unival® RCIED jamming Plattform

Identical system design and programming for all unival jamming products:
- DWJ1 (vehicle)
- PWJ1 (portable)
- SWJ1 (stationary)
- MWJ1 (micro)
unival® reactive jamming upgrade
for all unival® jamming systems

Scenarios, where reactive jamming is necessary:

All near field scenarios, where conventional jamming is limited due to the close distance between the terrorist and the bomb,

Terrorist with a bomb enters a building/office room,

Checkpoint scenarios,

Vehicle convoy scenarios, where the terrorist is very close to the roadside bomb.
Digital Wideband Jamming System - DWJ1®
Developed and manufactured in Germany
Digital Wideband Jamming System - DWJ1®
Advantages compared to other systems -
best price/ value in class

- 100% Made in Germany - all main components and system parts are made in Germany,
- System can be exported with export license from German BAFA. EUC required,
- FPGA/ 24 DDS control board for programming of system, communication windows can be programmed,
- Modular plug-and-play system - all components can be easily exchanged and/ or upgraded,
- Modular system design with autonomous low-band/ high-band cases with individual control boards,
- FPGA controlled, real-time programming of system, laptop or remote programming,
- Multi-Operation-Modes: Barrage, Sweep, Multi-Sweep, Hopping with database,
- Fully synchronized system for multi-jammer-convoy-scenarios,
- More than 1.000 Watt output power available from 20 MHz – 6.000 MHz,
Digital Wideband Jamming System - DWJ1®
Advantages compared to other systems -
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- Modular power-supply system with fast access battery system and DC distribution,
- Latest Generation FET power amplifiers for continuous operation in high-threat areas,
- Patented V5-HighEnd Antenna system with outstanding performance and usability,
- Passenger health protection due to EMV shielding of vehicle with certificate,
- Second alternator for power supply and back-up battery system for non-engine-scenarios,
- EMERGENCY MODE
- Protection against overheating with real time temperature monitoring of main components,
- Modular, high-end anti-shock rack system for easy maintenance of system
- Full system certification in Germany including technical acceptance in German TECCENTER.
Improvized explosive devices, also known as IEDs, roadside bombs and suicide car bombs, have caused over 60% of all American combat casualties in Iraq and 50% of combat casualties in Afghanistan, both killed and wounded.
Digital jammers are operated specifically to counteract the detonation of IEDs by remote devices, such as cell phones, garage door openers and hand held radios. Jamming is the intentional generation of interfering signals by powerful transmitters intended to prevent clear reception of broadcast signals.
The strategical meaning of digital jamming for convoy protection

Jamming vehicle for RCIED protection of VIP vehicle.
The strategical meaning of digital jamming for convoy protection

2 unival® DWJ1® jamming vehicles before operation.
DWJ1® convoy jamming vehicle with roofbox for V5 antenna
DWJ1® with roofbox for V5 antenna
Configuration Digital Wideband Jamming System
DWJ1® - 20 MHz – 6.000 MHz

Automotive configuration/ 24V system for highest performance & stability/ 24V optional. Modular design / total system weight approx. 120 kg subject to technical change without prior notice.
Configuration Digital Wideband Jamming System

DWJ1® - Intelligent Jamming – FPGA/ DDS

Control board

- Low Band: 20 - 1000 MHz
- High Band: 1000 - 6000 MHz
DWJ1® Low-Band/ High-Band Cases with modules
DWJ1® High-Band Case with FPGA/ DDS control board
DWJ1® power supply box on modular anti-shock racks
DWJ1® Remote Control for system operation
DWJ1® 2010 V5 roof-box wiring
Digital Wideband Jamming System DWJ1®
Guaranteed protection range of 100 meters
Digital Wideband Jamming System DWJ1®
Impressions – Second alternator for power supply
Digital Wideband Jamming System DWJ1®
Impressions – EMV shielding for health protection
unival® group - Multi Level Security Solutions

Digital Wideband Jamming System - PWJ1®

Fully programmable portable digital jamming system/ 20 MHz - 6.000 MHz
unival® group - Multi Level Security Solutions

Digital Wideband Jamming System - PWJ1®

Antenna specification

4/6 special omnidirectional rod antenna 20MHz - 6.000MHz and alternatively directional antenna for optimum performance in all scenarios with universal port for fast exchange and use of alternative antenna systems.
unival® group - Multi Level Security Solutions

Digital Wideband Jamming System - PWJ1®

PWJ1® 6Band special casing
Watertight special IP67/ STANAG casing for system protection:
Conventional Jammer can be used in active stand-by and will be powered-up through the reactive jamming module within 30 Nano seconds.

- Less power consumption
- Less heating issues
- Prevents the conventional jammer from damage – prolongs the lifetime

Integrated battery of the reactive module supplies 4 hrs. of continuous operation in transmitting mode - 2 days of stand-by.

Sensitivity of the reactive jammer module can be adjusted. Reactive jamming only works against signals, which are stronger than the existing jamming signals.
unival® group - Multi Level Security Solutions

Digital Wideband Jamming System - SWJ1®

Fully programmable stationary jamming for communication and bomb jamming

SWJ1® for building/perimeter jamming up to 6.000 MHz.

Stand-alone operation as well as network-controlled operation possible
unival® group - Multi Level Security Solutions

Digital Wideband Jamming System - SWJ1®

Fully programmable stationary jamming for communication and bomb jamming

SWJ1® for building jamming up to 6.000 MHz (incl. PoE jammers)

Module 1
1 x 900 MHz @ 100 Watt
1 x 1800 MHz @ 100 Watt

Module 2
1 x 2100 MHz @ 100 Watt
1 x 2500 - 6000 MHz @ 20 Watt
1 x 2500 - 6000 MHz @ 20 Watt (optional)

Module 3
1 x 20 - 500 MHz @ 100 Watt
1 x 500 - 2500 MHz @ 35 Watt
1 x 500 - 2500 MHz @ 35 Watt (optional)

Stand-alone operation as well as network-controlled operation possible
Regardless if unival® group’s digital jamming systems are used in a convoy or stationary (access control and perimeter protection), all systems are operated with the same software and can be programmed specifically according to customers requirements.

New threat frequencies can be programmed within minutes and saved to the database without replacing any hardware, which makes our jamming systems also ready for future tasks, new frequency bands (f.e. LTE) and adaptable for different kind of threat scenarios.

Pre-programmed files can be installed plug & play for immediate use in any operational environment.

Several jamming profiles can be uploaded into the system.

Via remote control the system can be programmed directly according to the scenario requirements.
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