





Portable Counter-UAV Systems



Introduction

SteelRock Technologies (SR) offers an effective first response solution to the increasing security threat posed by UAVs, enabling those with responsibility for public, private and sensitive installations to secure themselves against the challenges posed by UAV intrusions.

The SR Night Fighter is a portable, RF-emitting Counter-UAV system, combining leading-edge directional communications inhibition technology with a military specification back-pack and antenna platform. The NightFighter offers the best of both worlds: performance and facility value, designed and built by operators for operators.

The Night Fighter has been designed and tested for use in a broad variety of civil and military applications to provide an effective counter-UAV solution to enhance the security of:

- Military and government buildings / compounds
- Naval and other vessels
- Front-line military personnel
- Strategic infrastructure
- Airport perimeters
- International borders
- Prisons
- Sports stadia and outdoors concert / event venues
- Film studios and locations

Important note:

The NightFighter range is only available to end-users / buyers approved by the UK Government



System Overview

SR

The NightFighter is an advanced portable counter-UAV device, with class-leading performance specifications. The system can be configured and optimised for a broad range of applications and operational theatres.

Features include:

- Reactive system with an intelligent, self-learning algorithm for threat assessment and mitigation
- Custom-made, multi-band helix and flat panel antenna array
- Broad-ranging operating capabilities with high-powered signal transmission (where needed), enabling superior range and target / threat mitigation
- Progressive power output tailored to each specific UAV threat
- Targeted and directional signal capabilities meet class-leading safety parameters, minimising “RF exposure” to operators
- Two-piece system with batteries and electronic circuitry housed in a robust SR-designed “X-Pack” back pack system that has been designed and constructed to withstand a broad range of operating environments and conditions with directional antenna mounted on custom-built platform, equipped with rail system
- Military specification coaxial antenna cables and N-Type connectors
- Broad range of system initiation options including touch screen-based user interface via tablet
- Low or High gain versions available depending on customer requirement



System Performance Highlights



- Extensively tested against a broad range of commercial-off-the-shelf and other drones in a wide variety of operating environments to ensure consistent, predictable system performance where and when it is needed
- Successfully tested out to a range of 5.4 Kms
- Subject to extensive chamber-based RadHaz testing to verify operator safety levels and reduced risk to surrounding RF environment
- Configured to induce a range of outcomes in a target UAV including:
 - » Denial of UAV operator controls and video feeds
 - » Initiation of “return to home” protocols
 - » Inducing forced, controlled-landing

X Pack Shock Mounted Backpack

- Lightweight aluminium EMC Shielded inner electronics housing
- Quick- change battery compartment
- Natural rubber isolation mounts
- Protection from water and dust ingress
- Heavy- duty 1000d ballistic nylon outer skin
- Water repellent heavy duty zips
- Rear and front covers
- Modular ergonomic back harness
- Stainless steel quick release/self- securing Buckles
- Slidable neodymium magnets with stable mechanical locking
- Passive cooling vent



Specifications



Transmitter Frequency:

Frequency of operation	A range of options available (depending on customer requirement) with FSSH technology
Bandwidth / Class of emission	Digital Phase and Frequency Modulation – Algorithm

Transmitting Antenna:

Antenna Type	Helix
Antenna Gain	13.5 dBi

Transmitting Antenna:

Antenna Beam	34 Degrees
Direction of maximum radiation	45 Degrees
Elevation of maximum radiation	41.7 Degrees

Safety:

RADHAZ	Regulation Public Limit - 61 V/m 1999/519/EC - ICNIRP and Occupational Limit - 140 V/m 2013/35/EU (Passed)
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Power: Denchi Power BB-2590 Lithium-Ion Battery Pack

Technology	Lithium-ion
Voltage Range	20-32.8V (24V mode) 10-16.4V (12V mode)
Capacity	9.3 Ah (28.8V Nominal) 18.6 Ah (14.4V Nominal)
Charging	16.8 V @ 3A Maximum
Max Discharge Current	10 ± 0.5A (24V mode) / 20 ± 1A (12V mode) continuous
Length	111.5 mm
Width	62.0 mm
Height	126.7 mm
Weight	1.35 Kg
Operating Temperature	-30 °C to +70 °C
Storage Temperature Range	-40 °C to +70 °C
Application	Dismounted soldier / Security Team

Training & SOPS

Training is at the heart of SR's service and is mandatory in order to ensure the safe, secure and effective operation of the NightFighter. All SR C-UAV systems are sold with long-term training packages that are designed to ensure their continued optimal use.

Our training packages include:

- An initial on-site training programme tailored to customer requirements and operators' existing skill levels;
- Annual on-site refresher training for existing and new users included in on-going O&M contract; and
- SRUAV instructors and operators drawn from ex-UK elite forces for best advice on the technology's strategic implementation into customer SOP's.

Operations & Maintenance

SR offers its customers the highest level of after-sales operational and maintenance support, including:

- Dedicated help line;
- UK and on-site support available as part of O&M contract;
- Priority product repair and/or replacement service available;
- Annual on-site servicing option; and
- Technology upgrades available as part of annual on-site servicing option.





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