

Russia deploying low-tech counter-UAS solutions as Ukrainian drone tech advances

30 April 2024 Adam Jeffs, Editor, SAE Media Group

As Ukraine continues to develop drone technology to bypass Russian soft-kill effectors, Russia is investing in low-cost, low-tech solutions that are proving effective



Credit: Atlantic Council

Russia is adopting [low-tech counter UAS options](#) in response to rapidly advancing Ukrainian drone technologies. Drones have formed a large part of Ukraine's defensive and offensive strategy throughout the war with Russia, with Ukraine gaining significant advantages due to its growing defence industrial base and leveraging commercial innovation from international partners.

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Low-cost drone technology has allowed Ukraine to strike at critical Russian infrastructure and military assets with relative impunity. While Russia has had success with soft-kill options such as jamming, spoofing or hacking, advancing Ukrainian drone technology has reduced the effectiveness of the Russian counter UAS suite. In response, Russia has been utilising several low-tech solutions to great effect.

One such solution is the deployment of anti-drone metal nets. These nets, which are supported by mooring lines anchored to metal stakes in the ground, can surround critical facilities entirely. Aside from preventing Ukrainian drones from getting close to these facilities, the nets are difficult to detect. This means that they also serve as an option for taking down Ukrainian drones, as they often crash into them.

Russia has also taken steps to protect military assets in the field, with ‘turtle tanks’ now being deployed across the front lines. These tanks feature a relatively simple shell made from metal and wood attached to the top of the tank but separate from the main vehicle. Any strikes on these tanks from drones, which have been common by Ukraine, are unable to target the tank’s weak points and deal damage only to the low-cost defensive shell.



Low-tech Russian ‘turtle tanks’ made from metal and wood (Credit: Open Source Information)

Wartime has long been the great driver of military innovation with WW2 famously bringing us many significant scientific breakthroughs, such as radar, jet engines and even superglue. The war in Ukraine has been no different as we have witnessed a technological 'back-and-forth' between Russia and Ukraine with regard to offensive and defensive drone technologies. While the current low-tech strategy by the Russians is proving effective, we will likely see developments in the Ukrainian UAS suite as it draws on collaboration from the international commercial community to provide a solution.

Nataliia Kushnerska, Chief Operating Officer at Brave1, spoke this year on how Ukraine is accelerating the domestic development of counter UAS capabilities at the [Counter UAS Technology Europe](#) conference, which will return in April 2025.