(AI 1.webp)
(neuron.mp4)
Artificial intelligence is already present in nearly every aspect of our daily lives. And now, it has taken its rightful place on the battlefield — in the real combat conditions of the Russian-Ukrainian war.

My dear viewers, massive strikes with kamikaze drones on Ukraine continue, and Russia keeps increasing their scale day by day. They're now reaching numbers of nearly 500 attack UAVs in a single night.

(S sentinel.mp4)
But what if I told you that Ukrainians have finally found a solution to this problem? And it's not just an effective and low-cost way to counter the aerial threat — it's a development that virtually has no analogues in the world and has already proven its effectiveness in real combat conditions on Ukrainian lands.

Today, I'll tell you about the Sky Sentinel — a development by Ukrainian engineers, fully controlled by artificial intelligence, requiring no human operator in real-time.

We'll explore what makes it so unique, and how it stands out from other automatic turret systems currently used around the world.

(sentinel green.mp4)
An automatic turret capable of reacting instantly, operating 24/7, and eliminating the human factor of fatigue. And while doing so — shooting down aerial targets flying at altitudes up to 1.5 kilometers.

Just imagine a machine gun that aims itself, identifies its target, and strikes — completely autonomously.

At the end of this video, I'll explain how each of us can contribute to this development and help strengthen the defense capability of a country that has been suffering from the attacks of a powerful aggressor for more than three years now.

But first, let's take a closer look at the system itself and the reasons behind its creation.

(old tanks.mp4)
(F-22.mp4)
The rapid development of military technology during wartime isn't news anymore — it's more like the rule than the exception these days.

As grim as it sounds, warfare creates a perfect testbed for both legacy weaponry that's never seen real combat

(Heckler & Koch G11 .png)
And for experimental prototypes, some of which might turn out completely impractical.

So, just like the rest of the world, our friends in Ukraine had to rely on ingenuity and engineering creativity to quickly hold back a massive aggressor like Russia.

And as we all know — there was no time to reinvent the wheel.

The escalating pace of combat, relentless kamikaze drone attacks, and the parallel explosion in AI capabilities worldwide… That's what gave rise to the Sky Sentinel.

(Sentinel1.jpg)
An AI-powered turret using the battle-tested .50 caliber Browning machine gun — combined with cutting-edge sensors that allow AI to detect and engage targets almost instantly.

But let's start from the beginning. What prompted Ukraine to create something like this? And how in the world did they fund such a project?

As strange as it may sound, it seems that Ukraine could have gladly embraced the help of artificial intelligence back when most of us had little to no idea what it was or what potential it held.

Let me explain.

(drone atack.mp4)
In early 2022, when Russia launched its full-scale invasion, the first thing the Ukrainian people felt — were missiles.By striking civilian infrastructure as well, the aerial bombardments quickly made it clear that protecting the skies would become Ukraine's top priority in the near future.

(Zelensky.jpeg)
Almost immediately, on February 28, President Zelenskyy appealed to NATO and the U.S. to help close Ukraine's skies with modern air defense systems — something Ukraine lacked at the time.

(
"If the West does this, Ukraine will defeat the aggressor with much less blood."
https://en.wikipedia.org/wiki/Proposed_no-fly_zone_in_the_Russian_invasion_of_Ukraine?
)
He said.

But that — and all subsequent requests — were denied. So Ukraine was left with no choice but to endure missile strikes on civilian targets, while fighting back on land and sea.

And Russia didn't stop at missiles.

Realizing a quick victory wasn't possible, they turned to a cheaper, mass-attack solution — UAVs striking from the sky, Ukraine's most vulnerable direction.

(Shahed 136.jpg)
By September 2022, near Kupiansk in Kharkiv Oblast, Russia's use of Shahed-136 kamikaze drones was officially confirmed — as was the first successful shootdown.

That's when it became clear — the race for aerial weaponry had begun. And Ukraine needed an answer. Fast.

Luckily, Ukrainians adapted quickly — almost immediately identifying the new threat's main weaknesses.

(shahed sound.mp4)
First, the noise. Shaheds have a loud, moped-like sound. Second — their relatively low speed and flight altitude.

(ADG.mp4)
Before long, mobile defense groups started forming. Their job? Hit the road, get in the drone's projected flight path, deploy a mounted machine gun — and take it out. Usually from a pickup truck.

Honestly, this solution was almost self-evident, because Ukraine didn't have the resources to counter such a threat at the time. But what it did have was ingenuity, machine guns, and skilled hands.

These makeshift platforms had their pros and cons. On the plus side — they were affordable and easy to set up.

Even despite the somewhat archaic weaponry available at the time, they managed to organize and fight back against drones — a type of threat that had never been used on such a massive scale in any country before the war in Ukraine.

(Maksim.jpg)
(
“A group of Ukrainian part-time soldiers, including judges and other professionals, have taken up arms to defend Kyiv from Russian drone attacks. Stationed about 100 km east of the capital, the 241st brigade, equipped with WWII-era machine guns, has been tasked with intercepting low-flying enemy drones.”

https://www.theguardian.com/world/article/2024/may/09/judges-with-machine-guns-the-part-time-drone-hunters-defending-kyiv?
)

(IGLA.mp4)
And with the sheer number of drones Russia was launching, even relatively efficient systems like the Stinger or Igla manpads were too costly to fire repeatedly.

(pickup.jpg)
So Ukrainians started welding mounts, rigging rotating platforms, and attaching whatever they had — DShKs, anti-tank KPVTs, and other machine guns they had.

And developing air defense specifically in this direction turned out to be the right decision, because as of now, Russia has already carried out the most massive kamikaze drone attack, totaling 479 units.

And, let’s be honest – it doesn’t look like they’re going to stop there.

Anticipating the growing threat, Ukrainians were forced to make a breakthrough in the field of air defense. This led to the creation of Sky Sentinel — or, as it’s already been nicknamed on the front line, the Shahed catcher.

But before we dive into its combat achievements — which, I assure you, this automatic turret has already accomplished despite its young age — let’s first take a look at the technical solutions that make this system so unique.

(Sentinel2.jpg)
And we’ll start with the thing that stands out the most when you first lay eyes on this turret. It’s a rather large and intimidating machine gun.

(Browning M2HB.jpg)
That’s the good-old Browning M2HB .50 caliber machine gun. Rugged. Reliable. Battlefield-proven.

Ukrainian forces fell in love with the M2 early in the full-scale invasion — once the U.S. began stable deliveries of this legendary gun.

Infantry, air defense crews, light armor — everyone quickly got used to handling .50 cal, and now operate it as skillfully as U.S. troops would.

(Browning burst.mp4)
Even though the M2 is a machine gun, it's not just about the rate of fire. Browning never was the fastest shooting machine gun out there. And with Sky Sentinel's precision targeting — it doesn't need to be one.

The real reason behind choosing this weapon lies in its caliber and reliability — a powerful round, accurate over long distances, and devastating on impact.

Which matters even more now that Russia has changed tactics and equipped their new modification of the Shahed, called "Geran-2," with more powerful antennas, making them capable of flying at much higher altitudes and increasing resistance to electronic warfare (EW). So hitting them with weaker rifles or machine guns seems almost impossible.

You need a more accurate, precise shot at long range.

(Barrett-M82_2.png)
So in this case, the Browning acts more like a sniper rifle that uses the same .50 caliber — Barrett M82, only way faster.

But to shoot with sniper-level precision, caliber alone isn't enough. You need advanced targeting systems, in-depth mathematical analysis of the target's movement, and — something most of us rarely think about — mechanical perfection and precise fitting of components to eliminate any play.

(Sentinel3.jpg)
(
"We built a system that moves a lot — but with zero play,"

The lead engineer of the Sky Sentinel team proudly explains.

"And it doesn't just move — it fires. Which means it has to withstand recoil."

https://itc.ua/ua/articles/myslyvets-na-shahediv-shho-vidomo-pro-avtonomnu-ukrayinsku-shi-turel-sky-sentinel/amp/
)

(turret turn.mp4)
It's the complete elimination of play that made possible the incredible accuracy of 17 microradians. Because when firing at distances over a kilometer, even a millimeter of play

can result in a miss by meters — or even tens of meters. Especially considering that the Browning allows for sustained fully automatic fire.

So, we've just uncovered how the uniqueness of the Sentinel reveals itself through seemingly ordinary and familiar components. Now let's dive deeper into the truly distinctive solutions that have placed our Ukrainian friends at the forefront of autonomous turret development. And I do mean autonomous, not just automatic.

Let's break it down.

As you could already tell, Sky Sentinel is more than just motors and steel. It's a high-precision sensor platform, constantly scanning its environment in real time.

(Sentinel4.png)
At the core — there's a multispectral camera. It sees in day, night, fog, smoke — doesn't matter.

Remember when I mentioned the incredible precision of 17 microradians? It's thanks to this camera, combined with cutting-edge sensors and AI analysis, that the system can lock onto a target with such astonishing accuracy. Let me explain in simpler terms what those microradians actually mean.

Imagine standing on the roof of a ten-floor building, aiming at a pencil standing upright a block away — and hitting it on the first try. That's how precise it is. And it can lend sots like that up to 600 times per minute.

Its turret rotates horizontally at up to 150 meters per second. That's not just fast — it's blazing.

And yes — it covers a full 360°. No blind spots. No matter where the target comes from — Sentinel will lock and fire.

(AirDefRadar.jpg)
But even if the drone isn't yet in its field of view — it does not mean that it's safe.

Sky Sentinel can connect to external air defense radar systems in order to "see the target" even before it enters the field of view of the turret's built-in sensors.

What is even more impressive, according to UNITED24, the official fundraising platform of the Ukrainian government:

(U24.mov)
(
“Human intervention, such as a soldier manually aiming the turret, is not required. Deploy the Sky Sentinel into a combat position, feed it radar data, and it does the rest: detects, locks on, tracks the flight paths, calculates the shot and fires. All on its own.”

https://united24media.com/war-in-ukraine/ai-powered-turret-that-hunts-russian-drones-meet-sky-sentinel-ukraines-new-air-defense-8589?
)

So let’s take a closer look at the “brain” of this turret.

(AI 2.png)
Inside its core is a deep-learning neural network trained on thousands of real combat video frames.

It doesn’t just detect — it classifies targets, tracks their speed and trajectory, and makes a decision: engage or not.

This isn’t automation. This is artificial intelligence — built for war.

(Terminator.mp4)
Something we used to watch — and some even feared — in movies about how artificial intelligence takes over the world.

Anyway, what’s wild is that Sky Sentinel is not only making decisions on its own, but also is a fully autonomous unit.

Which means you can deploy it with a mobile team in minutes. No antennas, no need for additional radars, no satellite uplink. Drive it in. Power it on. It works.

(joystick shot.mp4)
Of course — it can work with a human operator if needed. There’s a special interface where a soldier can take manual control. You know… just in case.

(OV)
(United24_Full.mp4 1:48-2:27)
First, I have to track the target until it's within my range. And then I lock it. To open fire, these two tumblers must be switched on. And that's it. I wait for the target to approach, and then the third computer itself takes into account the height and other data already calculated by the rangefinder. Then, when everything is calculated, I will see a sign indicating that the fire is authorized, and then it starts shooting.

But most of the time that's not necessary at all.

And if you thought that the "Shahed catcher's" capabilities end there — you were wrong. Its precision, targeting speed, and trajectory calculations allow it not only to shoot down drones, but also subsonic missiles and other targets moving at speeds of up to 800 km per hour.

(rocket down.mp4)
That's faster than most helicopters — and nearly half of cruise missiles.

But the most impressive fact about the development of Sky Sentinel, to me, will always be that it was entirely developed, designed, programmed, and funded by the people of Ukraine.

(Maydan.mp4)
Referring to the history of Ukraine's calls to close the sky, like the ones I've mentioned at the beginning of this video, this situation almost feels symbolic, if I may say so. To me, it's a serious and radical response to the entire West — which either couldn't, or rather didn't want to, shield Ukraine from Russian air attacks.

And when there's no one to count on for help, but the problem still needs to be solved — human ingenuity can go a long way. In my opinion – that's exactly what Ukrainians have demonstrated in their fight against a superior enemy in the sky. They've set an example for the whole world that giving up is never an option, no matter the circumstances.

(discussion.jpg)
So the turret itself wasn't built in a secret military bunker by defense specialists — it was assembled and programmed by Ukrainian engineers and IT experts, funded by money raised by ordinary people.

Let's be honest… air defense isn't cheap. And for most countries, it's built around systems like Patriot.

But here's the thing.

(patriot.mp4)
Patriot missiles cost around 4 million dollars per shot. Yes, you heard that right — four million dollars. Per missile.

And that's just to take down one incoming threat. In this case, usually a drone that costs 30,000 dollars.

Now compare that to this Sky Sentinel – around 150,000 dollars per entire system. That's not just the gun — that's the AI, the turret, the sensors, the whole thing.

For the price of one Patriot missile, you could deploy over 25 Sentinels across the country.

(city.mp4)
And about 10 to 30 of these systems should be enough to cover the whole city. Or even less to cover power plants and so on.

So let's return to the system's artificial intelligence, and I'll do my best — as far as possible — to explain in detail what makes it so valuable.

Of course, one of the most obvious advantages over a human is the reaction speed with which the system operates.

(lockon.mp4)
The moment a drone enters its line of sight — the system detects, identifies, tracks, aims… and fires. All without waiting for human confirmation.

No delays. No hesitation. No fatigue.

That's where Sentinel changes the game.

(monitor.avif)
Because with traditional automatic systems — you need trained personnel. You need radar operators, launch approval, sometimes political clearance.

Here?

Minimal human involvement equals fewer mistakes.

It's not just smart. It's scalable. You don't need a bunker or a massive base to run this thing. You can deploy it in two ways:

One. Stationary mode — for protecting infrastructure, energy hubs, city limits.

(sent move.mp4)
Two. Mobile mode — mounted on a trailer with onboard generator and radar, enabling rapid redeployment as the threat evolves.

Because it's so flexible, Sentinel fits the needs of modern warfare — instead of trying to force the war to fit the system.

You can plug it into radar networks. You can drop it off at the front line with a generator. You can operate it with or without remote control.

It’s built for all different circumstances. And that’s exactly what modern warfare demands.

Its independence from external factors means there’s a lower chance of things going off plan and virtually eliminates the risk of sabotage when the turret is deployed in mobile battlefield conditions.

This, in turn, can unlock not only defensive capabilities, but also create new offensive opportunities — effectively sealing off the airspace over newly liberated territories.

(Phalanx CIWS.webp)
(Rheinmetall Skynex.jpg)
Most countries already have automatic turrets. But here’s the catch — almost all of them still rely on one thing: a human in the loop.

A soldier sits at a screen, sees the target, confirms identity, and pulls the trigger.

That’s not bad — it’s safer in complex environments.

But it’s also slow. Risky. And when drones come at night, from five directions at once — slow just doesn’t cut it.

(OV)
(United24_Full.mp4 1:10-1:27)

- How active is everything flying around here now?
- Right now?
- For the past month.
- It's gotten more intense. In general, there's been a lot more of it in recent months. I remember in 2022-2023, it was still very different back then.

Sky Sentinel doesn’t wait for instructions. It doesn’t ask. It acts. Because it was trained like a soldier — to recognize the threat and make the right call in real time.

(Sentinel1.jpg)
No joystick. No constant supervision. Just pure AI-driven decision-making, based on real-time data. That’s basically just a better, tireless soldier.

It detects, it classifies, it predicts the flight path — and engages. All in under a second.

This gives troops one more advantage — safety.

Back when mobile teams had to expose themselves to deploy and fire machine guns manually, every mission was a risk. Now, dropping an autonomous system into the field? That's a whole different level of safety.

(battle.mp4)
And while most systems were built for clean battlefields, open skies, and predictable threats… Sentinel was born in chaos.

It was built for Ukraine — for jammed GPS, for drones coming out of nowhere, for real war. That's why it doesn't just compete with other turrets — it redefines what a turret should be.

Some may ask — "Sure, it looks great on paper… but does it actually work?"

So let's talk about the results.

Sky Sentinel was first deployed in late May 2025. Not in a lab. Not on a training ground. In the field. Under enemy fire.

(droneshot1.mp4)
And between its first real mission and early June — just a few days — it took down six Shahed drones. Confirmed.
(droneshot2.mp4)

Six kills. From a brand-new system. On its first week in combat. Let that sink in.

Most defense platforms take months to prove themselves. They need iterations, adjustments, trial and error. Not The Shahed Catcher.

It was dropped into combat — and immediately started doing its job. No warm-up. No test runs. Just raw results.

And that's not according to marketing slides — that's from confirmed battlefield data. Multiple independent sources. Including frontline commanders and international outlets like Business Insider and United24.

(Sentinel3.jpg)
This isn't a theory anymore. It's a fact: Sky Sentinel works — and it works fast.

Remember how I mentioned earlier that it was made by regular people?

(flags.jpg)
Engineers. Volunteers. Crowdfunding. It's not just a weapon — it's a movement.

That’s why production is already happening. It scales with every donation. And every new unit Is better than the last. Because people are building it — faster than the government ever could.

At the beginning I told you that you can become a part of this movement and help Ukraine to build those turrets. In the description you will find a verified link which will lead you to the official United24 Foundation site, where you can help them to close the fundraising, so feel free to check it out after watching this video.

This new approach solves a real problem the world never had before: cheap drones that are hard and pricey to shoot down.

And now Ukraine has a solution for that. That actually works. And it doesn’t cost 4 million dollars a shot.

Today, Sky Sentinel uses a heavy machine gun. However, United24 reports that different turret variants are being developed for different types of missions. So it's entirely possible that, in the future, Sky Sentinels will be equipped with more powerful weapons.

And the first thing that comes to my mind is, obviously, a Tryzub.

(Tryzub1.jpg)
As you may already have heard – Ukraine recently unveiled its own laser weapon, and has already tested it on drones, cruise missiles, even aircraft.

It's capable of targeting up to 2 kilometers altitude and 5 kilometers out for now.

In real field tests, Tryzub already blinded FPV drones and even destroyed ground targets.

I should note right away that this information is not confirmed and the Ukrainian government has made no such statements, but to me it seems quite logical that we may soon see an actual laser turret controlled by artificial intelligence on the battlefield. And it will be Ukrainians who lead the way.

This isn’t some sci-fi fantasy anymore — It’s happening. Right now.

(Tryzub2.jpg)
Ukraine is already actively developing and testing laser weapons. And Sky Sentinel is the platform they can definitely ride on.

(bomb lazer.webp)
So we can say that this technology has become the backbone of a new generation of smart, scalable, energy-based air defense.

The sensors, the software, the tracking AI — that's what makes this system different — and ready for the future.

So let's take a step back and look at the bigger picture. Because right now, we're standing on the threshold of an incredible breakthrough — one that could very well change the way wars are fought and offer a real chance in the struggle against a much stronger enemy, as we're seeing now in the case of Russia's war against Ukraine.

Big missiles, huge expenses… Now we have an example of how to fight smart, not just big. This turret is compact, fast, easy to deploy — and deadly.

It's networked. It's modular. It's made for today's war.

And yes, artificial intelligence plays a huge role here. This is the first real war where AI makes real combat decisions.

(lockon.mp4)
(droneshot1.mp4)
Not just recommendations — real, critical actions. It tracks drones. Distinguishes them from birds or any other non-combat targets. Predicts where they'll go. Fires before humans even notice.

This is algorithmic warfare.

And Ukraine Is right in the middle of it. Not by choice. But because they had no other option.

And now I invite you to head to the comments and share your thoughts and impressions about the Sky Sentinel.

Do you think this could mark the beginning of a new kind of digital warfare, where artificial intelligence takes over core combat tasks? And how effective do you believe it could be in other areas of military operations?

Remember that you can support the fundraising campaign for the development of the turrets featured in this video for Ukraine via the link in the description.

You can also support my work with a voluntary donation using the link below, through Patreon, or by becoming a member of the channel here on YouTube. It really motivates me to keep bringing you new videos promptly.