



WolvesFleet

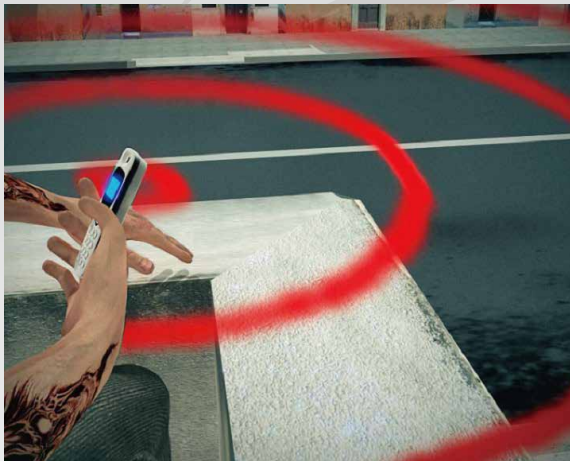
We Save Lives and Prevent leakage of confidence



HIGH POWER **DDS** CONVOY VEHICLE JAMMING SYSTEM

Model No. WF-D12 JAM

WOLVESFLEET TECHNOLOGY CO., LIMITED | www.wolvesfleet.com



INTRODUCTION

Protecting military and VIP convoys from the threat of Remote Control Improvised Explosive Devices (RCIEDs) – road-side bombs – has become challenge and task in many parts of the world.

Wolvesfleet solutions—**WF-D12 JAM**, High Power DDS Convoy Jamming System, implementing the most effective and reliable RF jamming technology and equipped with a fully-integrated broadband jamming system.

WF-D12 JAM can cover, continuously and simultaneously, all the RF communication Frequencies 20MHz ~ 3600MHz (20-6000MHz) which are most commonly used by terrorists to detonate road-side bombs (RCIEDs). Adopting the latest jamming technologies, **WF-D12 JAM** features ultra-high RF transmission power of 1300 watts, making a bigger shielding range around the vehicle. Beyond the installation of the convoy protection device itself, the vehicle is customized with special RF protection for full protection of the driver and passengers. System management, including activation and control and operation is carried out through a wired remote control unit installed covertly inside the driver's console unit.

Once the system is activated, it transmits unique noise signal which creates "Firewall" between the transmitter (terrorist) and its receiver (explosive device). Effective eighteen-month warranty and technical support is absolutely indispensable to make sure our excellent quality and reputation.

There is absolutely no better way to defend your VIP from the threat of radio-activated bombs.





ADVANTAGES OF THE WF-D12 JAM

- ▶ Designed with ultra broadband frequency bands, 20MHz-3600MHz (20-6000MHz).
- ▶ 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.
- ▶ Operators are able to regulate the working frequency band and output power of each module through the software. Configuring a specific frequency band can ensure the internal communication in emergency.
- ▶ System operation can be performed in the driver's console unit. Each module can be ON/OFF. Backup battery or generator system can be optional.
- ▶ Device body is no more than 90kg.
- ▶ Continuously and simultaneously interference to the common used RF signals.
- ▶ Equipped with high power generator to ensure excellent low noise operational capabilities.
- ▶ Integrated backup battery system for continuous silent operation and fast start.
- ▶ Integrated smart active cooling system to make sure the device working continuously.
- ▶ Antenna is installed with a covert design.
- ▶ Video camera with LCD monitor both inside and outside the vehicle provides rear viewing and monitoring.

THE WF-D12 JAM APPLICATIONS

- ▶ 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 the bomb through the wireless remote control devices and avoid the huge casualties.
- ▶ It 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 equipments ,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 denotated 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 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 denotated 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.



EQUIPMENT STRUCTURE AND OPERATING PRINCIPLES

MACHINE BODY

WF-D12 JAM 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, dustproof, shockproof and drop-resistance.

Single module design makes easier maintenance. Any module with damage can be took off and changed easily. It will not interfere the other modules' normal working.



TECHNICAL SPECIFICATION

RF Frequency Band(MHz)	Application	RF Output Power (Watt)
20-100	Radio Control Toys; Car Alarms	60
135-175	Walky-talky (VHF)	100
310-400	Remote Control, Walky-talky (UHF300)	100
400-470	Cellular NMT; Walky-Talky (UHF400); Cellular CDMA450; Car Alarm; Remote Control	100
850-895;725-775	Cellular CDMA/TDMA, Walky-Talky (UHF800); LTE4G	100
925-960	Cellular GSM900	100
1520-1580	GPS & Satellite; Thuraya; Iridium; Odyssey; GlobalStar;	50
1805-1880	Cellular HGSM1800/ DCS	100
1920-1990	Cellular HGSM1900/ PHS	100
2110-2170	Cellular UMTS / WCDMA (3G)	100
2400-2500	WLAN & Bluetooth & WiFi2.4G	40
2620-2690	LTE, 4G	40
3400-3600	WiMax; Bluetooth	10
TOTAL RF POWER		1000Watt
Frequency Range	20-3600MHz	
Total RF Power	1000Watt, Max: 1300Watt	
Jammer Module Number	12	
Jamming Frequency Bands Number	More than 20Bands	
Cooling System	Systematic Smart Cooling System	
System Protection	VSWR, Over-voltage, Over-current,	
Jamming Source	Direct Digital Synthesize Technology	
Remote Control	Full System Operation Control	
Antenna Type	High Gain Omnidirectional Antennas	
Number of Antennas	8-10	
Vehicle Platform	Off-road four-wheel drive car	
Power Supply Source	Additional AC Generator (5000W)	
Total Power Consumption	Max: 5500W, (+28VDC)	
Battery Back Up Capacity	200AH/+28VDC	
Jamming System Weight	Approx. 90kg	
Operating Temperature Range	-35°C ~ +65°C	
Operating Humidity	Up to 80%	

WIRED REMOTE CONTORL PANEL

WF-D12 JAM has wired remote control function. And 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.



ANTENNA

High Power Wideband VHF Antennae

Product Code: WF210-18-200

Product Code	WF210-18-200
Frequency range	20-100MHz
Input Impedance	50Ω
Main Frequency VSWR	<2.5
Gain	-3~2dBi
Maximum Power	200Watt
Polarization	Vertical Polarization
Temperature	-40℃ ~+75℃
Radome Material	Fiberglass
Connector Type	N-K
Lightening Protection	Direct Ground
Wind Velocity	160Km/h
Length	About 1810mm
Weight	About 2.8Kg



High Power Wideband VHF Antennae

Product Code: WF1030-95-200

Product Code	WF210-95-200
Frequency range	100-300MHz
Input Impedance	50 Ω
Main Frequency VSWR	<2.5
Gain	1~2dBi
Maximum Power	200Watt
Polarization	Vertical Polarization
Temperature	-40℃ ~+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 Wideband UHF Antennae

Product Code: WF3050-88-200

Product Code	WF3050-88-200
Frequency range	300-530MHz
Input Impedance	50 Ω
Main Frequency VSWR	<2.5
Gain	1.5~3dBi
Maximum Power	200Watt
Polarization	Vertical Polarization
Temperature	-40℃ ~+75℃
Radome Material	Fiberglass
Connector Type	N-K
Lightening Protection	Direct Ground
Wind Velocity	160Km/h
Length	About 880mm
Weight	About 2.5Kg



High Power Wideband CDMA/GSM Antennae

Product Code: WF80100-80-200

Product Code	WF8090-80-200
Frequency range	800-1000MHz
Input Impedance	50Ω
Main Frequency VSWR	<1.5
Gain	5 ~7dBi
Maximum Power	200Watt
Polarization	Vertical Polarization
Temperature	-40℃ ~+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 Wideband 1Ghz-6Ghz Antennae

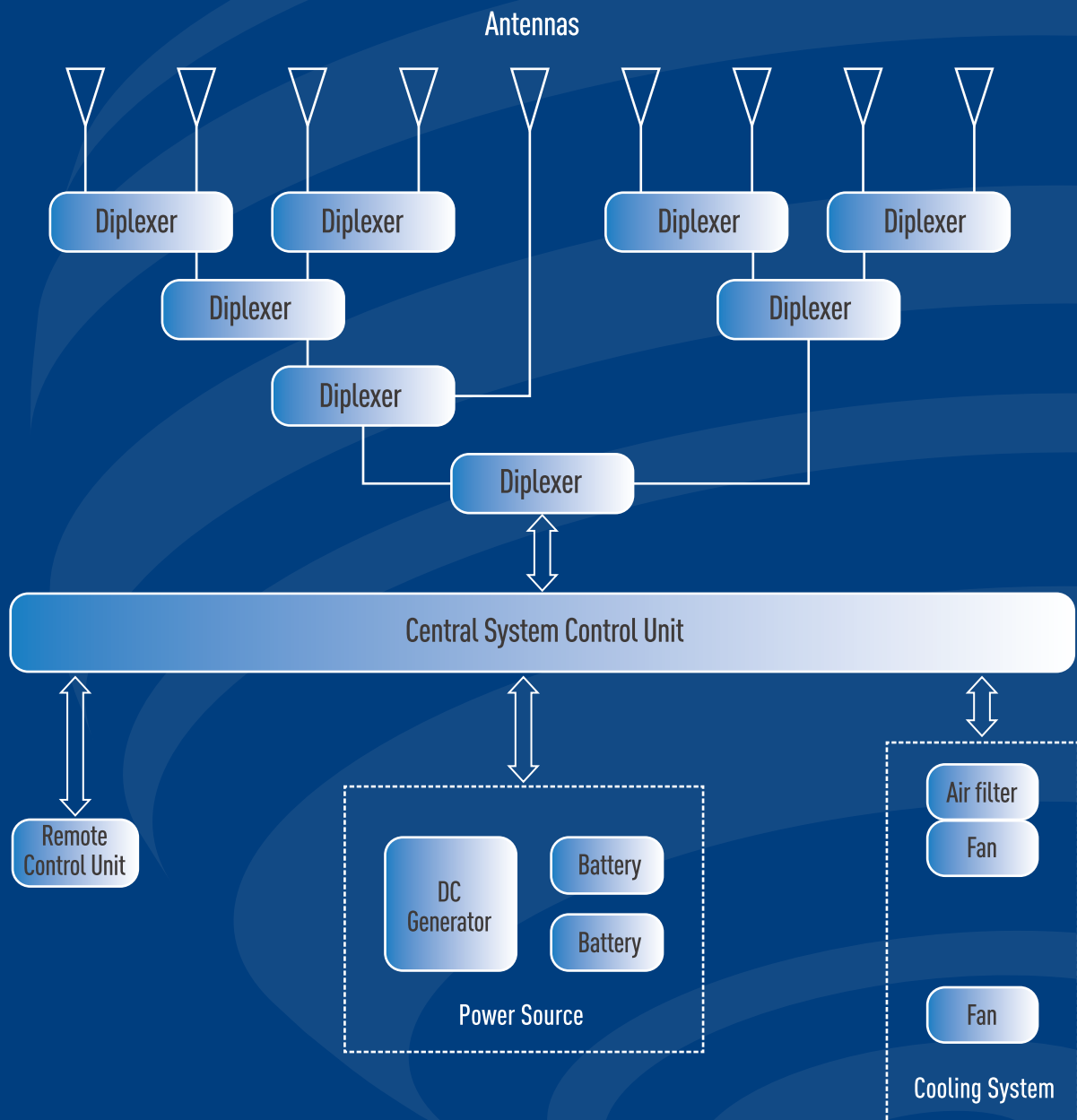
Frequency range	1000-1300MHz	1800-2200MHz	3400-3600MHz
	1500-1700MHz	2300-2700MHz	5500-6000MHz
Input Impedance	50Ω		
Main Frequency VSWR	<1.5		
Gain	5~7dBi	7~8dBi	8~10dBi
Maximum Power	200Watt		
Polarization	Vertical Polarization		
Temperature	-40℃ ~+75 ℃		
Radome Material	Fiberglass		
Connector Type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



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.

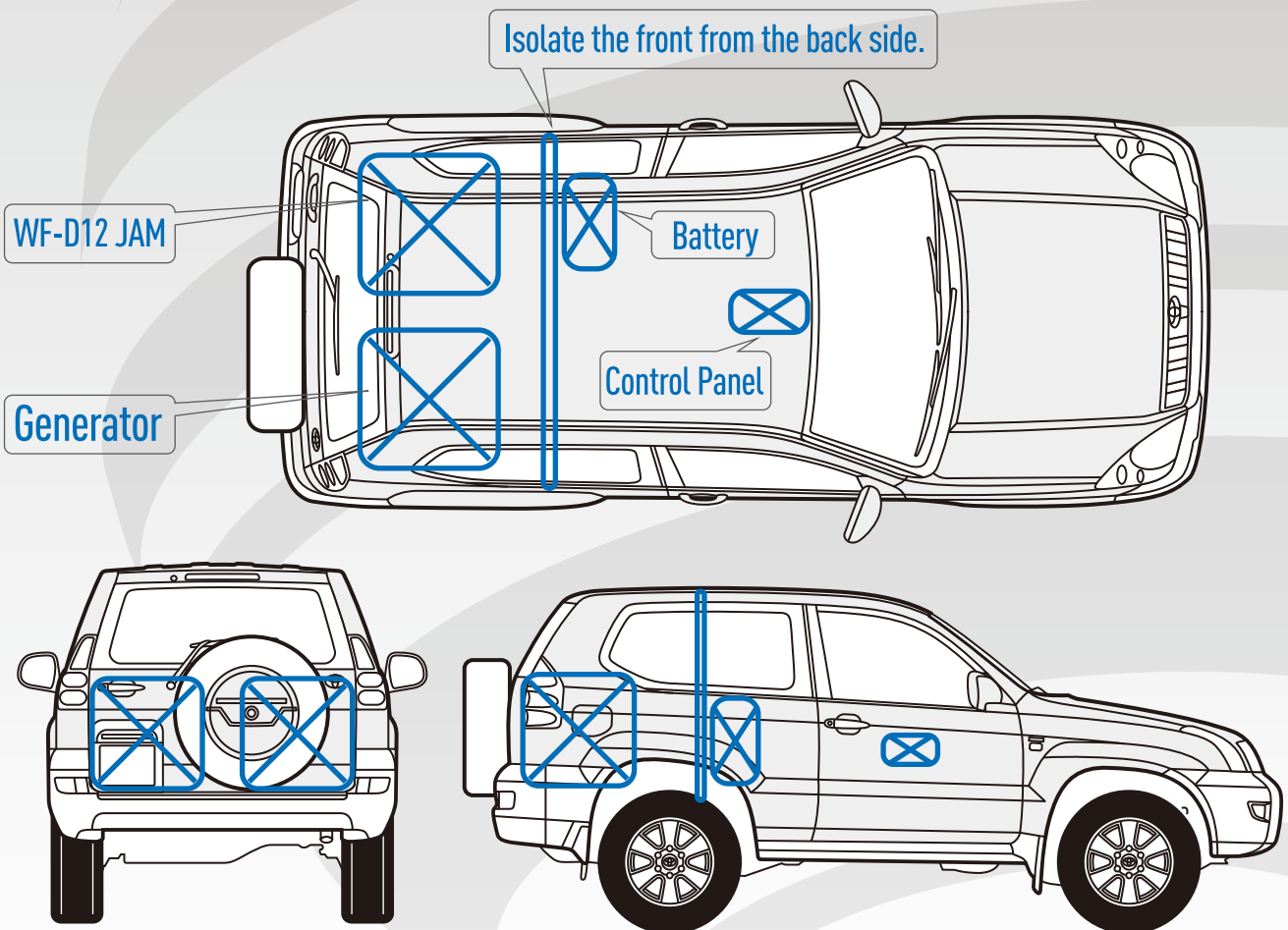
SYSTEM DIAGRAM



OVERALL STRUCTURE LAYOUT

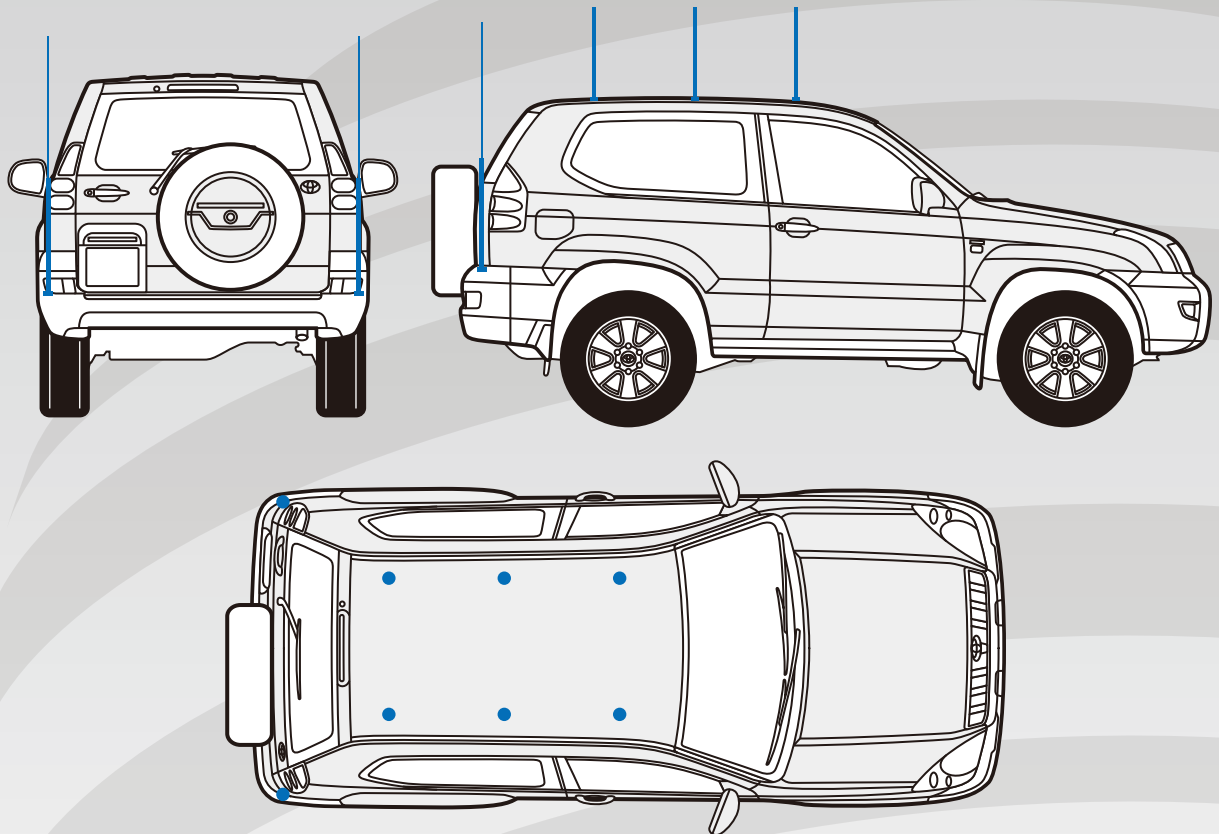
Maintaining the front section layout of original vehicle, Try to isolate the front and rear section firstly as a whole.

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 **WF-D12 JAM** device body, and back door area for the generator.



ANTENNAE 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 INSTALLTION

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.



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™ Series QG 5800 EFI



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 lbs (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

Cummins Onan



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.



FC12-200A



Specification

Rated Voltage		12V
Rated Capacity (10HR)		200Ah
Capacity 25℃ (77°F)	20HR(10.8A)	216Ah
	5 HR(35.8A)	179Ah
	1 HR(115A)	115Ah
Internal Resistance	Full charged Battery 25℃ (77°F)	≤3m Ω
Capacity affected by Temperature (10 HR)	40℃ (104°F)	102%
	25℃ (77°F)	100%
	0℃ (32°F)	85%
	-15℃ (5°F)	65%
Self-Discharge 25℃ (77°F)	Store for 3 months	90%
	Store for 6 months	80%
	Store for 12 months	62%
Charge 25℃ (77°F)	Float	Initial current less than 40A Constant voltage 13.6-13.8V
	Cycle	Initial current less than 40A Constant voltage 14.4-14.9V

Dimension

Size	Length	522mm
	Width	240mm
	Height	216mm
	Total Height	242mm
Packing	Length	522mm
	Width	240mm
	Height	299mm
Quantity/carton		1 pcs/carton
N.W/PC		60.0 kgs±0.3
N.W/carton		60.0 kgs
G.W/carton		60.5 kgs

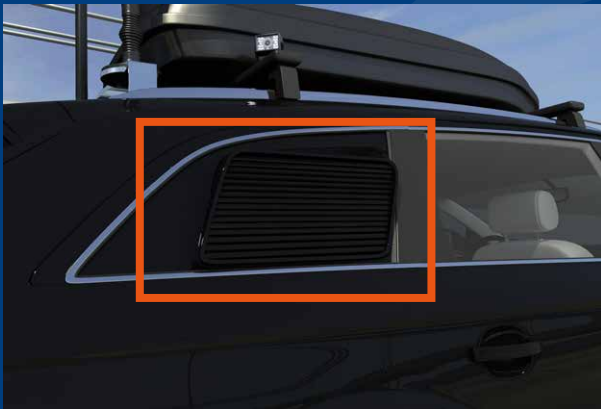
IR PURE SINE WAVE INVERTER SPECIFICATIONS



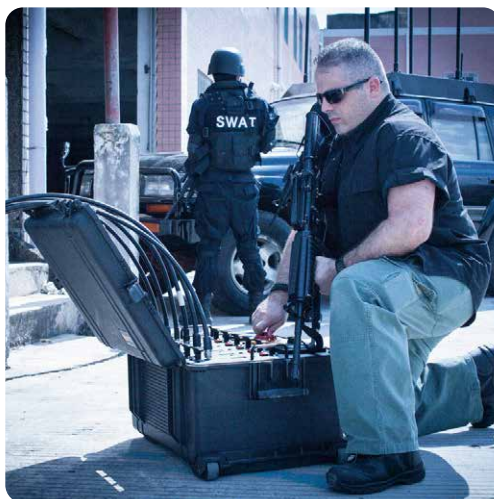
Model		IR5000	IR6000
Capacity	W	5000W	6000W
Battery	DC Voltage (Optional)	48V	48V
	Recharge current	40+/-5A	50+/-5A
	3 - stage charge	Boost CC → Boost CV → Float	
Input	Nominal Voltage	120VAC or 230VAC	
	voltage trip range	184v/154v +-4% to 253v+-4%	
	Voltage re engage range	194v/164v+-4% to 243v+-4%	
	Max input AC voltage	150VAC or 270VAC	
	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%,	
	Short circuit protection	Fault after 10 secs	
Electric Fans		Thermo -controlling	
Static Consumption		< 10 Watts	
Surroundings	Temperature, humidity	0-50 °C , 90%, no condensin	
Surge rating (10s)		10000W	12000W
capable of starting electric moto		5HP	6HP
Physical	Mount	Horizontal wall mount	
	Size CM (H x W x D)	63.0 x 21.8 x 17.9	
	Carton CM (H x W x D)	75.5 x32.0x31.0	
	N.W (KGS)	38	40
	G.W (KGS)	40	42
Remark	Specification for reference, subject to change without prior notification		
	We accept order with special specifications		

COOLING SYSTEM

WS-D12 JAM 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.



Wireless Explosion Prevention Expert



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