

The Russian Ground Forces' New Command-and-Control Vehicles

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OE Watch Commentary

The accompanying excerpted articles from *Armystandart.ru*, a Russian website featuring military news, describe the Russian Ground Forces' new command-and-control vehicles for the battalion and brigade/division. The R-149MA1 command-staff vehicle is for the battalion staff, having 2 crewman and 4 workstations. The APE-5 mobile command post vehicle is for brigade or division staffs, having three crewman and 9-11 workstations supporting up to 18 staff members. Aside from describing the improved capabilities of these systems from their predecessors, the articles are also interesting because they describe the number of staff members in a motorized rifle battalion or brigade/division, making it apparent that these staffs are far smaller than the staffs of their U.S./NATO equivalents.



R-149MA1 Command-Staff Vehicle.

Source: Vitaly Kuzmin, <https://photos.smugmug.com/Military/Engineering-Technologies-2012/i-qzsv2MC/0/61b5e97e/X3/TVM2012ch2p4photo039-X3.jpg> Attribution: CC BY 4.0

“Compared to earlier (non-automated) systems, the use of the standardized R-149MA1 command-staff vehicle as a component of a tactical level automated troop command and control system reduces the troop and weapons command and control cycle time by three-fold, and it provides a five-fold improvement in the relevance of enemy information. In general, it takes no more than 10 minutes to collect data and plot it on a map, while setting up combat missions for subordinates to commanders takes up to 5 minutes.”

Source: Peter Nikolaev, “Компьютер, карта, решение: Управление боем в тактическом звене вышло на новый уровень с современными мобильными (КП А Computer, a Map, and a Decision: Tactical Combat Command and Control Reaches New Level with Modern Mobile Command Posts),” *Armystandart.ru* (Russian website featuring military news), 18 June 2021.
<https://armystandart.ru/news/2021617935-kXQ2B.html>

The following stereotype has evolved over many decades: the commander of a company, battalion, or occasionally a regiment, is directing the battle next to a radio operator with a portable radio. What has changed today? Today the main role in providing command and control of combat operations at the tactical level is played by modern command-staff vehicles. They were used in the past, but their present kit (and consequently their capabilities) have fundamentally changed. This fully applies to the R-149MA1 standardized command staff vehicle. In recent years this system has been sent to the troops.

In essence, this is an advanced command post, which was developed as part of the fulfillment of an edict of the President of the Russian Federation to create a unified, tactical level command and control system (ESUTZ) [единая система управления тактического звена (ECYT3)] for Russia's Armed Forces.

The equipment of the R-149MA1 allows the military situation to be rapidly updated on electronic maps that annotate the locations of one's own subordinate units and those of [known] enemy forces into consideration. With its support, one can produce essential calculations and establish missions for subordinates in extremely short periods of time.

The R-149MA1 is mainly used at the battalion-level, as an element of the unified tactical level command and control system, this command-staff vehicle communicates with higher headquarters (regiment and brigade), and subordinate units (companies and platoons)...It has a six-man crew with four automated work stations.

The standardized R-149MA1 command staff vehicle is equipped with the following VHF radio stations: R-168-100UE-2, R-168-5UNE-2, R-168-0.1U(M)IE and the “Prima-DMV.” It also has two HF radios, the R-168-100KBE and the “Prima-KV.” This equipment allows operational and command communications to be provided to up to 25 kilometers in the VHF range while in motion and up to 55 kilometers while stationary. If it is needed to “reach” further, the HF radio stations are used to communicate up to 50 kilometers while in motion and up to 350 kilometers while stationary (using masts). Moreover, the reception and transmission of secure data is provided over cable and VHF/HF radio channels using a speech and data encryption device.

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APE-5 Mobile Command Post.

Source: Vitaly Kuzmin, <https://photos.smugmug.com/Military/ARMY-2020-Static-part-3/i-PpRmrJF/0/2524cb95/X3/Army2020-Static-Part3-017-X3.jpg> Attribution: CC BY 4.0

“the APE-5 [mobile command post] substantially increases the effectiveness of the work of the command staff in field conditions. As a rule, the chief of staff, deputy commanders, and the chiefs of other troops and services are in a brigade or division command and control post. There is the capability to work on the move - the process is not interrupted, which is especially important in conditions of a rapidly changing tactical situation and the receipt of reconnaissance data.”

Source: Peter Nikolaev, Слышит, видит, управляет! Автоматизированные подвижные пункты управления АПЕ-5 выводят на новый уровень работу КП в полевых условиях Hears, See, Controls! The APE-5 Automated Mobile Command Post Raises Work of the Command Post to a New Level, *Armystandard.ru* (Russian website featuring military news), 12 February 2021.

<https://armystandard.ru/news/2021211943-1GHk6.html>

Fixed command and control posts, from the separate unit [отдельной части] through the 'brigade-division' echelon - are one of the adversary's main targets for reconnaissance and strikes. Camouflage and the latest electronic warfare systems only partially provide defense and, in the event of a threat, the command and control post must immediately change its position

Hence the State Order from the RF Ministry of Defense, which one can briefly word as follows: Develop and set up the production and deliveries of automated mobile units (APE) [автоматизированных подвижных единиц (АПЕ)] for field mobile command and control posts to the Armed Forces, beginning from the tactical level to the operational-strategic level...

The Western and Southern Military District troops received 64 sets of APE complexes in 2018 and deliveries have continued within the State Defense Order. The designers and manufacturing personnel took into account the comments and desires expressed in the APE-5 complexes, which are arriving in the Armed Forces right now...It is particularly important that it has the technical capability to redeploy the APE-5 long distances via rail, military transport aviation aircraft, and landing ships. The complex's deployment while bringing it up to the full operating state takes half an hour and tear down - 15 minutes. For comparison: previously, twice as much time went for deployment and tear down.

What about the "internals"? The APE-5 accommodates 9-11 automated workstations, which are connected to a single local area network and that provide the command and control of subordinate formations, units, and subunits, including via a secure communications channel in the videoconference mode. The complex is equipped with GLONASS satellite navigation equipment and cartographic information processing hardware.

The information that arrives via secure channels is collected, processed, and disseminated as soon as possible, and the software permits the automation of the accomplishment of a series of tasks and to conduct the needed calculations and modeling of the situation in the process of the accomplishment of current orders. The documents, maps, and photo images - one can send all of this to higher headquarters or to subordinate units and subunits in a matter of minutes. The data transmission speed via satellite communications is up to 10 Megabits per second. The HF radio supports communications with 300 subscribers in a radius of up to 30 kilometers.

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