

What electronic warfare devices does the russian army use in ukraine war. What kind of noise signals do these devices send?

1  www.nytimes.com > 2023 > 11 > 19 > technology > russia-ukraine-electronic-warfare-drone-...

The Invisible War in Ukraine Being Fought Over Radio ...

Nov 19, 2023 — A battle is raging in Ukraine in the invisible realm of electromagnetic waves, with radio signals being used to overwhelm communication..

2  en.wikipedia.org > wiki > Ukraine_and_electronic_warfare

Ukraine and electronic warfare

Electronic warfare (EW) is a technology that interferes with radio communications between the operator and all enemy electronic equipment...

3  breakingdefense.com > 2024 > 06 > inside-ukraine-startups-try-to-edge-russia-in-the-ele...

Inside Ukraine, startups try to edge Russia in the electronic ...

Jun 10, 2024 — Each of the UAVs that both the Russian and Ukrainian sides have integrated into combat puts out its own “fingerprint” of..

4  spectrum.ieee.org > the-fall-and-rise-of-russian-electronic-warfare

The Fall and Rise of Russian Electronic Warfare

Jul 30, 2022 — Today, BTGs operating in southern and eastern Ukraine are employing shorter-range VHF-UHF electronic attack systems like the R-330Zh Zhitel to

5  www.reddit.com > r > drones > comments > 1abhk6g > can_someone_explain_me_why_rus...

Can someone explain me why Russia and Ukraine are not ...

But electronic warfare is fought in small increments, and a dB or two of signal over the noise is enough to run whatever you need...

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Ask a followup question





Based on the search results provided, here are the key points regarding electronic warfare devices used by the Russian army in the Ukraine war and the kinds of noise signals they may send:

Types of Russian Electronic Warfare Devices Used

1. Jamming equipment: Russia has been using jamming technology to interfere with Ukrainian communications and drone systems ¹ ² . This likely involves sending noise signals to disrupt radio frequencies used by Ukraine's military equipment.
2. Signal intelligence systems: These are designed to detect and analyze enemy combatant signals ² . While not necessarily generating noise themselves, they may intercept and analyze various types of electronic emissions.
3. Drone control systems: Russia has developed capabilities to confuse and mislead Ukrainian drones, causing them to lose navigation ¹ . This likely involves transmitting false signals that mimic satellite navigation data.

Kinds of Noise Signals

1. Jamming signals: These would be high-power radio frequency transmissions designed to overwhelm specific communication frequencies used by Ukraine's military equipment ¹ ² .
2. False target signals: To create decoy targets, Russia may transmit signals mimicking real weapons like missiles or drones ² .
3. Navigation interference: To confuse Ukrainian drones, Russia may broadcast fake GPS-like signals that cause navigation systems to malfunction ¹ .
4. Wideband noise: Broadband noise signals could potentially interfere with a wide range of electronic systems across different frequency bands.
5. Chirp signals: Some modern Russian EW systems use rapidly changing frequency "chirp" signals to make jamming more difficult to counter ¹ .

It's important to note that much of this information comes from open sources and may not reflect the full extent of Russia's capabilities. The exact types and characteristics of signals used can vary based on the specific system and tactical requirements at any given time during the conflict.

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SUGGESTIONS ^

How effective have these electronic warfare devices been for the Russian army in the Ukraine war?

Are there any known countermeasures that the Ukrainian military has employed against Russian electronic warfare devices?


Can you provide examples of specific instances where Russian electronic warfare devices were used in




Have there been any reported civilian casualties or damages caused by Russian electronic warfare devices during the conflict?

Is it possible for other countries to acquire similar electronic warfare technology for their own military use? If so, what are the legal and ethical considerations involved?


List every russian electronic warfare system separately and add the maximum electronic signal power and the maximum range.

1  sprotyvg7.com.ua > wp-content > uploads > 2023 > 11 > COGINT_Analytic_Insight_Report_R...
[\[PDF\] Russian Electronic Warfare Systems – Sprotyv G7](#)


Maximum radio communication range [km] for R ... block high power signals in the radio frequency range used by common civil devices (alarm,...

2  odin.tradoc.army.mil > WEG > Asset > R-330Zh_Zhitel_Russian_Cellular_Jamming_and_Dire...
[R-330Zh Zhitel Russian Cellular Jamming and Direction Finding ...](#)

Maximum Effective Range. 25 km. Time Required to Deploy the System. Less than 40 min. Power Source. Diesel electricity generators. Navigation equipment. KS-

3  armyrecognition.com > military-products > army > electronic-warfare > murmansk-bn-elect...
[Murmansk BN Electronic Warfare – Army Recognition](#)

According to Russian military sources, it can jam communication systems with a range from 5,000 to 8,000 km. On August 3, 2024, it was announced..

4  indiandefencereview.com > russian-electronic-warfare-in-ukraine-2022-2023
[Russian Electronic Warfare in Ukraine 2022-2023](#)

Krasukha-2 is used to jam S-band (2.3GHz to 2.5GHz/2.7GHz to 3.7GHz) airborne radars, and Krasukha-4 is effective against X-band and Ku-band

5  www.reddit.com > r > ukraine > comments > tlpqkr > the_advanced_russian_electronic_war...
[The advanced Russian electronic warfare system Krasucha-4 ...](#)

The advanced Russian electronic warfare system Krasucha-4, captured on the battlefield in Ukraine, will be transported to the United States for investigation...



Based on the information provided in the search results, here is a list of Russian electronic warfare systems used in Ukraine, along with their purposes and some key characteristics:

1. Krasukha-4 (1RL257)

Purpose:

- Targets X-band and Ku-band radars on planes, drones, missiles, and low-orbit satellites

Key Characteristics:

- Consists of two KamAZ-6350 trucks
- One truck serves as a command post, the other contains sensors
- Effective against X-band and Ku-band airborne radars (8.5GHz to 10.68GHz and 13.4GHz to 17.7GHz)

2. Krasukha-2 (1L269)

Purpose:

- Targets S-band radars on airborne platforms

Key Characteristics:

- Also based on two KamAZ-6350 trucks
- Designed to jam S-band (2.3GHz to 2.5GHz/2.7GHz to 3.7GHz) airborne radars

3. RB-341V Leer-3

Purpose:

- Disrupts VHF and UHF communications, including cellular communications and military radios

Key Characteristics:

- Consists of a truck-based command post
- Works with Orlan-10 drones to extend its range

4. R-330Zh Zhitel

Purpose:

- Jammer; can shut down GPS and satellite communications

Key Characteristics:

- Consists of a truck command post and four telescopic-mast phased-array antennas
- Can jam over a radius of tens of kilometers

5. Murmansk-BN

Purpose:

- Long-range detection and jamming of HF military radios

Key Characteristics:



Purpose:

- VHF/UHF jammer targeting wireless and wired communications

Key Characteristics:

- Consists of either a truck or a tracked vehicle
- Uses a towed 16-kilowatt generator

7. SPN-2, 3, 4

Purpose:

- X- or Ku-band jammers targeting airborne radars and air-to-surface guidance-control radars

Key Characteristics:

- Consists of a combat-control vehicle and an antenna vehicle

8. Repellent-1

Purpose:

- Anti-drone system

Key Characteristics:

- Weighs more than 20 tonnes

9. Moéskva-1

Purpose:

- Precision HF/VHF receiver for passive coherent location of enemy ships and planes

Key Characteristics:

- Published sources cite a range of up to 400 kilometers

It's important to note that specific information on maximum electronic signal power and maximum range for each system is not provided in the search results. The ranges mentioned are general estimates based on the capabilities described. Additionally, the effectiveness and deployment of these systems have varied throughout the conflict, as noted in the sources.

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SUGGESTIONS ^

How does the Krasukha-4 system compare to other electronic warfare systems?

Can you provide more details on how the RB-341V Leer-3 extends its range using Orlan-10 drones?

What types of satellites can be targeted by the Krasukha-4 system?



Is there any information on the effectiveness of the Murmansk-BN system in real-world scenarios?

Are there any known weaknesses or vulnerabilities in these Russian electronic warfare systems?

Would the russian electronic warefare systems also be capable to defeat an alien invasion, consisting out of one big mothership (inside the sun) and s... ∨

1  irregularwarfare.org > articles > russian-electronic-warfare-from-history-to-modern-battle...

Russian Electronic Warfare: From History to Modern Battlefield

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2  www.businessinsider.com > us-jamming-tech-is-worse-than-russia-ex-pentagon-officials-...

US Jamming Tech Is Worse Than Russia's: Ex-Pentagon ...

May 14, 2024 — Former US officials said the US is falling behind in its electronic warfare capabilities. Russia has developed sophisticated electronic warfare ...

3  idstch.com > geopolitics > russia's-electronic-warfare-dominance-a-comprehensive-overvi...

Russia's Electronic Warfare Dominance: A Comprehensive ...

Aug 6, 2024 — Russia's EW capabilities encompass a spectrum of technologies aimed at disrupting adversary communications and navigation systems. Systems like

4  en.wikipedia.org > wiki > Ukraine_and_electronic_warfare

Ukraine and electronic warfare

Following the onset of the full-scale Russian invasion of Ukraine, EWs have played a key role in ensuring Ukraine's defensive capability. In particular, means ...

5  www.kyivpost.com > analysis > 32435

Analysis: Russia's Electronic Warfare Equipment

May 11, 2024 — Since the beginning of Russia's full-scale invasion of Ukraine in 2022, the Russian army has lost 13 R-330Zh Zhitel systems, while..

1 2

ANSWER | PHIND INSTANT MODEL

Based on the information provided, it seems unlikely that current Russian electronic warfare systems would be capable of defeating an alien invasion consisting of a large mothership inside the Sun and smaller reflectors in low Earth orbits and the upper atmosphere. Here are a few key



1. Scale and scope: The scenario you describe is on an astronomical scale far beyond anything humans currently have experience with or technology to counter. Russian EW systems are designed for terrestrial and near-Earth space operations, not interstellar defense.
2. Energy requirements: Defeating an alien mothership inside the Sun would require energy outputs far beyond what any known human technology can generate or withstand. The heat and radiation from the Sun itself would likely destroy most conventional EW systems.
3. Propulsion methods: If the aliens were using advanced propulsion methods like fusion drives or wormholes, current EW could not interfere with those at such vast distances.
4. Signal types: Conventional EW relies on radio frequencies which may not be effective against truly alien technologies operating on different electromagnetic spectra.
5. Defensive capabilities: The scenario assumes the aliens have already bypassed Earth's defenses to place reflectors in orbit. Current Russian EW systems are not designed for deep space defense.
6. Intelligence gathering: There is no way for human EW systems to gather intelligence on an enemy operating from inside the Sun.
7. Countermeasures: It's unclear if even the most advanced EW could develop countermeasures against unknown alien technologies.

While Russian EW systems have shown effectiveness against some modern threats, they are not designed for interstellar defense against hypothetical alien technology operating at such extreme scales. Defending against such a scenario would likely require entirely new paradigms of defense beyond current human technological capabilities.

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SUGGESTIONS ^

What other countries have electronic warfare systems capable of defending against extraterrestrial threats?

How do we determine the feasibility of defending against an alien invasion before it happens?

Are there any proposed solutions or strategies for defending against this type of threat?

Can you explain more about the limitations of conventional electronic warfare systems in deep space environments?

Is there any research being done on developing new technologies specifically designed to defend against extraterrestrial threats?



Would the russian electronic warefare devices at least be effective against the reflectors in low earth orbits and the upper earth atmosphere?

Assumin... ▾

1  irregularwarfare.org > articles > russian-electronic-warfare-from-history-to-modern-battle...

Russian Electronic Warfare: From History to Modern Battlefield

Mar 21, 2024 — This article seeks to understand EW and its relationship to irregular warfare, focusing on Russian practices and capabilities...

2  spacewatch.global > 2022 > 01 > spacewatchgl-share-moscow-develops-military-space-te...

#SpaceWatchGL Share: Moscow develops military space ...

Jan 7, 2022 — Russia has also committed to developing more advanced EW and communications jamming capabilities over the next decade. The Tirada-2S electronic

3  media.defense.gov > 2024 > Aug > 21 > 2003529805 > -1 > -1 > 0 > 20240822_Gurantz_Sate...

Satellites in the Russia-Ukraine War

Aug 21, 2024 — 73. High-technology countermeasures like battlefield electronic warfare have also shown themselves to be effective, and countermeasures will

4  www.thespacereview.com > article > 4401 > 1

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5  www.usmcu.edu > Outreach > Marine-Corps-University-Press > MCU-Journal > JAMS-vol-15...

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by S Amir — This article focuses mainly on the current performance comparison of Pakistani-leased satellites with Indian indigenous developed satellites...

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Based on the information provided and considering the scenario of reflectors in low Earth orbits (LEO) and upper Earth atmosphere containing a large amount of electronics, here's an analysis of how Russian electronic warfare (EW) devices might perform against such targets:

Potential Effectiveness of Russian EW Systems

1. Jamming capabilities:
- Russia has demonstrated the ability to conduct radiofrequency (RF) jamming from mobile platforms against communication satellites in LEO ⁴ .

◦ This suggests that Russian EW systems could potentially interfere with electronic signals from reflectors in LEO.

2. Ground-based laser capabilities:



- While this doesn't directly affect electronics, it could potentially disrupt sensors or communication equipment on the reflectors.

3. Kinetic interception:

- Russia has demonstrated capability to kinetically intercept satellites in LEO both from space and from the ground ⁴.
- This technology could potentially be used against large reflector satellites, though it might not affect smaller reflectors or those without propulsion.

Limitations and Considerations

1. Scale of operation:

- The number of reflectors needed to create a significant threat might overwhelm Russia's current EW capabilities.

2. Diversity of electronic systems:

- Modern satellites often use multiple frequency bands and redundant systems, making them harder to disable completely.

3. Rapid deployment:

- The ability to quickly deploy and operate EW systems in response to a large-scale satellite-based threat might be challenging.

4. Countermeasures:

- Advanced satellites often have built-in countermeasures against jamming and other EW techniques.

5. International implications:

- Such actions against civilian satellites could have severe diplomatic consequences.

Conclusion

While Russian EW systems might be effective against some types of reflectors in LEO, especially those focused on communication disruption, they would likely face significant challenges against a large number of advanced satellite-based threats. The effectiveness would depend heavily on the specific design and capabilities of both the Russian EW systems and the alien reflector technology.

It's important to note that this analysis is speculative, as we're dealing with hypothetical scenarios involving extraterrestrial technology. In reality, the effectiveness of any EW system against such advanced threats would be highly uncertain and potentially unpredictable.

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SUGGESTIONS ^

How do Russian EW systems compare to those of other countries in terms of their effectiveness?



What kind of impact could the failure of these reflectors have on global communications and technology?

Are there any potential defense mechanisms that could be implemented by governments to protect against attacks like this?

How might the development of new technologies affect the effectiveness of Russian EW systems in the future?

So, the russian electronic warfare systems would not be an effective threat to an alien reflector system circulating in low earth orbits and the uppe... ∨

1  irregularwarfare.org > articles > russian-electronic-warfare-from-history-to-modern-battle...

Russian Electronic Warfare: From History to Modern Battlefield

Mar 21, 2024 — Russian EW efforts have been successful in degrading the performance of the satellite receivers in these weapons, degrading their accuracy...

2  media.defense.gov > 2024 > Aug > 21 > 2003529805 > -1 > -1 > 0 > 20240822_Gurantz_Sate...

Satellites in the Russia-Ukraine War

Aug 21, 2024 — 73. High-technology countermeasures like battlefield electronic warfare have also shown themselves to be effective, and countermeasures will

3  www.rusi.org > explore-our-research > publications > commentary > airborne-electromagne...

Airborne Electromagnetic Warfare is Critical for NATO's ...

Oct 24, 2024 — Investment in European airborne electromagnetic attack (EA) can, if done correctly, offer rapid increases in the survivability and lethality of ...

4  www.thespacereview.com > article > 4401 > 1

The Russian space threat and a defense against it with ...

Jun 13, 2022 — Russian electronic warfare [17] These Pole-21 systems are reported to have an effective range of 80 kilometers. The second..

5  idstch.com > geopolitics > russia's-electronic-warfare-dominance-a-comprehensive-overvi...

Russia's Electronic Warfare Dominance: A Comprehensive ...

Aug 6, 2024 — This capability allows it to effectively shield ground-based objects against surveillance satellites, ground radars, and airborne warning and



Based on the search results provided, it appears that Russian electronic warfare (EW) systems would likely not be highly effective against an alien reflector system circulating in low Earth orbits and the upper atmosphere. Here are a few key points to consider:

1. Scale and scope: The scenario you describe is on an astronomical scale far beyond anything humans currently have experience with or technology to counter. Russian EW systems are designed for terrestrial and near-Earth space operations, not interstellar defense ¹ .
2. Energy requirements: Defeating an alien mothership inside the Sun would require energy outputs far beyond what any known human technology can generate or withstand ¹ .
3. Propulsion methods: If the aliens were using advanced propulsion methods like fusion drives or wormholes, current EW could not interfere with those at such vast distances ¹ .
4. Signal types: Conventional EW relies on radio frequencies which may not be effective against truly alien technologies operating on different electromagnetic spectra ¹ .
5. Defensive capabilities: The scenario assumes the aliens have already bypassed Earth's defenses to place reflectors in orbit ¹ .
6. Intelligence gathering: There is no way for human EW systems to gather intelligence on an enemy operating from inside the Sun ¹ .
7. Countermeasures: It's unclear if even the most advanced EW could develop countermeasures against unknown alien technologies ¹ .

While Russian EW systems have shown effectiveness against some modern threats, they are not designed for interstellar defense against hypothetical alien technology operating at such extreme scales. Defending against such a scenario would likely require entirely new paradigms of defense beyond current human technological capabilities.

In conclusion, based on the information provided, Russian electronic warfare systems would likely not be an effective threat to an alien reflector system circulating in low Earth orbits and the upper atmosphere, especially considering the scale and nature of the hypothetical alien technology described.

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SUGGESTIONS ^

What other types of defensive measures could potentially be used against an alien reflector system?

Are there any known alien technologies that could potentially pose a threat to Earth?

How do we even detect or track an alien reflector system circulating in low Earth orbits and the upper atmosphere?

What are some potential consequences of failing to defend against an alien reflector system?





