

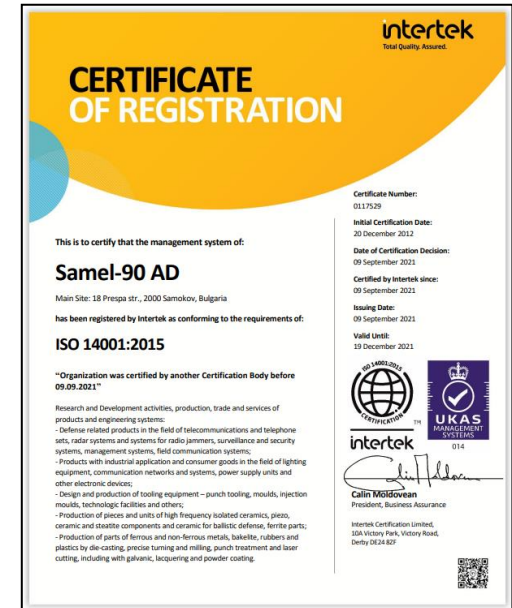
SAMEL 90



58 years of history, experience, expertise and trust



- ISO 9001:2015
- ISO 14001:2015
- ISO 45001:2018
- NATO AQAP 2110
- NATO Security Clearance Certificate
- NAMS code: 40000499994
- CAGE code: 0002U
- D-U-N-S number: 628154379
- CCR number: AYZ87B
- TPIN number: 75863891



-Staff > 450 people
- 75% of the production is exported



**RADIOJAMMERS
FOR PROTECTION AGAINST
REMOTE CONTROLLED
IMPROVISED EXPLOSIVE DEVICES (RCIED)
AND ILLEGAL USAGE OF RADIO DEVICES
AND DRONES**



TYPES OF RADIOJAMMERS:

- **Mobile (vehicle installation)**
- **Stationary**
- **Portable (briefcase)**
- **Manpack (rucksack)**
- **Cell Phone Jammer**
- **Prison Jammer**
- **GPS and anti UAV jammers**
- **All bands GNSS jammers**
- **Bomb Disposal Teams protection jammers**



LIST OF JAMMED DEVICES:

(depending on ordered frequency subbands):

- **Wireless communications-all types;**
- **Walky-Talky;**
- **RFID;**
- **CDMA;**
- **GSM 900**
- **Satellite terminals;**
- **GSM 1800**
- **GSM 3G;**
- **GSM 4G/LTE/5G**
- **WCDMA**
- **GPS;**
- **UMTS;**
- **WLAN;**
- **Bluetooth;**
- **All Radio controlled Remote Control Devices;**
- **All other remote radio controlled devices**

RADIOJAMMER'S APPLICATIONS :

- **For protection of cars and convoys against IED;**
- **For protection of people, VIP persons, etc. against IED**
- **For protection against listening in on business meetings, confidential conversations, etc.;**
- **For protection against illegal usage of radio devices and mobile phones on public areas, prisons and other places;**
- **For protection of technical teams and military subdivisions when implementing special operations and dismantling IEDs.**
- **For protection against drone attacks**

SAM[®]L90

MOBILE (CONVOY) RCIED RADIOJAMMERS



The most powerful available on the market radiojammer



MOBILE RADIOJAMMER



Frequency band, MHz	20 ÷ 2500 20 ÷ 3000 (option) 20 ÷ 6000 (option)
Number of frequency subbands (transmitter modules)	Up to 44 pcs depending on customer specification Modular design of the system
Type of antennas	External mobile omnidirectional or directional

All main parameters are according to the end user requirements



MOBILE RADIOJAMMER



Total RF output power, W

Up to 3500 W, according to customer requirements. Total output RF power is divided on the frequency subbands depending on customer specification

Mode of interference

Barrage

All main parameters are according to the end user requirements



MOBILE RADIOJAMMER

Input Power supply	• 12 or 24VDC on board power supply • 12 or 24 VDC from additional batteries • 12 or 24 VDC from additional DC alternator • 24 or 48 VDC from additional DC generator • 110 or 220VAC from external generator or mains
Operational time of the jammer	• Unlimited with vehicle engine running • Unlimited when power supply is from generator or mains • Limited depending on the capacity of the additional battery
Working temperature	-20°C ÷ +55°C



Input power supply source is according to the end user requirements

MOBILE RADIOJAMMER



Remote control function	Yes
Other features	Possibility for inside or outside vehicle mounting
Protection distance	Depending on the output RF power of the activating transmitter, distance between activating transmitter and receiver, topographical characteristic.



MOBILE RADIOJAMMER

Remote Control Units



- Individual control of the modules
- Group control of the all modules
- LED indicators for modules status and malfunctions
- Service communication channel (windows) for in convoy communication
- Control of the output RF power
- Control interface to the all modules





MOBILE RADIOJAMMER

EMC shielding of the vehicle cabin



MOBILE RADIOJAMMER

Protection dresses



PORTABLE RADIOJAMMER (briefcase)



Frequency band, MHz	20 ÷ 520 800 ÷ 1000 1800 ÷ 2200, or any other depending on customer specification
Number of frequency subbands (transmitter modules)	Up to 10 depending from customer requirements Modular design of the system
Type of antennas	Internal omnidirectional and external for vehicle (stationary) installation

All main parameters are according to the end user requirements



PORTABLE RADIOJAMMER (briefcase)



Total RF output power, W	Up to 500 W divided on the frequency subbands depending on customer specification and requirements
Mode of interference	Barrage

All main parameters are according to the end user requirements

PORTABLE RADIOJAMMER (briefcase)



Power supply

- 12 VDC from internal battery
- 12 or 24 VDC from external battery (including vehicle battery)
- 110 or 220 VAC from external generator or mains.

Operational time of the jammer

- Up to 60÷90 min from internal battery, depending from value of the output power
- Unlimited when power supply is from generator or mains
- Limited depending on the capacity of the external battery

Input power supply source is according to the end user requirements

PORTABLE RADIOJAMMER (briefcase)



Working temperature	-20°C ÷ +55°C
Remote control function	Yes
Other features	Possibility for vehicle or fix installation and operation with external antennas

> 15 different sizes and shapes of the briefcases

PORTABLE RADIOJAMMER (rucksack)



Frequency band, MHz	20 ÷ 520 800 ÷ 1000 1800 ÷ 2200, or any other depending on customer specification
Number of frequency subbands (transmitter modules)	Depending from customer requirements
Type of antennas	Omnidirectional Option for external for vehicle or fix installation

All main parameters are according to the end user requirements

PORTABLE RADIOJAMMER (rucksack)



Total RF output power, W	Up to 100 W divided on the frequency subbands depending on customer specification
Mode of interference	Barrage

All main parameters are according to the end user requirements

PORTABLE RADIOJAMMER (rucksack)



Power supply

- 12 or 24 VDC from internal battery
- 12 or 24 VDC from external battery (including vehicle battery)
- 110 or 220 VAC from external generator or mains

Operational time of the jammer

- Up to 120 min from internal battery (depending from value of the output power)
- Unlimited when power supply is from generator or mains
- Limited depending on the capacity of the external battery.

PORTABLE RADIOJAMMER (rucksack)



Working temperature	-20°C ÷ +55°C
Remote control function	Yes
Other features	•Possibility for vehicle installation and operation with external antennas •Possibility for increasing of the output power when jammer operate in the vehicle

Portable and Manpack radiojammers

Remote Control Units



- Individual control of the modules
- Group control of the all modules
- LED indicators for modules status and malfunctions
- Service communication channel (windows) for in convoy communication
- Control of the output RF power
- Control interface to the all modules



EOD PORTABLE JAMMER SET for Bomb Disposal Teams

Frequency band, number
of the modules, types of
antennas and output power
– according to the end user
requirements



Jammers against illegal usage of mobile phones on prisons



Frequency band,
MHz

- CDMA 800
 - GSM 900
 - All satellite phones
 - GSM 1800
 - PCS 1900
 - GSM band 3G
 - 4G/LTE
 - Wi-Fi, WLAN
 - Other frequency bands according to customer request
- GSM frequencies and bandwidths are according to GSM standards in customer country**

Jammers against illegal usage of mobile phones on prisons



Type of antennas	High effective omnidirectional or directional antennas according to specific area, customer requirements and according to site survey
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Jammers against illegal usage of mobile phones on prisons



Total RF output power, W	Depending from the end user requirements Output power is according to specific area, customer requirements, site survey
Power supply	• 110 or 220 VAC from mains with battery backup • 12 or 24 VDC
Operational time of the jammer	Unlimited

Jammers against illegal usage of mobile phones on prisons



Working temperature	-20°C ÷ +55°C
Remote control function	Yes, wire and wireless Remote Controlled Unit
Installation	• On the wall • On small tower shelter • On the ceiling • Other places
Other features	Possibility for installations on public areas and other places



Room Cell Phone Jammer



**Frequency band,
number of the modules
and output power –
according to the end
user requirements**

GNSS and anti UAV portable (briefcase) & stationary jammers



Frequency band, MHz

- All bands for Wi-Fi (2,4 and 5,8 GHz)
- All navigation satellites:
 - GPS
 - Galileo
 - Glonass
 - BeiDou
 - Other standards

RF Power

- According end user requirements

Antenna types

- Omnidirectional
- High gain directional

Installation

- According end user requirements

All main parameters are according to the end user requirements

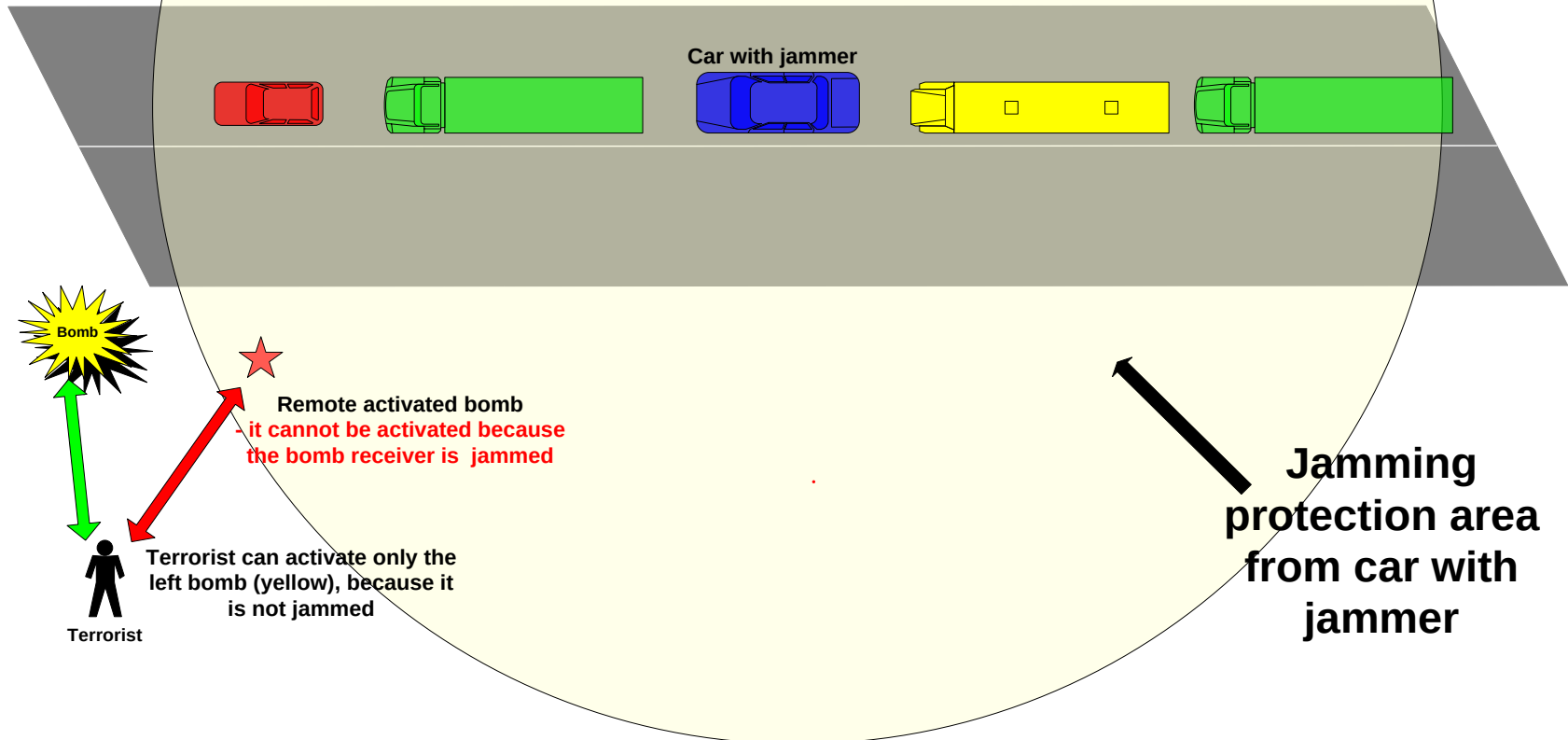


Portable Jammers

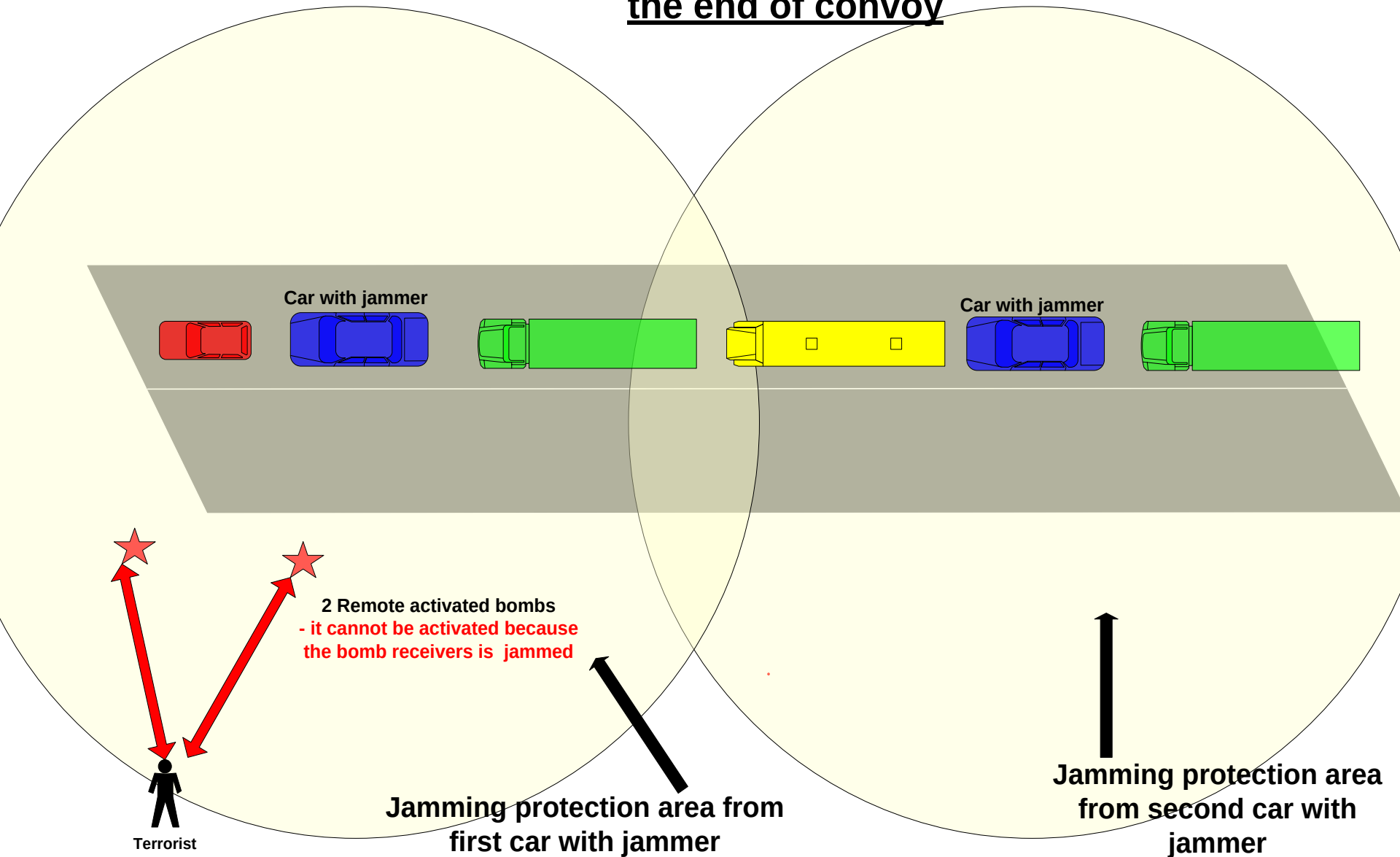
Range of products depending from different customer requirements

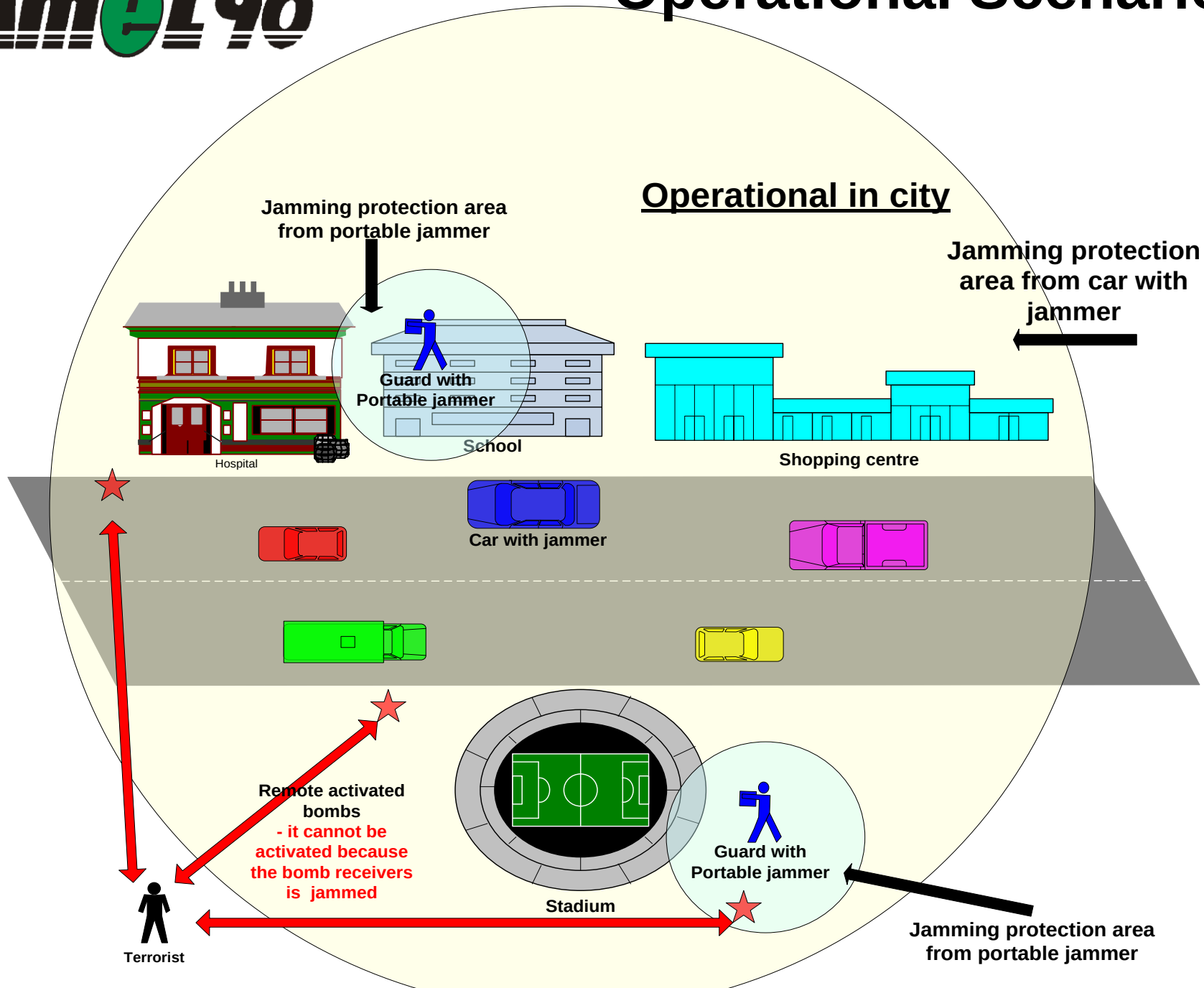


Option 1 – only one jammer (in blue car) in the middle in the convoy



Option 2 – two cars (blue) with jammers in the front and the end of convoy



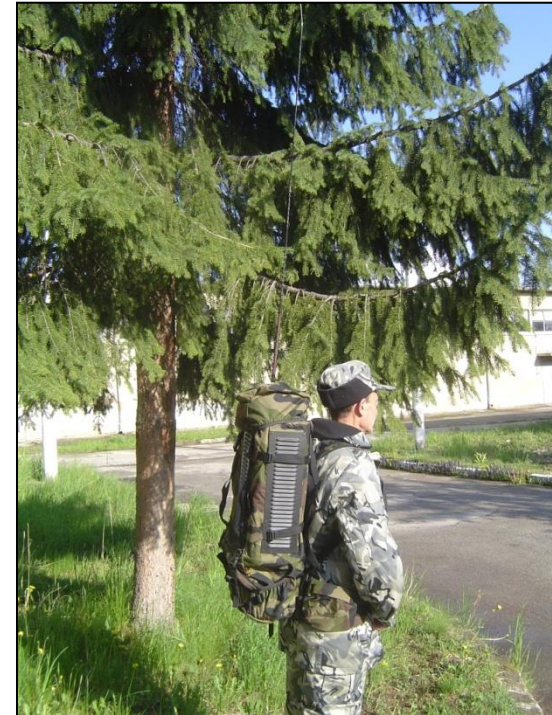




CUSTOMISZATION OF THE RADIOJAMMERS

All values and capabilities described in this presentation refer to the products standard configuration. Samel 90 can provide customization of all types of jammers based on the customer specific requirements.

Samel-90 can provide future expansion and upgrading of the jamming systems.





INSTALLATION REFERENCES

Turn key solution for very high RF power vehicle jammers



INSTALLATION REFERENCES

Operations in different climatic zones



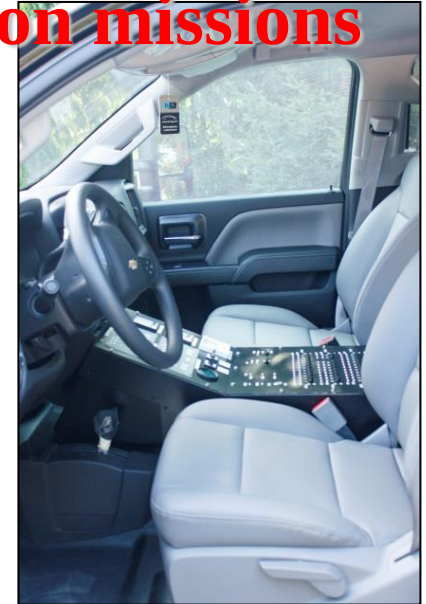
INSTALLATION REFERENCES

Different options for VIP convoy protection missions

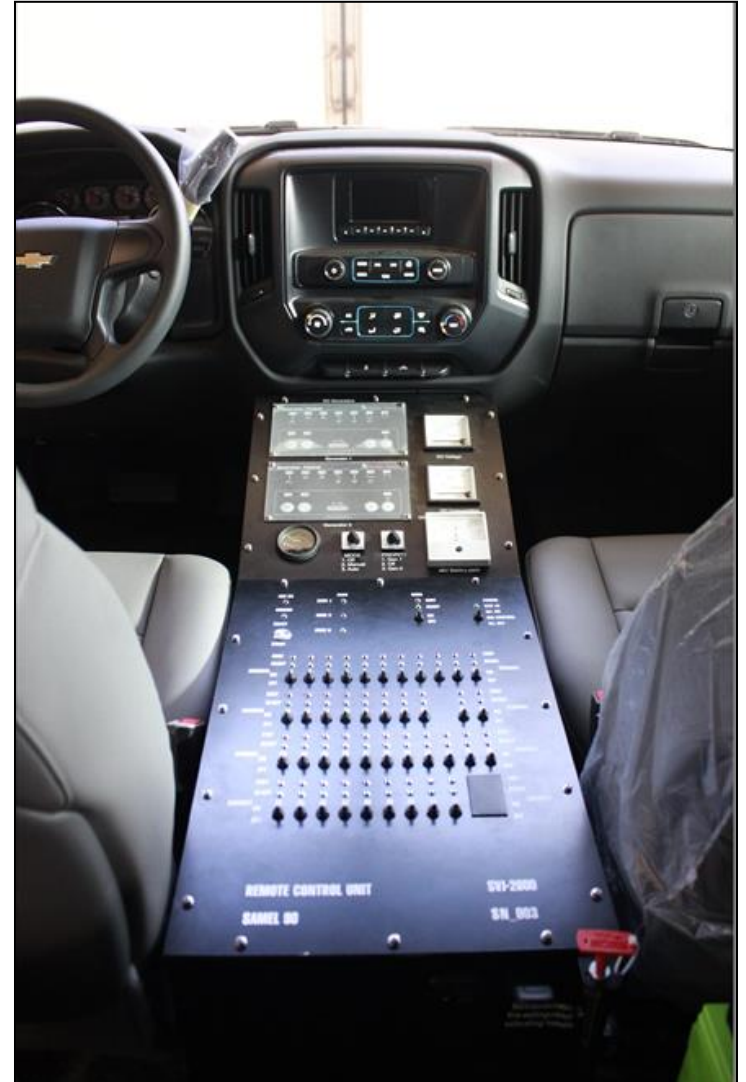


INSTALLATION REFERENCES

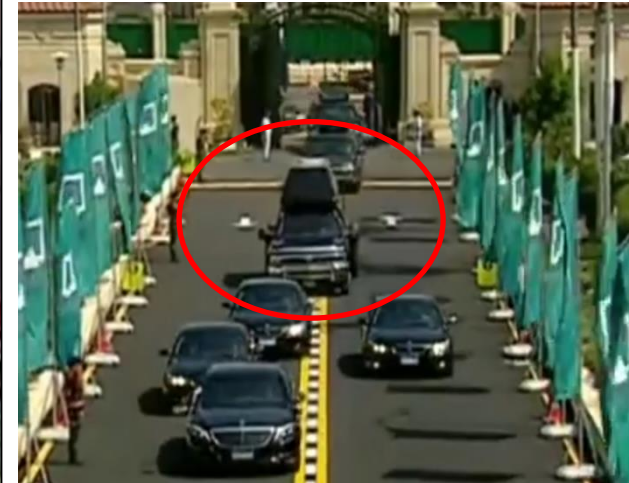
Different options for VIP convoy protection missions



INSTALLATION REFERENCES



VVIP protection missions



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VVIP protection missions

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Military and Police protection missions

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Military protection missions

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**Protection missions
for UN**



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**Military convoys
protection**

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VVIP protection missions

INSTALLATION REFERENCES



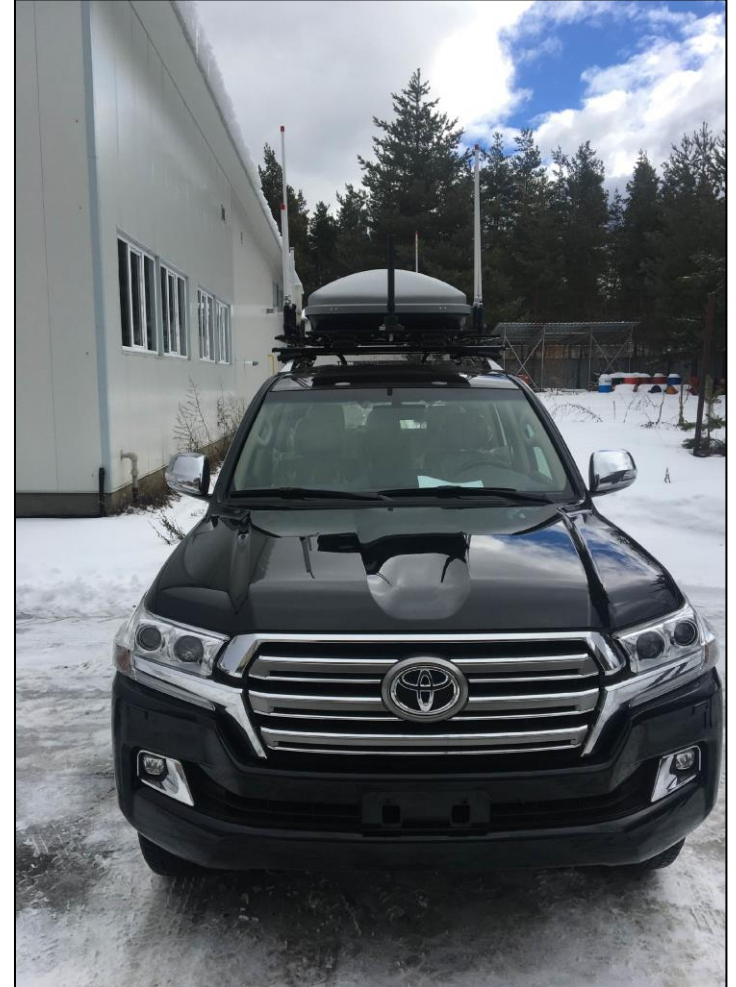
**Military and Police
protection missions**



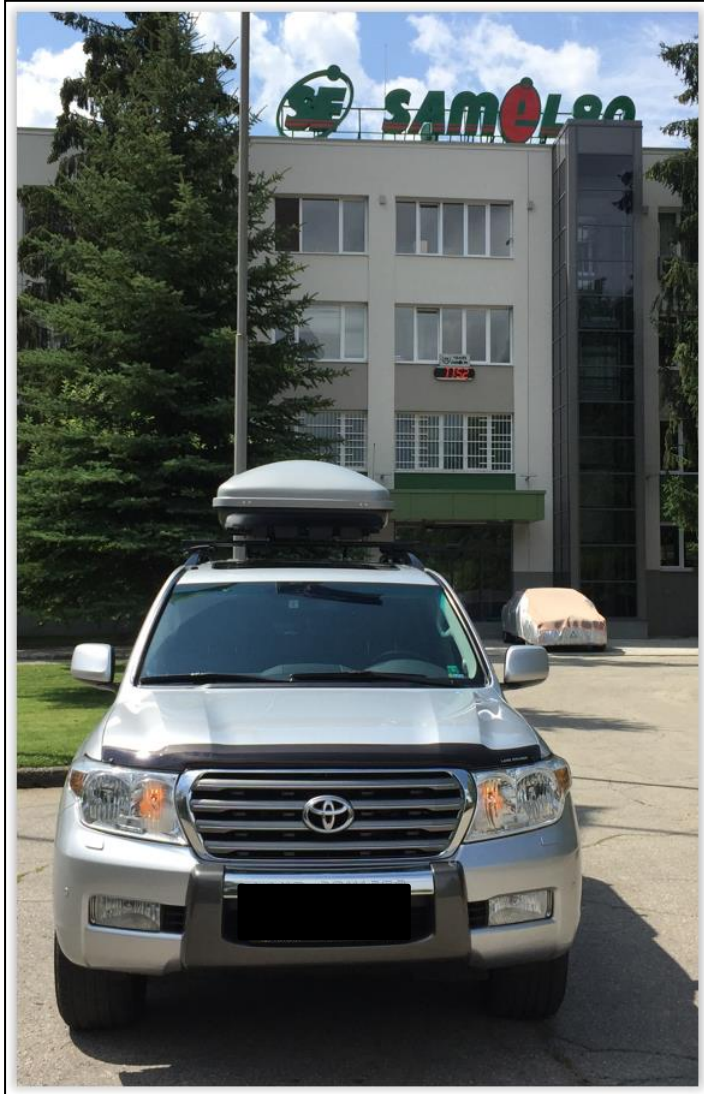
INSTALLATION REFERENCES



**Military and Police
protection missions**



INSTALLATION REFERENCES



Security escort

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VVIP protection missions

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**Military and Police
protection missions**



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**Military and Police
protection missions**

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**Military and Police
protection missions**

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**Military and Police
protection missions**

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Military protection missions

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Police protection missions



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VVIP protection missions

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**Police protection
missions**

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Police protection missions



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VVIP protection missions

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Police and army protection missions

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Police protection missions

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VIP protection missions

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VIP protection missions

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Police protection missions

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VIP protection missions



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VIP protection missions



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VIP protection missions



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Prison jammers installations

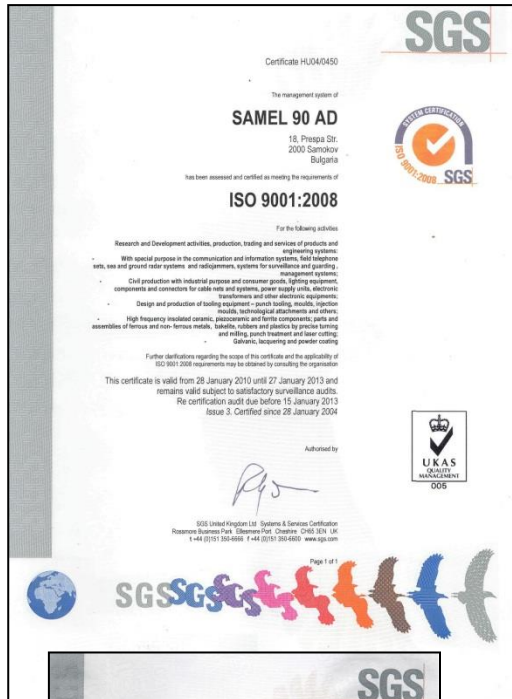
INSTALLATION REFERENCES



Prison jammers installations

INSTALLATION REFERENCES





- ISO 9001-2008
- ISO 14001-2004
- ISO 18001-2007
- NATO AQAP 2110
- NATO Security Clearance Certificate
- NAMS code: 40000499994
- CAGE code: 0002U
- D-U-N-S number: 628154379
- CCR number: AYZ87B
- TPIN number: 75863891



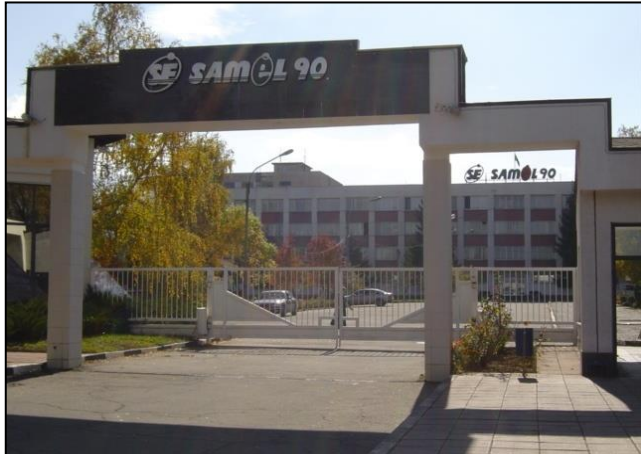
SAMEL90

PRODUCTION LINE





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