



Electronic warfare

Electronic warfare (EW) is any action involving the use of the electromagnetic spectrum or directed energy to control the spectrum, attack of an enemy, or impede enemy assaults via the spectrum. We will learn some facts about Electronic attack and protection, and then will find out some facts about Electronic warfare support and confrontation between Russia and the USA in this direction.

Electronic attack

Electronic attack (EA) (previously known as Electronic Counter Measures (ECM)) involves the use of EM energy, directed energy, or anti-radiation weapons to attack personnel, facilities, or equipment with the intent of degrading, neutralizing, or destroying enemy combat capability including human life. In the case of EM energy, this action is referred to as jamming and can be performed on communications systems or radar systems.



РБ-531Б Infauna

Electronic protection

Electronic Protection (EP) (previously known as electronic protective measures (EPM) or electronic counter countermeasures (ECCM)) involves actions taken to protect personnel, facilities, and equipment from any effects of friendly or enemy use of the electromagnetic spectrum that degrade, neutralize, or destroy friendly combat capability. Jamming is not part of EP, it is an EA measure.



Mi-8MTPR-1 EW helicopter

The purpose of Electronic Warfare support.

The purpose of ES tasking is immediate threat recognition, targeting, planning and conduct of future operations, and other tactical actions such as threat avoidance and homing. However, the same assets and resources that are tasked with ES can simultaneously collect intelligence that meets other collection requirements. These activities are under the control of an operational commander and being applied for the purpose of situational awareness, threat recognition, or EM targeting, they also serve the purpose of Electronic Warfare surveillance (ES).



1RL257E Krasukha-4

Russia is the best in the field of electronic warfare nowadays.

Developing and adopting such a number of variety of electronic warfare systems does not Bode well for American and NATO military, which for several years have expressed concern about the success of Russian. In 2016, air force General Breedlove, the U.S. acknowledged that the Pentagon in the last two decades have neglected the REB, thanks to which the Kremlin has achieved advantages in this area. The commander of US ground forces in Europe Lieutenant General Ben Hodges (Ben Hodges) said that the success of the Russian radio-electronic warfare in Syria "incredible." In 2015, when Russia stepped up its military activities in Syria, Lieutenant General Edward Cardon (Cardon Edward) said that the United States is "not moving forward (in the development of EW) at a fairly rapid pace, as required by emerging threats". In the same year the American military became clear that Russia through its investment in electronic warfare could surpass what is available in the West.

Symbol of electronic warfare and It's main leader



Flag of REB



General-major Yuri Lastochkin – Chief of the electronic warfare.

The interest of America and further confrontation

But in 2017, the U.S. military began to make efforts to ensure that U.S. forces receive the necessary equipment and capabilities to counter Russian advances. The Ministry of defence now considering the question of how to allocate the electromagnetic spectrum in a separate sphere of warfare like air, sea and land. Ground forces require their drones, long-range one and all were equipped with electronic warfare. It should be noted that one of the achievements of the Russian developers was the creation of multifunctional unmanned complex medium-range "Orlan-10", included in the complex EW "Leer-3" and provides suppression of cellular communication. There is no doubt that the United States is closely monitoring this system as it is in the East of Ukraine and in Syria . After running their Russian electronic warfare in Syria and their possible application in Ukraine, Western observers got another chance to see what might encounter their military exercises "West-2017".

Complex EW "Leer-3"



Conclusion

I think, less than 10 years the USA will run the program for the armed forces electronic warfare systems. That is why Russia needs to develop something new in this direction and to try to retain her leadership!



© Vitaly V. Kuzmin

MKTK-1A Judoist ECM vehicle

СПАСИБО ЗА ВНИМАНИЕ,
Thank you for Attention!