

## Tri-Force Vehicle

**The inspection vehicle is equipped with radio frequency jammer, Improvised Explosive Device protection, phone, radio, and remote-control toy.**

With today's technology, the world has expanded at an exponential rate. This establishes a conduit for undesirable events to occur, which can impair stability in a wide variety of ways, particularly in terms of communication technology. The damage can spread swiftly and broadly. **Tri-Force** (Vehicle) jammer is designed to deliver a very strong signal. VHF/UHF radio transmissions, including Bluetooth and Wi-Fi signals, may be used in both security applications to improve the efficiency of mobile phone signal interception operations on 2G, 3G, 4G, and 5G networks. Controlling information in the AOI (Area of Interest), including crowd control work, and positioning equipment to reach the AOI by covertly installing it in an automobile, typically an SUV.

The device's design, including the computation of the signal wave's transmit power, is intended for missions that need effective intervention, disguise, and covert access to the operational AOI.



# JAMMER



## Tri-Force Vehicle

### FEATURE

The principles of interference with the telephone signal transmission differs from standard signal transmission. The Tri-Force jammer must be quick in order to cover the complete range of all communication channels on VHF/UHF radio, including 2G, 3G, 4G, and 5G mobile networks. to generate interference that covers all signal ranges simultaneously. Communication on 2G, 3G, 4G, and 5G networks, in particular, spans many ranges at once. This distinguishes the Tri-Force Jammer (Vehicle) from other signal jammers. both in terms of signal transmission and electrical transmission.

As a basis, an operator's fundamental knowledge of radio communication systems is necessary to operate the Tri-Force jammer. It is also a significant factor in estimating or calculating the expected range of this type of Jammer. This information will allow operators to plan for more efficient mission usage.



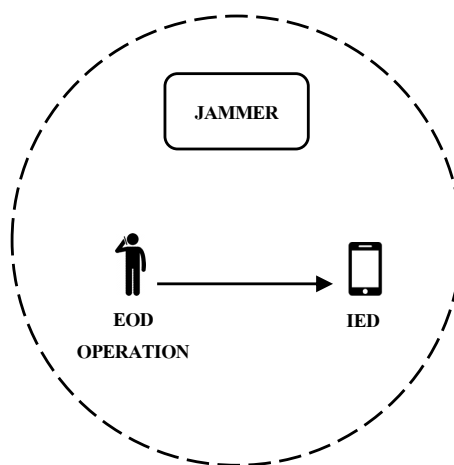
# JAMMER



## Tri-Force Vehicle

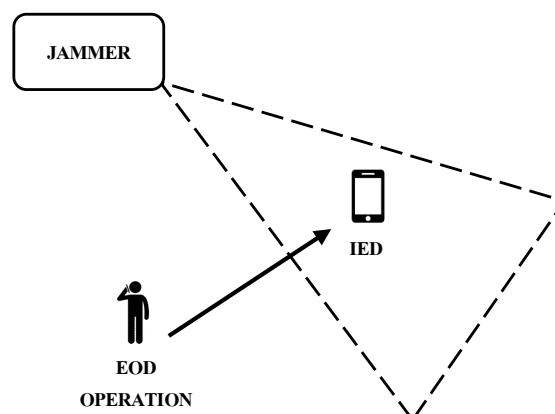
### OMNI-DIRECTIONAL ONE SYSTEM BOX

Using one jammer equipped with an omni-directional jammer antenna to cover all potentially harmful signals, (Using just one signal jammer to cover all signal waves may reduce the distance of the jamming signal transmission)



### DIRECTIONAL ONE SYSTEM BOX

Using one jammer equipped with a directional jammer antenna This enables the usage of interference transmitters to be extended for higher precision and distance. In this manner, the user may fully exploit the jammer's transmitting strength in a particular direction.



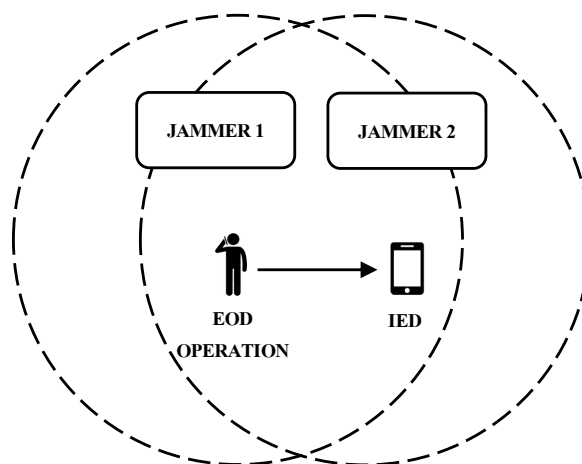


# JAMMER

## Tri-Force Vehicle

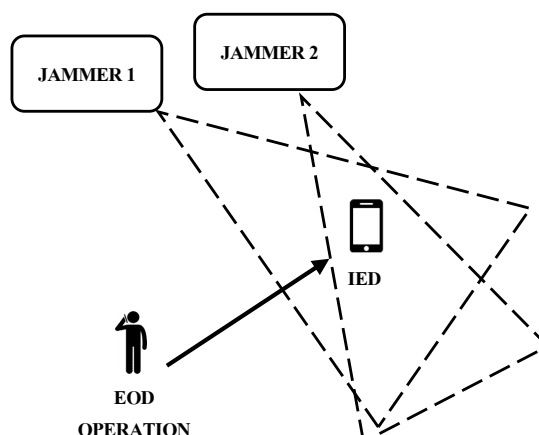
### OMNI-DIRECTIONAL TWO SYSTEM BOX

Using two jammers equipped with omni-directional jammer antennas in the AOI at the same time boosts the system's capacity to cover potentially dangerous operational risks by creating a unique signal that interferes with both transmission sources. By operating in tandem this usage pattern can considerably improve user security.



### DIRECTIONAL TWO SYSTEM BOX

Using two jammers equipped with directional jammers simultaneously in the operating area. It increases the user's ability to cover areas from signal that could compromise operations by emitting a unique pattern that interferes with both transmission sources. Working together at full efficiency, this usage pattern can significantly increase the security of users. This is the best form of use if the user knows the location of the IED.



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### PRODUCT DETAIL



**Equipment Form**  
SUV Vehicle



**Size**  
340 x 320 x 380 mm



**Weight**  
< 60 kg



**Operation Time**  
2 hrs / cycle



**Communication Technology**  
GSM(2G), UMTS(3G), LTE(4G),  
5G, Bluetooth, Wi-Fi, Walkie Talkie



**Operation UI**  
Software Control on tablet



**Operation Distance**  
200 – 500 m. (LOS)



**Frequency**  
Walkie Talkie 100 - 520 MHz  
Mobile Phone 500 - 6000 MHz

# SPECIFICATION DETAIL



## Jammer Module

Topic	Description
Equipment Form	Installation on SUV Vehicle (2.5 total high with antennas)
Communication Technology	Walkie VHF, UHF, CB, Car alarm, key fob, CDMA, GNSS, GSM, EDGE, UMTS, WCDMA, LTE, 5G NR (NA,NSA,CA), Bluetooth, Wi-Fi
Output Power	8 Output, Software Controlled, High Speed 100W (Max) per output
Size	340 x 320 x 95 mm. (Per variant)
Size	< 60 kg (4 variant)
Power Consume	12VDC battery, 100-220VAC 50Hz for battery charging and external power supply (average 480W, maximum 800W)
Operation Time	2 hours using battery (continuous use with external power supply)
Operation UI	Controlled with Meteor Suite software via touch screen tablet. Command power on/off, control signal emissions for each module, display operating status such as current, temperature, signal frequency and power, battery level, various abnormalities such as antenna connection alarm, over-voltage in system, overheating, module problem, battery dead, etc.
Antenna	Omni-Directional 137 – 6000 MHz (Impedance $50\Omega$ , VSWR < 3.5) Directional 190 – 3000 MHz (Impedance $50\Omega$ , VSWR < 3.5) with antenna control platform and a switch for on/off operation for switching antennas (Automatic system) Replaceable and comfortable for maintenance
Environment	IP67 standard Operation -20 °C to +60 °C, RH 98% non-condensing Storage -40 °C to +85 °C, RH 98% non-condensing
Cooling System	Special cooling fan, noiseless during operation
Voltage Protection	Continuously
VSWR detection	Automatically detects when VSWR ratio is lower than 4 to 1.
Material	Aluminum 6085 MIL-DTL-5541F Type II Class 3 standard
Certificate	MIL-STD 461F, MIL-STD 1275 E, MIL-STD 810G

# SPECIFICATION DETAIL



## Frequency Channels (Adjustable)

Channel #	Frequency (MHz)	Purpose	Power (W)
CH 1	137-155 MHz	VHF-1 Walkie Talkie	Up to 200 W
CH 2	155-185 MHz	VHF-2 Walkie Talkie	Up to 200 W
CH 3	227-300 MHz	VHF-3 Walkie Talkie CB	Up to 200 W
CH 4	300,433 MHz	Alarm, Car Alarm, Key fob	Up to 200 W
CH 5	300-450 MHz	UHF-1 Walkie Talkie	Up to 200 W
CH 6	450-520 MHz	UHF-2 Walkie Talkie	Up to 200 W
CH 7	703-960 MHz	Mobile Phone GPS, 2G, 3G,	Up to 200 W
CH 8	960-1050 MHz	Satellite Radio 1	Up to 200 W
CH 9	1050-1290 MHz	Satellite Radio 2	Up to 200 W
CH 10	1575.42 MHz	GPS	Up to 5 W
CH 11	1710-1880 MHz	Mobile Phone 3G, 4G, 5G	Up to 200 W
CH 12	1920-2025 MHz	Mobile Phone 3G, 4G, 5G	Up to 200 W
CH 13	2110-2170 MHz	Mobile Phone 3G, 4G, 5G	Up to 200 W
CH 14	2300-2400 MHz	Mobile Phone 3G, 4G, 5G	Up to 200 W
CH 15	2400-2500 MHz	Mobile Phone 4G, 5G, Wi-Fi, Bluetooth	Up to 200 W
CH 16	2500-2700 MHz	Mobile Phone 4G, 5G, Wi-Fi, Bluetooth	Up to 200 W
CH 17	2700-3000 MHz	Mobile Phone 4G, 5G	Up to 200 W
CH 18	3000-3100 MHz	Mobile Phone 4G, 5G	Up to 50 W
CH 19	3400-3700 MHz	Mobile Phone 5G	Up to 50 W
CH 20	5150-5350 MHz	Wi-Fi 5G	Up to 50 W
CH 21	5740-5870 MHz	Wi-Fi 5G	Up to 50 W

### \*\*NOTE

- CH1-11 transmission power 200W
- CH10 transmission power 5W
- CH18-21 transmission power 50W
- 2G including GSM/GPRS/EDGECDMA
- 3G including UMTS/HSDPA/HSPA+/WiMax
- 4G including LTE/LTE-A/LTE-A Pro
- 5G including 5G NR (NA,NSA) / 5G-A
- GPS including GNSS, Galileo, BeiDou

Ref: A Survey Report on " Generations of Network: 1G, 2G, 3G, 4G, 5G " TABLE OF CONTENTS; Author Ahtisham Bhatti