACTERISTICS

Dimensions of the shield, mm	1000x600
Protected area, dm ²	60
Weight, not more than, kg	4,8
Power of influence of electroshock discharger (ESD), W	10
Voltage of blank discharge ESD, kV	130
Distance between electrodes, mm	40
Operational in the range of temperatures from -15 °C to +50 °C and relative humidity up to 98% at the temperature +25 °C	
Time of autonomous operation, months	3
Non-stop operation of the light from fully charged battery, hours	3
ESD operation mode	manual/automatic/mob.barrier
Modes of cartridges initiation	1x1 / 1x2 / 1x4
Floodlight operation mode	100% power/stroboscope/50% power
Protection class	02 according to 50744-95
Supply element: rechargeable LiPOL accumulator battery 11,1V/5Ah	
Video camera*	yes
Telemetry system*	yes
Magazine capacity, flashbang cartridges, pcs	8

*configuration depends on contract terms

ELECTROSHOCK SHIELD "STENA". FUNCTIONALITY

- Patented module design (patent RU2652496 "Electroshock module and shield for suppression of riots, that uses this module") allows to use optimal configuration of special means.
- Control of use of special means and parameter adjustment can be done remotely with mobile app or on monitoring website.
- Can be integrated in the satellite navigation and monitoring system (NMS) to improve the accuracy of evaluation of the situation and management decisions, to improve the efficiency of the interaction between law enforcement agencies, to strengthen control over the use of special means.



ELECTROSHOCK SHIELD "STENA". CONSTRUCTION SPECIFICS

- Shockproof transparent polymer shield provides optimal visibility, confidence and effectively protects against melee weapons, improvised street weapons (sticks, rods, stones,...), protects law enforcement officers from traumatic weapons. The cushioning pad protects user's shoulders and forearms from the pressure of the crowd during riots.
- Special means are activated by the hand holding the shield.
- The shield has brackets for battle formations and is equipped with a lower handle.
- Module design allows to replace the spent magazines of flashbang cartridges and discharged batteries to recharge them.
- Electronic key lock eliminates the possibility of unauthorized use of the shield.
- Module design allows the customer to select appropriate configuration and functionality of the shield.

USE WITH MOBILE BARRIERS

The system can be used for connection to stationary and mobile barriers in order to ensure physical protection of important, administrative, economic and other objects.

TELEMETRY SYSTEM "OBERON.MONITORING"

The shield "STENA" has the Control System (CS), which controls its operation. All history of operation and application of the System is recorded in the event log: CS receives information from data sensors, as well as records its own actions. Obtained data is continuously stored in non-volatile memory.

CS is equipped with a real-time clock that is synchronized with the clock of an external device when a communication channel is established.

Information is transferred to external devices via communication module.

External device is:

- PC with installed software that commutates with CS of the shield through the wire.
- Mobile device that commutates with CS of the shield through mobile application.
- Automated workplace in the monitoring center that commutates with CS of the shield through web-interface and mobile application. Collected data is processed on a remote server or in the monitoring center, and access to the data is organized through a web-interface or through special software.

All objective information is visualized and statistically processed with reference to a single map resource.



INTEGRATED MODULES. ELECTROSHOCK MODULE

The module operates in manual (switching on from the button) and automatic mode (automatic switching on when an object approaches the electrodes). It can also be connected to mobile high-voltage barriers.

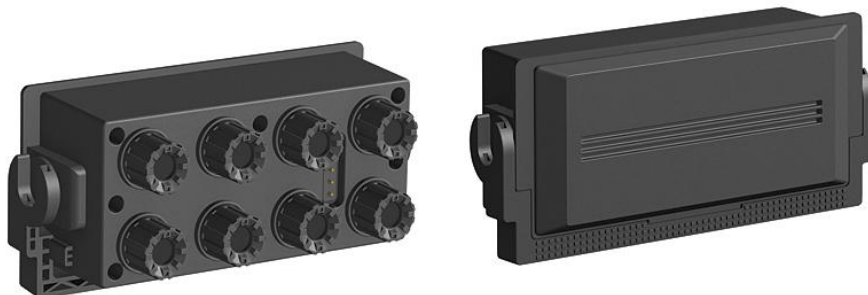
The electrodes are arranged in two vertical rows. The absence of electrodes at the perimeter of the shield excludes unintentional defeat of the law enforcement officer during operation.

INTEGRATED MODULES. FLASHBANG MODULE

For remote psycho-physical influence on the target (stunning, blinding, disorienting the influenced person) the shield is equipped with a replaceable magazine with 8 flashbang cartridges. After all cartridges have been used, the magazine can be quickly replaced. The magazine is fixed with clamps and removed by lifting the rotary handle.

Flashbang cartridges are initiated by pressing a button on the handle.

Type of initiation can be set on control panel: 1, 2 or 4 cartridges at a time.



INTEGRATED MODULES. LIGHT MODULE

The shield is equipped with powerful LED lights. The bright light has a blinding effect on offenders.

Operation mode is set with the selector on the control panel.

Operation modes:

- Floodlight 100% power (equivalent of 400W halogen lamp), narrow beam;
- Stroboscope;
- Floodlight 50% power.

INTEGRATED MODULES. IDENTIFICATION MODULE

The shield has the function of identification of the operator. To do this, the operator inserts an electronic key-identifier into the slot, which can be firmly fixed in the slot or fixed with the possibility of extraction, with a rotary lock. Control unit regularly sends the signal to the receiver of identifier. If control unit receives a response signal from the identifier, the system allows switching on electroshock discharger, flashbang cartridges, etc. The belt of identifier is put on the operator's hand, and if the offender captures the shield, the identifier is removed from the socket, the control unit does not receive a response signal and blocks operation of the shield.

Identifiers are registered in the memory of control unit with the master card, which is unique for each shield, with "OBERON.Monitoring" service through PC or mobile application.

INTEGRATED MODULES. VIDEO RECORDING MODULE

Video recording module is designed to save video information about the circumstances of the device application to provide evidence about its legality. The device has a non-volatile memory designed to store the recorded information. Video camera is turned on using the button on the control panel. Indicator of camera operation is on the control panel.

The module transfers data in online or offline mode to the navigation and monitoring system.

INTEGRATED MODULES. TELEMETRY MODULE

Shield "STENA" is equipped with a telemetry system and a GPS/GLONASS communication module that allow:

- to integrate the shield into the navigation and monitoring system for control from the monitoring center;
- to receive and store online operation log data, statistical data, etc.;
- to transfer stored data to an external information device;
- to control modules remotely, to adjust parameters and block system resources;
- to monitor the application of ESD, monitor the intensity of application.

ELECTROSHOCK SHIELD "STENA". CONTROL PANEL

On the control panel are located:

- * illuminated rotary switches of:
 - ESD operation modes;
 - Flashbang module;
 - Light module.
- * activation buttons of:
 - the system;
 - camera;
 - block of the control panel.
- * indicators of:
 - operation mode of the communication module;
 - charge level of the battery;
 - system status.

There are buttons of electroshock discharger activation and flashbang cartridges initiation on the handle. Buttons are pressed with the hand holding the shield.