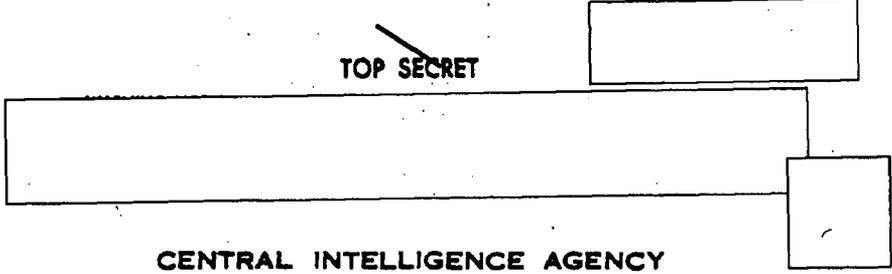


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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

30 March 1976

MEMORANDUM FOR: The Director of Central Intelligence
SUBJECT : MILITARY THOUGHT (USSR): Military District
Air Defense Exercises

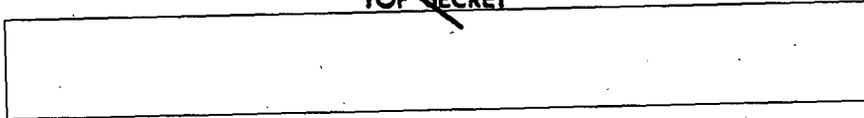
1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. This article examines the organization and conduct of district-level air defense exercises, using the Baltic Military District as an example. Two groups of exercises were established to differentiate the repelling of sudden air attacks from the air defense activities within an offensive operation. The author explores the composition of the participating troops and directing body as well as the problems of setting up the actions of the target aircraft, and provides detail on the three stages in each exercise group. This article appeared in Issue No. 1 (77) for 1966.

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

for William E. Nelson
Deputy Director for Operations

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Intelligence Information Special Report

Page 3 of 17 Pages

COUNTRY USSR

DATE OF INFO. Early 1966

[Redacted] DATE 30 March 1976

SUBJECT

MILITARY THOUGHT (USSR): Military District Air Defense Exercises

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 1 (77) for 1966 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. The author of this article is General-Major P. Lavrinovich. This article examines the organization and conduct of district-level air defense exercises, using the Baltic Military District as an example. Two groups of exercises were established to differentiate the repelling of sudden air attacks from the air defense activities within an offensive operation. The author explores the composition of the participating troops and directing body as well as the problems of setting up the actions of the target aircraft, and provides detail on the three stages in each exercise group. The stages of the first group included bringing air defense forces to combat readiness and repelling the first air attack, followed by regrouping and repelling subsequent attacks. The stages of the second group consisted of setting up an air defense grouping and kill zones within a front operation, repelling the first enemy air attack and eliminating its aftereffects, and providing cover for the rear. Certain aspects of control are mentioned briefly in both contexts. End of Summary

[Redacted] Comment:

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. [Redacted]

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Page 4 of 17 Pages

Military District Air Defense Exercises

by
General-Major P. Lavrinovich

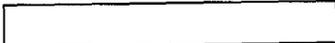
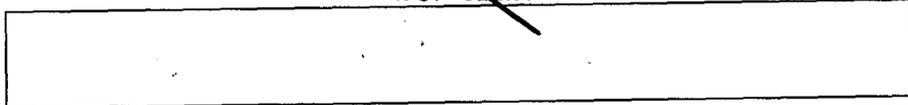
Air defense exercises of the military districts are one of the important forms of the joint preparation of the air defense forces and means of the Ground Forces, large units (formations) of the Air Defense Forces of the Country, the Air Forces and, on coastal axes, the Navy. The conduct of these exercises involves a great deal of preparatory work, the observation of strict methods, and the satisfaction of a series of specific requirements inherent only in exercises of this type. We would like to make some comments on the organization and conduct of such exercises, based chiefly on the experience of the Baltic Military District.

Themes and training problems. If we consider the activities of a military district air defense system as they apply to the initial stage of a war, we find that two different periods stand out clearly; these are determined by the uniqueness of the situation and the nature of the problems to be solved.

The first is to repel strikes by the air enemy at the start of combat actions through the combined efforts of all air defense forces and means deployed in the territory of the district. In this case the air defense system conducts its combat actions from main and alternate positions (airfields). The control of all forces and means, regardless of their component affiliation, is carried out from the command posts of formations and large units of the Air Defense Forces of the Country.

The second is to repel attacks by the air enemy in the course of front operations through the combined efforts of the air defense means of the ground forces and the fighter aviation of the air army in close cooperation with the Air Defense Forces of the Country. Combat actions are carried out under conditions of the dynamic movement of troops from temporary field positions (airfields). In this case the system of air defense of the troops actually becomes the first echelon of the country's air defense, and in turn, the front-area air defense large units (formations) act partly in support of the ground forces. The control of all air defense forces and means operating in the front zone is carried out from the air defense command post of the front, where operations groups from the air army and

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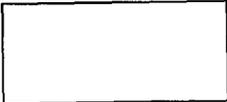
the formation of the Air Defense of the Country are located.

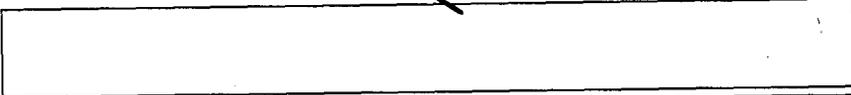
Accordingly, even the themes of air defense exercises may be divided conditionally into two groups. The first group includes exercises the purpose of which is to prepare all air defense forces and means deployed in the territory of the military district for joint action against sudden enemy attacks at the start of a war. The second includes exercises in which, generally, questions concerning the air defense of the ground forces are worked out directly in the course of an operation. Of course, it is impossible to draw a sharp line between these two types of exercises, even though they have essential differences in training problems and the methods by which they are conducted.

Thus, in exercises involving the repelling of an air enemy's initial strikes, we usually attempt to complete the following training problems:

- improvement of the radar system and other forms of reconnaissance through the combined employment of the reconnaissance means of the air defense of the country, the military district, the air army and the navy;
- maximum reduction of the time required to report air situation data to the active air defense means, the troops of the district and the fleet as well as local organs of authority and the civil defense;
- development of cooperation between the fighter aviation of the air defense of the country and the air army;
- practical mastery of methods of cooperation between the surface-to-air missile systems, antiaircraft artillery and fighter aviation;
- integrated use of the means of radio countermeasures of the military district, the Air Defense Forces of the Country and the navy, as well as joint measures for protection against enemy jamming;
- improvement in the control of all air defense forces and means deployed in the territory of the military district, regardless of their component affiliation;
- maneuvering by part of the air defense forces and means to provide cover for the ground and naval forces.

The main purpose of the second group of exercises is to coordinate the activities of the front air defense system which is cooperating with the Air Defense Forces of the Country in order to provide reliable cover for the ground forces when they are conducting operations. In such exercises it is best to set approximately the following tasks: to set up a continuous radar field in the front zone by the forces of the radiotechnical units and tie this field in closely to that of the Air Defense Forces of the Country; to warn the active air defense systems, the





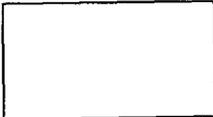
troops and the system of the air defense of the country; to transmit target information from the front to the rear; to develop cooperation between the fighter aviation of the air army and the fighter aviation of the front-area formation (large units) of the air defense of the country. Among the main problems worked out in close connection with the above are those such as the maneuver of part of the forces and means of the air defense of the country to cover the ground forces in the course of an operation; cooperation of surface-to-air missile units, antiaircraft artillery and fighter aviation under the conditions of a complex air situation and the rapid movement of the troops of the front (army); cooperation with the air defense systems of adjacent fronts and the fleet as well as with the troops being covered; and the control of all air defense forces and means operating in the front zone from the air defense command post of the front.

As in exercises of the first group, one of the main tasks will be practice in conducting combat actions against actual targets. Here it will be possible to monitor the level of combat readiness and the state of training of the troops and staffs.

The composition of the troops and the directing body of the exercise.
The composition of the troops allocated to an exercise is determined by the commander of the troops of the military district in agreement with the main staffs of the air forces and the Air Defense Forces of the Country. He must make sure that the theme agrees with the training objectives. For example, if an exercise is to be carried out on a theme of the first group, the exercise must include all the air defense troops deployed in the territory of the military district, and if it is an exercise of the second group, he must use the air defense forces and means of the ground forces and the fighter aviation of the air army. In this case the Air Defense Forces of the Country may be represented by the staffs of air defense large units and some units of the fighter aviation and radiotechnical troops designated to operate jointly with the field air defense systems.

The staff of the directing body should be made up of generals and officers of the military district headquarters. The director's assistants from each of the air defense branch arms may be appointed from among the command personnel of formations of the air defense of the country, the chiefs of air defense troops of districts and, in some cases, with the agreement of the commander-in-chief of the air defense and air forces -- from the senior generals and officers of the main staffs.

The proper selection and careful preparation of umpires assigned to each unit is extremely important to the success of the exercise. The





umpires should participate in training practices and be given briefings before joining the troops.

Practice has shown that the umpires for each branch arm should have the same report form. For example, the umpires assigned to radiotechnical units must prepare, with the assistance of a staff, plotting cards for the targets that pass through the zone of visibility of the unit (only with a code for the aircraft that have been designated as targets). The cards should be distributed at certain periods of time. In addition to the aircraft course plots, each card must indicate basic information in approximately the following form:

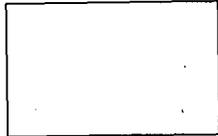
Total # Targets Plotted	At Altitudes			Identified As					
	Below 500 m	From 500 to 11,000 m	Above 11,000 m	Single	Group	Jamming Aircraft	At Intervals up to 100 km	At Intervals greater 100 km	Others

Photographs of the radar displays and command post plotting boards must accompany the cards.

Umpires assigned to surface-to-air missile and aviation units must also prepare target plotting cards with an indication of the exact time of each missile launching and the coordinates and times of interception of targets by the fighters, with photographic verification.

In addition to the report forms, special instructions should be prepared for the umpires for each branch arm with a list of questions which they must answer and present to the staff of the directing body.

Organization of the actions of the attacking aviation. The air situation that is created must be such as to ensure that the established training objectives will be developed and must approximate the situation that could be expected in the given theater of military operations on the basis of the capabilities and tactics employed by the probable enemies.



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Page 8 of 17 Pages

However, the creation of such a situation is an extremely difficult matter. Some military districts do not have the necessary forces for this, and it is impossible to allocate a sufficient amount of fighter aviation to act as targets since this aviation will be operating in the air defense system. In addition, the aviation based in the territory of the district usually is not capable of faithfully reproducing the operations of the attacking side. It appears immediately above the territory of the district and is detected almost above the airfields, which essentially prevents timely reaction by the air defense system.

Experience has shown that these difficulties may be overcome by using the aviation of two adjacent military districts.

Flights by the attacking aviation should be planned so that the radar system has the opportunity to detect them at ranges close to those that could be expected in a real situation. A very instructive situation can be created, for example, when the aviation of one district makes sorties and delivers strikes against targets in an adjoining military district and lands at the latter's cooperating airfields. The return of this same aviation to its own airfields can quite successfully represent an enemy attack against targets in its own military district. It is important that flights by the attacking aviation be carried out over a broad range of altitudes and that its flight paths place a sufficient amount of strain on the air defense forces.

Routine flights of long range aviation may be used successfully in addition to the aviation of the military districts to represent targets. Of course in this case it will be necessary to make prior arrangements and have a precisely developed plan. Flights by long range aviation are particularly useful at night, under jamming conditions and at low altitudes. With agreement from the fleet commander, coastal military districts can use mine-laying and torpedo aircraft as the attacking aviation.

In exercises by the Baltic and Belorussian military districts, usually more than 150 sorties were made in all by the attacking aviation and almost all acted against the air defense systems of each military district.

In the course of an exercise it is very important that the observance of the assigned flight paths and flight altitudes by the attacking aviation be strictly monitored. Any alteration in the flight of a target with respect to that which was planned, if it has not been noted in advance by the directing body, will result in blame being placed upon the air defense

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Page 9 of 17 Pages

means and, primarily, the radar system. Such instances distort the true picture of the state of the air defense, the level of training of the units and the preparation of organs and directorates, and naturally reduces the usefulness of the exercise.

Procedure for conducting the exercise. The course of the exercise and the sequence in which its tasks are worked out are determined by its plan. Usually the following stages were included in the plans of exercises of the first group conducted by our district.

First stage (a duration of six to eight hours): bringing the air defense forces and means to combat readiness and repelling the first massed attack by enemy aviation and drones.

Second stage (a duration of 10 to 12 hours): elimination of the aftereffects of the initial enemy strike, the partial regrouping of air defense forces and means in order to cover the ground forces and fleet. Combating small groups and individual enemy aircraft.

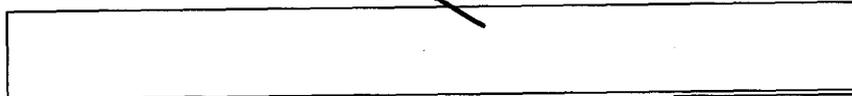
Third stage (duration of one day): repelling subsequent attacks by enemy aircraft and drones. The control of alternate and auxiliary command posts by radio.

In all, about two days are spent on an air defense exercise in the military district, not counting the critique, which requires another two to three days for preparation.

The air defense forces may be brought to combat readiness by orders of the senior chief or, in the event of an unexpected attack by an air enemy, at the decision of the commanders of large units and units. The second variant is considered to be the most instructive; however, its use is fraught with some undesirable consequences. The radar reconnaissance system of the military districts, particularly that of the coastal and border military districts, is generally directed toward the probable enemy. In order that the radar companies on alert have the opportunity to detect a sudden air attack, the attack should be made from the direction of our probable enemies, and this would require crossing state borders which is, of course, inadmissible. By carrying out an air attack from the rear of the radar field we are essentially preventing the opportunity for the timely detection of the aircraft on the distant approaches to the boundaries of the military district. Therefore, in air defense exercises the troops are brought to combat readiness by order of the senior chief.

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Page 10 of 17 Pages

The true state of the warning system and the times required to assemble personnel and ready combat equipment can be checked if the order (signal) to bring the troops to full combat readiness is given unexpectedly. This means that the participants in the exercise should not know the dates on which the exercise is to be held. They may be informed only of the month in which it is to be held. For this same reason the mission of the exercise should not be made known in advance. Moreover, it is our opinion that there is no need to establish a separate mission. All data on the situation may be presented in the first point of the operations directive of the commander of the military district, and additional information concerning the enemy can be given in the reconnaissance report.

The director of the exercise indicates the exact time at which orders will be given to bring the troops to full combat readiness. Only at this time will the umpires move to the units (large units) and hand over to their commanders the appropriate written orders for responding to the alert. The orders for the air defense units included in the complement of combined-arms large units should be presented to the commanders of these large units or to the commander of the combined-arms (tank) army.

After receiving the alert signal the antiaircraft artillery regiments move to the concentration areas of their large units and deploy to provide them cover. After a short march the surface-to-air missile regiments of district and army subordination also occupy previously assigned training sites for the purpose of providing air defense for certain groupings of troops. The radiotechnical units of the district and armies deploy at positions and create an independent radar field.

At the same time the air defense command posts of the combined-arms (tank) armies and the military district deploy, gradually taking over control of the field air defense means. Operations groups with communications means are sent from the chief of the air defense troops of the district and the commander of the air army to the army (division or corps) air defense command post.

Of course, this is only one variant of actions in an initial situation. Other variants are possible, depending upon the problems that the troops of one or another military district are to solve. For example, in a number of cases the radiotechnical units of a district will not deploy but will comprise a reserve intended for the restoration or strengthening of the radar field of the air defense of the country; antiaircraft artillery units may remain in their deployment areas for completion of mobilization and send out only the subunits on alert; surface-to-air missile



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Page 11 of 17 Pages

regiments may begin a march to train loading areas, limiting their participation in the air defense system to battalions on alert.

There may also be a variant in which the overwhelming majority of the field air defense units will begin moving either independently or in their large units from the territory of the military district. However, regardless of how rapidly this may be carried out, they will still have to participate in repelling attacks by the air enemy.

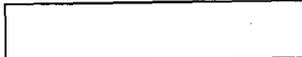
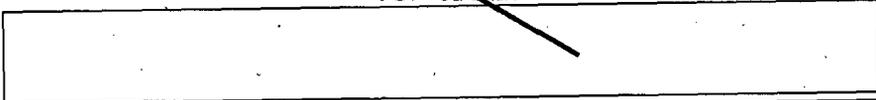
The repelling of the first air attack represents the culminating point of the exercise. During this period the most complex situation should be created for the air defense troops.

The maximum number of aircraft should be allocated for participation in the first massed attack; strikes by aircraft and drones should be directed against the air defense system, troop concentrations, railroad junctions and other important installations of the district. The attack should be echeloned in time for a total period of two to three hours from the moment of detection of the targets until they have left the zones of visibility. The flight paths of the target aircraft should cover the entire territory of the military district in a way that will create maximum stress on the air defense means. Experience has shown that in the first attack it is desirable to have a minimum of 50 aircraft overflights organized in such a way that 25 to 30 targets will be over the territory of the district at the same time for at least 20 to 25 minutes. The bulk of the targets (up to 50 percent) should enter the territory of the district at low altitudes. About 30 percent should comprise high-speed, high-altitude targets. It is best to use fighter-bombers of the MIG-17 type and YAK-28 bombers in the attacks, since they are capable of operating at medium, low and high altitudes. IL-28 aircraft should be used for hedge-hopping and YAK-25 high-altitude aircraft at maximum altitudes (up to 20 kilometers).

The start of the first enemy attack should be planned for the moment at which the troops have reached full combat readiness.

As this attack is being repelled, the directing body and umpires should pay particular attention to the cooperation between the fighter aviation and the surface-to-air missile troops; this cooperation begins with the highest authority responsible for centralizing control over the air defense forces and means. It is at the command post of the senior chief where targets are distributed between the fighter aviation and the surface-to-air missile troops. The umpires of course cannot accept a

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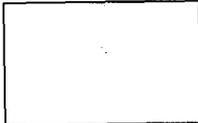


situation in which fighters are assigned the task of destroying targets in zones where the surface-to-air missile troops are firing, or when surface-to-air missiles are launched against targets being attacked by the fighters. A consideration of the grouping of air defense means, the transmission of signals in an accurate and timely way, the speed at which they pass over the communications channels, the clarity of their content, and, finally, a thorough understanding of the principles of this cooperation -- these form the basis for success in the rational utilization of means to combat an air enemy.

However, successful cooperation depends not only on the precise functioning of the senior chief's command post. Sometimes fighters in the air will be targeted against the enemy using the fixes on their own radars rather than the radar data provided by the air defense system, that is, before the fighter is notified of the target. As a result, either the target is attacked by the fighter in the zone of the surface-to-air missile troops or is fired upon by missiles at the moment the fighter attacks, while the senior chief, not knowing about the attack by the fighter, assigns the task of destroying the target to other means.

In such cases, after photographic monitoring documents have been collected at the air regiment, the destroyed target is usually assigned a number which coincides approximately with those numbers used when notification was given at the time of attack on the target. After these are compared with the documents and report cards presented by the umpire, it can be established that certain targets were fired upon by the surface-to-air missile troops at the same time that they were being attacked by fighters. As a form of punishment for the poor organization of cooperation, all fighters attacking targets at the moment that missiles were being launched against these targets should be considered destroyed by the fire of their own surface-to-air missile troops. In actual conditions some fighters could possibly avoid such fate, but it is better not to take this into consideration in exercises. Naturally the reasons for a breakdown in cooperation must always be explained carefully so that it will not be repeated.

In the course of the first enemy attack the umpires assigned to the units will introduce situations, in accordance with the game plan, involving nuclear strikes against one or another target, indicating the TNT equivalent of the warhead, the altitude of the burst, and the losses experienced by the unit. The situation thus created should force the units and large units to adopt measures of protection against weapons of mass destruction and elimination of the aftereffects of the nuclear attack.



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Page 13 of 17 Pages

The second stage of the exercise may begin when the director hears the decisions of the commanders of the formations (commanders of the large units), the chiefs of the branch arms and services, and the chief of the air defense troops. In this situation the dynamics of events are somewhat interrupted. Therefore, the time devoted to reporting should not count as operating time of the exercise.

While the senior authority is hearing reports, similar reporting should be carried out in the large units and units. Here the umpire assumes the role of the director. The commanders of large units and units and the chiefs of the branch arms and services report briefly and within their capacity on the results of combat operations, the status of their subunits and measures taken to eliminate the aftereffects of the nuclear strike. Generals or officers from the directing body may be sent specially to some large units to hear reports.

One of the most important elements of the second stage is the operation of the staffs. They collate the information received on the actions of the enemy and their own troops, prepare reference material for the commander and, most important of all, they provide continuous supervision over the combat operations of the forces subordinate to them, compile combat documentation and dispatch it to the executors, develop plans for the further employment of the means of combat, and also work out records and planning documentation for immediate delivery to the higher staffs.

In the course of the second stage the enemy conducts intensive reconnaissance by individual aircraft and makes attacks in small groups against specific targets, forcing the air defense system to maintain continuous combat readiness and carry out combat actions with its means that are on alert (we are talking about those units that are on alert for the purpose of the exercise, while the means of the military district on alert status do not participate in the exercise). The conclusion of the second stage should be planned for about midnight, which will give the troops several hours of darkness to move to alternate positions.

The main part of the third stage of the exercise consists of repelling enemy air attacks of varying nature. It would be very useful if training flights of the long range aviation could be used as the first of these attacks. Flights by individual aircraft at night and over several routes with intervals of one to five minutes and echeloned at altitudes from 300 to 10,000 meters, under the cover of intensive jamming, could be used to represent the penetration of the enemy's strategic aviation into the

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Page 14 of 17 Pages

country's interior.

All active air defense means should be used to repel this attack, although the main burden will still be with the fighter aviation. Participation by surface-to-air missile troops will be limited to narrow zones, since, unlike the tactical aviation which operates over a broad front, these aircraft will be flying in trail over the same flight paths.

The transfer of control from the main command posts to alternate command posts and to those of subordinate large units and units is also worked out during the third stage.

One of the training problems of the third stage may be to switch to control using radio alone. However, during the transfer of control as well as in control by radio, it must always be remembered that the safety of aviation flights must be ensured -- it is impermissible to interrupt communications with fighter aircraft in the air. In addition, the air defense exercise should not be allowed to become a command-staff exercise. Each decision, command, document and signal should be checked out in practice.

An attack by strategic aviation may coincide with aggressive actions by enemy fighter-bombers and cruise missiles against the air defense installations and troops of the district. At this stage the tension of the situation builds up with each hour. Antiaircraft artillery units of motorized rifle and tank divisions are deployed, complicating flights by the fighter aviation. Data are received on the disabling of surface-to-air missile systems, airfields, radar companies, command posts, etc. Under such conditions it is of course impossible to arrange meetings to hear reports. The commanders issue their instructions and report on them to the umpires and director in the course of operations.

The last air attack should be carried out under daylight conditions. This attack may be represented by the aircraft of one's own military district returning from airfields of a cooperating adjacent military district. At the time of repelling this attack the air defense troops should be controlled from alternate command posts or from main ones if alternate ones had been in operation prior to this time.

The procedure for conducting exercises on themes of the second group will differ significantly from that of the first. For example, the plan and sequence of an exercise conducted on the subject "Air Defense in a Front Offensive Operation" (as one of the variants) may have the following

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Page 15 of 17 Pages

form:

First stage (a duration of two days): the organization of front air defense during a period when an offensive operation is being prepared.

The main points of this stage will be:

- to bring the air defense troops of the military district and the fighter aviation of the air army to combat readiness;
- to establish a grouping of air defense troops corresponding to the decision of the commander of the front troops for the operation;
- to set up kill zones for surface-to-air missile units and a radar field in the front zone;
- to organize cooperation with the air defense system of the country, adjacent fronts and the fleet as well as between the air defense branch arms;
- to control the air defense means.

The working out of training problems of the first stage will begin when the air defense troops and the fighter aviation of the air army receive the alert signal. The commanders of units and large units are handed their assignments for the exercise. In addition to general and specific situations, these assignments must indicate the areas of departure positions of each air defense unit and the time a position is to be occupied. The chief of the air defense troops of the front, the commander of the air army and the commander of the front-area formation (large unit) of the air defense of the country are given, in addition to their assignments, the decision of the front commander for the operation, in which only general tasks are assigned to air defense. Then the director of the exercise hears reports with specific proposals for the organization of the air defense system.

During the first stage of the exercise the air defense troops complete their regrouping and deploy at their positions. The staffs work out combat documentation, organize control and monitor the actions of the troops.

If the front operation is being prepared when combat actions have already begun, the movement of troops and staffs from their areas of permanent deployment to the departure areas for the exercise should be carried out outside the exercise situation and should not be considered part of the time of operations. The operational role-playing may begin only after the troops, staffs and command posts have occupied the departure areas indicated in the assignment.

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Page 16 of 17 Pages

In the process of regrouping the troops and setting up an air defense system, enemy aviation activities may be represented by flights by individual aircraft and small groups.

Second stage (a duration of 10 to 12 hours): repelling the first attacks by enemy aircraft and drones; eliminating the aftereffects of nuclear strikes. The content of the second stage is evident from its name. The first attack by enemy aircraft and drones may be organized according to the same principle used in working out themes of the first group. Once the attack has been driven off, the control system is restored, and the personnel, equipment and armament are decontaminated. In this stage special attention should be given to practical problems of cooperation between the fighter aviation and surface-to-air missile units.

Third stage (a duration of one day): to provide cover for the troops and installations of the rear of the front in the course of the offensive operation.

This stage may consist of the following: repelling two to three attacks by aircraft and drones and combating single aircraft and small groups in the course of the offensive by the troops; providing continuous cover to the advancing troops and carrying out successive movement of surface-to-air missile units to new positions; setting up and maintaining a continuous radar field throughout the offensive; controlling the air defense troops and maintaining cooperation between the air defense systems of the front and the country, as well as among the fighter aviation, surface-to-air missile units and radiotechnical troops.

In content the third stage of the exercise will be more dynamic and complex both with respect to the organization of the role-playing as well as to the monitoring of the combat actions of the troops. In planning this stage an attempt should be made to ensure that the time of the attacks by target aircraft coincides with the maximum degree of readiness of the air defense systems. Generally speaking, the air defense system of a front should always be at a particular level of combat readiness, even when the rates of advance are high. This point should be specially emphasized, since gunners and missile crew members, in attempting to keep up with the troops, frequently are not held at their firing (launching) positions and in this way essentially curtail the air defense system.

Small subunits of motorized riflemen, instructed in advance and supplied with radio communications equipment, can be used to represent the offensive on the main two or three axes. In organizing the relocation of

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Page 17 of 17 Pages

their own subunits, the commanders of antiaircraft artillery, surface-to-air missile and radiotechnical units should take into consideration the rates of movement of the motorized rifle groups and should coordinate all questions of cooperation by radio with them, as well as with the troops being covered.

In the dynamics of an offensive the forms of cooperation between the surface-to-air missile units and the fighter aviation may change sharply. As the positions of surface-to-air missile units change, the continuous kill zones of the surface-to-air missile troops will be partially broken up, resulting in a disruption of the centralized control of the units. Under such conditions, cover for the troops should be provided chiefly by the organic air defense means of motorized rifle divisions (tank divisions), which are capable of firing from the march or after brief stops, and by the fighter aviation. Close cooperation between the fighter aviation and surface-to-air missile units by zones will be difficult to achieve (surface-to-air missile zones are continuously changing), and therefore the fighter aircraft should be given preference in attacks on targets. They cannot determine the location of surface-to-air missile zones from the air, while surface-to-air missile systems and antiaircraft artillery units have the means (although they are not sufficiently reliable) to identify their own fighters. Umpires assigned to surface-to-air missile units must attentively follow all targets passing through the kill zone of the unit and carefully explain the reasons for each case when a target passes through without being subjected to fire.

On the whole, the air defense exercises of military districts should play an important role in coordinating the country's air defense system as well as in increasing the effectiveness of the front and fleet air defense systems and, what is most important, in preparing all air defense forces and means, through their combined efforts, to repel sudden enemy attacks in the first hours of a war.

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