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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

22 August 1980

MEMORANDUM FOR: The Director of Central Intelligence

FROM : John N. McMahon
Deputy Director for Operations

SUBJECT : USSR GENERAL STAFF ACADEMY LESSONS : Preparation and
Critique of the Plan of Air Defense in the Front
Offensive Operation

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on a collection of 29 lessons, classified TOP SECRET, prepared in 1977 for use in the Soviet General Staff Academy. The lessons are broken down into two parts: the first 19 lessons deal with the staff preparation of a front offensive operation with conventional and nuclear weapons, the remaining 10 lessons deal with the conduct of an offensive employing conventional weapons at first with a transition to the use of nuclear weapons. This lesson outlines the steps followed by a front chief of air defense troops in planning and organizing the air defense of the front's troops in an offensive operation in the northern area of West Germany.

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.

John N. McMahon

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Intelligence Information Special Report

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COUNTRY USSR

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SUBJECT

GENERAL STAFF ACADEMY LESSON No. 10 : Preparation and Critique of the Plan
of Air Defense in the Front Offensive Operation

SOURCE Documentary

Summary:

The following report is a translation from Russian of a lesson, classified TOP SECRET, prepared for use at the General Staff Academy of the Armed Forces of the USSR. This lesson is for the instruction of students acting as front chiefs of air defense troops in the steps to be followed in drawing up the air defense plan for a front offensive operation, with conventional or nuclear weapons, across northern West Germany toward Brussels. The main points, which are covered in a very generalized and undetailed manner, deal with the following: the assessment of the enemy air threat, the tasks of front air defense at various phases, stressing air defense during assault river crossings; the organization of reconnaissance, cooperation, and control; surface-to-air missile and fighter aviation cover for front troops, NATO radioelectronic warfare aircraft and equipment, and the radioelectronic warfare missions and disposition of the front air defense radiotechnical troops.

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Lesson No. 10

Lesson subject: "Preparation and critique of the plan of air defense in the front offensive operation."

I. Estimated time to complete Lesson No. 10.

Number and designation of the lesson	Allotted time		
	Group Exercise	Individual Study	Total
Lesson No. 10 -- Preparation and critique of the plan of air defense in the <u>front</u> offensive operation	4	6	10

II. Training objectives of the lesson:

1. Give students practice in planning the front's air defense in the offensive operation.
2. Systematize and consolidate the students' knowledge in matters of the combat employment of front air defense forces and means in the offensive operation.

III. Method of conducting the lesson -- group exercise with a critique of the plan of the front's air defense; separate sections of the plan are to be prepared individually by the students.

IV. Methodological recommendations on the preparation of students for the lesson.

When conducting a briefing, at the request of the training group, it is advisable to make known to the students the training objectives of the lesson, the training topics, and the procedure for working them out, and then to recommend the following procedure of work to the students:

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-- study the general and particular situation from the operational assignment in the portions which deal with air defense and clarify the concept of the front commander's decision on the offensive operation;

-- study the assignment for lesson No. 10, focusing attention on clarifying the tasks of air defense in the offensive operation and on a comprehensive estimate of the situation; following that, independently make a decision and plot on a map the air defense troop grouping (surface-to-air missile units and radiotechnical units) of front and army subordination at the lines for fulfillment of the front's immediate and follow-up tasks during the commitment to battle of the second-echelon armies of the front and during the assault crossing of the RHINE River by the main grouping of the front;

-- using the explanatory memorandum, be prepared in the role of chief of front air defense troops to report the air defense plan to the commander (at the lesson), and in doing so, the points in the organization of air defense must be reported with respect to tasks of the front in the operation (in the departure area for the offensive and during fulfillment of the immediate and follow-up tasks of the front). The students are to note in their workbooks the above-mentioned sections of their own individual decision with necessary substantiations;

-- study the recommended literature and be prepared to answer theoretical questions at the discretion of the lesson director.

At the end of the briefing, it is advisable to show students the procedure for the critique of the air defense plan set forth in Section V, the procedure for conducting the lesson, and to remind them that the reports will be done according to the map that is to be hung on the blackboard.

V. Procedure for conducting the lesson.

A. Main training topics and approximate distribution of training time.

Check of the students' preparation and critique of theoretical questions regarding the lesson subject.....10 minutes

1. Conclusions from clarification of the concept of the front commander's decision on the offensive operation, the air defense tasks, and the stipulations for cooperation.....15 minutes

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2. Conclusions from an assessment of the air enemy.....20 minutes
3. Tasks and concept of the air defense of the troops and the rear services installations of the front in the offensive operation.....10 minutes
4. Combat strength and capabilities of the forces and means of the air defense in the front area.....10 minutes
5. Organization of the air defense of the troops and installations with respect to the tasks of the front in the operation:
Total time.....100 minutes
 - a) organization of reconnaissance of the air enemy and warning of troops about it; organization of surface-to-air missile and fighter aviation cover in the departure area for the offensive.....25 minutes;
 - b) organization of reconnaissance of the air enemy and warning of troops about it; organization of surface-to-air missile and fighter aviation cover during fulfillment of the immediate task of the front.....30 minutes;
 - c) organization of reconnaissance of the air enemy, organization of surface-to-air missile and fighter aviation cover during fulfillment of the follow-up task of the front.....20 minutes;
 - d) organization of the cooperation of air defense forces and means in the departure area for the offensive and during the offensive operation.....15 minutes;
 - e) organization of the control of the front air defense forces and means in the departure area for the offensive and during the offensive operation.....10 minutes.
6. Protection of the front air defense radioelectronic means against enemy jamming.....10 minutes
- Concluding remarks.....5 minutes

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At the beginning of the lesson, it is necessary to check the student's plotting of the grouping of the air defense forces and means of front and army subordination on the map according to their own decisions and to check their workbook entries of the notes for the report of the air defense plan.

The subject and training objectives of the lesson and also the training topics and procedure for their attainment will be announced. To check the assimilation of the material from the literature recommended in the assignment, it is recommended that two or three theoretical questions be asked of the students concerning the organization of air defense in the front offensive operation.

Following the critique of the theoretical questions, the operational time will be announced as 1300 hours 3 September, all students will be assigned the role of chief of front air defense troops, the critique of the air defense plans will be initiated, the reports of one or two of the students on each training topic (each section of the explanatory memorandum) will be heard, and when necessary, supplements on individual topics will be heard. In doing so, it is advisable that the students be required to concisely and accurately make the reports, within the time prescribed by the lesson director, on their own work maps hung on the blackboard, with the necessary substantiation and in their own words, not permitting them to simply read out the material of the explanatory memorandum.

After hearing the reports and supplements by the students, the director can inquire as to the organizational structure and tactical-technical characteristics of the weapons of the front air defense forces and means and of the air enemy; in the concluding remarks it is advisable to conduct a short, individual critique of the training topic as a whole in which the necessary remarks on individual questions can be made and an explanation of them can be given.

It is recommended that the critique of the training topics be carried out mainly by following the order of the sections of the explanatory memorandum to the air defense plan, and in line with this, the first training topic will be brought out for critique external to the explanatory memorandum, but for the fifth (main) training topic -- the organization of air defense -- it will be advisable to examine it with respect to the tasks of the front in the offensive operation: in the departure area for the offensive, during fulfillment of the front's immediate and follow-up tasks; but as for the matters of cooperation and control, it is advisable in this case to examine them as a whole in the departure area for the offensive and

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during the offensive operation.

B. Some of the bases concerning the contents of the training topics which are to be worked out.

1. Conclusions from clarification of the concept of the front commander's decision on the offensive operation, the air defense tasks, and the stipulations for cooperation.

The concept of the front commander's decision was worked out by the students in lesson No. 1c and set forth in the training methods textbook for this lesson. The tasks of air defense and the stipulations for cooperation have been set forth in the assignment for lesson No. 10.

Students must clarify these topics from the standpoint and for the purpose of properly organizing an effective and reliable air defense in the front offensive operation, and not merely paraphrase their contents. Therefore, in their conclusions from the clarification of these topics, students in the role of chief of front air defense troops must determine the main troop groupings and installations of the front which need most reliable cover against enemy air strikes, and the axes and sequence for concentrating the air defense main efforts with respect to the primary operational lines of troop actions and the tasks of the front in the operation:

-- in the departure area for the offensive: during repulse of an enemy invasion and the transition of front troops to the offensive;

-- during fulfillment of the immediate task of the front: when breaking through the enemy's forward line of defense, during the assault crossing of water obstacles, during repulse of a counterattack by the enemy's reserves, and when committing the second-echelon armies of the front;

-- during fulfillment of the follow-up task of the front: when making assault crossings of the IJssel, Rhine, and Maas rivers, and during development of the offensive on the BRUSSELS axis.

In conformity with this, specific tasks for the air defense and the stipulations for the cooperation of front air defense forces and means will be determined.

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2. Conclusions from an assessment of the air enemy.

The given training topic will be examined within the scope of the first section of the explanatory memorandum after a report is given by one student. The report must clearly reflect the possible scale and nature of the actions of the enemy's tactical, carrier-based, and strategic aviation and his army aviation helicopters against troops and installations of the front, specially in the first massed air attack and also during the offensive operation on the key operational lines of troop actions associated with the tasks of the front.

After listening to the report, for the purposes of more precise definition, it is advisable to ask some of the students: the combat strength of the 2nd Allied Tactical Air Force, the organization of enemy air large units and units, the tactical-technical characteristics of the main types of aircraft and of the means of destruction employed by them (guided missiles, guided aerial bombs, antiradar projectiles, etc.) and also of the means that propagate electronic jamming.

In a short, special critique by the lesson director, it is necessary to draw attention to the salient features in the nature of the actions of enemy aviation in an initial massed air raid under conditions of the employment of nuclear weapons and under conditions of the conduct of combat actions employing conventional means of destruction only: the disposition of forces in the raid, the composition of the strike groups, the methods of overcoming (breaking through) the air defense system, the capabilities with respect to the employment of electronic jamming, etc. Also, attention should be given to the fact, and it should be emphasized, that the explanatory memorandum will have listed in it some of the most probable strike targets; however, the air enemy in the initial massed air attack, especially one without the employment of nuclear weapons, and according to his capabilities, and based on the norms for the detailing of forces for the destruction of the particular targets, may destroy only part of these troop groupings and targets. Consequently, in an initial massed air raid, the enemy will concentrate his strikes against designated portions of those targets which are on the most important axes for him at the given movement.

3. Tasks and concept of the air defense of the troops and installations of the front in the offensive operation.

The given training topic will be examined within the scope of the second section of the explanatory memorandum after a short report is given by one of the students.

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The critique of this training topic has as its purpose (what the students should focus their attention on in the short, special critique by the lesson director), based on the clarification of the concept of the front commander's decisions for the operation, the tasks of air defense established in General Staff instructions and the stipulations for cooperation, and it is also based on the conclusions from an assessment of the possible nature of the actions of the air enemy: to define and formulate the tasks of the front air defense troops and fighter aviation and the concept of the air defense -- that is, in cooperation with whom these tasks are to be fulfilled and how the main efforts are to be concentrated with respect to the tasks of the front and the main operational lines of troop actions.

4. Combat strength and capabilities of the forces and means of the air defense in the front area.

The given training topic will be worked out within the scope of the third section of the explanatory memorandum after a report from one of the students is given in which the air defense forces and means are depicted on a map. In line with this, the report must not be a simple listing of data from the tables, but must give correlated conclusions -- that is, the total number of large units, units, and subunits of air defense troops (by armies) and fighter aviation of the front, and also the cooperating forces and means in its area.

Following the student's report, it is advisable, for the purposes of reiteration and consolidation of the students' knowledge, to ask about and examine the organizational structure and tactical-technical characteristics of the weapons of the large units and units of air defense troops and fighter aviation of the front.

5. Organization of the air defense of the troops and installations of the front in the offensive operation.

The given topic -- main training topic -- will be examined within the scope of the fourth section of the explanatory memorandum. In line with this, it will be advisable to conduct a critique on the tasks of the front in the offensive operation after five reports are given by the students on:

a) the organization of reconnaissance of the air enemy and pertinent warning of the troops and the organization of surface-to-air missile and fighter aviation cover in the departure area for the offensive -- during repulse of the enemy's invasion and of his massed and concentrated air

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attacks and during the transition of front troops to the offensive;

b) the organization of reconnaissance of the air enemy and pertinent warning of the troops and the organization of surface-to-air missile and fighter aviation cover during fulfillment of the immediate task of the front -- during breakthrough of the enemy's forward line of defense and assault crossing of the LEINE and WESER rivers, and during commitment to battle of the second-echelon armies of the front;

c) the organization of reconnaissance of the air enemy and the organization of surface-to-air missile and fighter aviation cover during fulfillment of the follow-up task of the front -- during assault crossing of the IJSEL and RHINE rivers and during development of the offensive on the BRUSSELS axis;

d) the organization of the cooperation of air defense forces and means in the departure area for the offensive and during the offensive operation;

e) the organization of control of the front air defense forces and means in the departure area for the offensive and during the operation.

With regard to the first, fourth, and fifth reports, the material has been set forth in detail in the pertinent subsections of the fourth section of the explanatory memorandum. Material concerning the second and third reports must be prepared independently by the students during the hours of individual study using, in the process, the necessary data in the corresponding subsections of the fourth section of the explanatory memorandum. Therefore, it is advisable to direct greatest attention to the critique of these two reports, especially during fulfillment of the immediate task of the front.

a) The organization of air defense in the departure area for the offensive has been set forth in detail in subsections a and b and in the fourth section of the explanatory memorandum.

b) Organization of air defense during fulfillment of the immediate task of the front.

Reconnaissance of the air enemy is to be accomplished by a network of radar posts which are to be deployed during the troops' offensive: in the first line -- from the separate air defense radiotechnical battalions of the first-echelon armies of the front (4th, 7th, and 9th armies, and

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subsequently with their commitment to battle, the 6th Army and 10th Tank Army -- two posts in the area of each), and in the second line -- four to five posts from the 17th Radiotechnical Regiment of the front's air defense. In the offensive zone of the 2nd Army Corps, upon its commitment to battle, reconnaissance will be accomplished by radar posts of the 4th Army and by one radar post of the front. On D3 the 20th Radiotechnical Regiment of the air defense will begin to deploy its radar posts on the right flank of the front attack grouping in the 7th Army's offensive zone and on the left flank of the 4th Army. Intensified reconnaissance of the air enemy on the lines of commitment to battle of the second-echelon armies (6th Army and 10th Tank Army) will be accomplished by the means of these armies by the deployment of two radar posts per army.

With the advance of the front troops to the line for the immediate task of the front, to augment its radar coverage the 6th Air Defense Corps will move up and deploy seven radar posts, of which three will be on the JUTLAND axis (in the area of the 4th Army and 2nd Army Corps) and four in the zone of the offensive of the 6th, 7th, and 9th armies. (See the map for the grouping of radar posts.)

The warning of troops, staffs, and installations concerning the air enemy is to be: centralized -- from the front air defense command post and the air defense command posts of the armies; decentralized -- directly from the control posts of the nearest radar posts.

The main efforts of surface-to-air missile means will be concentrated on covering: the troops of the main grouping of the front on the CELLE, OSNABRUCK axis (7th and 9th armies) during the breakthrough (overcoming) of the enemy's forward line of defense and during the assault crossing of the LEINE and WESER rivers; the groupings of front missile/nuclear means and the main home airfields of the delivery aircraft of the 1st Air Army; and the second-echelon armies of the front (6th Army and 10th Tank Army) during their advance and commitment to battle. For this, the cover of the troops of the front main grouping (7th and 9th armies) during the breakthrough of the forward line of defense and the assault crossing of the LEINE and WESER rivers will be reinforced by the 15th Front Surface-to-Air Missile /SAM/ Brigade; the grouping of missile/nuclear means (2nd Front Missile Brigade, 5th Front Mobile Missile Technical Base, and the army missile brigade of the 7th Army) will be covered by the 13th Front SAM Brigade; the 3rd Front Missile Brigade and the 3rd Front Mobile Missile Technical Base -- by the 14th Front S-75 SAM Regiment; and the main home airfields of 1st Air Army delivery aircraft -- by the 17th and 18th Front S-125 SAM regiments. The commitment to battle of the 6th Army, and subsequently of the 10th Tank

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Army, will be reinforced by the 15th Front SAM Brigade and by the main forces of the air defense troops of the 7th and 9th armies which are to be deployed on the flanks of the line of commitment to battle.

(See the map for the grouping of SAM large units and units of front and army subordination while front troops are moving out to the line of the immediate task.)

Fighter air cover will be accomplished by fighter aviation of the 1st Air Army (1st, 3rd, and 5th Fighter divisions) in cooperation with fighter aviation of the 6th Air Defense Corps and the 15th Fighter Division of the Western Front. The main efforts of fighter aviation of the 1st Air Army (3rd and 5th Fighter divisions) will concentrate on repelling enemy air strikes from the western axis and on covering the troops and missile/nuclear means of the main grouping of the front on the CELLE, OSNABRUCK axis. Part of the fighter aviation forces (1st Fighter Division) will concentrate on repelling the air enemy from the northwestern axis and on covering the troops and missile/nuclear means of the 4th Army and 2nd Army Corps on the JUTLAND axis.

To ensure the timely and reliable destruction of the air enemy on the distant approaches during fulfillment of the immediate task, fighter divisions will be rebased forward in succession (by regiments) to new airfields.

(See the map for the basing of fighter aviation up to the time front troops fulfill the immediate task.)

c) Organization of air defense during fulfillment of the follow-up task of the front.

Reconnaissance of the air enemy, concentrating main efforts on the northwestern and western axes, will be accomplished by a network of radar posts which are to be deployed immediately following the advancing troops: posts of the first line by the separate air defense radiotechnical battalions of the first-echelon armies (7th and 6th armies, 10th Tank Army, and 9th Army -- two posts in each army zone); posts of the second and third lines -- by the 17th Air Defense Radiotechnical Regiment in the offensive zone of the main grouping of the front and by the 20th Air Defense Radiotechnical Regiment in the area of the 7th Army and along the coast of the North Sea.

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Reinforcement of reconnaissance and thickening of radar coverage during the assault crossing of the IJssel, Rhine, and Maas rivers will be accomplished by deploying the first line posts at reduced intervals in the sector of the assault crossing of the front's main grouping, and the radar coverage will be built up by the advance and deployment of posts at the captured bridgeheads by drawing on reserve radar companies.

(See the map for the grouping of radar posts during the assault crossing of the IJssel and Rhine rivers and at the line for fulfillment of the follow-up task of the front.)

The main efforts of front antiaircraft means will concentrate on covering: the troops of the main grouping of the front (6th Army and 10th Tank Army) during the assault crossing of the IJssel, Rhine, and Maas rivers and during development of the offensive on the Brussels axis; the grouping of front rocket troops and the main home airfields of the 1st Air Army's delivery aircraft. For this the 15th Front SAM Brigade will reinforce the cover of the troops of the main grouping of the front; the 13th Front SAM Brigade will cover the 2nd Front Missile Brigade, the 5th Front Mobile Missile Technical Base, and partially cover the army missile brigades of the 6th and 7th armies; the 14th Front S-75 SAM Regiment will cover the 3rd Front Missile Brigade, the 3rd Front Mobile Missile Technical Base, and partially cover the army missile brigades of the 9th Army and 10th Tank Army; the 17th and 18th Front S-125 SAM regiments will cover the delivery aircraft of the 1st Air Army.

(See the map for the grouping of antiaircraft large units and units of front subordination while troops are moving out to the line for the follow-up task of the front.)

Fighter air cover will be handled by forces of the 1st, 3rd, and 5th Fighter divisions of the 1st Air Army in cooperation with the 15th Fighter Division of the Western Front. The main efforts of the fighter aviation of the 1st Air Army will concentrate on repelling strikes by the air enemy from the northwestern and western axes and on covering the main grouping of the front on the Brussels axis -- during the assault crossing of the IJssel, Rhine, and Maas rivers and during the development of the offensive on the Brussels axis; part of the forces (one fighter division) will cover troops of the 7th Army. Rebasing of fighter aviation will be accomplished by regiments as the attacking troops of the front move forward.

(See the map for the basing of fighter aviation of the 1st Air Army up to the moment front troops arrive at the line for the immediate task.)

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d) Organization of the cooperation of air defense forces and means in the departure area for the offensive and during the offensive operation.

The given topic has been set forth in detail in subsection d of the fourth section of the explanatory memorandum. During an individual critique, special attention will be focused on the cooperation of front fighter aviation and surface-to-air missile means and the 6th Air Defense Corps when repelling the initial massed and concentrated raids by the air enemy in the same general area -- that is, in the departure area for the offensive; and also on the cooperation during the offensive operation when a front air defense system will be operating in its own area territorially segregated from the combat action area of the 6th Air Defense Corps.

e) Organization of the control of front air defense forces and means in the departure area for the offensive and during the offensive operation.

The given topic has been set forth in subsection e of the fourth section of the explanatory memorandum.

In an individual critique, it is advisable to draw the attention of the students to the sequence of the transition from control of the front air defense forces and means on alert from the command post of the 6th Air Defense Corps to control of all air defense forces and means from the front air defense command post in the departure area for the offensive when repelling the massed and concentrated raids by the air enemy and, subsequently, to the control of front air defense forces and means during the offensive operation; and also to the degree of centralized control under various conditions of the ground, air, and jamming situations (during breakthrough of the enemy's forward line of defense, assault crossings of water obstacles, and commitment of the second echelon, when all means are being deployed and consolidated groupings of air defense troops are being established; during pursuit of the enemy, when a significant portion of the air defense means and control posts are relocating; when repelling the air enemy at low and extremely low altitudes and when repelling the air enemy at medium and high altitudes under conditions of intense jamming, and when reconnaissance data do not provide for the timely assignment of combat tasks to the large units and units of air defense troops and fighter aviation).

6. Protection of the front air defense radiotechnical means against enemy jamming.

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On the given training topic, a short report by one of the students will be heard within the scope of the sixth section of the explanatory memorandum, directing attention to the students' comprehension of the substance of the tasks and measures for protecting the air defense radioelectronic means.

In an individual, short critique concerning the given topic, it is advisable for the lesson director to emphasize and direct the students' attention to the fact that at the present time all combat aircraft of the air force and naval forces of the US and up to 80 percent of the aircraft inventory of other NATO countries are equipped with means of electronic neutralization. There is a real possibility of these means' being installed in virtually any type of aircraft of strategic, tactical, and carrier-based aviation, and also on army aviation helicopters.

On strike aircraft of tactical and carrier-based aviation, from four to six jamming transmitters and automatic chaff dispensers with 400 to 600 bundles of dipole reflectors are installed as well as decoy rockets with different kinds of radiation (electromagnetic and infrared radiation). With these means, each aircraft can disrupt the work of one or two types of radars (SNR /missile guidance/, RPK and SON /antiaircraft artillery fire control/) or one or two radar sights of fighter aviation. In addition, they can disrupt one or two automatic trackings of missile guidance radars of surface-to-air missile units /or/ radar sights of fighter aviation and they can also ensure protection against four to six missiles with thermal homing heads.

To increase jamming density, mainly against the detection, target designation, and guidance radars of fighter aviation, there will be available specially equipped EB-66 jammer aircraft which will have on board from 20 to 25 active jamming transmitters and automatic equipment to dispenser chaff (for passive jamming) and to eject infrared decoys. At the present time the US Air Force is replacing EB-66 aircraft and accepting into service EF-111A and F-4 Wild Weasel electronic neutralization aircraft and, in the naval forces, the EA-6B aircraft which can carry from 10 to 14 high-power jamming transmitters.

The basic measures for increasing the protection of the radioelectronic means of air defense troops against the electronic jamming produced by the enemy are: the prior allocation (carried out during peacetime) of primary (operating) and alternate (reserve) frequencies for all radioelectronic means, ensuring they will operate without mutual interference in keeping with the organization and the distinctive features

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in combat employment of the large units and units of air defense troops; the correct tuning of radioelectronic means on primary and alternate frequencies, also carried out in advance; and maintaining the retuning equipment for radioelectronic means in good working condition. The combat readiness of radioelectronic means (SRTs /reconnaissance and target designation station/, SNR, RPK, etc.) will be determined by the quality with which these measures are conducted.

The disposition of mixed groupings of air defense troops as a whole, and of the battle formations of air defense large units and units separately, are determined by the reference norms for the frequency-territorial separation of radioelectronic means based on their electromagnetic compatibility during combat operations when repelling the air enemy's massed raids under conditions of intense electronic jamming. These reference norms for frequency-territorial separation are given in the sixth section of the explanatory memorandum.

Concluding remarks.

In concluding the lesson, the director will note the competence with which the training topics were worked out, the level with which the training objectives of the lesson were achieved, which of the topics were poorly worked out, and the topics in the theory and practice of the air defense of troops which the students must focus their attention on in the future by way of preparation for the next lessons.

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