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DRONE CATCHER GUN

Krishna Kumar Karothiya	Department of Mechanical Engineering, IIMT College of Engineering, Greater Noida, U. P., India
Abhishek Yadav	Department of Mechanical Engineering, IIMT College of Engineering, Greater Noida, U. P., India
Abhyuday Mishra	Department of Mechanical Engineering, IIMT College of Engineering, Greater Noida, U. P., India
Ankush	Department of Mechanical Engineering, IIMT College of Engineering, Greater Noida, U. P., India
Anshul Gupta	Department of Mechanical Engineering, IIMT College of Engineering, Greater Noida, U. P., India
Anshul Katiyar	Department of Mechanical Engineering, IIMT College of Engineering, Greater Noida, U. P., India

ABSTRACT Drone catcher gun is a scalable system, which provides the maximum protection of areas and facilities of various sizes, forms and functions. It comprises of different sets of equipment depending on the application (private houses, prisons, commercial venues, government buildings, industrial installations, airports, border security, critical infrastructure, military facilities). We chose these particular bottles as even after our processing on them, they are still safe to tolerate high pressures. One of the most important factors for the right performance of the gun is how fast the valve will open and release the air. Basically we making and using this gun for the security purposes and to secure from drone.

KEYWORDS : Drone catcher gun, Military facilities, National security,

1. INTRODUCTION

Drones are going to be everywhere, including places that you may not want them. That doesn't sit well with everyone, and some are taking matters into their own hands with tools like this homemade drone disabling tool that just about anyone can build. We have seen various mechanisms instead of drones, our construction is unique and maybe it is the first homemade, anti-drone gun.

Initially, our thought was simple, to create a gun with four barrels which would shoot a net with the help of compressed air and it would trap this flying device. First of all, we started making our construction taking two bottles of oxygen of one use only that are durable up to 150 bar.

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The net has four bullets on it that are inserted in the barrels and when the bullets are released with power, the net is drifted away with them. It's not the lightest machine at about 13 pounds, but it's portable enough to be usable by one person.

You don't need technical training, either, so it's easy for security staff to use. Closing, we would like to say that we are very proud of our construction as its performance was excellent and our successful shoots made us happy.

2. LITERATURE REVIEW

A drone, in a technological context, is an unmanned aircraft. Drones are more formally known as unmanned aerial vehicles (UAVs) or unmanned aircraft systems (UAS). Essentially, a drone is a flying robot The aircrafts may be remotely controlled or can fly autonomously through software-controlled flight plans in their systems working in conjunction with on board sensors and GPS.

As consumer drones get cheaper and more popular, there are lots of drones in inexperienced hands and growing concern that they could be used for terrorist attacks. Legally speaking, you cannot just shoot drones out of the sky. So now, both government agencies and private companies are developing technology to keep drones away from places where they shouldn't be. Douglas Starr is the co-director of the graduate program in science journalism at Boston University and a contributor to wired magazine. Marketplace host Kai Ruysdael talked with him about his latest piece, "'This Brilliant Plan Could Stop Drone Terrorism. Too Bad its Illegal," and the budding anti-drone industry. Below is an edited transcript of their conversation.

So the review of recent literature has been carried out here-
Someday, sometimes, drones might do a bad thing. Quadcopters are small and cheap, capable of carrying cameras or tiny cargoes into places they shouldn't, and no one quite knows how to protect against them. On Friday, the drone-centric corner of the internet shook with the announcement of Open Works Engineering's Sky Wall, a high-tech anti-drone weapon that shoots nets at drones. Open Work's Sky Wall brochure advertises three variants on the system: the shoulder-mounted Sky Wall 100, a stand-mounted Sky Wall 200, and a fixed mechanical turret called Sky Wall 300. Each will be capable of firing the same four projectiles. There's the basic training projectile, SP01. There are three net-carrying projectiles: a basic net, a net and a parachute, and a net that that comes with electronic counter measures, presumably jamming any signals sent from the captured drone.

or just a nosy onlooker. That's the same jammer the German police used in Berlin when President Obama visited the country. The publication says authorities decided to bring in an anti-drone technology, because people with malicious intent could use UAVs to monitor security positions or even to launch Swiss authorities have added another security measure for this year's World Economic Forum in Davos: anti-drone guns. Bloomberg has spotted local police preparing HP 47 Counter UAV Jammers to make sure no

unmanned aerial vehicle (UAV) gets too close to the venue, whether it's sent by a spy organization attacks.WEF spokesman Georg Schmitt explained:

"While drones have great potential, they have -- just as every new technology or aspect of the Fourth Industrial Revolution -- also a potential downside. The forum takes the safety and security of its participants seriously. It is therefore normal that we take any potential issue into account and prepare for it."

The HP 47 can block drones up to 1,000 feet away from sending data, including video feeds, back to their operators. It can also disable operators' remote access to their UAVs, as well as trap the machines within an invisible fence. Once the drones are trapped, authorities could either capture them with a net or shoot them down with the help of snipers.A consulting firm told *Bloomberg* that it's much too early to estimate the size of the anti-drone market, but jamming devices are clearly becoming more popular as drones become more common. Both the military and private companies are developing their own guns and jammers. The Dutch National Police, however, resorted to training eagles to take down drones during emergencies.

There are concerns or troubles in drones that affects user's navigation routine. A local government unit sometimes restricts the use of drones when there is an ongoing military conflict. Drones are also blocked from entering a restricted zone such as military facilities that are conducting experimentation and active military training inside their camps. These growing restrictions prompts drone users to consider the rules and regulations of drone usage to a certain area so that they will not be subjected to either ethical or legal violations. User violators are at risk for legal apprehension that could mandate them to pay for financial compensation or imprisonment for several days if caught violating laws.

Go ahead and scoff at the sheer bulk of this 10-kilowatt capable anti-drone laser technologydeveloped by Boeing, but back in 2014 this was highly advanced, and could function in Heavy fog, rain, and wind. Known as the High Energy Laser Mobile Demonstrator (HELMD), it succeeded in "consistently acquiring, tracking and engaging a variety of targets in different environments, demonstrating the potential military utility of directed energy systems", according to Dave DeYoung, Boeing's Directed Energy Systems director.

Battelle's DroneDefender weighs 4.54 kg, straps onto any existing anti-drone gun, and blocks a UAV's radio, GPS, and ISM signals. The drone is then told to return to its origin and land.   AsPopular Sciencepoints out, the Defender works best in cases "where cops want to disable a drone without risking injury to bystanders or property." According to Gizmodo, Homeland Security and the DOD have around 100 Defenders already. Check it out below, courtesy of Battelle Innovations.

Similar to Battelle's "Drone Defender," Drone Gun is a signal jammer that uses subversive electrical blocking instead of brute, ballistic force. But Drone Gun is a little more sophisticated, adding GLONASS positioning to its targeting capabilities, allowing it to reach 1.2 miles away. The enemy drone is then commanded to land or return to origin. Check out the 5.89 kg Drone Gun below, courtesy of Drone Shield.

This Pentagon department focuses on developing the most advanced technologies possible, and is now joining the anti-drone field. DARPA aims to finalize a machine that is easily upgradable over time.   According toPopSci., it's intended to "neutralize" all shapes and sizes of UAVs and be portable enough to mount on trucks and ships. It'll also defend against "rocket, artillery, mortar, and other conventional threats."

Boeing and Airbus Defence and Space were prepared in case drones fell into the wrong hands. According to Airbus, the 2015 "Counter UAV System ... uses operational radars, infrared cameras and direction finders from Airbus Defence and Space's portfolio to identify the drone and assess its threat potential at ranges between 5 and 10 Kilometres. Based on an extensive threat library and real-time analysis of control signals a jammer then interrupts the link between drone and pilot and/or its navigation." Look at this diagram from 'Airbus official press release.

3. CONCLUSION

The idea was to investigate the three proposed realms of legitimacy as they relate to drone killings across international borders, a design that does not necessarily point in the direction of policy solutions. By peering through the lenses of *legality, morality,* and *efficacy* a series of worthwhile views into the legitimacy of drones could be offered to enhance the public understanding of an issue that is only growing in importance. This indebted editor believes that the contributing authors have done precisely this. Unexpectedly, this book project also advanced in a manner that has produced a keen policy proposal meant to integrate these three basic tenants of legitimacy.

As has been seen, this starting point has simultaneously produced descriptive and normative contributions. That is, the authors have had to explore both what is and what ought to be,[1] to be able to express a complete view on each of their research questions. The current applicable law, our moral understandings of lethal force and war, along with judgments of their effectiveness as a policy tool, cannot be currently presented as definitive since unmanned combat air vehicles have so drastically changed the practical and political calculations for exercising force across borders; both views are required.

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