

1/16/2006

HR 70-14

TOP SECRET

3618

CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

7 March 1978

MEMORANDUM FOR: The Director of Central Intelligence
FROM : John N. McMahon
Deputy Director for Operations
SUBJECT : MILITARY THOUGHT (USSR): Basic Problems of
Troop Control and Possible Ways of Resolving
Them

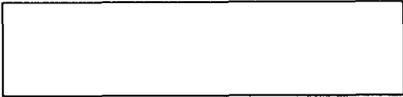
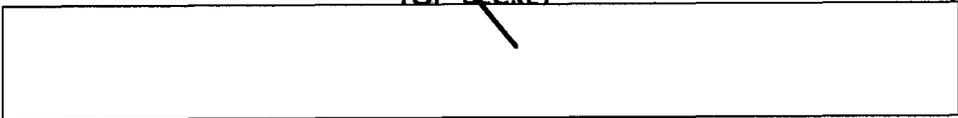
1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The two authors of the article examine the main problem areas in troop control. They point out that the efficiency, reliability and security of troop control can be improved by increasing the training of commanders and staff officers, by introducing new and secure communications equipment, and by reorganizing the control post system at the regimental, division, and army levels. This article appeared in Issue No. 2 (63) for 1962.

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies. For ease of reference, reports from this publication have been assigned

John N. McMahon

~~TOP SECRET~~

~~TOP SECRET~~



Distribution:

The Director of Central Intelligence

The Director of Intelligence and Research
Department of State

The Joint Chiefs of Staff

The Director, Defense Intelligence Agency

The Assistant to the Chief of Staff for Intelligence
Department of the Army

The Assistant Chief of Staff, Intelligence
U. S. Air Force

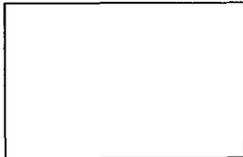
Director, National Security Agency

Deputy Director of Central Intelligence

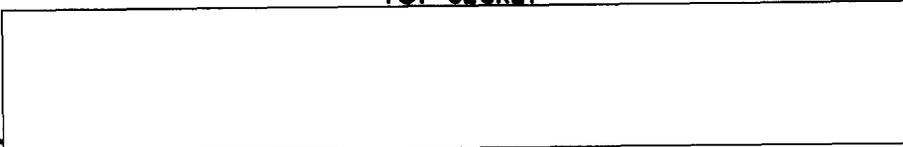
Director of the National Foreign Assessment Center

Director of Strategic Research

~~TOP SECRET~~



TOP SECRET



Intelligence Information Special Report

Page 3 of 21 Pages

COUNTRY USSR



DATE OF INFO. Early 1962

DATE 7 March 1978

SUBJECT

MILITARY THOUGHT (USSR): Basic Problems of Troop Control and Possible Ways of Resolving Them

SOURCE Documentary

Summary:

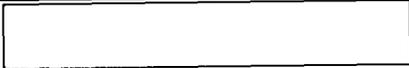
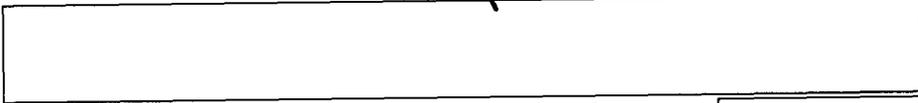
The following report is a translation from Russian of an article which appeared in Issue No. 2 (63) for 1962 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The authors of this article, General-Major V. Yanov and Colonel P. Shemanskiy, examine the main problem areas in troop control. They point out that the efficiency, reliability and security of troop control can be improved by increasing the training of commanders and staff officers, by introducing new and secure communications equipment, and by reorganizing the control post system at the regimental, division, and army levels.

End of Summary

Comment:

After 1962 the SECRET version of Military Thought was published three times annually and was distributed down to the level of division commander. It reportedly ceased publication at the end of 1970.

TOP SECRET



Basic Problems of Troop Control and
Possible Ways of Resolving Them

by

General-Major V. YANOV
Colonel P. SHEMANSKIY

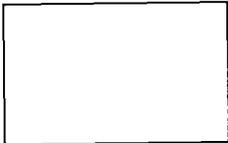
The extensive employment of missile/nuclear weapons and other new means of combat has changed the nature of a modern operation and battle and, as we know, has caused the appearance of a number of complex problems in the sphere of troop control. Of these problems the main ones are:

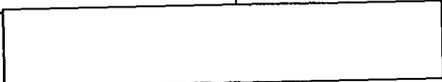
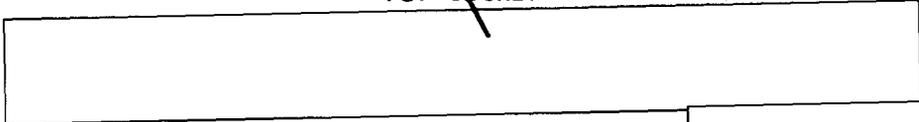
-- sharply raising the efficiency in the work of commanders and staffs of all levels in controlling troops under combat conditions, especially in collecting and analyzing data about the situation, making a decision and relaying the combat tasks to the executors;

-- ensuring reliability and security of control under conditions of intense enemy radioelectronic countermeasures, during the delivery by the enemy of nuclear strikes against control posts, and while the enemy is in movement for a prolonged period of time.

A high level of efficiency in the work of commanders and staffs was necessary even in the past. However, under modern conditions it has acquired fundamentally new importance, since the time factor has become one of the most decisive elements in troop control. This has been influenced by the increased fire and strike power of the troops, the highly mobile nature of combat actions, by the transience and the rapidity of their development, the frequent and sharp changes in the situation, and the increased spatial scale of combat actions along the front and depth. Successful control of troops is possible only when all measures for control, and especially collecting data about the situation, making plans and relaying combat tasks to the executors, are carried out in minimal time periods.

A high level of efficiency and rapidity of thought and actions on the part of each commander and officer of the staff in troop control are a persistent requirement of life.





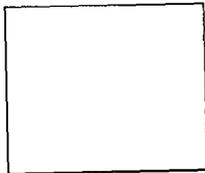
An analysis of the existing theory and practice of control and the experience of the many troop and command-staff exercises of recent years attests to the fact that the state of troop control at present hardly satisfies this requirement. In spite of the availability of highly trained and experienced personnel and the equipping of control organs with a comparatively large number of communications means, efficiency in troop control remains low for this day and age.

Reliability of control is called upon to ensure commanders and staffs the capability to exert the necessary influence on the course of combat actions at any time, without interruption, especially under conditions when the enemy delivers nuclear strikes against troops and control posts, when he is creating jamming and zones of contamination, when our control posts are in movement for a prolonged period of time, and also when they are separated from one another by great distances.

Security of control should make it impossible for the enemy, by means of his reconnaissance, to ascertain the disposition of our control posts, to intercept the content of conversations and transmissions and, moreover, to find out the concept of the combat actions of our troops.

Incidents which took place in exercises attest to the fact that everything is still not satisfactory in the matter of ensuring reliability and security of control. The disposition of control posts and the organization of work in them are such that with modern means of reconnaissance and destruction, there is no complete guarantee that the enemy will not be able to detect and destroy our control posts, intercept the content of voice and other transmissions, determine the concept of the combat actions of our troops, and also disrupt our communications by jamming.

An analysis of the exercises of recent years has made it possible to ascertain the fundamental causes of the defects in troop control. These are: the inadequate staff efficiency of some of the officers; their use of obsolete work methods; the inferior technical equipping of control organs; the prevalence of unproductive manual labor in the work of the staff officers; and incomplete conformity to the modern-day requirements of the organizational structure of control organs. To one degree or another these causes have already been mentioned in our press.



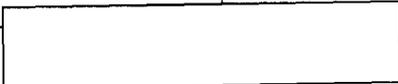
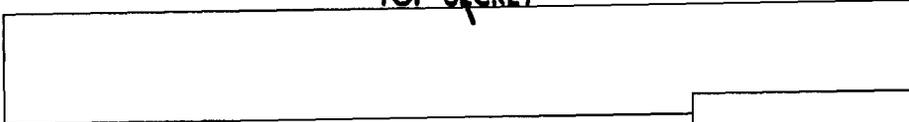
Therefore, in our opinion, there is no need to dwell on them further.

Summarizing the advanced experience of exercises and the results of research which has been conducted provides the capability of outlining specific ways of eliminating the deficiencies in troop control and sharply improving it on the whole.

Under present-day conditions troop control must be examined not as the simple sum of organizational measures, but rather as an art, which is continuously being developed and improved in accordance with changes in armament, and in methods of actions and of the organizing of troops. In connection with this, the solution to problems of sharply raising the efficiency, reliability and security of control, in our opinion, must proceed along the following basic lines simultaneously:

- further improving the work methods of commanders and staffs in controlling troops;
- improving the organization of control posts and the T/O structure of control organs;
- raising the level of training of officer personnel in matters of troop control;
- substantially improving the equipping of control organs with more improved means of communication and reconnaissance, and also with technical means of mechanization and minor and integrated automation of control processes.

All these measures are interrelated, and no one of them, taken individually, will ensure the achievement of the desired results. In connection with this, we must point out the error of statements even now encountered on the pages of the press, that only the introduction of means of integrated automation of control will enable us to solve all the problems which have arisen. Undoubtedly, integrated automation will be the most basically important way of solving the problems of troop control, but, obviously, much time will pass before it is introduced and mastered. A transition period is inevitable, while the interests of raising the combat readiness of troops oblige us to decisively improve control immediately by utilizing all other ways and capabilities for this purpose. Moreover, we must prepare our control organs in advance for receiving and using means of

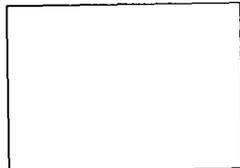


integrated automation, for we hope that with their entrance into the troops, these means will carry out all tasks by themselves, that is, eliminate major errors.

Improving the work methods of control organs, as exercises show, can be accomplished first of all by raising self-discipline in work, by more precisely allocating duties among assigned personnel, and by reducing the multi-level nature and parallelism in the passing of different information both between control posts and within them. In the control posts of a number of districts, for example, it is considered expedient to set up small groups (centers) of staff officers and chiefs of branch arms (services) with a strictly designated purpose and equipped with the necessary technical means. These basic groups (centers) can be:

The command group (center) headed by the commander (formation commander). The chief of staff and the chief of rocket troops and artillery are included in its complement. The remaining personnel are enlisted for work in this group according to need or they report the necessary data to the commander (formation commander) over loudspeaker communications. The main task of this group is to ensure that the commander (formation commander) quickly makes a decision apropos of the situation, rapidly reacts to changes in the situation and directly controls troops in the most difficult periods of combat actions by means of direct conversations with subordinate commanders. For carrying out this task, the group must be maximally relieved of technical work connected with collecting data about the situation and performing calculations; the officers of the staff and chiefs of branch arms (services), included in the complement of other groups, can carry out the technical work.

An information-planning group (center) headed by the chief of the operations department (section). The task of the group includes collecting and analyzing data about the situation and forecasting it, performing the necessary operational-tactical calculations, reporting their conclusions and proposals to the commander (formation commander) when he requests them, drawing up the necessary combat documents, relaying the combat tasks to the troops and monitoring their actions, and informing the superior staff, subordinates, adjacent units and officers located in the alternate command post and the rear control post about the



~~TOP SECRET~~

WARNING NOTICE

Page 8 of 21 Pages

situation within their own command post. The composition of this group should include the requisite number of officers of the operations and intelligence departments (sections) and officer-specialists (a missileman-artilleryman, a representative of aviation, an engineer, a chemical officer, an officer of air defense, and an officer of the rear services). The work of the group in collecting data about the situation and relaying combat tasks to the troops at all levels, including the division level, must be based on the principle of axis officers. One to two axis officers, who receive data from subordinates about the situation and rapidly report it to the commander or the chief of staff, are permanently assigned to each unit (large unit, reconnaissance organs in the special troops). These axis officers must be prepared, when necessary, to go out (fly out) with communications means to the troops for the purpose of monitoring their actions, and directly from there send data about the situation to the group, or straight to the commander. In that way, there will be a single intermediary between the commander and his subordinates which will greatly speed up the process of collecting data about the situation and of reporting tasks to the executors.

A communications group (center), consisting of officers of the communications department (section) and the cipher department (section). Its task is supporting communications and secure troop control.

Exceptional activity, efficiency, initiative and creativity are required of the officers of any of the enumerated groups. By constantly sensing the pulse of combat actions, they must foresee what data about the situation and what calculations may be needed by the commander (formation commander), and obtain these data and prepare calculations without waiting for his orders.

According to a number of comrades, improving the organization of work in control organs can also be achieved by means of subordinating certain chiefs of branch arms and services to the chief of the combined-arms staff.

We feel that all these proposals deserve considerable attention. However, more careful testing in exercises is needed for a final conclusion on them since the experience which has been gained is still insufficient. The very idea of improving the organization of work in control organs by means of a more

~~TOP SECRET~~

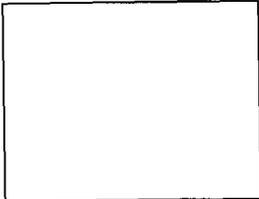


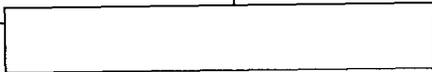
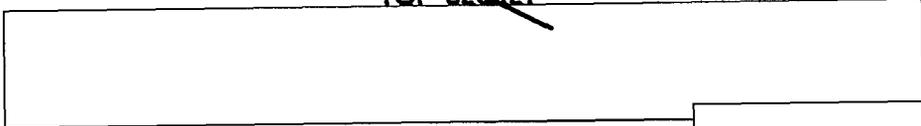
precise allocation of duties among the assigned personnel and their specialization in conjunction with the principle of interchangeability is self-evident, and, in our opinion, it should be put into effect. This, by the way, will help us find the most appropriate way of improving the organizational structure of control organs.

It is necessary to have a strict procedure in obtaining information about the situation, for which the entire flow of information will be divided into two categories. The first category will contain the most important information characterizing the overall situation of the troops at a given time, and also information to which the appropriate commanders must react quickly (the detection of the enemy's means of mass destruction, the advance of his reserves, etc.). The officers must personally transmit this information by radio at first precedence, and as quickly as possible by through passage without any delay at one or another control post. Until secure communications equipment is introduced, brief and simple procedure tables should be employed in conjunction with a code chart for transmitting this information. If we are successful in this, the commanders and staffs will constantly know where the subordinate troops and the enemy are located and roughly what they are doing, and even this will be a great step forward. All the remaining information, characterizing the situation in more detail, should belong in the second category and should be transmitted at second precedence. But here it is important in every way possible to decrease the volume of information and not to transmit information to the staff and, moreover, to the commander, which is not needed by him for troop control.

In analyzing the data of the situation and making a decision, the commanders and officers of the staff must be able to quickly find the main and definitive information, and ultimately refrain from the practice of listening to verbose reports of subordinates on matters which are already clear. The advanced experience of troops shows that brief memoranda from specialists on unclear matters and a brief exchange of ideas with the chief of staff are all that the commander needs to make a decision.

The volume and content of the decisions themselves must be examined with a view toward reducing them. We know that now the

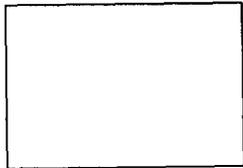




decision of the formation commander (commander) for an operation (battle) is extraordinarily voluminous, and, as in the past, it includes a great number of different measures of a support nature. In essence, this practice was adopted when it was difficult to find a problem which would not have been resolved personally by the formation commander (commander). This forced the latter to listen to the reports of many subordinate officers, to give all of them appropriate instructions in supporting combat actions, which, as a result, limited the time available for resolving the most important problems.

We share the viewpoint of the officers of a number of districts who feel that in his decision, the commander must specify the concept of the combat actions, the procedure for employing nuclear weapons and other means of mass destruction, and the combat tasks for subordinate troops. Concerning measures in the comprehensive support of combat actions, however, the commander can limit himself to indicating only the main one, entrusting all the remaining measures to the staff and the appropriate chiefs of branch arms and services. Of course, the commander will retain control over them. Also, one should not needlessly interfere with the functions of subordinates but one should point out to them in detail the methods for fulfilling the combat task they have received. It is necessary to wisely combine centralization and decentralization of control. This allows the commander, while firmly maintaining the principle of one-man command, to more correctly and efficiently decide the most important problems of control, while it enables his subordinates to take on a broad field of activities in order to manifest creativity and initiative in ensuring the fulfilment of his decision.

The decision must be diagrammed on a map at the same time that it is worked out. As soon as the commander makes and announces his decision on one or another problem, the officers of the staff will immediately put it on the map, while the chief of the operations department (section) or the axis officers will immediately work out a combat order or combat instruction. It is necessary to so organize the work of the staff that, at the moment the commander has finished making his decision, the basic combat documents will be ready. The advanced experience of the troops attests to the fact that this is a very real task. The new technical means, especially loudspeaker and television video



communications, pantographs, stamps, stencils, and also formalized (standard) combat documents can greatly assist the staff in fulfilling it.

In order to speed up the process of organizing combat actions we should more widely practice putting out preliminary instructions, as a method of working out the decision of the commander. Preliminary instructions, which are specific in content and issued on the basis of conclusions from an understanding of the task, permit subordinates to be quickly included in the work of preparing combat actions and to carry it out simultaneously with the senior commander.

At the same time that they receive the combat tasks, the subordinates must also listen to additional instructions for cooperation. In connection with this, more precision should be introduced into the field service regulations which are now in effect, and especially article 62 which, in our opinion, does not properly discuss the matter of organizing cooperation. It seems as if the commander is first setting the combat tasks for the troops, and only then organizing their cooperation. This interpretation does not correspond to the very essence of organizing cooperation. In the first place, the commander organizes cooperation by specifically setting combat tasks and he achieves coordination of the actions of the troops according to the goal, time and place. In a number of cases, especially when there is insufficient time, the commander will limit himself only to setting combat tasks in the matter of organizing cooperation. And only when necessary and possible can the commander give the troops brief additional instructions (to the combat tasks) on cooperation.

A proper understanding of the essence of the commander's work in organizing cooperation has great theoretical and practical importance, especially if we take into consideration its projected tendency to raise the combat independence of the troops. Obviously, in the near future we will have units and large units which are capable of carrying out any tasks without additional reinforcement by other troops. Under such conditions there is no need for the prolonged and tedious work in organizing cooperation which we had to carry out in the last war. To achieve the uninterrupted cooperation of the troops, it will be sufficient for the commander to precisely set the combat tasks

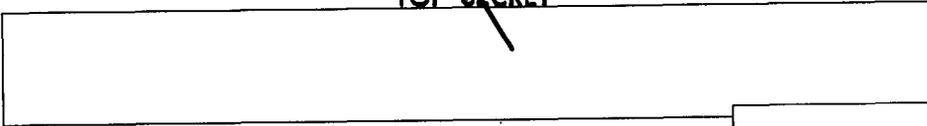
for the subordinates, and for the staff to ensure reliable communications and to set up signals for cooperation and strict monitoring for the accurate fulfilment of the combat tasks by the troops.

We must dwell especially on the question of combat documents which are drawn up by combined-arms staffs, all the more, since various opinions have surfaced on this question in recent years.

We feel that the vital organizational work of the commanders and staffs must lie at the basis of troop control. A high level of organization and efficiency, firm knowledge and precise fulfilment by them of their service duties, and the manifestation of creativity and initiative in work, combined with considerable theoretical knowledge, have always been and will always be the main indicators of the level of their staff competence.

However, it would be a mistake to assume that our control organs must refrain entirely from drawing up combat documents. Practice teaches that the presence of a plan of combat actions which is carefully drawn up and opportunely relayed to the executors greatly promotes the achievement of organization and order in the troops and the successful fulfilment of combat tasks by them, especially in a case where we are not capable of implementing personal contact or of employing technical means of communication.

The number of combat documents to be drawn up cannot be determined in advance. It is established each time by the appropriate chief, depending on the specific conditions in which a given operation or battle is organized and conducted, and primarily depending on the time available. If one or another measure can be successfully implemented without a combat document, the staff should be limited to recording the instructions personally or by technical means. But on the other hand, if a combat document on one or another question must be drawn up, then this must be done. In all cases, the reduction in the number of combat documents must not have a detrimental effect. And, since this is the case, then we must firmly teach the officers skills in quickly drawing up combat documents (textual and graphic), which are brief in volume but detailed in content and accurately drawn up, for this is also one of the important indicators of staff competence. It has also become



especially important that officers possess skills in precise command language and that they employ standardized combat documents. Certain experience in using these documents in exercises and training allows us to draw the conclusion that they have a great future.

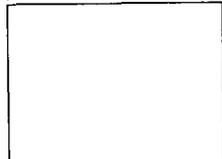
It is necessary to eliminate drawing up duplicate documents. Many exercises have shown, for example, that when maps of the decision have been properly drawn up, we should refrain from drawing up maps (planning tables) for cooperation.

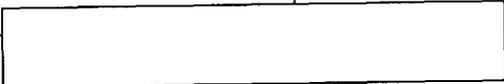
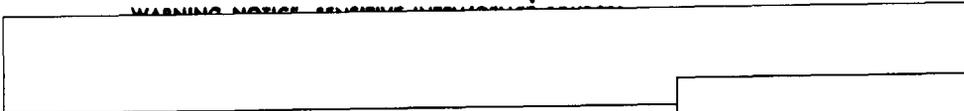
It is important to put an end as quickly as possible to confusion in the conventional signs which are employed in processing graphic combat documents, and in the forms of the main written combat documents. The availability of precise forms of combat documents disciplines thought processes and greatly promotes the hastening of drawing up and relaying the documents to the executors, and also of studying them. Therefore, it is extremely necessary to very quickly update the new service manual for staffs and to issue a collection of forms for the basic combat documents. It is also necessary to organize the training of commanders and officers of staffs so that they know the sequence for setting forth the content of the main combat documents (orders, instructions, reports) by heart and that they know how to dictate them directly from maps without preliminary notes. Practice confirms that this considerably hastens the drawing up of documents and largely promotes the development of precise command language among officers.

Such then are our views regarding the improvement of the work methods of commanders and staffs in troop control, stemming from the experience of exercises of recent years.

We have already mentioned above that the existing practice of organizing control posts, especially at the division and army levels, does not fully meet the modern requirements for them which consist of:

-- ensuring uninterrupted communications, reliability and stability of control in any complex combat situation, including during the delivery of nuclear strikes and intense radioelectronic countermeasures on the part of the enemy;





- being capable of operating not only when stationary, but even during movement, and also of rapidly transferring control from one post to another;
- having a small complement, great mobility and maneuverability, and the capability of quickly and frequently changing its location;
- ensuring suitable accommodation and a high level of efficiency in the work of the commander and staff in troop control;
- providing reliable camouflage of the locations of control posts, antinuclear protection, and also security of control on the whole.

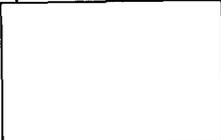
These requirements could best be fulfilled if we were able to set up several equivalent control posts at all levels. However, this would lead to a considerable increase in the T/O&E of control organs and to a large number of people and equipment being put in reserve. Therefore, proposals about setting up alternate (reserve) staffs in the troops can hardly be considered expedient.

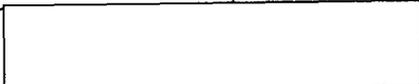
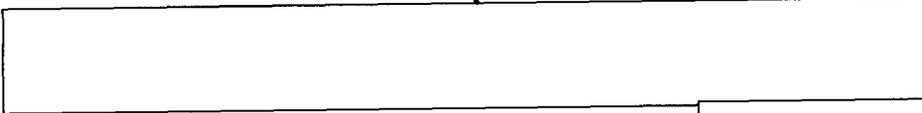
At present, research is being conducted in the troops and military academies in seeking different ways of improving the organization of control posts. This work has not yet been completed. Therefore, in this article we can only set forth our own preliminary considerations on this matter.

In our opinion, it is advisable to have two control posts in a regiment as previously, that is, a command post and a rear control post. When necessary, an observation post can be set up close to the command post so the commander of the regiment can observe the course of combat actions on the main axis.

In order to ensure greater efficiency in work, security of location, and mobility during the course of combat actions, the composition of the regimental command post should be divided into two groups: a group for control and a group for support. In the first group there should only be what is actually necessary for the immediate control of subunits. Everything else should be in the support group located apart from the control group.

The rear control post of a regiment is at the same time also the alternate command post. Therefore, it is necessary to have



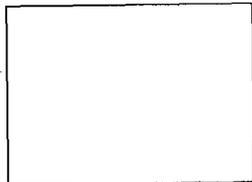


in it officers who are trained in the combined-arms sense and at least a minimum of communications means. Otherwise, if the command post is put out of action, one of the battalion commanders or the staff of a division will have to assume control of the regiment, after having allocated a group of officers for this.

In a division and army with modern tables of organization it is more advantageous to set up a main command post, an alternate command post and a rear control post. When this is done the alternate command post can allocate only a small group of officers with communications means headed by the deputy commander (deputy formation commander) whose task is to take control of the troops in case the main command post is put out of action, or assist the latter in a complex situation, especially during actions on separated axes. Depending on these tasks, the alternate command post may be deployed in front of or to the side of the main command post. Hence, in the first case, the task of preparing a place for locating the command post in the future (upon relieving it) can also be entrusted to the alternate command post.

For security of the location, the complement of a division and army command post should be divided into two parts -- control and support, and for better efficiency in work, as has already been mentioned, the entire control complement should be deployed according to groups of a specific designation. Each of these groups must have work areas fitted into cross-country vehicles (of the types BTR-50PU, BTR-60P, or GAZ-66), equipped with all the necessary technical means, which enable conversations to be conducted between officers of subordinate, superior, and their own staffs, and permit reception of any information without moving from the vehicle. Radio sets mounted in individual vehicles must be equipped with remote control, so that they can be located apart from the command post.

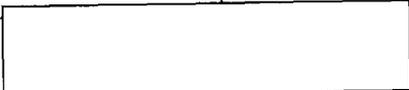
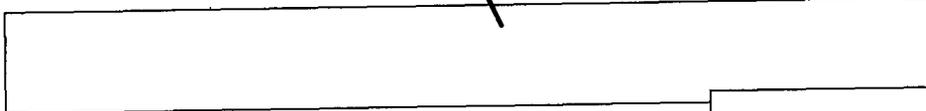
In the course of a battle and operation, the commander of a division and the commander of an army must be able, when necessary, to quickly withdraw from the position of the command post with a small group of officers and move closer to the troops on the main axis for personal control of them during the most tense and crucial periods of combat actions (the entrance into combat of second echelons, repulsing an enemy counterattack,



assault crossing of rivers, etc.), while at the same time temporarily forming the forward command post. As exercises have shown, the constant division of a field headquarters into the forward command post and command post with the existing tables of organization will lead to the dissipation of personnel and communications means, to needless red tape in collecting data about the situation and getting tasks to executors, to a work overload of some officers (in the forward command post) and to the inactivity of others (in the command post). As a result, not one of these posts fully copes with performing the tasks of control. Therefore, we must decisively renounce this system and seek a new procedure for setting up control posts. In our opinion, a separate location for the formation commander (commander) and his closest assistant, the chief of staff, is especially undesirable. We must mention that many formation commanders were against such a division even during the Great Patriotic War.

At present, ways of improving the organizational structure of control organs have still not been sufficiently investigated. A new structure for control organs can be worked out only after the problems of equipping them with new technical means of control, employing new work methods for control organs, and also the problems of organizing the troops themselves have been finally resolved. In addition, a wide range of experimental exercises must be conducted in which different variants of organizing control organs will be tested. Therefore, it is now possible to indicate only the principles, which, in our opinion, must be followed while the organizational structure of control organs is being improved. These principles can be the following:

- supporting a high level of efficiency, reliability and flexibility of control with the least number of personnel in control organs;
- reducing the number of assigned personnel in control organs, who are directly subordinate to the commander (formation commander), by means of uniting certain departments of the staff and services;
- the capability of setting up two control posts in the course of combat actions, which can, when necessary, control troops autonomously;
- the capability of receiving information from two levels lower in minimally short time periods;



- high mobility and maneuverability of control posts and the capability of locating in areas which have not had engineer preparation;
- the rational combination of centralized and decentralized principles of control, and an increase in the role and responsibility of officers of control organs, and especially of the chief of staff, for supporting the fulfilment of the commander's decision;
- the ability to receive and use advanced technical means in work, primarily means of integrated automation of control.

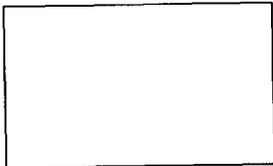
The problem of improving the training of officers in matters of troop control deserves special attention, for the fate of all the remaining measures depends largely on this. One cannot help but mention that the training we now have is not entirely suitable. Especially unsatisfactory is the lack of the necessary continuity in training among the military schools, the system of command training in the troops, and the military academies. As a result of this, in the military academies it is necessary to teach officers elementary matters of military affairs (setting up materiel and rules on using equipment available in the troops, rules for maintaining an operational map, and others), and there is not sufficient time to study the fundamental questions of troop control.

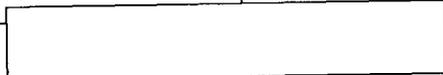
Little attention is given to matters of control even in scientific research work. Suffice it to say that during the entire postwar period not a single disseration or any type of major work has been published on matters of troop control, and since 1952 we have not been able to issue a service manual for staffs.

It should be mentioned that the system of service of the staff officers, and in particular, the procedure for promotions, are such that they do not wish to work for staffs.

All these deficiencies must be quickly eliminated.

In our opinion, on the scale of an entire army it is necessary to set up a single, well-designed, centrally controlled system for training officers, based on the principle of continuity in training in military schools, in the system of command training in the troops, and in military academies.



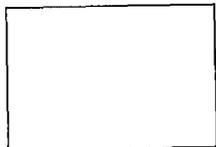


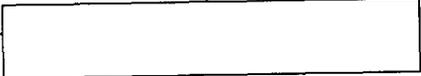
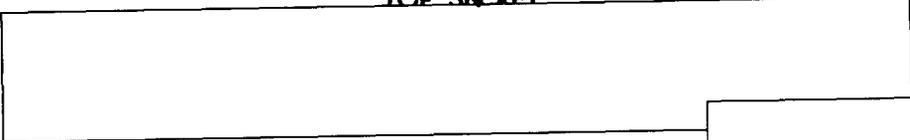
The very rich experience of civilian educational institutions, and also an analysis of the now existing procedure for training officers permits us to draw the conclusion that the presence of such a system will enable us to place the training of officers on more solid scientific bases. In particular, this will allow greater attention in military academies to be given to training officers in matters which are actually characteristic of the academy, rather than spending a considerable amount of time on what they should learn in military schools and in the troops.

It is necessary to carefully coordinate the teaching programs among all the academies, to eliminate different interpretations on matters of tactics and operational art, and also the lack of coordination in the practical implementation of measures in troop control. Primary attention should be given to training officers in the skilful use of nuclear weapons and indoctrinating them in the high fighting efficiency and morale needed for firm troop control when highly mobile combat actions are conducted under conditions of a missile/nuclear war.

We should develop scientific research work in the sphere of troop control on a wider scale, take heed on a timely basis of everything new which arises in the experience of the troops, and make it accessible to all. On the basis of studying and generalizing the advanced experience of the troops, we feel it is advisable in the near future to work up and publish a special guide on troop control, which will set forth the scientific bases and general principles of control, as well as practical recommendations for the work of the commanders and staffs. Undoubtedly this guide will promote the creation of a unity of views and the improvement of the state of troop control. It is also advisable to publish instructions on individual matters of control which are constantly in effect, especially on measures connected with the support of combat actions. This will relieve commanders and staffs of having each time to give subordinates those instructions which must be fulfilled by them in any situation.

The most important condition for solving problems of control which have arisen is to supply control organs with new means of communications, mechanization, and automation of the processes of control. Until we have eliminated the technical backwardness of our control organs, we will not work efficiently in the area of





control. The efforts of everyone must be directed toward overcoming technical backwardness, beginning with the judicious private soldier in the troops and ending with the workers of the central directorates and scientific research institutes.

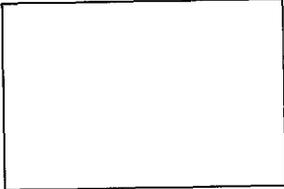
First, it is necessary to supply troops as quickly as possible with those new technical means of communications, mechanization and minor automation of control whose production has already been organized or will be organized in the near future.

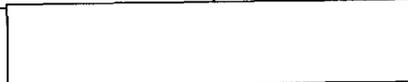
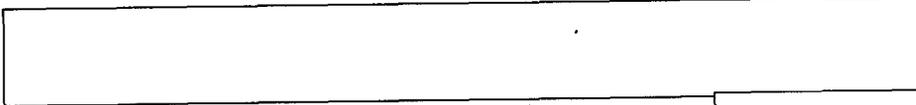
Of those means, we will first of all point out the new standard radio sets, which have a greater operating range than those we have at present, reaching 30 to 40 kilometers at the regiment level, 80 to 100 kilometers at the division level, and 250 to 300 kilometers at the army level.

All radio sets must be supported as quickly as possible by automated and mechanized scanning means, and the practical use of them must be implemented directly from the work areas of the commander and the staff officers.

The introduction of secure communications equipment at all levels of control for voice and other transmissions will permit us to mainly solve the problem of ensuring security of control and eliminate the main obstacle to efficiency in the work of control organs, that is, coding and decoding with the aid of the awkward secure troop control documents. During exercises in a number of districts it was established that when a combat order of an army and division is transmitted by those technical communications means which are not equipped with secure communications equipment it takes on the average one hour and 55 minutes for coding, 38 minutes for sending the coded message, and one hour and 50 minutes for decoding -- four hours and 23 minutes in all. When secure communications equipment is available, the same order can be transmitted directly to units in 40 to 50 minutes. Of course, the available models of secure communications equipment are still in need of substantial technical improvement.

In spite of the technical deficiencies, loudspeaker communications equipment (selective circuit communications) set up in control posts of a front and army, has made it possible in





a number of exercises to considerably speed up and facilitate reciprocal information about the situation within those posts, and also for the formation commander to receive the necessary memoranda from subordinates and to relay instructions to them without calling them to him.

Sound recording equipment (dictaphones and tape recorders) also has great prospects. It permits a considerable reduction in combat documentation and, via this, an increase in efficiency in the work of staffs of all levels.

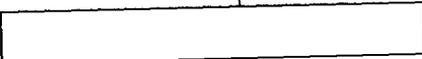
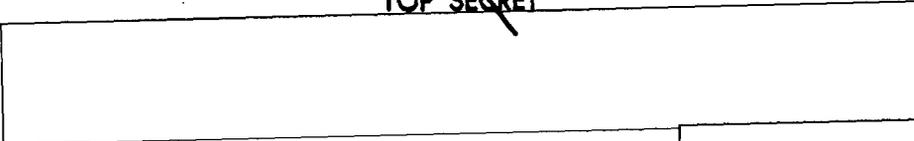
Judging by the results of tests on experimental models, the simplest automatic information equipment operating on the principle of burst transmission, and also signal-coding devices in conjunction with standardized forms ensure an exceptionally rapid transmission of any instructions and reports with a firm guarantee of security. The same combat order of a division or army can be transmitted with the aid of these means in only five to seven minutes. In our opinion, these means have a great future even with the introduction of electronic computers into the troops, inasmuch as they can be employed in this case as data transmitters for information to be entered into the electronic computer. Therefore, their modification and rapid introduction into army and division levels of control must be given special attention.

Very simple keyboard calculators have allowed various calculations to be speeded up four to six times in exercises, especially in the area of rear services support of troops in division, army, and front levels of control.

The experience of exercises has shown that we should not disregard such means as television video communications equipment, pantographs, various devices for duplicating combat documents (especially graphic documents), conventional sign and signature stamps, roller handles, templates, stencils, slide rules, and tables, since after modification all these means will allow the work of staffs to be facilitated, the low productivity of manual labor to be replaced, and moreover, the efficiency of control to be raised.

It has long been time to change the field outfitting of officers and generals, in particular to replace their canvas bags





with a suitable command map-board with everything needed for the control of instruments and accessories.

Until better vehicles are issued, the BTR-50PU or the BTR-60P should be fitted out with work spaces for commanders and staff officers at all tactical levels. When this is done, an officer, with the aid of a remote control panel, should be capable of entering into communications from his own work space with any subscriber. Course plotters, which are set up in these vehicles in battalions, by transmitting at specific time intervals the coordinates of the position of commanders of subunits with the aid of automatic transmitters or by radio, enable superior commanders and staffs to constantly know the situation and the nature of actions of the troops in general terms.

In addition to this, in a division, army, and front it is desirable to employ helicopters, equipped as airborne (flying) control posts for control of troops on the march, when combat actions are being conducted in complex conditions of terrain, and also for conducting reconnaissance and monitoring the actions of the troops.

Reconnaissance units and subunits must be supplied with more advanced technical means of aerial, radiotechnical, and television reconnaissance, permitting them to conduct reconnaissance to a depth of a minimum of 100 kilometers in a division, and up to 400 to 600 kilometers in an army.

Of course, the views expressed in this article about ways of solving problems of control cannot be considered final. They must still be carefully investigated, debated on the pages of our military press, and tested in forthcoming exercises with the troops.

