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# MILITARY COMMUNICATION SYSTEMS

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**Annotation**

This article discusses the types of military communication systems, how they are used, the role of communication technologies in the field of defense, communication security.

**Keywords:** Military, types, communication, system, management, field, training, exercise, technology, information, technique, weapons, force, army, Uzbekistan, maximum

Military communications have traversed a complex historical path, from the simplest audio and visual means of transmitting signal and combat control commands to multi-band automated systems that provide almost unlimited communication with stationary and mobile objects in real time. Today, combat operations require: effective management of troops and weapons, the use of modern weapons and weapon systems, military and special equipment. One of the priorities in the field of military communications is the creation and deployment of a single automated digital communication system.

At the same time, the communication system, built on the basis of the latest achievements of the Armed Forces of the Republic of Uzbekistan in the field of information systems and telecommunications technologies, plays an important role in improving its efficiency. Use troops and maximize the combat potential of weapons.

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An analysis of the wars and military conflicts of our time shows that the opposing parties are widely and urgently applying promising changes in the field of armaments. The role of information, telecommunications and automated systems in the modern war is growing, and the forms and methods of using them to win are constantly being improved. This strengthens the requirements for the communication system. In modern conditions, the role of the communication system in the management of operations, troops and force groups is growing significantly. It is a communication system that ensures the exchange of information in the control system, and it is designed to respond quickly to changes in the situation, to dynamically change its structure, to improve construction methods and operating modes.

According to leading experts, the contribution of the communications system to increasing the efficiency of the use of troops (forces) and weapons can be compared with a significant increase in the number of combat assets or an increase in their combat capability. Therefore, further development of the system and communications forces is one of the priorities in increasing the combat potential and capabilities of the Armed Forces of the Republic of Uzbekistan. One of the priorities in the field of military communications is the creation and deployment of a single automated digital communication system of the Armed Forces of the Republic of Uzbekistan based on the latest local developments in the field of modernity. Digital means of satellite, radio, radio relay and troposphere communications, as well as digital transmission systems, information using optical fiber technology. Special attention is paid to the operation of the communication system of the Armed Forces of the Republic of Uzbekistan, the establishment of common principles of its security and safety. Elements of an automated communication management system are being developed for checkpoints at all levels.

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The introduction of new types of communication services requires a radically different approach to building a communication system. Within the framework of research work carried out by the research organizations of the Ministry of Defense, the principles of using advanced communication systems, prototypes of military communication equipment using wireless broadband communication technologies, radio communication software, and communication system resources for mobile communication subscribers have been introduced. One of the most important and fast-growing types of communication in recent years is satellite communication. The potential capabilities of military satellite systems, which have a number of important advantages, allow broadcasting, high reliability and quality of communication channels, independence from distance and physical geographical conditions, high speed and reliable communication for subscribers.

At the same time, radio communications play a key role in ensuring the command and control of units on the battlefield. Firstly, we are talking about 6th generation radio stations, which allow the construction of cognitive radio communication networks in a network width, including in an organized and unintentional interference environment. These products allow for “all-in-one” automatic and automated communication for all types and modes of warfare. In addition, they have a multi-band automatic re-transmission mode, which allows the units to organize radio communication on long-distance lines in mountainous and middle areas, without the use of additional equipment.

In fact, the armies are encompassing modern complexes of field call centers and mobile command posts that provide a variety of quality communication services to the command post officials. These services include, for example, video conferencing, data transmission, e-mail and file sharing, teamwork with graphic data, open and secure telephony, information services, and more. At the same time, they are able to exchange information both independently and as part of a telecommunication node, which allows them to expand its structure for the tasks to be solved.

Universal wear kits for military personnel and intelligence, command and communication systems have been developed and delivered to the troops for the operation of a single control cycle from communications to firefighting equipment. The means of communication they contain have small masses and dimensions and provide speech and data transmission under the influence of the suppression of enemy radio. It combines the functions of command and control, communication, intelligence, electronic warfare, navigation, identification and provides maximum

efficiency in the management of military structures, ensuring the creation of a single command and control system for troops and weapons.

The functional capabilities of systems, complexes and means of communication are significantly expanding, which increases the requirements for their reliability, design and production quality. Domestic and foreign experience shows that the basis for ensuring quality and reliability is a well-organized multi-level complex of facilities and means of communication to verify compliance with the requirements set out in regulatory documents. There are several types of communication.

Fixed Communication System. It is pre-equipped and designed to provide the following. Transmitting (receiving) signals, commands, orders and commands of the combat command to ensure their control in the territory of the troops (headquarters) in peacetime and wartime; to report on the training of troops; commanding troops to repel an enemy attack; used to guide mobilization. Depending on the level of protection against weapons of mass destruction, the communication system can be protected or unprotected.

Unprotected Communication System. They are equipped in above-ground buildings (rooms). They must have reliable lines of communication with the secure communication system and ensure the rapid transfer of all communications to the secure communication systems. An example of a stationary communication system is garrison communication nodes - GIS. Mobile communication nodes are equipped with a mobile vehicle and are designed to provide control during combat operations, the movement of control points and the deployment of communication systems. In peacetime, they are used for field and training exercises. The mobile communication system is divided into field, air and rail communication systems.

Field Communication System. They are equipped in cars, Armored personnel carriers, trailers, containers and serve to establish communication at field control points. The on-board communication system is equipped with aircraft and helicopters and serves to enhance the stability and continuity of the command of the troops. They can be on duty on the ground or in the air. The continuity and stability of communication from the air control point is ensured by air (aircraft, helicopter) and ground communication point (gateway).

Railway Communication System. They are equipped with wagons and are used as an auxiliary or backup communication system at the highest levels of management. According to the involvement of the Armed Forces in the command units, the communication systems are divided into: General Staff General Communication System, Military District Staff Communication System, Air Defense

and Air Force Communication Nodes, Brigade and Battalion Headquarters communication systems. According to the function of the control communication system, communication systems are divided into: control point communication system, backbone communication system (base and auxiliary communication networks) and special communication nodes. The control point is an element of the communication network and the governing body (headquarters) of the communication network, which serves to exchange and communicate all kinds of information in the process of commanding the troops.

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