



Russia's A-50U Long-Range Radar Detection Aircraft

OE Watch Commentary: The accompanying excerpted article from the 18 May edition of *Izvestia* discusses the capabilities of Russia's A-50U long-range radar detection (DRLO) aircraft. The first A-50U entered service in 2011. Since that time six 'flying radars' have undergone modernization. (There are 22 of the older A-50M reportedly still in service.)

After upgrading the A-50M to the A-50U standard, the aircraft is reportedly better able to detect, track, and identify air, large ground and naval targets, and transmit their information to command centers. The A-50U is also able to independently guide fighters to air targets, and operational-tactical aircraft to ground and naval targets. The system has an advertised 650km detection range for large air targets, such as bombers, a 300km range for the detection of ground targets, and a 215km range for the detection of low flying cruise missiles.



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A-50 Long-Range Radar Detection Aircraft.

Source: Vitaly Kuzmin, <https://www.vitalykuzmin.net/Military/100th-Anniversary-of-RuAF/i-tF89vtq#>, CC BY-NC-ND 4.0

Since April 2017, one or two A-50Us have been stationed at the Khmeymim Airbase. An A-50U reportedly tracked the 14 April 2018 cruise missile strike conducted by France, Great Britain, and the United States, on Syria. Russian media stated that the A-50U was capable of tracking the US's AGM-158B Joint Air-to-Surface Standoff Missile-Extended Range (JASSM-ER) cruise missiles. The accompanying excerpted article from the 3 May edition of *Izvestia* explains how an A-50U was employed by the Baltic Fleet to coordinate operations. **End OE Watch Commentary (Bartles)**

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Continued: Russia's A-50U Long-Range Radar Detection Aircraft



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Source: Vitaly Kuzmin, <https://www.vitalykuzmin.net/Military/100th-Anniversary-of-RuAF/i-pfBsLzj#>, CC BY-NC-ND 4.0

Source: Anton Lavrov and Bogdan Stepovoy, “Засветились на радаре: ВКС получают новую технику для обнаружения ракет (They Show Up on the Radar: Aerospace Forces Will Acquire New Equipment for Detecting Missiles),” *Izvestia Online*, 18 May 2020. <https://iz.ru/1012605/anton-lavrov-bogdan-stepovoi/zasvetilis-na-radare-vks-poluchat-novuiu-tekhniku-dlia-obnaruzheniia-raket>

Next year Russian Aerospace Forces will receive two unique “flying radars.” This is the nickname the troops have given to the A-50U long-range radar detection (DRLO) aircraft. Craft of this type have already performed excellently in Syria, but changes will be introduced in their equipment for the domestic army. The radar will be upgraded, as will the command and control and communications systems. In the opinion of experts, as a result this equipment will become especially effective for tracking cruise missiles and for directing fighters.

Two modernized A-50U “flying radars” will join Russia’s Aerospace Forces before the end of 2021, sources in the defense industrial complex told “Izvestiya.” The capabilities of these aircraft will substantially increase in comparison with their predecessors...The modernization of the long-range radar detection and guidance (DRLO) aircraft will be conducted at the Taganrog Aviation Science and Engineering Complex imeni G.M. Beriyeve. The cost of the work on each of them will be more than 600 million rubles. As indicated by their specifications (which “Izvestiya” has in its possession), the main attention will be devoted to the radar section.

The A-50 can operate in the air for an extensive period, without entering the zone of responsibility of the enemy’s air defenses, “Izvestiya” was told by Reserve Lieutenant-General Aytech Bizhev, former Air Force Deputy Commander in Chief for the Unified Air Defense System for CIS Countries.

“During modernization the resistance of the craft to jamming generated by electronic warfare devices must be strengthened. And the number of enemy aerial objects tracked will be increased,” the expert believes. “DRLO aircraft are especially effective while interacting with MiG-31 fighters. As a rule, the A-50 interacts with a regiment of such interceptors, which allows large regions to be quickly ‘closed’ to the enemy. It is important that its radars can fix the locations of enemy cruise missiles earlier and more effectively than ground radars. The cruise missiles are easily visible from above against the background of the land and during flight they cannot hide behind terrain features.”

“After detecting the enemy, the A-50 will allocate the targets in real time to both aircraft, as well as ground air defense assets. The MiG-31s, which often interact with these airborne radars, were especially developed to repel both attacks of cruise missile and the United States tactical bombers that carry them,” stressed Aytech Bizhev.

The DRLO aircraft is a flying command post and powerful radar providing target detection and designation, explained Hero of Russia, Lieutenant-General Valeriy Gorbenko, former Commander of the 4th Air Force and Air Defense Army. “From on board the A-50U the repelling of any air attack can be commanded,” the specialist stated to “Izvestiya.” “The craft ensures a detection range at a greater distance than that provided by ground-based radar stations, allowing a timely reaction to the threat. Operators located in the cabin follow the air situation and transmit information to ground command posts and to fighter interceptors in real time...”



Continued: Russia's A-50U Long-Range Radar Detection Aircraft

Source: Dmitriy Boltenkov and Roman Kretsul, Балтийская крепость: что показали маневры в Калининградской области (Baltic Fortress: What Maneuvers in the Kaliningrad Region Showed)," *Izvestia Online*, 3 May 2020. <https://iz.ru/1006630/dmitrii-boltenkov-roman-kretcul/baltiiskaia-krepost-chto-pokazali-manevry-v-kaliningradskoi-oblasti>

The Baltic Exclave - is the country's most vulnerable region since it has no land ties either with Russia or with allied Belarus. The experience of contemporary military conflicts shows that much is decided in the initial period - the first two to three days. It is precisely they that also determine the further course of combat operations.

Therefore, the primary mission for the Baltic Fleet- is to prevent the enemy from conducting massive missile-aircraft strikes against its facilities and the infrastructure of Kaliningrad Oblast. It also needs to manage to lay minefields to counter an enemy amphibious operation and to organize a land defense. All of these actions were rehearsed during the course of the exercises that were conducted in the last 10 days of April. The A-50U Early Radar Warning Aircraft "Sergey Atayants" flew in to command and control the air forces and Air Defense in Kaliningrad Oblast. Those unique aircraft - are rare guests in the sky over the Baltic.

Under the command and control of the A-50U, the Su-30SM and Su-24M strike aircraft conducted a series of flights, during the course of which they refined the conduct of strikes against airborne and coastal targets. Combat helicopters, among which were Ka-29s, which recently arrived in the Fleet, also accomplished a broad range of combat missions. And two Tu-160 strategic missile aircraft became involved in the maneuvers over the Baltic Sea on 29 April. In general, those major exercise became the first in the history of the recently created Kaliningrad 132nd Composite Aviation Division.

The large-scale aerial maneuvers attracted the attention of the NATO countries' military personnel. In particular, Belgian fighter aircraft "intercepted" the A-50U. They escorted the Tu-160s and some other of our aircraft on various sectors of the routes. The Russian pilots gave as good as they got - Su-27s "intercepted" a Swedish reconnaissance aircraft and also the unduly aggressive Belgian F-16s.

On the whole, Kaliningrad Oblast is adequately saturated with air defense systems, beginning from S-400 long-range complexes and ending with ship systems. While taking into account the proximity of Baltiysk Naval Base to the NATO countries' borders, the PVO crews will not have time to build up in the event of the initiation of combat operations. This is precisely why the ship PVO systems have been included in the region's defense loop...

Compendium of Central Asian Military and Security Activity

By Matthew Stein

Since Central Asian states gained independence in 1991, new regional military and security alliances have been created (some of which are Russian-led), new military partnerships with non-NATO countries have been established, a number of joint military exercises have been conducted, over a dozen high-profile incidents of violence and civil unrest have taken place, and military installations have been used by foreign militaries. While this activity gained attention, it has not been collectively compiled. A compilation of this activity can serve as a guide for current and future military and security involvement in Central Asia.

<https://community.apan.org/wg/tradoc-g2/fmso/m/fmso-monographs/194880>

