VEHICLE JAMMING SYSTEM V5.9J-1

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HIGH POWER DDS CONVOY VEHICLE IED JAMMING SYSTEM

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Introduction

Protect military and VIP team from the road-side remote improvised explosive device (RCIED) attack detonated by the terrorists. Moreover, It can prevent terrorists using GPS location to track the vehicles efficiently.

Used for EOD. Before EOD,wireless telecommunication signals surrounding the bomb must be blocked effectively to prevent the terrorists detonating the bomb through the wireless remote control devices and avoid the huge casualties.

lt can be applied that the common used telecommunication frequency will be blocked when the Police arrest the criminals in order to prevent the criminals gang or Police insider leaking the confidence through the wireless equipment's, so that the arrest collapsed.

It also make the criminals not be able to remotely control the bomb in the key entrance of the building so that Police can quickly access to the building and round up the criminals to avoid the casualties.

Protecting the boarder and army patrol from the attack of road- side bomb RCIED detonated by the terrorists.

It can be used to prevent terrorists remotely controlling the bomb bursting points in military protection zone, government buildings and some other important places.

It can also make the criminals hidden in the military protection zone not SWI communicate with the outside gang to leak the confidence.

In the event of the partial ground war, this wireless jamming system can prevent the enemy laying the bomb detonated by the wireless remote control in. advance. In order to protect the land surface chariot attacking troops, Tank and soldiers' lives.

It can be also fixed in some occasion for a temporary protection to respond to some emergencies.

Advantages

- Designed with ultra-broadband frequency bands, 20MHz-6000MHz.

- 12 modules plug and play design, facilitate for future power upgrading, change and maintenance. Any ruin on the modules never interfere the normal operating for other modules.

- American Mil-spec standard case, shockproof and drop-resistance, available for the vehicle running in a worse field environment.

- Up to 20 Frequency Bands. All Jamming Modules Designed by DDS technology.

- Built-in intelligent and efficient cooling fans and radiators ensure that the host of the interference system can work stably for a long time and extend its service life.

- Continuously and simultaneously interference to the common used RF signals.

- The main chassis adopts aviation aluminum alloy shock-proof design, with a majestic appearance and stable structure.It can be dragged like a suitcase for easy transfer.

- Continuously and simultaneously interference to the common used RF signals.

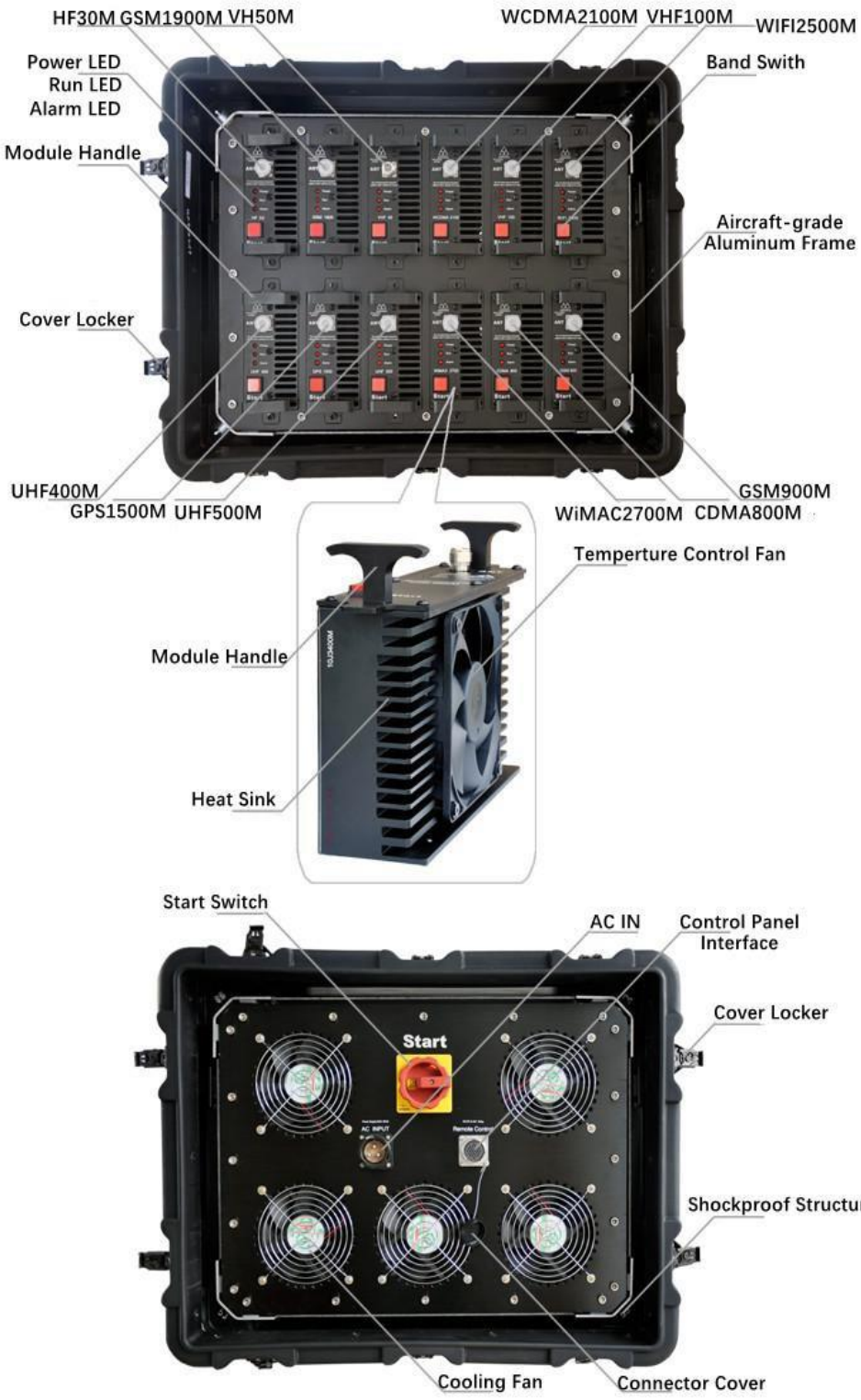
- The driver has a remote control that can directly control the on/off of each module of the equipment and whether it is working normally or malfunctioning. It can also display the battery status and low battery alarm.

HIGH POWER DDS CONVOY VEHICLE IED JAMMING SYSTEM

Channel	Frequency Bands MHz	Application	Output Power (Watt)
1	3-30	HF	50W
2	136-174	VHF	50W
3	400-470	UHF	50W
4	758-894	GSM 700&800	50W
5	1930-1990	UMTS	50W
6	1805-1880	LET 1800	50W
7	2100-2170	WCDMA	50W
8	2620-2690	LTE 2600	50W
9	3300-3800	5G	50W
10	1570-1610	GPS 1500	50W
11	2400-2500	WIFI 2.4G&Bluetooth	50W
12	5150-5850	WiFi5.8G	50W
		Total Power	600W

Items	Specifications
Interception Channel	Total 12 bands
Output Power	Total 600W
Regulatory Distance	depends on the signal strength in given area.
System Protection	VSWR, Over-voltage, Over-current.
Power supply	AC220V / 110V or Car power supply
Ingress Protection	IP56
Heat Dissipation Method	Systematic Smart Cooling System
Weight	Approx. 70-80kg per case.
Size	978X719X467mm (Not include antenna)
Environmental	-30°C to + 55°C operation
Remote Control	Full System Operation Control
Number of Antenna Type	Directional Antenna
Vehicle Platform	Off-road four-wheel drive car
Power Supply Source	Built-in battery for 1.5 hour Or Additional AC Generator (5000w) or Additional DC Alternator (+28V DC/400A) or External power supply
Total Power Consumption	Max:5500VA, (+28V DC)
Battery Back Up Capacity	200AH/ +28V DC
Operating Humidity	Up to 95%

Equipment details



Jammer adopts DDS technology, fully sweeping the jamming frequency bands so that it results in a more efficient jamming and longer shielding coverage.

Enclosed with American Mil-spec Case, dust-proof, shockproof and drop-resistance.

Wired Remote Control Panel

System has a wired remote control function.

This remote control panel could be performed in the driver’s console unit.

So it will be very convenient for the driver to remote control the jammer to turn on/off each module separately while driving.

With this remote control panel, the driver can turn off a specific frequency band to make sure the internal communication in emergency.

High Power Wide-band VHF Antenna

Product Code	WA100-20
Frequency range	20-100MHz
Input Impedance	50Ω
Main Frequency VSWR	＜2.5
Gain	-3~2dBi
Maximum Power	200Watt
Polarization	Vertical Polarization
Temperature	-40℃to +75℃
Radome Material	Fiberglass
Connector Type	N-K
Lightening Protection	Direct Ground
Wind Velocity	160Km/h
Length	About 1810mm
Weight	About 2.8kg

Product Code	WA300-100
Frequency range	100-300MHz
Input Impedance	50Ω
Main Frequency VSWR	＜2.5
Gain	1~2dBi
Maximum Power	200Watt
Polarization	Vertical Polarization
Temperature	-40℃to +75℃
Radome Material	Fiberglass
Connector Type	N-K
Lightening Protection	Direct Ground
Wind Velocity	160Km/h
Length	About 950mm
Weight	About 2.6kg

High Power Wide-band VHF Antenna

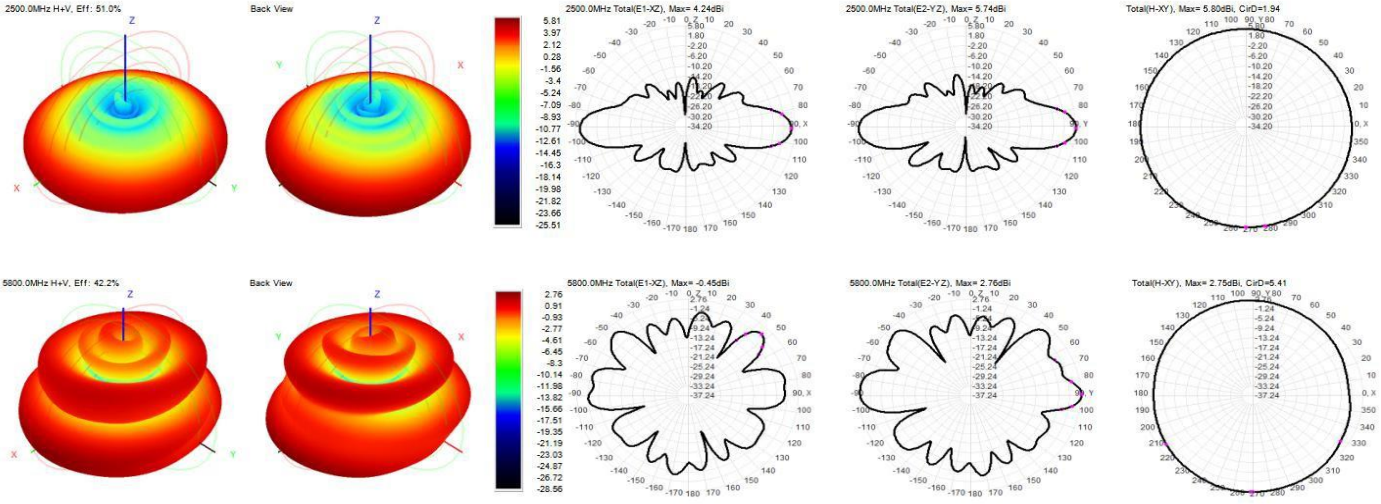
Product Code	WA500-300
Frequency range	300-500MHz
Input Impedance	50Ω
Main Frequency VSWR	＜2.5
Gain	1.5~3dBi
Maximum Power	200Watt
Polarization	Vertical Polarization
Temperature	-40℃to +75℃
Radome Material	Fiberglass
Connector Type	N-K
Lightening Protection	Direct Ground
Wind Velocity	160Km/h
Length	About 880mm
Weight	About 2.5kg

Product Code	WA1000-800
Frequency range	800-1000MHz
Input Impedance	50Ω
Main Frequency VSWR	＜1.5
Gain	5~7dBi
Maximum Power	200Watt
Polarization	Vertical Polarization
Temperature	-40℃to +75℃
Radome Material	Fiberglass
Connector Type	N-K
Lightening Protection	Direct Ground
Wind Velocity	180Km/h
Length	About 800mm
Weight	About 2.1kg

High Power Wide-band 1Ghz-Ghz Antenna

Frequency range	1000-1300MHz 1500-1700MHz	1800-2200MHz 2300-2700MHz	3400-3600MHz 5500-6000MHz
Input Impedance		50Ω	
Main Frequency VSWR		＜1.5	
Gain	5~7dBi	7~8dBi	8~10dBi
Maximum Power		200Watt	
Polarization		Vertical Polarization	
Temperature		-40℃to +75℃	
Radome Material		Fiberglass	
Connector Type		N-K	
Lightening Protection		Direct Ground	
Wind Velocity		180Km/h	
Length		About 650mm	
Weight		About 2kg	

Antenna pattern display of some styles



Vehicle Modification Solution

Try to keep the original configuration of the vehicle fit the machine body, remote control panel, generator and ventilation design into the whole vehicle system.

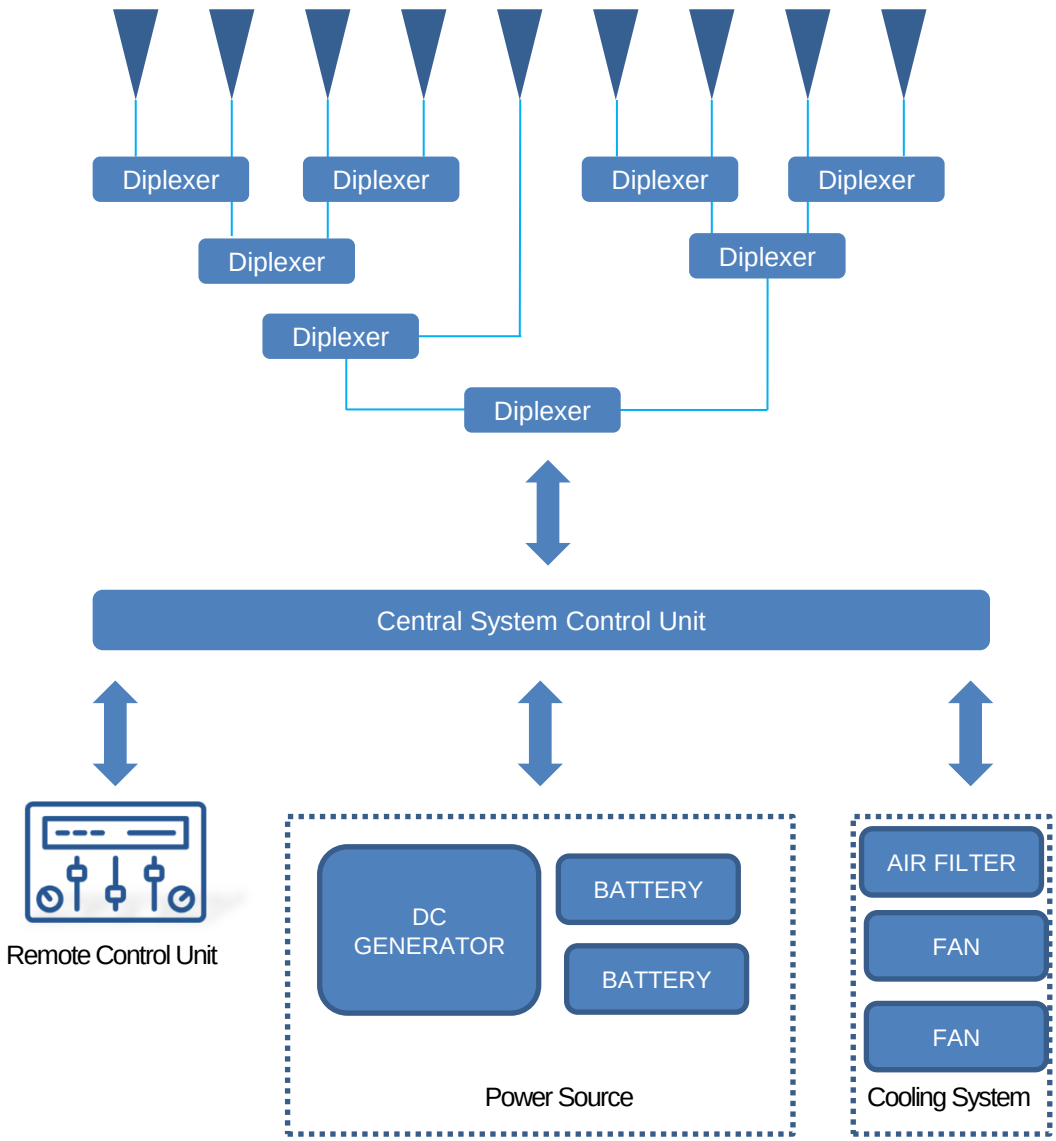
Moreover, through the shock damping design on the vehicle cabinet (rack),

All the above parts are integrated into the vehicle, and supplied under the same power feed system, equipped with another one generator.

Make Proper distribution plan for all the VHF/UHF/Cellphone Antennae on the vehicle, like the roof, rear side or other positions and then fix them well. Make it necessary for electromagnetic compatibility.

System Diagram

Antennas

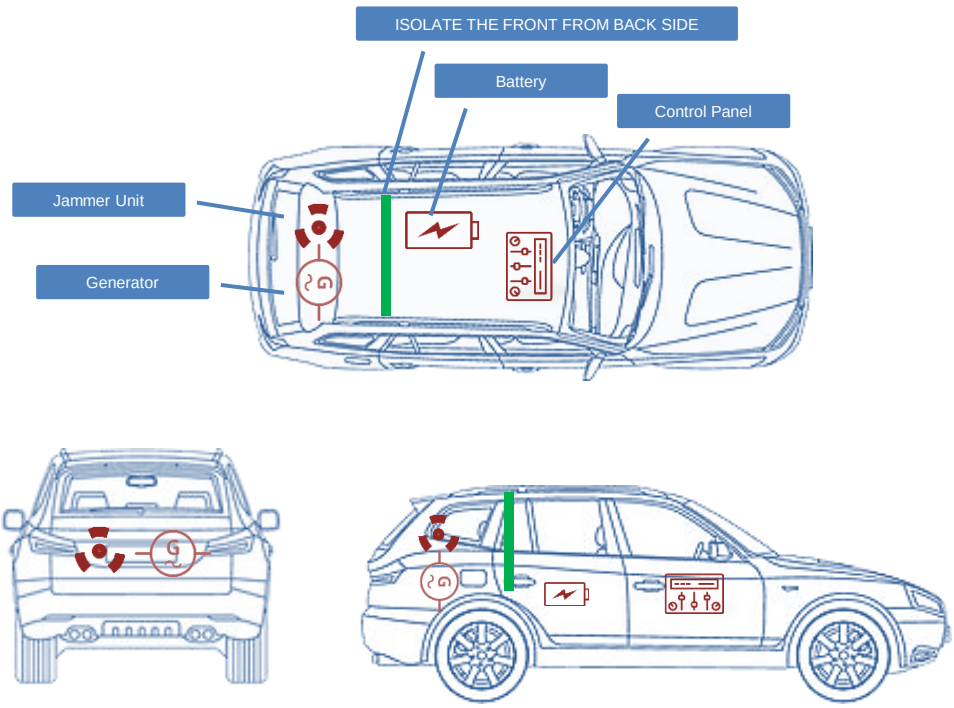


Overall Structure Layout

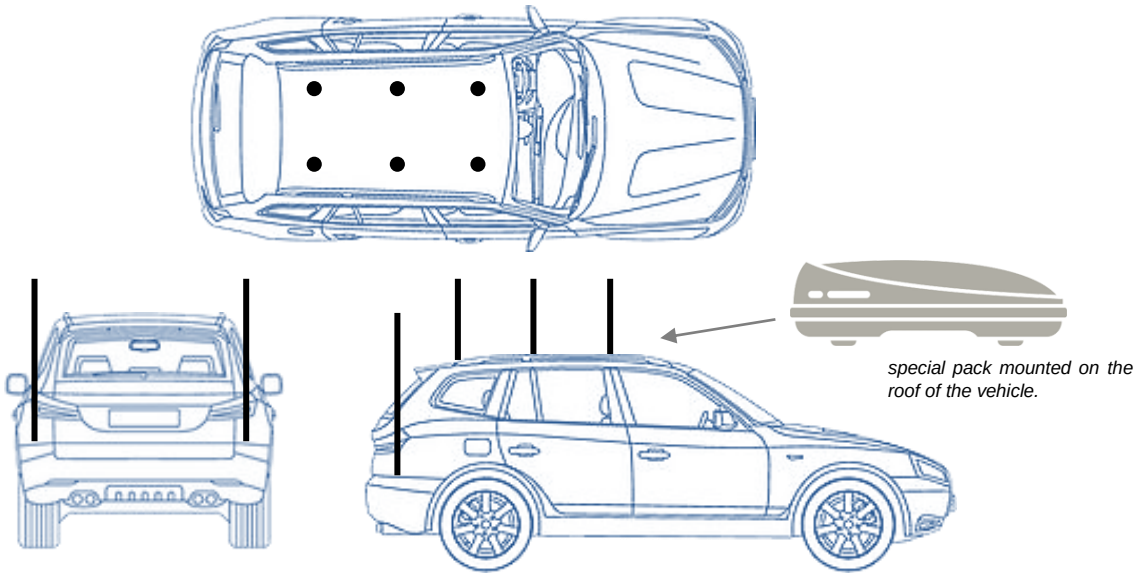
Maintaining the front section layout of original vehicle, Try to isolate the front and rear section firstly as a whole.

The specific requirements are as, sealing, noising, internal partitions made of aluminum (light weight, isolation of electromagnetic radiation), and then a whole cabinet (or racks) from the bottom to the roof of the vehicle should be installed at the rear section.

Fix the cabinet on the bottom and roof of the vehicle.
Make sure fixed shockproof.
The cabinet area is to place system device body, and back door area for the generator.



Antenna System Layout



There are VHF/UHF and cellphone antennae 8 to 12 pieces in total.

To avoid the electromagnetic interference between the antennae. Make full use of the back section (rear bumper)and available space on the roof. If necessary, the both sides of front section can be also used.

Covert Antennae installation

If the antennae installation must be elegant and covert, the customized professional antennae can be selected, shorten the antennae and fit all the antennae into a special pack mounted on the roof of the vehicle.

However such antennae design will reduce the antennae gains, VSWR,etc.

The shielding coverage will be also reduced.

The vehicle-mounted antenna is installed with an electric lodging and lifting device, which allows the automatic lodging and lifting of antenna of wireless frequency jammer can be realized in the process of stationary and vehicle traveling.

Power System

Total system power consumption is around 5000watt. Backup battery UPS system and generator system can be optional

Conventional Gasoline Generator

For the conventional gasoline generator power supply, the main advantage is low cost, easy modification. But the disadvantage are noise problem (Isolation of the noise is suggested), slightly bigger size and necessary regular maintenance.

Commercial Generator Set

Quiet Gasoline TM Series

Features and benefits

- EFI provides improved hot and cold start capability;
- Quietest and lowest vibration generator set in its class;
- Integrated housing design;
- Enclosed muffler for ease of installation;
- Self-diagnostic capability to simplify troubleshooting;
- Runs two ACs;
- Digital regulation for voltage stability as loads change;
- Electronic governor for voltage stability and frequency control;
- 2-year limited warranty, 5-year drive warranty;

Weight, size and sound level

- Weight: 299 Ilbs (136 kg);
- Size: Length 33.6 in (853 mm), width 22.2 in (563 mm), height 16.7 in (425 mm);
- Sound: 70 dB(A) at 10 ft (3 m), typical installation, full load;

Battery UPS Power Supply

Although the generator voltage is relatively stable, it is important to use UPS to ensure the equipment in a stable voltage and reduce the power supply accidents.
Moreover, UPS can also recharge the backup battery bank.
A good quality UPS is essential for the whole system.

BATTERY SPECIFICATIONS

Rated Voltage		12V
Rated Capacity(10HR)		200Ah
Capacity 25℃ （77℉）	20HR(10.8A)	216Ah
	5HR	179Ah
	1HR	115Ah
Internal Resistance	Full charged Battery 25℃（77℉）	≤3mΩ
Capacity affected by Temperature (10HR)	40℃（104℉）	102%
	25℃（77℉）	11%
	0℃（32℉）	85%
	-15℃（5℉）	65%
Self-Discharge 25℃（77℉）	Store for 3 months	90%
	Store for 6 months	80%
	Store for 12 months	62%
Charge 25 （77℉） Float	Initial current less than 40A Constant voltage 13.6-13.8V	
Cycle	Initial current less than 40A Constant voltage 14.4-14.9V	

DIMMENSIONS

Size	Length	522mm
	Width	240mm
	Height	216mm
	Total Height	242mm
Packing	Length	522mm
	Width	240mm
	Height	
Quantity / Carton		1 pcs / carton
N.W / PC		60.0kg±0.3
N.W / Carton		60.0kg
G.W / Carton		60.0kg

TIR Pure sine wave inverter specifications

Model		TIR5000	TIR6000
Capacity	W	5000W	6000W
Battery	DC Voltage(Optional)	48V	48V
	Recharge current	40+ / -5A	40+ / -5A
	3 - stage charge	Boost CC→Boost VC→Float	
Input	Nominal Voltage	120V AC or 230V AC	
	Voltage trip range	184V / 154V +-4% to 253V+-4%	
	Voltage reengage range	194V / 164V +-4% to 243V+-4%	
	Max input AC voltage	150V AC or 270V AC	
	Frequency	50Hz or 60Hz (Auto detect)	
	Current	25 Amps in maximum	
	Efficiency	95%	
Output	Voltage	120V or 230V AC±5%	
	Wave form	Pure Sine Wave	
	Frequency	50/60Hz	
	Voltage range	Depends on battery type	
	Transfer time	≤5ms	
Protection	Overload	15 mins for 125%,60s for 150%,20s for over 150s	
	Short circuit protection	Fault after 10 secs	
Electric Fans		Thermo-controlling	
Static Consumption		≤10 Watts	
Surroundings	Temperature,humidity	0-50℃,90%, no condensing	
Surge rating (10s)		10000w	12000w
Capable of starting electric moto		5HP	6HP
Physical	Mount	Horizontal wall mount	
	Size CM (H*W*D)	63*21.8*17.9	
	Carton CM (H*W*D)	75.5*32*31	
	N.W	38	40
	G.W	40	42

Cooling System

System is a ultra high power full band jammer, when running at full capacity, the heat will be huge.

To make sure the device in a normal working, It is necessary to be equipped with strong heat dispersion and cooling equipment.

It is very important to modify the inlet and outlet.

ANALOG VS DDS JAMMING SYSTEMS

Vehicle Protection & IED Countermeasures

Mission Context

Vehicle-mounted jammers are crucial for:

- Preventing Remote-Controlled IED (RCIED) detonation
- Protecting VIP convoys and military patrols
- Suppressing hostile communications in real-time

1. ANALOG JAMMING SYSTEMS – VEHICLE USE

Strengths:

Broadband Noise Jamming: Analog systems emit continuous RF noise over wide frequency ranges (e.g., 20 MHz – 2.5 GHz) to block triggering signals.
Simplicity and Robustness: Fewer software dependencies; very stable.
Fast startup: Instantaneous reaction with no boot time.
Cost-effective: Lower unit cost, easy to maintain.

Limitations:

Inefficient Power Usage: Constant full-band jamming drains batteries fast.
Less Selective: Can block friendly communications (no frequency discrimination).
Low Adaptability: Can't change waveform dynamically to respond to new threats.

Ideal Use:

- Short-duration missions
- Environments with predictable threats (e.g., GSM triggers, walkie-talkies)

2. DDS JAMMING SYSTEMS – VEHICLE USE

Strengths:

Smart Jamming: Identifies and targets specific signals (e.g., Wi-Fi, GSM, RF triggers) without affecting friendly comms.
Frequency Agility: Hops or sweeps across bands within microseconds to follow evolving threats.
Waveform Control: Uses customized interference patterns (chirps, bursts, etc.).
Threat Libraries: Can be updated with new IED/RF threat profiles.
Multi-Band, Multi-Antenna Output: Protects against multiple threats simultaneously with minimal power waste.

Limitations:

Higher Cost: Advanced tech comes at a premium.
More Complex: Requires digital control unit and possibly training.
Firmware Updates Needed: To stay current with latest threats.

Ideal Use:

- Long-term convoy protection
- Multi-threat environments (urban warfare, asymmetric ops)
- Environments with mixed triggers (GSM, RF, drones, satellite phones)

Power & Size Comparison (Vehicle Use)

Feature	Analog Jammer	DDS Jammer
Power Consumption	High (always on full band)	Optimized (targets only needed bands)
Typical Output Power	50W – 300W per band	20W – 100W per band (efficient)
Cooling Needs	High (fans or liquid cooling)	Lower (smarter load control)
Size/Weight	Larger rack-mount units	Compact modular units

Vehicle Integration Scenarios

Application	Analog Tech	DDS Tech
VIP Convoys	Basic noise jamming	Smart suppression of targeted frequencies
Military Patrols	Reliable, brute-force protection	Advanced, threat-adaptive jamming
Armored Vehicles	Simple multi-band jammers	Programmable, networked ECM suites
IED Countermeasures	Blocks broad threat range	Identifies trigger signal type & reacts fast

Mission Profile Questions:

1. Operational Purpose

☐ Convoy Protection / VIP Escort
☐ Military Patrol / Urban Operations
☐ EOD / IED Neutralization
☐ Checkpoint / Perimeter Security
☐ Mobile Electronic Countermeasure (ECM)
☐ Other (please specify): _____

2. Threat Signal Types to Jam

Select known or suspected trigger/control signals for IEDs or threats:

☐ VHF/UHF Radios (e.g., 136–512 MHz)
☐ GSM (900 / 1800 MHz)
☐ 3G / 4G LTE (800 / 2100 MHz)
☐ 5G (Sub-6GHz or mmWave)
☐ Wi-Fi / Bluetooth (2.4 GHz / 5.8 GHz)
☐ Satellite Phones (e.g., Thuraya, Iridium)
☐ GPS L1/L2 (for navigation denial)
☐ Drone Control Links (e.g., DJI, proprietary RC)
☐ Remote Car Key or Garage Remote Frequencies (e.g., 315 / 433 / 868 MHz)
☐ Other: _____

3. Platform Type

☐ Civilian SUV
☐ Armored 4x4 or MRAP
☐ Pickup / Technical
☐ EOD/Route Clearance Robot
☐ Static Ground Station
☐ Naval or Amphibious Vehicle
☐ Other: _____

4. Power Availability

☐ Vehicle Battery (12V)
☐ Military Power System (24V)
☐ Generator Onboard
☐ External AC (110V / 220V)
☐ Battery-only (EOD portable kit)
☐ Hybrid (Generator + Battery Backup)

5. Operating Environment

☐ Urban (high RF noise)
☐ Desert / Rural (low RF clutter)
☐ Conflict Zone / War Theater
☐ Mountainous
☐ Naval / Coastal
☐ All-weather / Rugged terrain
☐ Temperature Extremes (–30°C to +60°C)
☐ Sand / Dust / Humidity exposure

Mission Profile Questions:

6. Coverage Requirements

Jamming Radius Desired: _____ meters

360° Coverage? ☐ Yes – omnidirectional
☐ No – directional / sector-based

Number of Simultaneous Threat Bands: _____

7. Form Factor Preferences

☐ Integrated in vehicle rack (hidden install)
☐ Modular box for trunk mount
☐ Top-roof box with RF antennas
☐ EOD backpack or briefcase version
☐ Remote deployable unit
☐ Lightweight version (under 15 kg)

8. Control Preferences

☐ Manual ON/OFF switches
☐ LCD Touch Panel in vehicle
☐ Remote control tablet/console
☐ PC-based software interface
☐ Preset automatic modes (Auto Jam, Smart Scan)
☐ Threat detection and feedback (optional)

9. Additional Features Desired

☐ Built-in GPS/GLONASS jammer
☐ Direction-Finding (DF) capability
☐ RF Signal Analyzer / Recorder
☐ Wireless Command & Monitoring
☐ Safe Zones (whitelist certain frequencies)
☐ Integration with vehicle CAN/ECU systems
☐ Tamper protection / anti-theft
☐ NATO STANAG or MIL-STD compliance

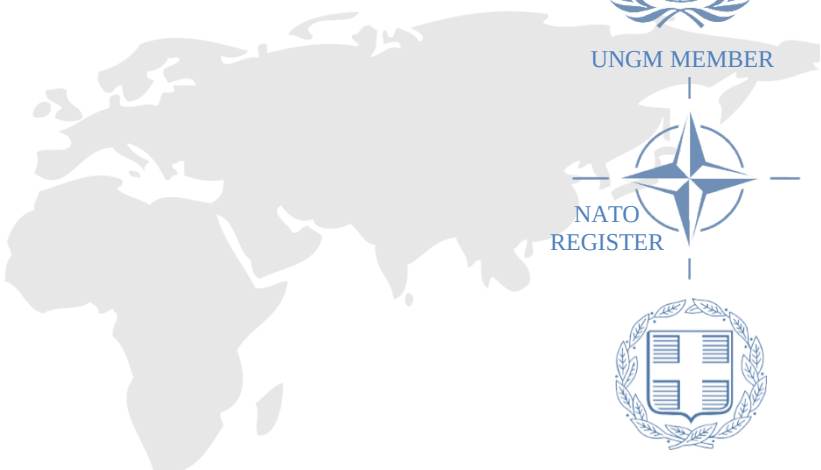
10. Budget Range (Per Unit)

☐ <$20,000 (Entry-Level)
☐ $20,000–$50,000 (Mid-Range)
☐ $50,000–$150,000 (Advanced DDS)
☐ $150,000+ (High-End / Custom ECM suite)

11. Intended Use Country / Region

For export/import control and frequency regulation compliance:

Country: _____



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