

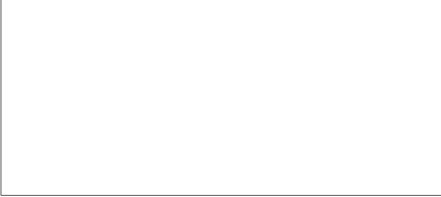


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The Role of the Soviet Deputy Minister of Defense for Armaments



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A Research Paper

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The Role of the Soviet Deputy Minister of Defense for Armaments



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A Research Paper

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This paper was written by [redacted] Office of Soviet Analysis, with contributions by [redacted] SOVA. Comments and queries are welcome and may be directed to the Chief, Defense Industries Division, SOVA [redacted]

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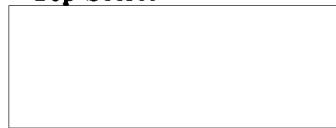


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The Role of the Soviet Deputy Minister of Defense for Armaments 

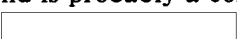
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Summary


Information available as of 1 March 1984 was used in this report.

The Deputy Minister of Defense for Armaments is the central authority in the Soviet Ministry of Defense (MOD) for supplying the Soviet Armed Forces and security troops with armaments and related equipment. He coordinates the planning, development, production, testing, supply, storage, and repair of all armaments and related equipment deployed with Soviet troops. To carry out this mission, the Deputy Minister oversees a number of main and central armaments directorates, each concerned with a different type of weapon system or component. He also works with the deputy commanders in chief for armaments of the branches of service who oversee the armaments personnel in the field. The current Deputy Minister of Defense for Armaments is Army Gen. Vitaliy Shabanov, a former radioelectronics industry expert who has been Deputy Minister of Defense since 1978. 

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As one of the best informed persons on military equipment in the USSR, the armaments chief is an important adviser on arms control issues. His office is represented at arms control negotiations and is probably responsible for keeping chief Soviet arms control decision makers aware of technical issues involved. As the main procurement coordinator for Soviet arms and equipment, the armaments chief is closely tied to both military and industrial interests and is probably a conservative force in major arms control negotiations. 

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The deputy minister is also key in the Soviet bureaucracy for the acquisition of weapons-related technology from abroad. He or his representatives help assess the value of the various foreign weapon designs or production technologies collected and make recommendations on their incorporation into Soviet designs or production processes. Other activities in which the armaments chief is involved include coordination of weapons acquisition in the Warsaw Pact alliance and arrangement of foreign sales. 

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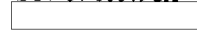
Centralizing the authority and responsibility for armaments in one individual provides a number of advantages to the Soviets. As the focal point in Soviet arms procurement, the Deputy Minister of Defense for Armaments helps the Minister of Defense to:

- Conserve scarce resources through coordination of weapons development programs.
- Coordinate military doctrine and armaments technology.



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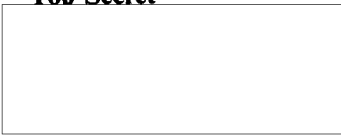


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- Standardize weapons and equipment across branches of services and throughout the Warsaw Pact.
- Raise—through training and propaganda—the level of technical knowledge and, thus, combat readiness in the Armed Forces.
- Assess the potential military threat to the USSR posed by new and developing foreign weapon systems.



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The Role of the Soviet Deputy Minister of Defense for Armaments [Redacted]

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Introduction

Marshal Kulikov wrote in 1975 that "people and armaments¹ are the two main components of the Armed Forces." As the primary representative of the Minister of Defense (MOD) in the field of armaments, the Deputy Minister of Defense for Armaments coordinates all aspects of the planning, procurement, supply, and repair of armaments and related equipment of the Soviet Armed Forces. [Redacted]

Information on the activities of the office of the Deputy Minister of Defense for Armaments is difficult to obtain. Much of the analysis contained in this report, therefore, has been derived by piecing together occasional references in open source materials and combining these with insights obtained from classified data. Analogies to similar organizations, such as the MOD Rear Services or Warsaw Pact armaments procurement structures, have also played a key role in this analysis. [Redacted]

Evolution of the Armaments Position

The position of the deputy minister of defense for armaments dates back to 18 November 1929, when Ieronim P. Ubovich was appointed the first Chief of Weapons of the Red Army (Raboche-Krest'yanskaya Krasnaya Armiya, or RKKA). At that time, the Soviets were reestablishing the Armed Forces and were planning the production of military equipment under the First Five-Year Plan. A June 1982 article in the Soviet *Military Historical Journal* described the Red Army chief of weapons as having responsibility and leadership over all questions of artillery, chemical warfare, and chemical support. He supervised all weapons matters for the Air Forces and the

¹ According to the *Soviet Military Encyclopedia*, the term "armaments" (*vooruzheniye*) includes weapons and related equipment of all types as well as the means of their introduction, establishment, and control within the units of the Armed Forces. [Redacted]

motorized-mechanized troops and performed inspector functions for the Navy. The new chief of weapons was also in charge of the central artillery, chemical, and military-technical directorates as well as the Military Scientific Research Committee of the Revolutionary Military Council (Revvoyensovet).² [Redacted]

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In the middle and late 1930s, increasing demands were placed upon Soviet weapons acquisition as the civil war began in Spain and as German military power grew. Ostensibly in search of greater effectiveness (although more likely because of Stalin's plan to purge his officer corps), a major reorganization of the Soviet Armed Forces took place in April 1936. The position of chief of weapons (held since 1931 by Marshal Mikhail N. Tukhachevskiy) was abolished and the functions assigned to other Red Army components, such as the newly created General Staff. During World War II the provision of armaments to the front temporarily became a task of the Rear Services. [Redacted]

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After the war, the Soviets reorganized their military structure to take account of the lessons learned in combat. To monitor the reconstruction of the defense industrial base and to oversee the creation of such bases in Eastern Europe, the post of deputy minister of defense for armaments was recreated in 1948 and assigned to Marshal of Artillery Nikolay D. Yakovlev, previously head of the Main Artillery Directorate (*Glavnoye Artilleriskoye Upravleniye*, or GAU).³ Soviet accounts of World War II indicate that Yakovlev's ability to procure and supply artillery equipment and ammunition had impressed both Stalin and Marshal Zhukov during and after the war. [Redacted]

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The early 1950s marked the beginning of a tremendous drive in Soviet science and technology. Mitrofan I. Nedelin, head of GAU during 1948-50, became

² The Revvoyensovet is one of the organizational antecedents to the Soviet Ministry of Defense Collegium. [Redacted]

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³ For more information on GAU and other early weapons procurement agencies, see appendix. [Redacted]

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Deputy War Minister for Armaments in 1952. Nedelin played a leading role in the development of nuclear and rocket technologies. Shortly after Stalin's death in March 1953 (while Soviet strategic doctrine was in flux), Nedelin was transferred to a command position in artillery; but in 1955, as Khrushchev began to consolidate power, Nedelin once again became Deputy Minister of Defense for Armaments. After the creation of the Strategic Rocket Forces (SRF) in 1959, Nedelin served concurrently as SRF Commander in Chief (CinC). Nedelin's armaments position appears to have been temporarily left vacant after his accidental death in 1960. [redacted]

In addition to the armaments post, there also has existed at times the position of Deputy Minister of Defense for Radioelectronics. The first public identification of this position was the appointment of Admiral Engineer Aksel' I. Berg in September 1953. We do not know the exact functions of this position, but the *Soviet Military Encyclopedia* credits Berg with "great service in outfitting ships of the Soviet Navy with the latest radio apparatus and in the development of radar equipment for the USSR." Berg was replaced in 1956 by Col. Gen. A. V. Gerasimov. [redacted]

In 1964 the position of Deputy Minister of Defense for Radioelectronics was abolished. Gerasimov became Deputy Chief of the General Staff for Armaments and apparently assumed both radioelectronics and armaments responsibilities. At this point it appears that all central direction in the field of armaments was absorbed into the General Staff and that procurement for the individual service branches may have been accomplished by organizations directly subordinate to the branches themselves. [redacted]

Col. Gen. (later Marshal of Signal Troops) Nikolay N. Alekseyev was named Deputy Minister of Defense for Armaments in 1970. During World War II he had been chief of a department of the Main Artillery Directorate, and he served as chief of the Scientific Technical Committee of the General Staff from 1960

to 1970. His appointment reestablished the position of armaments chief and seems to have marked a major reorganization of the defense procurement apparatus. At this point, responsibility for the coordinating of weapons procurement appears to have been largely removed from the services and again centralized at the MOD level. [redacted]

The current Deputy Minister of Defense for Armaments, Army Gen. Vitaliy M. Shabanov, was formerly a Deputy Minister of the Radio Industry. Ustinov's choice of a radioelectronics industry expert probably reflects the need to fill this position with someone knowledgeable in the bureaucratic politics and industrial processes of defense production. Shabanov's appointment probably also illustrates the increasing importance of radioelectronics in modern Soviet weaponry. Furthermore, Shabanov's election to full membership on the CPSU Central Committee in June 1983, an honor not accorded his predecessor, is probably an indication of the growing perception on the part of the Soviet leadership of the need for better coordination of defense acquisition. His election to the Central Committee is part of a policy commenced under Brezhnev of granting political prestige to those involved in weapons production. [redacted]

Structure and Missions

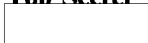
As Deputy Minister of Defense for Armaments, Shabanov serves as a member of the MOD collegium, a consultative body composed of the first deputy and deputy defense ministers that advises the Minister of Defense. As the focal point for all weapons procurement matters, Shabanov also works frequently with [redacted]

* Procurement directorates previously subordinate to the General Staff (such as the 4th, 5th, and 12th Main Directorates) were placed directly under Alekseyev. It is unclear whether armaments directorates subordinate to the services were also placed immediately under the supervision of the Deputy Minister. Nevertheless, responsibility for coordinating the work of all the armaments directorates was entrusted to him at that time. For further discussion of subordination, see appendix. [redacted]

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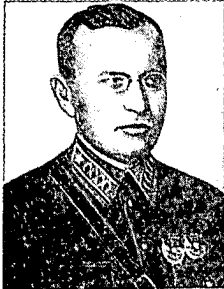
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Soviet Armaments Chiefs



Ieronim Petrovich Uborevich. Chief of Armaments of the Workers and Peasants Red Army, 1929-31



Aleksandr Ivanovich Berg. Deputy Minister of Defense for Radioelectronics, 1953-56



Mikhail Nikolayevich Tukhachevskiy. Chief of Armaments of the Workers and Peasants Red Army, 1931-36



Anton Vladimovich Gerasimov. Deputy Minister of Defense for Radioelectronics, 1957-64, then 1st Deputy Chief of the General Staff for Armaments, 1964-70



Nikolay Dmitriyevich Yakovlev. Deputy Minister of Defense for Armaments, 1948-52



Nikolay Nikolayevich Alekseyev. Deputy Minister of Defense for Armaments, 1970-80



Mitrofan Ivanovich Nedelin. Deputy Minister of Defense for Armaments, 1952-53, 1955-60

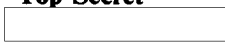


Vitaliy Mikhaylovich Shabanov. Deputy Minister of Defense for Armaments, 1980-present



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Vitaliy Shabanov



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Vitaliy Shabanov came to his post without a career military background and is the only Deputy Minister of Defense for Armaments not appointed to his position directly from another military slot. Shabanov served in World War II, and later he worked in the Scientific Research Institute of the Air Force as a tester of aviation equipment. From 1949 to 1974 he held various positions in the radio industry, including that of general director of a scientific production association (1972-74). In 1974 Shabanov became

Deputy Minister of the Radio Industry. The first identification of his MOD appointment came in an article published on 19 September 1978 in Krasnaya Zvezda, which identified him as a deputy minister of defense. [redacted]

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Shabanov's exact responsibilities at the time of his appointment are unclear, because Alekseyev was still officially the deputy for armaments. Some Western analysts hypothesized, on the basis of Shabanov's background, that he was filling the reestablished role of Deputy Minister of Defense for Radioelectronics. It was not until after Alekseyev's death in 1980 that Shabanov was identified for the first time as Deputy Minister of Defense for Armaments. A Soviet SALT delegate noted in 1981 that Shabanov had been promoted to army general at the time of his MOD appointment and said that Shabanov was then sitting in two deputy minister chairs, one was Alekseyev's old post related to armaments and the other was his earlier deputy job, which, among other things, included space systems. It is possible, however, that Shabanov and Alekseyev were sharing the same position, because of increased demands on the position—given the invasion of Afghanistan—and Alekseyev's poor health. This is supported by the fact that no other successor to Alekseyev has been identified since his death. [redacted]

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the ministers and representatives of the defense industries, officials of the Military-Industrial Commission (VPK), and high-level officials of the State Committee for Foreign Economic Assistance (GKES) [redacted]

Shabanov and his staff are based in Moscow, where they coordinate an extensive apparatus for weapons procurement. This centralized apparatus includes several MOD-level organizations as well as a large number of armaments supply depots, repair facilities, and other MOD enterprises designated to provide technical and armaments support to the branches of the armed forces. [redacted]

The armaments chief controls a number of MOD-level main and central armaments directorates⁵ that monitor research and development (R&D), production, storage, supply, and repair of specific types of

[redacted] there are counterparts to the central-level weapons procurement organizations within some of the branches of service as well. These counterparts include the 5th Directorates of the Navy and the Air Forces and the Mine/Torpedo Directorate and Rocket/Artillery Directorates of the Navy. With the exception of the Naval Mine/Torpedo Directorate, whose product is applicable only to the Navy, these service-level counterparts probably work with the MOD-level main and central directorates to procure equipment required exclusively by that service. [redacted]

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equipment for the armed forces. (For further information on the different directorates, see appendix.) A deputy to the armaments chief heads a Scientific Technical Committee (NTK), which probably consists of highly trained engineer-officers and leading academicians from universities and institutes. This council advises the Deputy Minister on weapons-related technical problems. We believe that the armaments chief also maintains a staff, which prepares documents, calls meetings, and otherwise acts as a permanent secretariat to the chief and the NTK. 

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Procurement of military equipment is probably coordinated with the branches of service through the deputy commander in chief for armaments (the exact title varies) of each branch. The deputy CinC for armaments monitors all research and production activity for his service and serves as an adviser to the CinC on technical matters. 


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Storage, maintenance, and servicing of weapons in the field are also coordinated with the deputy CinCs of each branch of service. In the Air Forces and the Air Defense Forces, field management is carried out by a separate deputy CinC, while in the Strategic Rocket Forces (SRF), the Ground Forces, and the Navy the same deputy may be responsible for overseeing both procurement and field management. These deputy CinCs, while immediately subordinate to their respective CinCs, appear to receive technical direction from the Deputy Minister of Defense for Armaments. 

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Planning

Individual Weapon Systems. Weapons planning in the Soviet Armed Forces is a complex process involving representatives from organizations subordinate to Shabanov, the General Staff, the five branches of service, and the Rear Services. 


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Initiating Requirements. 

 new weapon concepts may evolve within the military, within industrial institutes, or elsewhere in the economy. Concepts in which interest has been indicated either by MOD officials, the Politburo, or its advisory body for national security affairs, the Defense Council, are probably reviewed for technical feasibility by the main or central armaments directorate responsible for the particular type of equipment. 

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concept is considered feasible, the main or central armaments directorate will probably draft formal technical requirements. These requirements specify such factors as size constraints, weight or displacement, propulsion characteristics, necessary special materials, and logistic support. 

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At the same time, the idea is probably reviewed by the Main Staff of the branch of the service for which the weapon is intended. If the Main Staff agrees that the proposed system meets operational needs, it will compose tactical requirements for the system and pass

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these back to the main or central directorate. [Redacted] tactical requirements include factors such as speed, endurance, durability, intended types of operations and theaters, manning levels, and, for delivery systems, the types of weapons and electronics systems to be included in the proposed system. [Redacted]

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Formulation of the final weapon requirements, known as the Tactical-Technical Requirements (*taktiko-tekhnicheskoye trebovaniye* or TTT), is probably completed by the main or central directorate and submitted back through the service Main Staff and up to the deputy CinC for armaments of the service. He then probably passes the requirements to the service CinC for approval. [Redacted]

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Checking for Standardization and Efficiency. At the same time that the requirements are receiving final approval by the service, they are probably passed to Shabanov. He and his staff check to ensure that weapon and component requirements have been standardized to the greatest extent possible. Standardization facilitates weapon design, production, and servicing, and, according to Chief of the Rear Services S. K. Kurkotkin, "constitutes one of the principal directions taken to improve the organization of production and the military goods supply systems; to increase efficiency of economic support of the troops; and, consequently, Armed Forces combat readiness as well." Shabanov's long experience in defense industry management most likely helps him in this task. [Redacted]

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Shabanov's office probably also checks to make certain that all possible economies (that would not affect product quality) have been included. Shabanov's mandate to keep costs down gives him a somewhat unique role in a sector sometimes considered to have a blank check for its weapons wish lists. The fully approved proposal is probably then submitted through the General Staff for incorporation into the Five-Year Plan for the Development of the Armed Forces, the military portion of the national five-year plan (see section on national planning below). [Redacted]

Soviet students of military science frequently make the claim that technology drives doctrine—that the pressing advance of science and technology opens

doors to the discovery of new battlefield approaches. In the course of acquisition planning, the Deputy Minister of Defense for Armaments is quite likely an active consultant to those on the General Staff who formulate military doctrine. [Redacted]

Work With the VPK. After the Ministry of Defense has approved the weapons requirement, it is formally submitted to the Military-Industrial Commission (VPK).⁶ [Redacted]

Involvement in the National Planning Process. In addition to coordinating the planning of individual weapon systems, the deputy minister of defense for armaments is a central figure in the national defense planning process. Although specific information on Shabanov's participation in this process is scarce, analogy to the Polish system suggests that he coordinates the formulation of those portions of the Soviet one-year, five-year, and long-range defense plans that deal with weapons. [Redacted]

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[Redacted] the armaments planning process is initiated by the Deputy Minister of Defense for Armaments and the General Staff, who solicit proposals from the armaments directorates and the military

⁶ The VPK is a coordinating agency of the Council of Ministers, responsible for monitoring development of new systems and for ensuring the smooth functioning of defense industry R&D and production programs. To ensure consistency with overall state plans and to guarantee that sufficient scientific and technological resources are applied to development efforts, the VPK coordinates its activities with the State Planning Committee. [Redacted]

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commands regarding current weapons requirements and future requirements for R&D and capital investment. Similar plans are generated by other military components as well, such as the Rear Services and the Engineering Troops. [Redacted]

Directorate. In the Polish case, two representatives from the equivalent of the office of the Deputy Minister of Defense for Armaments are assigned to the directorate. Their participation in this organization allows them to press the case for devoting increased proportions of the military budget toward weaponry. [Redacted]

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The task of the Deputy Minister of Defense for Armaments is to prepare, on the basis of policy guidance that originates with the Soviet Defense Council, an integrated requirements plan for the weapons and combat equipment needs of the entire Soviet military.⁷ [Redacted]

[Redacted]

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in Poland this preliminary plan of requirements must describe in detail every weapon and type of equipment. Timetables and financial estimates must be included. The plan deals with weapon supply, R&D, industrial expansion, and mobilization reserves. Formulation of this plan is coordinated with the mobilization plan, which is prepared by the General Staff. Every requirement plan, short or long range, has one or more variations, with a justification for each. [Redacted]

Monitoring Weapons Procurement

Oversight and Tasking of Basic Research. The Deputy Minister of Defense for Armaments uses the Section on Applied Problems of the USSR Academy of Sciences to monitor basic and applied scientific research performed by Academy institutes. [Redacted]

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After the compiled requirements plan has been reviewed by the Deputy Minister of Defense for Armaments and approved by the General Staff, it is passed to Gosplan. On the basis of our knowledge of the Polish planning process, we believe that Gosplan revises the plan according to economic feasibilities and limitations and then submits it to the VPK for consideration.⁸ The VPK-approved version is then returned to the Deputy Minister of Defense for Armaments and the General Staff, who, after reviewing it once more, submit it for signature to the Minister of Defense. The signed plan proposal is then forwarded to the Defense Council for approval. [Redacted]

[Redacted]

We believe that the primary function of the Section on Applied Problems is to screen and evaluate Academy of Science research proposals for possible military sponsorship and to task promising basic scientific research. [Redacted]

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Formulation of the military budget proposal is accomplished by the Central Finance Directorate, which is attached to the General Staff. The main and central armaments directorates draft budget proposals for armaments and submit them to the Central Finance

[Redacted]

⁷ During the 1960s the armaments requirements plan was prepared by the General Staff. When Alekseyev was transferred from his position as chief of the General Staff Scientific Technical Committee to become Deputy Minister of Defense for Armaments in 1970, he appears to have taken this planning function with him. [Redacted]

⁸ When the requirements plan is revised and accepted by Gosplan, it becomes a formal "supply plan." It is unclear, however, whether Gosplan reviews the entire plan or rather just a list of the resources required to meet it. [Redacted]

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Development, Production, and Testing. The main and central armaments directorates subordinate to the MOD armaments chief are the central customer-agents in the weapons acquisition process (see appendix). As the bridge between the Ministry of Defense

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and the defense industries, the main and central directorates follow the procurement process from the generation of requirements to the delivery and storage of weapons for the troops in the field. Specifically, the directorates:

- Issue the tactical-technical requirements for weapons.
- Monitor design and engineering.
- Test prototypes.
- Negotiate prices and contracts and handle payment.
- Monitor quality during series production.
- Operate ranges and facilities for testing equipment.
- Accept produced items on behalf of the services.
- Store and maintain finished weapons and equipment in specially designated depots throughout the country.
- Supervise the repair and modification of armaments and equipment in special military repair plants.⁹ [Redacted]

Much of this work is accomplished by means of military representatives assigned to institutes, design bureaus, and production, test, and repair facilities throughout the Soviet Union. The military representatives communicate military needs to the managers at plants and research facilities while keeping the MOD informed about technological developments with military application, and of industrial capabilities and shortcomings.¹⁰ [Redacted]

[Redacted]

Historical

evidence shows that, when Nedelin was Deputy Minister of Defense for Armaments, he participated actively in the oversight of defense industries. In his biography of Nedelin, SRF CinC Chief Marshal of Artillery Tolubko says that the late deputy minister "systematically became involved in the creative activity of the design offices and the manufacturing plants," and that he "met regularly and worked

⁹ This may not be the case for all types of equipment. In the Air Force, for instance, repair plants appear to be the responsibility of the engineering aviation service. [Redacted]

[Redacted]

jointly with the scientists, designers, engineers, test officers, and many other people" who were involved in the procurement and production of nuclear weapons.

[Redacted]

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Storage, Repair, and Modernization. Personnel of the main and central armaments directorates continue to have some responsibility for military equipment even after it has been delivered to the field. [Redacted]

[Redacted] once armaments and equipment are delivered, they are stored by the representatives of the main and central directorates in special depots until distributed to the units. Careful accounting is kept on the quantity and condition of equipment in storage. [Redacted]

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After the equipment has been released from the depots to the troops, it becomes the responsibility of the main and central directorates when it requires capital repair.¹¹ Armaments and equipment requiring capital repair are returned to repair plants or mobile repair bases where the work is monitored by military representatives of the MOD. [Redacted]

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A further key responsibility of the main and central armaments directorates is the upgrading of weapons and equipment, which, according to Soviet military writings, improves their performance capabilities, extends their life, and allows standardization for routine maintenance. Upgrading usually appears to be undertaken when the equipment has been submitted for capital repairs. Smaller improvements may be accomplished during routine maintenance under the supervision of main or central directorate personnel. [Redacted]

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Armaments in the Field. Technical supervision of the storage, maintenance, and servicing of Soviet armaments in the field appears to extend organizationally

¹¹ The Soviets divide repair into three categories: light, medium, and capital. Light repair, which includes scheduled maintenance and simple fixes, is performed at the company, battalion, and regimental (or equivalent) level. Medium repair, which includes the replacement of two or more major assemblies, is performed at the division or army level. Capital repair, the most serious, involves complete disassembly and rebuilding. [Redacted]

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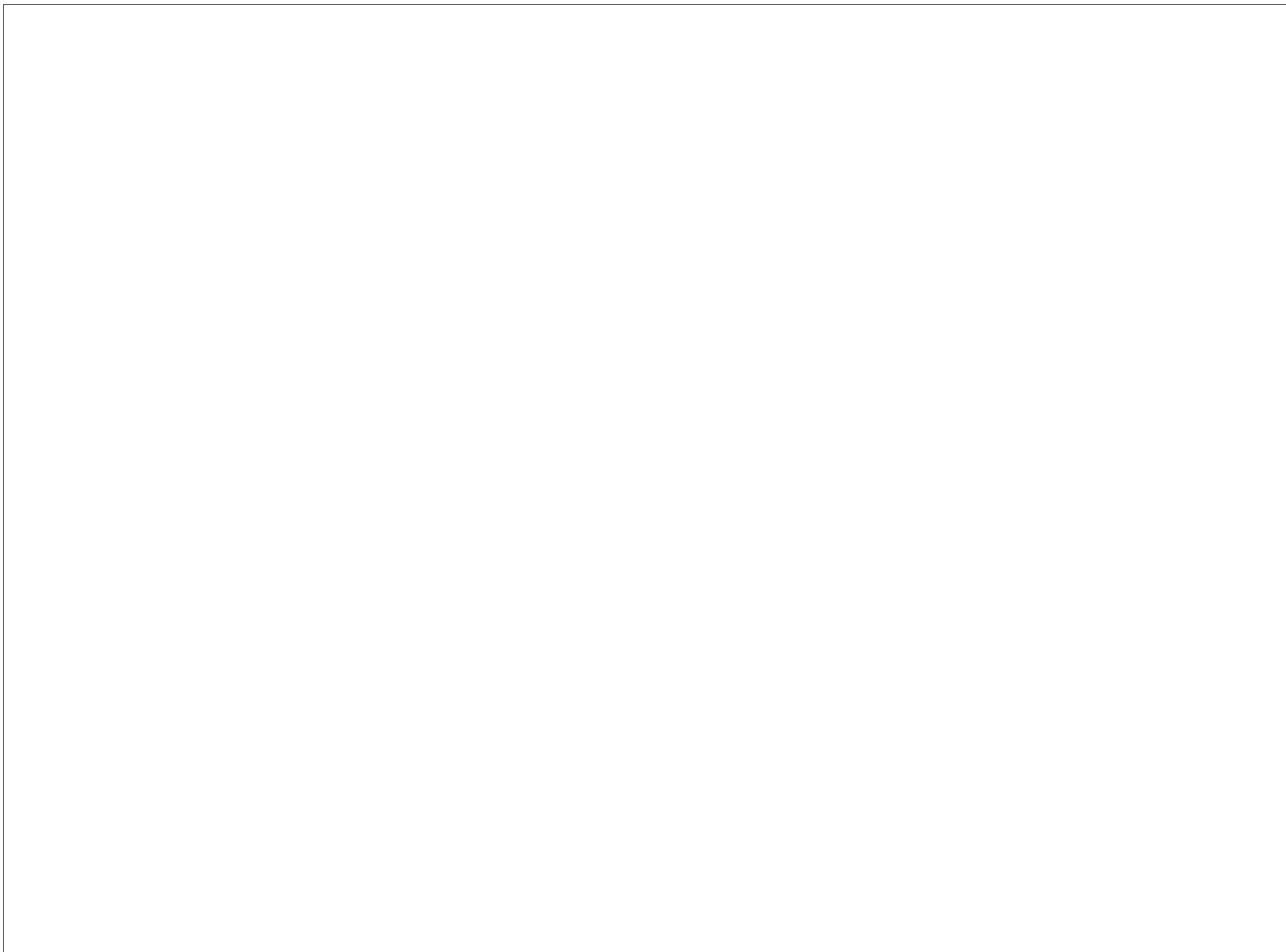
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from the Deputy Minister of Defense for Armaments down through deputy CinCs in the services to at least regimental level in the ground armies. At each echelon in the ground armies, there is a deputy commander for armaments who controls the distribution, maintenance, and repair of armament and equipment, as well as a deputy commander for technical affairs who performs the same functions for armored and other vehicles. In the Navy there are deputies for armaments and repair at the fleet, flotilla, and squadron levels. The Air Forces have deputy commanders for the engineering aviation service at the divisional air forces and air armies echelons. We believe that each deputy is immediately subordinate to his commander but is also subordinate in substantive matters up the armaments management ladder. (This structure can best be compared to the US concept of "technical channels.") In addition, the armaments organizations

operate within a cooperative network with the rear services and other organizations at each echelon.



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According to the Internal Service Regulations of the USSR Armed Forces, the deputy for armaments maintains all the records on parts and equipment, investigates equipment malfunctions, and monitors the condition and status of weapons and equipment. In addition, he coordinates actions with subordinate units, implements the commander's orders and policies, and advises the commander on all matters pertaining to the status and combat readiness of the unit's equipment. During war the deputy for armaments keeps current with the needs of the units in the

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field and supervises the supply of new equipment and the collection and limited repair of damaged equipment. The deputy commander for technical affairs has the same responsibilities with regard to armored and other vehicles. [Redacted]

The deputy commander for armaments and the deputy commander for technical affairs supervise personnel belonging to special technical services across the branches of the Armed Forces and keep them in a state of readiness. According to the *Soviet Military Encyclopedia*, a service (sluzhba) is a system of established organs of direction and military formations intended for the supply and servicing of the Armed Forces according to their specialties. Services responsible for the supply and servicing of armaments include the Armored Vehicle Service, the Engineering Aviation Service, the Missile/Artillery Armament Service, the Auto-Tractor Service, and others. At each echelon, the deputy for armaments and the deputy for technical affairs have deputies who are chiefs of the applicable services. [Redacted]

The Deputy Minister of Defense for Armaments occasionally becomes directly involved with armaments in the field through inspection tours of military installations and units. [Redacted]

[Redacted]

The Deputy Minister of Defense for Armaments has also been a strong advocate of increasing the technical skills of the units in the field. Both Shabanov and his predecessor Alekseyev have authored several articles in military journals on the need for better, more thoroughly trained troops because of the higher technological levels of the equipment being introduced. [Redacted]

Innovation by the troops in the field is also a concern of the armaments chief. An August 1978 article by Alekseyev in *Equipment and Armaments* claims that "in the first two years of the 10th Five-Year Plan alone, more than 2 million efficiency proposals by young innovators have been utilized in the national

economy, and a cost benefit of 2.4 billion rubles¹² has been obtained from the introduction of these proposals." For this reason the Deputy Minister of Defense for Armaments works closely with the MOD Department of Inventions to arrange innovation competitions and expositions such as the annual Central Exposition of Scientific and Technical Creativity of the Young. [Redacted]

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Ancillary Functions

Arms Control Inputs. The armaments chief and his staff are key technical advisers to Soviet policymakers on arms control matters. When the first Strategic Arms Limitation Talks (SALT) began in 1969, Col. Gen. Alekseyev, then chief of the Scientific Technical Committee of the General Staff, participated as a delegate. He continued through fall 1970, when he was appointed Deputy Minister for Armaments. At that time Lt. Gen. Konstantin A. Trusov, Alekseyev's deputy who had followed Alekseyev from the General Staff to his new position, replaced him at the talks. One Soviet delegate to the talks commented that Alekseyev continued to participate in the talks from Moscow "only indirectly," but another Soviet delegate noted that supervision of the negotiations for limitations on antisatellite weapons was one of Shabanov's responsibilities. [Redacted]

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A Western observer at the Strategic Arms Reduction Talks in Geneva said that he believed that the last Soviet delegation before the talks broke off in December 1983 contained a representative from Shabanov's office. Vyacheslav P. Mironov, identified only as a former missile testing and telemetry expert, was probably this representative. It is logical that a Soviet arms control delegation would contain a representative from Shabanov's office, since this office is a repository for all technical data regarding Soviet armaments. [Redacted]

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Coordination of Warsaw Pact Armaments. The Soviet Deputy Minister of Defense for Armaments plays a role in Warsaw Pact weapons acquisition through the

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¹² Alekseyev, N. N., "Enthusiasm and Creativity of the Young," *Equipment and Armaments*, vol. 8, 1978. [Redacted]

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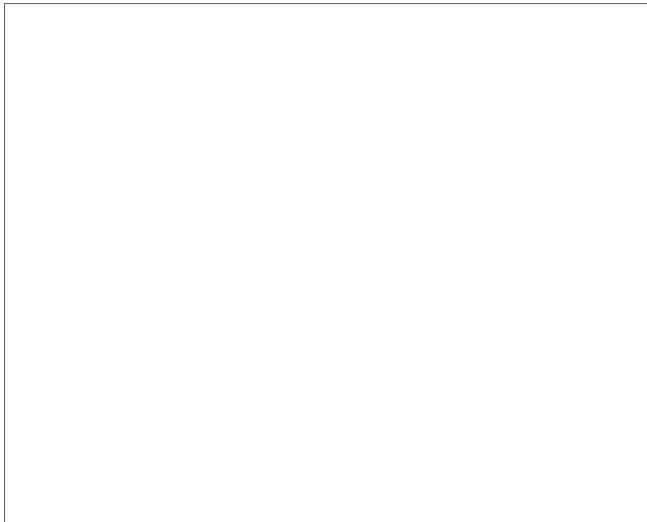
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Pact weapons planning organization, the Technical Committee. Headed by a Deputy CinC of the Warsaw Pact, Soviet Col. Gen. Ivan A. Fabrikov, the Technical Committee conducts studies on future technical developments in the Warsaw Pact armies and coordinates within the framework of the Warsaw Pact the scientific research and development activities necessary for equipping the non-Soviet Warsaw Pact nations with modern, standardized weaponry. 

designed and provided actual assistance in the construction of foreign shipyards, particularly in socialist-allied countries such as Cuba. It is likely, therefore, that Shabanov is actively involved in all discussions relating to the transfer of production capabilities, as well as with problems in domestic production intended for home use. 

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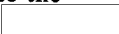
A representative of Shabanov's office serves on the Scientific Technical Council, which is subordinate to the Technical Committee. The Council's task is to study the most important recommendations prepared by the Technical Committee. The Council is composed of the deputy ministers for armaments and deputy chiefs of the general staffs for armaments or chairmen of the scientific technical councils of the ministries of defense or the general staffs of the Warsaw Pact states. 




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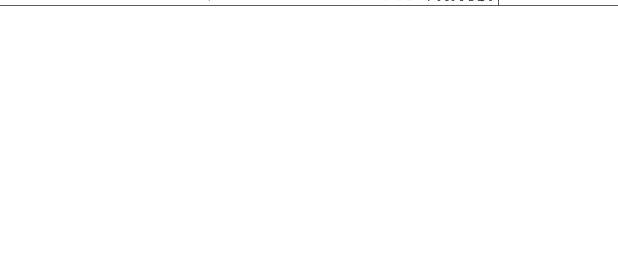
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Technical Committee chief Fabrikov and CinC of the Combined Armed Forces, Marshal of the Soviet Union Kulikov, maintain a continuing liaison with Shabanov and the deputies for armaments to the Ministers of Defense of the member states. 

Technology Transfer. Acquisition of foreign technology frequently allows the Soviets to shorten leadtimes in the development of new systems, to cut costs by avoiding expensive mistakes, and to develop some systems that might otherwise be out of reach of Soviet industry. Despite these advantages, however, the acquisition of foreign technology (legally or illegally) is an expensive and time-consuming task. Before the decision is made to devote manpower and other resources toward acquisition, the requirement for a particular item or a set of plans from abroad is carefully scrutinized. 

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Foreign Sales. In addition to his responsibilities for domestic and non-Soviet Warsaw Pact weapons acquisition, the Deputy Minister of Defense for Armaments monitors Soviet procurement of armaments and related equipment for foreign sales as well. He also appears to participate in the negotiation of sales of turnkey military production facilities and technologies to other countries, although this may be in an advisory capacity. 

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The Deputy Minister of Defense for Armaments participates in the technology transfer decisionmaking process through his membership on the Interagency Commission on Intelligence Information. This Commission was created by an order of the VPK in 1979. Its mission is to organize the study and utilization of

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 an institute was created in the Main Shipbuilding Directorate, for which the armaments chief has responsibility, which

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[Redacted]

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Western technology acquisitions.

[Redacted]

[Redacted]

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Participation of the armaments chief and his representatives on this commission affords the MOD another way to influence future development of defense capabilities. They are able to review new types of foreign production processes for possible acquisition for defense industry facilities. They are also able to influence the channeling of acquired weapons or technologies to industrial institutes or institutes of the main and central armaments directorates, where the advanced materials and technologies used in these arms can be studied by industrial or military experts.

[Redacted]

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Wartime Responsibilities. In the event of general war, the Deputy Minister of Defense for Armaments would be responsible for ensuring the continuous flow of armaments and equipment to the fronts at a greatly increased tempo. Military representatives of the MOD main and central directorates are responsible during peacetime for ensuring that sufficient reserves of production materials are maintained at all plants that contribute to the defense effort. They also make sure that contingency plans for wartime production are available. Should war break out, the main and central directorates would help direct any planned relocation of industries and provide instructions for new modes of production.

[Redacted]

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In addition to overseeing the work of the main and central directorates during wartime mobilization, the Deputy Minister of Defense would also serve as a liaison to the Main Organization-Mobilization Directorate and the Main Operations Directorate of the General Staff, providing status reports on armaments supplies and performance from the deputy commanders for armaments in the field.

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Appendix


The Main and Central Armaments Directorates

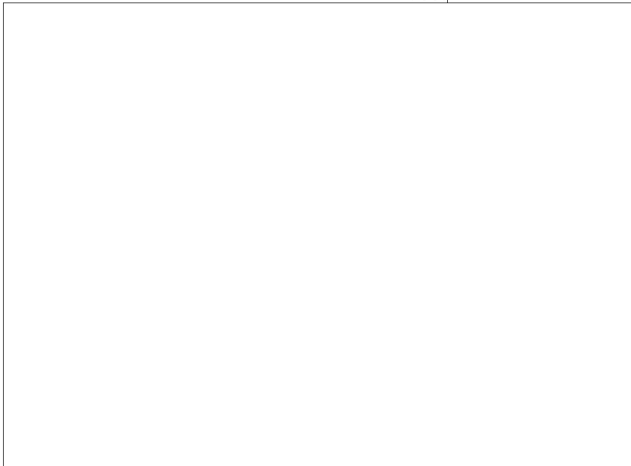
History

The Soviet weapons procurement apparatus has its roots in Czarist military organization. It has evolved over time to reflect the changing armaments requirements of the Soviet Armed Forces and the advancing technologies available for weapons design. 

The Main Artillery Directorate (GAU) was a direct successor to its Czarist counterpart and existed until 1953. Occupied mainly at first with guns and artillery, the scope of GAU's work expanded over time to include all anti-aircraft weaponry, radar, and probably electronics. During World War II, GAU monitored the production of ammunition as well. 

Sometime after the creation of the National Air Defense Forces (PVO) as an official separate service in 1948, a separate procurement agency was created for it. This organization, the 4th Main Directorate of the Ministry of Defense, assumed responsibility for monitoring the production of tactical and strategic air defense equipment. 

The appearance of new forms of weaponry at the beginning of the 1950s made it necessary to create new organizations better suited for equipping the Armed Forces. In the mid-1950s, GAU was renamed GRAU (Main Rocket/Artillery Directorate) to reflect its growing responsibility for providing short-range missiles for the Soviet Ground Forces. 

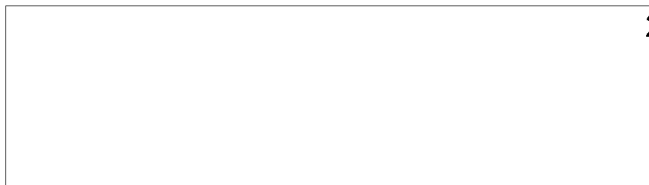


Marshal of Artillery Pavel Nikolayevich Kulshov. Chief of the Main Rocket and Artillery Directorate. 

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Tanks and other military vehicles were originally the responsibility of the Mechanization-Mobilization Directorate of the Red Army, established in November 1929 under the new Deputy People's Commissar of Defense for Armaments. Figure 2 shows how this directorate evolved into today's Central Auto-Tractor Directorate (TsAVTU) and Main Armor Directorate (GBTU). 

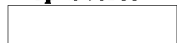
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The current naval vessel procurement agency, the Main Shipbuilding Directorate (GUK), is the direct successor to the Czarist Main Directorate of Shipbuilding and Supply (GUKiS). The evolution of armaments procurement organizations within the Navy is

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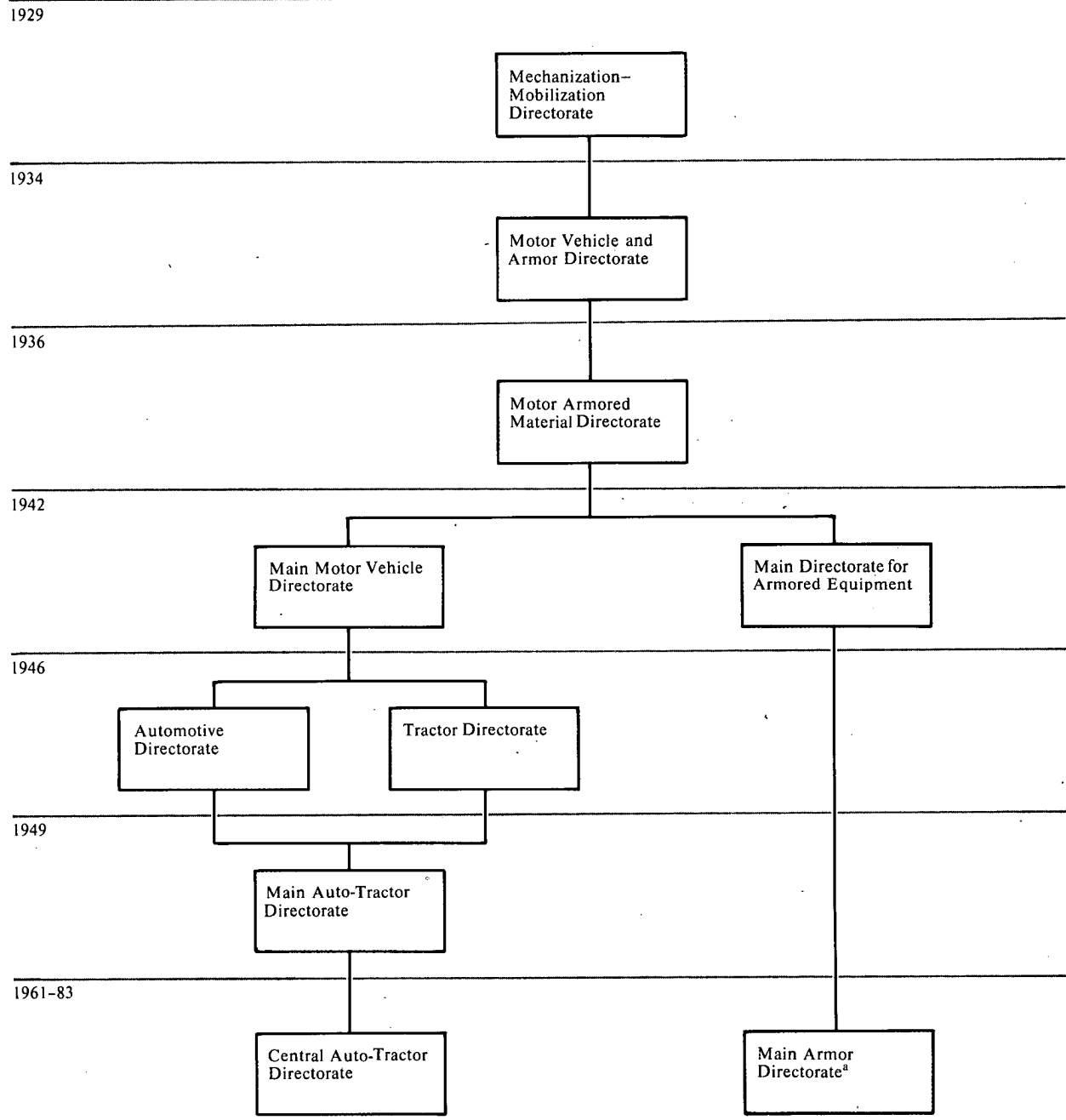


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Figure 2
Evolution of a Soviet Armaments Directorate



^a The post-1942 evolution of GBTU is unknown.

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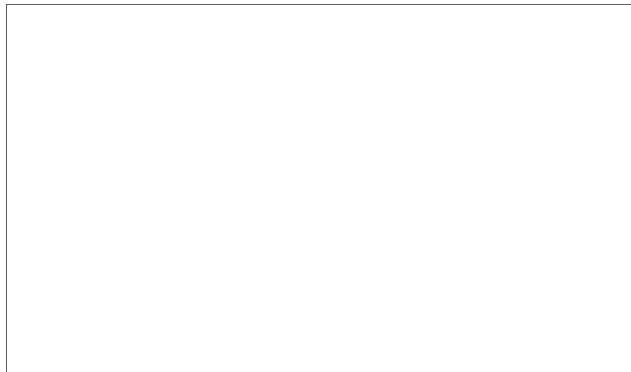
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Col. Gen. Yuriy Mikhaylovich Potapov. Chief of the Main Armor Directorate.



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The evidence regarding the subordination of the Main Shipbuilding Directorate (GUK) is still less conclusive. Because ships are not required by any other branch of service, the Navy may indeed maintain its own procurement apparatus. The case for naval subordination is enhanced by the fact that the Soviets (like the Americans) have treated the Navy as a special case, different from the other branches of service.¹⁴ Moreover, when the post was first created, the Deputy Minister of Defense for Armaments only carried out inspector functions for the Navy. Nevertheless, in articles Shabanov mentions sailors just as frequently as soldiers and discusses combat readiness on ships as well as in field units. If the Main Shipbuilding Directorate is a Navy organization, it is most likely subordinate in technical matters to Shabanov as well.

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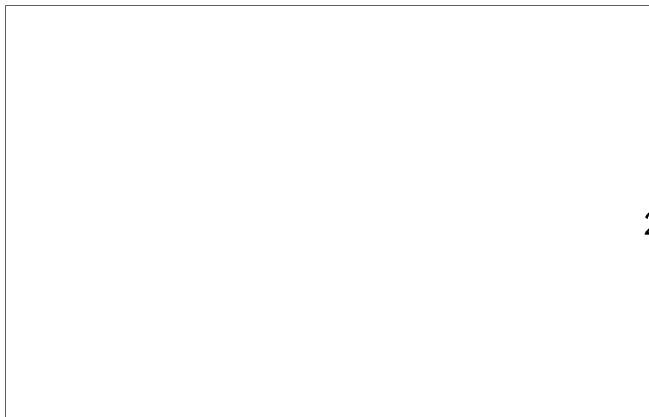
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not known, but probably closely reflects the evolution of the main and central directorates responsible for similar equipment. Thus, for example, the Navy's Missile/Artillery Directorate was probably established shortly after the creation of Granit, as the naval applications of the new strategic missiles became obvious.

Little is known about the evolution of the 12th GUMO, which acquires nuclear warheads.

Subordination

We believe that all main and central directorates currently responsible for Soviet weapons acquisition are either immediately subordinate to or subordinate in technical matters to the Deputy Minister of Defense for Armaments.



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¹⁴ The Navy has at times been a separate ministry. The last occasion was from 1950 to 1953.

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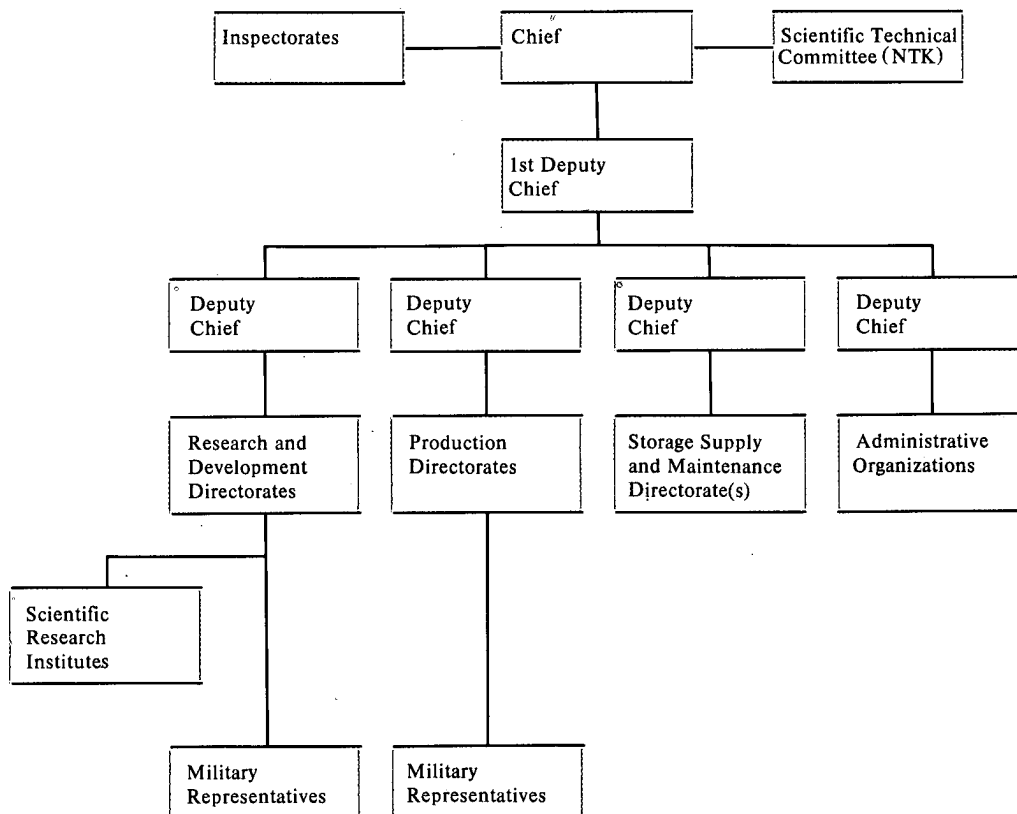


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Figure 3
Structure of a Typical MOD Main Directorate



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Organization

Internally, all of the armaments-related main directorates appear to have basic organizational similarities. Figure 3 presents the structure of a typical main directorate; each of the components has been identified in one or more of the main and central armaments-related directorates.

The chief of a main directorate is assisted by a first deputy and several deputies, each of whom has responsibility for certain functional directorates. The directorates are composed of several departments and sections. It is unclear whether administrative organs

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hold directorate status. Administrative organs have political, personnel, finance, education/training, and other responsibilities. 

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The substantive directorates are responsible for production, R&D, and storage and supply services. The production and R&D directorates employ the military representatives that oversee work in plants, institutes, and design bureaus. R&D directorates supervise the work of MOD scientific and central scientific research institutes, which help solve technical problems. There is also usually a Scientific Technical Committee (NTK) that serves as an advisory body to the chief of the main directorate. In addition to solving problems of a technical nature, it is probably the NTK that drafts weapons requirements. 

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