

## **Department 13 Launches MESMER™ Version 1.0 Counter-Drone Solution**

*Revolutionary Patented Technology Enables Control of Airspace Through Non-Kinetic Mitigation*

*Featured on NBC The Today Show*

**PERTH, WA and COLUMBIA, MD USA – 23 January, 2017** -- Department 13 (ASX: D13 or “the Company”) commercially launched its flagship counter-drone product, MESMER™ Version 1.0 (“MESMER”), a unique patented, low power, non-jamming, non-line of sight, non-kinetic drone mitigation solution, enabling an effective and safe method of protecting personnel and infrastructure from dangerous drones. With customer demonstrations and trials of MESMER currently underway, the company has secured global distributor agreements to support the launch.

Jonathan Hunter, CEO of Department 13, said, “MESMER is designed to secure commercial, public or government airspace from the increasing threat of drones. It utilizes unrivalled protocol manipulation technology, enabling it to take control of drones and land them safely in a defined exclusion zone. Our solution is superior to other technologies available in the market that jam or shoot drones down and pose significant risk for the personnel and infrastructure they are designed to protect. Having delivered MESMER on time and on budget, Department 13’s focus is now to drive sales, both directly and through our partner channels, and to establish the product as the global market leader in counter-drone technology.

The MESMER technology was highlighted on January 19 in a segment on *The Today Show* in the USA. To view the segment, please visit the following link: <http://www.department13.com/see-department-13-on-nbcs-today-show/>

The MESMER platform uses sophisticated automated detection and mitigation strategies to stop, redirect, land or take control of drones across a range of national security, defense and commercial scenarios. MESMER’s key differentiator is its ability to manipulate weaknesses in all digital radio protocols and take control of a drone’s computer, allowing it to land drones safely by flying them into a defined exclusion zone.

The patented technology is built on open source software architecture ensuring it can seamlessly integrate into existing security and surveillance systems, making it attractive to a range of government and commercial partners, including military bases, prisons, stadiums, airports and other critical infrastructure. The vast range of applications support forecasts for the counter-drone market to reach US\$1.14 billion by 2022, according to Markets and Markets Anti-Drone Market report.



Figure 1 Mesmer V1

A number of tier one customers have commenced commercial trials and scheduled demonstrations of MESMER, which follow a series of successful validation exercises conducted last year including Black Dart and the MITRE Challenge. Department 13's global distribution network enables MESMER to be marketed to an initial 37 countries. The sales channel comprises strategic partners Booz Allen Hamilton in the United States, EPE in Australasia, Phoenix Group in Latin America and ISM in the UK and Europe.

### **About Department 13**

Department 13 (D13) was founded in Virginia in 2010 by a team of former military operators, scientists and engineers who apply proprietary innovative advanced technology to emerging requirements. D13 is developing cutting-edge software and communication systems that have the potential to transform the networking and communication fields as well as current applications in drone defense, mobile phone IT security and secure enhanced Android phone systems. D13 is engaged with multiple counter UAS projects to provide strategic solutions for civil, military and commercial security requirements. D13 has 13 patents and 22 patent applications in the development of wireless protocol manipulation and communication networking software with applications in drone defense, local area and wide area cellular communications and networking, enhanced data bandwidth for all digital communications, cyber security for mobile devices and sophisticated RF technology applications (radiometrics).

For more information about D13, please visit [www.department13.com](http://www.department13.com) or follow us on Twitter (@D13ASX), LinkedIn and YouTube.

## Forward Looking Statements

This press release may contain certain forward-looking statements which have not been based solely on historical facts but, rather, on Department 13's current expectations about future events and on a number of assumptions which are subject to significant uncertainties and contingencies, many of which are outside the control of Department 13 and its directors, officers and advisors. This press release should be read in conjunction with Department 13's other periodic and continuous disclosure announcements including Department 13's Preliminary Final Report announcement lodged with the Australian Securities Exchange ("ASX") on 31 August 2016, Department 13's Annual Report lodged with ASX on 30 September 2016 and other announcements lodged by Department 13 with ASX. Department 13 undertakes no obligation to update these forward-looking statements for events or circumstances that occur subsequent to such statements or to keep current any of the information provided. Any estimates or projections as to events that may occur in the future (including projections of revenue, expense, net income and performance) are based upon the best judgment of Department 13 and there is no guarantee that any of these estimates or projections will be achieved. Actual results will vary from the projections and such variations may be material. Department 13 has no obligation to tell recipients if it becomes aware of any inaccuracy in or omission from the information in this press release. This press release does not constitute an offer to sell, or a solicitation of an offer to buy, securities in the United States or any other jurisdiction. Department 13's securities have not been, and will not be, registered under the US Securities Act 1933 (as amended) and may not be offered or sold in the United States except in transactions exempt from, or not subject to, registration under the US Securities Act and applicable US state securities laws.

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# MESMER™ COUNTER DRONE SOLUTION

Detect • Identify • Track • Mitigate

**Addresses diverse threat scenarios and drone types**

**Non-kinetic mitigations that pose no additional public hazards**

**Open software architecture integrates with other security applications**

**Automated response and alerting as a security force multiplier**

**Operational in multi-terrain environments (urban, remote, rugged)**

**Easily deployed to support mobile C-UAS operation**

Mesmer™, developed by Department 13, is a revolutionary commercial counter-drone platform that uses sophisticated automated detection and mitigation strategies to stop, redirect, land or take total control of a target drone or radio-controlled device. This is done with protocol manipulation, which takes advantage of weaknesses found in all digital radio protocols. Mesmer is also flexible, operating as a stand-alone system, or working in tandem with existing hardware solutions. Mesmer™ is ideal for both commercial and defense/security organizations to deal with the emerging threat of ubiquitous autonomous systems. Our counter-drone solution offers the best of Department 13's innovative technologies and deep experience.

Unlike other systems that use radio jamming and standard electronic

mitigation techniques, Mesmer uses signal features and metadata to select and apply strategies in order to curtail drone threats, regardless of how drone vendors may try and prevent this from happening. This protocol manipulation is low-power so it offers an advantage by not affecting non-targeted communication signals. This also allows Mesmer to operate below 1 watt and within US regulatory (FCC) constraints.

At Department 13, we understand that threats, constraints and user needs will continuously change and evolve as drones and devices are implemented in the real world. So instead of a purpose-built hardware solution approach, we designed Mesmer to use protocol manipulation to handle even the most complex of scenarios, providing you with a powerful and flexible counter-drone system.

## Mesmer Configurations



Stand-alone rack mountable system



Integrated into other platforms

### About Department 13, Inc.

Department 13 (ASX symbol: D13, [www.department13.com](http://www.department13.com)), headquartered in Columbia, MD, is a specialized communications company whose team includes former military operators, scientists and engineers. Department 13 has developed cutting-edge software and communication systems for the public and private sectors focused on three major areas: electronic warfare, wireless systems and mobile devices.

Department 13 has 13 granted patents and 22 patents pending in the fields of communication, networking, wireless technologies, security and more. Some of the applications of our intellectual property include:

- Drone defense
- Local area and wide area cellular communications and networking
- Enhanced data bandwidth for all digital communications
- Cyber security for mobile devices
- Sophisticated RF technology applications (radiometrics)

### Contact Us

For more information about Department 13, please use our contact page or email [info@department13.com](mailto:info@department13.com).

## Specifications for D13 Counter Drone Solutions

### GENERAL

Frequency Range	2.4 – 2.5 GHz, 5.18 – 5.825 GHz,
Transmit Power *	< 1W. Configurable upon request.
Antenna	An array of 9 antennae

### EFFECTIVE RANGE

1 km nominal at < 1W transmit power using omnidirectional antenna. Range may vary depending on antenna type, transmit power, and terrain.

### OPERATION MODES

- Detection Only Mode
- Auto-Mitigation Mode
- Manual Mitigation Mode

### SUPPORTED DRONE MODELS

Multiple models and manufacturers of commercial drones. Please contact for updated list.

### EXTERNAL SENSORS

Open architecture and standardized interface for ease of integration with external sensors (e.g. acoustic, radar, electro-optical sensors).

### PHYSICAL (STAND-ALONE SYSTEM)

Dimensions (Rack)	19 W x 10.5 H x 20 D in (48.3 W x 26.7 H x 50.8 D cm)
Volume (Rack)	2.3 ft <sup>3</sup> (0.07 m <sup>3</sup> )
Dimensions (External)	28 W x 19.5 H x 28.5 D in (71.1 W x 49.5 H x 72.4 D cm)
Volume (External)	9 ft <sup>3</sup> (0.25 m <sup>3</sup> )
Weight	90 lbs. (41 kg)

### POWER

Supply Voltage	88-264 VAC, 50/60 Hz
Power Consumption (Avg.)	220 W (110V/2A, or 220V/1A)

### ENVIRONMENTAL

Temperature (Indoor Ver.)	50°F to 95°F (10°C to 35°C)
Temperature (Outdoor Ver.)	-40°F to 131°F (-40°C to 55°C), with additional air conditioned enclosure

\* Depending on local laws and specific requirements Mesmer's power can be tuned up or down to increase range and capabilities.