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3) The Air Force made another effort to develop a radar device in the western region to fill the vacant and uncontrollable space between Hamadan and Tabriz radars, because the authorities believed that Kurdistan was considered the most vulnerable point of Iran against the invasion of Iraq with opposition groups very active in the region. The Iraqi Army also in its constant aggression has preferred the sky to make the region more insecure.

4) At 06:35 GMT on April 27, 1980 (11:05 local time), a target observed on the Dezful radar screen, which was confirmed by Dezful's Control & Reporting Center (CRC). The two armed F-5s aircrafts forced the aggressive aircrafts to an emergency landing[[1]](#footnote-1) by receiving the scramble alarm.

5) On the other hand, the Afghan Air Force aircrafts repeatedly raided the border[[2]](#footnote-2). On April 27, 1980 Afghan aircrafts entered the Iranian sky in two occasions. At the same time, the air force was installing and launching a tactical radar device (GPS-11) with the ability to move and prepare quickly in Chabahar.



Figure 3.1 Colonel Abolfath Yaftabadi, the 6th Air Defense Command in the Air Force and the first commander of this organization after the victory of the Islamic Revolution

In such a situation, the shortage of manpower for the positions that needed expansion in the care of the country's sky has been increasingly felt, and on the other hand, the irresponsible decisions of some operators to reduce the number of specialist staff in the form of service termination (redemption, retirement, expulsion, resignation, and service escape) faced the Army Air Force especially the Air Defense Command with major challenges. Evidence indicates the trend of weakening this vital unit consciously or unknowingly[[3]](#footnote-3).

- A review by some of the commanders and predecessors of the IRIAF air defense, the dismissal of commander officers in the observation artillery of the Oerlikon and the surface to air Hawk missile sites and radar, the non-observance of military standards, the wearing of plainclothes during work hours and the absence on the pretext of the shift resting time and ... are among issues considered normal. For example:

1. On the visit by evaluation team of a Hawk missile site, some staff members say that the team members are not qualified to assess and the team's presence is not accepted by Hawk’s site staff. Therefore, they did not cooperate and stopped the inspection.
2. One commander of the air defense battalion in a written report stated that at present none of the battalion defense systems are operational and if no changes are made in the course of ruling orders, no air defense systems will be operational.
3. A Battalion Commander in the Dezful Airbase asks about the transfer of weapons and the unnecessary interference of the irresponsible individuals, which clearly and explicitly requested headquarters to notify the unit responsibility in the face of the plans and instructions by the outsiders.
4. A regular report by the “Air Defense Operating Center (ADOC)” indicates that at 05:00 and at Dehloran Radar Station (at the peak of the conflict and confrontation with the enemy), only one out of 15 operational personnel was awake who was the shift officer and the other were asleep. In response to the command of the "Sector Operating Center (SOC)" to wake up other employees, the Shift Officer stated that he was unable to do so, saying: "They know when to wake up!"[[4]](#footnote-4)
5. As mentioned, some employees, using the Islamic societies titles, justified their actions and merged their foul intentions with the pure intentions of others to exert destructive effect on the Force policy making process in collaboration with the pressure groups. For example, in the expansion of the arsenal, they exaggerated the deficiencies of equipment and, in a false sense made attempts to show that Specialist staff was surplus on the organization. Fortunately, despite these unconventional conditions, some in the air defense units, with a deep sense of responsibility and understanding of the crisis situation, referred to various management and command lines, and sought to eliminate the threats and neutralize the intruder within the force, that will be dealt with in upcoming sections.

Hence, some of the major failures and events associated with the "Air Defense Command" are mentioned below:

A. In the course of the disruption, the Air Defense Command, in a comprehensive report to the IRIAF headquarters on the stop of staff trainings at critical systems such as Hawk missiles, Rapier, Variable Speed Training Target, TSQ-73, Labled Plan Display and Blind Fire, noting the lack of educational facilities, calls for the elimination of the causes of failures. Of course, the IRIAF prevailing conditions and the atmosphere of existing tensions prevented the air force from taking into account the air defense commander requests.

B. In those days, the expansion of weapons among the forces was very difficult, and all legal paths were blocked, since some officials did not forget the failed coup “Neghab”, and accordingly, the request of the forces under the control of the army on the transfer of weapons was carefully monitored. Although the operational capability of a large number of armored personnel carriers and armored vehicles in Khuzestan was reduced, the authorities did not care (or reluctantly) to repair and launch them in order to increase the fighting power of the army. Fortunately, the development of a radar system (owned by the Air Force) was not difficult as this expansion was to take care of the country's sky and eventually maintain the rule of the system. On the other hand, Iraq has increased its airborne threat on a daily basis, and with such understanding it was decided to cover a part of the Persian Gulf sky by launching a radar device in Behbahan. Meanwhile, with this plan, part of the vast plain of Khuzestan was also under surveillance.

Eventually, with the insistence of the Air Defense Command and persuading the country's military and political authorities, it was agreed to transfer the radar system to the Behbahan region and install it in the appropriate place[[5]](#footnote-5) on May 12, 1980. Having prepared communication facilities, the radar was operational on September 14, 1980 and joined the air defense network of the country and assumed responsibility for tactical air surveillance of parts of Khuzestan. In response to this move, the Iraqi Defense Network also launched radars near the cities of Al-Amara and Sha'ybiya. One of the Sha'ybiya radar with a range of more than 300 kilometers had the ability to search the area and discover the target for surface-to-air missiles "SAM -3", and other systems, according to their type and function, filled the blind spots of the early warning radar or served the airport facilities. With the launch of this equipment, the enemy's air intercept training was gradually increasing.

C. The Afghanistan airstrikes and threats in the east, the United States in the south and Iraq in the west, along with the emergence of false flying targets in Tabas (which was reported by a large number of radars located in Shahr Abad and Mashhad), in general, increased the number of scramble flights (and, of course, unnecessary and harmful) for the IRIAF. None of these flights, which were often carried out from Isfahan and Tehran, faced with the real target and imposed huge costs (including fuel, manpower, and scarce spare parts). Few would have thought that this process underlies preparation and occurrence of a war of attrition that first had challenged operational and logistical capabilities of the Air Force.

D. On May 12, 1980, one of the Persian Gulf oil platforms called Rostam was burned down by the US forces during a suspicious operation. The flight of airplanes and helicopters and the movement of foreign and suspicious corps and frigates around the platforms had been reported to the Defense Command system during the course of the relief efforts of the insurgents to the platform[[6]](#footnote-6).

E. A meeting by the officials of the fifth staff of the Joint Staff and Air Force representatives (including Air Defense officials) was held to address the lack of full radar coverage in some parts of the country and the need for an automated command and control system.

F. Despite the limitations, difficulties and obstacles, the SEMAJA and the IRIAF took measures for "passive defense measures and the building of bunkers " since the beginning of May 1979, in such a way that it was received by Amir Brigadier general Sayyid Abolfazl Mostafavi[[7]](#footnote-7) “Deputy Head of the Army Air Force Plan and Program”. On May 12, 1980 a letter was sent to the fifth executive of SEMAJA regarding the proposal for a joint meeting.

From: Headquarters of the IRIAF (Project Management)

To: Directorate of Fifth Office of SEMAJA No. 14-50/09-201

Subject: Building bunkers dated May 10, 1980

1. In order to coordinate and standardize the bunkers at the level of the Armed Forces of the Islamic Republic of Iran, it is recommended that a commission be set up in that department to study the subject.
2. Please, announce the date of the commission in case of approval.

Deputy Head of the Army Air Force Plan and Program; Brigadier general Mostafavi - Signed May 10, 1980[[8]](#footnote-8)

G. On June-July 1980, (three months before the outbreak of the imposed war), the Joint Chiefs of Staff issued an order to extend the 8 F-5 interceptor fighter aircrafts from the First Airbase to Mashhad in order to help the east defense system in preventing Afghanistan's aggression. At the same time, a Tactical Radar (GPS-11) was sent to Zahedan, the head of the Joint Chief of Staff on the sidelines of this transfer order, wrote:

"If another incident like Tabas happens, the Iranian people will not forgive the army."[[9]](#footnote-9)

H. according to the announcement of the Deputy Head of the Army Air Force Plan and Program, Behbahan and Zahedan radars are not efficient due to lack of proper connection to the relevant sites and the air force needs at least six to five radar equipment to cover the eastern part of the country.

However, the coverage of the northwest of the Persian Gulf was outside the Bushehr radar zone, and there was a gap or blind spot between the Tabriz and Hamedan radars (due to the mountainous nature of the region and the absence of low altitude radars in these regions), while overlooking all the technical and managerial issues on the Tactical Air Surveillance System, the Joint Chiefs of Staff (without any operational and logistic estimates of the IRIAF, and reminded of the Tabas incident), wrote the aforementioned on its letter. In fact, writing such a surprising statement comes at a time when the honorable nation of Iran did not forget the sweet memories of the eternal loyalty of the Army staff to the Imam Khomeini and the decisive role of the air force in the victory of the Islamic Revolution.

Nevertheless, information from the Iraqi Ba'ath army indicated that 24 early-warning radars have been operational throughout the country, which has been steadily controlling and tracking the Iranian aircrafts flights.

I. The initial results of the radar extension in Zahedan also indicate that the performance of this radar in this region is not optimal due to the geographical problems and inadequate location to meet the air defense needs.

J. In the west of the country, a number of insider aircrafts had been shot down due to the inconsistency between the ground forces air defense and the air force, the inability to detect the insider aircrafts and the enemy's aircrafts.

K. On July 9, 1980, eight Iraqi aircrafts raided the Sardasht region by flying at low altitude and bombed a village six kilometers to west of this region. For some reason, such as the lack of optimal radar coverage and a short distance between the enemy's base and the bombarded region, it was not possible for the Air Defense to detect and intercept aggressive aircrafts.



Figure 2-3 Radar antennas without dome covers

On July 16, 1980, the Air Force declares to the subsidiary units: "Due to the denser activity of air defense units in the west of the country, and that identification of insider aircrafts have been difficult for these units and there is the possibility of targeting insider aircrafts; therefore, the flight units are required to provide flight information to the Air Force Command post.”[[10]](#footnote-10)

The command post also, in coordination with the SEMAJA-3 (Joint Staff Operations Office), subsequently informed the time and route of the flight of the IRIAF aircrafts to the units of the ground forces and the Revolutionary Guards in the region to prevent being shot. By focusing on the above events, the issuance of such a directive (and similar cases) in fact represents the weak structure of command and control and the lack of oversight of the sky region of ​​operations. In fact, the lack of a system that at every moment knows the information of insider and outsider aircrafts flights and provides the defense units with such data was quite tangible. These data should be "up-to-date" to be used on quick decision-making of the battlefields. In those days, such facilities were not available to the air force, and the Defense Command also believed that the radar station in Sobasi, Hamedan, was somewhat sufficient for some of the operational needs of the region. On the other hand, the IRIAF aircrafts were at the risk of insider surface to air defense shootings in Kurdistan skyline and Sarpol Zahab, and in the event of an accident, could lead to a plane crash and the loss of the most experienced specialist forces. In the region where any flying object was subject to shooting, the term "flight safety" could not have made any sense. The lack of an integrated and coordinated command and control system across the country that could lead to the crisis management has exacerbated security challenges. Such a situation prevailed in the West. Even scramble flights were at risk. If they followed the enemy aircrafts, it would be possible to be shot by the insider defense (with the same intensity and precision as the enemy was targeted).

L. In addition, the long-term consequences of the IRIAF dominated atmosphere made it impossible to judge fairly some of the thinkers in the field of imposed war. For example, after over two decades of imposed war and without considering the brilliant performance of a committed and revolutionary pilot in exposing the coup “Neghab”[[11]](#footnote-11), the book " Air Defense: At the Eight Years of Sacred Defense " examines the issue as the following:

 "The deliberate sabotage in the air defense network is in turn one of the issues of the day. The main power switch in High Power Illuminator Radar (HPIR) “Tabesh” is on “off” mode, or the Pallet Catchpin to hold the rocket platform is released. "

Regardless of the intentional sabotage caused by the disclosure of the coup “Neghab” and the lack of awareness of the users of this important issue, such doubts were caused by the coincidence of Iraq's aggression with the coups.

M. The failure of one of the Hawk missile sites indicates that the commander of the Defense Group, Hawk Commander, Head of Operations, and Site Command Officer, were apparently subjected to pressure from subordinate personnel and to control operational conditions and prevent disobedience and the aggravationof the crisis have tried to stay calm and moderate the current situation. Meanwhile, the IRIAF itself did not have enough power to transmit tactical radar (GPS-11) to the Sarapul Zahab highlands (in the vicinity of the 81th Armored Division)!

N. In the census of the site, only 65 (out of 220) were present at the site. The bus on the road crashed outside the control of the site commander. No one knows the reason for bus travelled outside the command region! In the event that the official authorities of the Defense Forces command to the site were stopped by the guard (on the pretext that they do not have permission), the Air Force's minivan entered some of the plainclothes employees without the guard control. In other words, the minivan, which carried the logo of the air force on its body, was more valid than the officers and commanders who carried the identity card and were known to the commander of the site.

O. Some staff at the Hawk missile battalions believed that purchasing this kind of radar and missile and related systems by the air force was a mistake and that the weapon has been imposed by the United States on Iran. Some employees were transferred to units with no expertise there out of the organizational charts. Some fired ones still attended the Air Defense Command.



Figure 3.3 a view of the Hawk Battery Control Center in (B.B.C) where a number of mobile station specialists control radar and Hawk systems. The Ideological−Political Bureau agent is busy describing and distributing books to staff.

P. The order to expand a number of defense systems was issued by senior officials, but this expansion did not take place on the pretext of organizational staff shortage. Failure to observe the hierarchy and the factional performance of the units posed other challenges to the air defense command. For example, if the IRIAF employees had been assigned to one of the defense sites from an air base, they would have received extraordinary mission’s payments, but defense commander’s staff would not have received such payments.

Accordingly, the Air Defense Command's headquarters analyzed the current situation and provided the IRIAF command with some reasons, as the following.

(1) The absence of environmental facilities on sites;

(2) The absence of staff of the crew of the cannon;

(3) The absence of continuity of training to specialized staff;

(4) The use of non-specialized staff in specialized professions and vice versa

(5) Noncompliance of the subordinate staff with the technical officers;

(6) Noncompliance with the higher authority;

(7) Unlicensed occupation of institutional houses:

(8) Non-specified duties of an officer, an imperial officer, military ranks holder and interference in affairs;

(9) Factorial handling of affairs and preventing the entry of other strata into branches;

(10) Failure to comply with existing laws and regulations;

(11) The ample logical and irrational requests of employees;

(12) Continuous change of commanders and their successive retirement;

(13) Loss of service commitment in some employees;

(14) Leave service without permit (occasionally)[[12]](#footnote-12).

having reported the issue to the headquarters, the Defense Command issued a series of directives for directing staff and commanders to subsidiaries, pointing out that the commander has been appointed by the higher authority and on the basis of certain criteria and the commander appointment is not subject to the employee's interest and tastes.

This is a summary of the widespread status of a command from July 22, 1980 to September 22, 1980, and shortly before the outbreak of the imposed war as well as the Air Force subcommittee[[13]](#footnote-13). It is clear that the weakening of a major command, such as the air defense that lies at the front line with the enemy, will have a detrimental effect on national authority and national security.

**2 Organizational makeup and air defense command system**

The pre-war air defense command system introduced a variety of heavy military equipment, such as radar systems, artillery and surface-to-air missiles, and, after the victory of the Islamic Revolution, increased the threat of world arrogance and its regional factors doubled the strategic importance of the air defense force for the commanders and authorities of the system for a variety of reasons and factors.

* The diversification and expansion of activities in the tactical air surveillance and air defense before the victory of the Islamic Revolution revealed the weakness of the radar coverage (due to the mountainous nature of the country) to air defense officials, and the contract was signed to purchase seven AEW&C from the US, which the US refused to hand over with the victory of the Islamic Revolution, and Saudi Arabia received the radar system by which assisted Iraq in the war[[14]](#footnote-14).
* Increasing the responsibilities of strategic air surveillance and defense (based on the conditions of the Islamic Revolution) and the absence of appropriate systems in the field of strategic air surveillance and defense;
* The coincidence of the Tabas incident and the penetration of American airplanes into the country's atmosphere in May 1980 and the apparent weaknesses of the radar coverage system of the country;
* Scattered but purposeful invasion of Iraqi aircrafts to the sky of the Islamic Republic of Iran...;



Figure 3.4 Colonel Arsalan Pourarsalan, the second commander of the air defense after the Islamic Revolution

- On the other hand, the inability of the Iranian Air Force to withstand the United States Air force and Navy

In those days, there was a general understanding of the presence of the air force, the defense of surface forces, and the prevalence of the attitude that ground forces should never own self-defense air defense systems to back up the regions covered by them. Therefore, it was believed that the air defense should be organized by the Air Force, and this force was required to provide ground combat air defense in the battlefield. Obviously, with the reinforcement of this attitude, the terms “Theater Air Defense”, “Theater Missile Defense” and “Close in Weapon Systems” were not well-positioned (with all tactical dependencies).

With such an approach, the organization of the air defense command in the form of: identity, talent and how to expand the major units along with its command system at the outbreak of the imposed war are presented as follows.

**A. Organization, expansion of major units of air defense command**

Basically, from the organizational viewpoint the above command constituted 24 approved air defense groups, four of which in Ahvaz, Bandar Taheri, Bandar-lengeh and Kerand were not formed due to lack of preparation of residential and office facilities. Twenty remaining groups and their operational units are presented as follows, and then, the expansion of defense units along with the vital facilities of the country is presented in a Table:

1. Babolsar Air Defense Group consisted of Babolsar Radar Station and the ZU-23 mm anti-aircraft auto cannon;
2. Karaj Air Defense Group consisted of Karaj Radar Station, 11st Hawk Battalion, including 4 Hawk missile systems and 4 ZU-23 mm anti-aircraft auto cannon, 21 Rapier Battalion and 4 ZU-23 mm anti-aircraft auto cannon. The Rapier Battalion, based on the Dushan Tape, consisted of two Rapier missile system and three ZU-23 mm anti-aircraft auto cannon;
3. Mashhad Air Defense Group consisted of Mashhad Radar Station and mixed anti-aircraft cannon battalion including two Oerlikon 35 mm twin cannon equipped with the Oerlikon Radar and three ZU-23 mm anti-aircraft auto cannon;
4. Shahr Abad Air Defense Group consisted of the Shahr Abad Radar Station and ZU-23 mm anti-aircraft auto cannon;
5. Hamedan Air Defense Group including Hamadan Radar Station and 23rd Rapier Battalion including three Rapier missile system and four ZU-23 mm anti-aircraft auto cannon;
6. Tabriz Air Defense Group consisted of Tabriz Radar Station and 22nd Rupir Battalion, including three Rapid missiles and four ZU-23 mm anti-aircraft auto cannon;
7. Abdanan Air Defense Group consisted of Abdanan Radar Station with installed a GPS-11 radar system, and a 52nd mixed anti-aircraft cannon battalion consisting of an Oerlikon 35 mm twin cannon equipped with the Oerlikon Radar and a ZU-23 mm anti-aircraft auto cannon;
8. Dezful Air Defense Group consisted of Dehloran Radar Station[[15]](#footnote-15), 14th Hawk Battalion including five Hawk missile systems[[16]](#footnote-16), five ZU-23 mm anti-aircraft auto cannon and the 54th mixed anti-aircraft cannon battalion consisting of three Oerlikon 35 mm twin cannon equipped with the Oerlikon Radar and four ZU-23 mm anti-aircraft auto cannon;
9. Shiraz Air Defense Group consisted of 57th mixed anti-aircraft cannon battalion (two Oerlikon 35 mm twin cannon equipped with the Oerlikon Radar and four ZU-23 mm anti-aircraft auto cannon);
10. Behbahan Air Defense Group, with its only operational unit (Behbahan Radar Station), had a GPS-11 radar system;
11. Bushehr Air Defense Group consisted of Bushehr Radar Station, the 16th Hawk Battalion, consisting of 4 Hawk missile systems and 4 ZU-23 mm anti-aircraft auto cannon and mixed anti-aircraft cannon battalion (four Oerlikon 35 mm twin cannon equipped with the Oerlikon Radar and four ZU-23 mm anti-aircraft auto cannon);
12. Kharg Air Defense Group consisted of Kharg Hawk missile system Battalion (deployed and operated in the fall of 1980), a group of ZU-23 mm anti-aircraft auto cannon and mixed anti-aircraft cannon battalion (two Oerlikon 35 mm twin cannon equipped with the Oerlikon Radar and one ZU-23 mm anti-aircraft auto cannon);
13. Isfahan Air Defense Group consisted of 12nd Hawk Battalion (four Hawk missile system and four ZU-23 mm anti-aircraft auto cannon) and 25th Rapier Battalion including two Rapier missile system and four ZU-23 mm anti-aircraft auto cannon;
14. Bandar Abbas Air Defense Group consisted of Bandar Abbas Radar Station, all radar systems were based on and used as the main radar. Only a radar detector was installed on Geno Radar Station used as Reporting Post to report and store the main detector radar data. It was equipped with 17th Hawk Battalion, including three ZU-23 mm anti-aircraft auto cannon and 60th mixed anti-aircraft cannon battalion (Oerlikon 35 mm twin cannon equipped with the Oerlikon Radar and three ZU-23 mm anti-aircraft autocannon);
15. Kish Air Defense Group consisted of Kish Radar Station and 58th mixed anti-aircraft cannon battalion (two Oerlikon 35 mm twin cannon equipped with the Oerlikon Radar and one ZU-23 mm anti-aircraft autocannon);
16. Jask Air Defense Group consisted of Jask Radar Station and 62th mixed anti-aircraft cannon battalion (one Oerlikon 35 mm twin cannon equipped with the Oerlikon Radar and one ZU-23 mm anti-aircraft autocannon);
17. Chabahar Air Defense Group consisted of Chabahar Radar Station, with GPS-11 radar. 18th Hawk Battalion included three one ZU-23 mm anti-aircraft autocannon and 59th mixed anti-aircraft cannon battalion (three Oerlikon 35 mm twin cannon equipped with the Oerlikon Radar and four ZU-23 mm anti-aircraft autocannon);
18. Hashem Abad Air Defense Group consisted of Radar Site with an approved radar device that was not installed with the victory of the Islamic Revolution. The group's facilities were used to train Hawk ​​missile systems by American advisers;
19. A group of tactical radars responsible for maintaining tactical moving radar systems and expanded them to the necessary regions. Operational personnel of these systems were assigned from Air Defense Groups staff and their maintenance was handled by staff members of the tactical radar group;
20. Omidieh Air Defense Group, whose organization was approved before the victory of the Islamic Revolution but it was completed after the outbreak of the imposed war. Its operational units were: 15th Hawk Battalion, included five Hawk missile system and five ZU-23 mm anti-aircraft autocannon, with only one installed and launched in Mahshahr Hawk Battalion site on October 8, 1980 and another in Ramshir Hawk Battalion site on January 8, 1981, and the 55th mixed anti-aircraft cannon battalion (two Oerlikon 35 mm twin cannon equipped with the Oerlikon Radar and four ZU-23 mm anti-aircraft autocannon).

Semnan Tir Square was one of the other Air Defense Command units that were used for training and shooting.

The Operational Command also has an Air Defense Operation Center (ADOC) in Tehran, and three Sector Operation Centers (SOC) at Babolsar, Hamadan and Bandar Abbas Radar Stations, 14 Radar or Reporting Posts (CERC) in the air defense nodes of Babolsar, Mashhad, Shahr Abad, Karaj (under the command of Hamedan Babolsar SOC), Tabriz, Abdanan and Dezful (under the command of Hamedan SOC), Bandar Abbas, Bushehr, Kish, Jask, Behbahan, and Chabahar (under the command of Bandar Abbas (SOC). Meanwhile, before the victory of the Islamic Revolution, communication facilities for the formation of a center for air defense operations (storage) were formed in this group, so that if for any reason there is a problem with the air defense center operating in Tehran, this center will be immediately replaced as (ADOS). Having launched and used the radar facilities of the Dez Dam, Ahwaz and Bandar Imam as well as the communication facilities on May 20, 1981, the Regional Operation Center (SOC) was launched and used.

In the end Tables 3.1, 3.2, 3.3 and 3.4 provide lists of key commanders, as well as arrangement and expansion the IRIAF Air Defense weapons in the immediate vicinity of critical installations, and the number of 19 fixed radar and 10 mobile radar systems, respectively.

Table 3.1 The names of the commanders of the IRIAF defense groups on the brink of imposed war

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Defense group | Millitary rank | Full name |
| 1 | Abdanan | Major | Morteza Ahmadi |
| 2 | Isfahan | Major | Asghar Haqiqat |
| 3 | Omidieh | Technical Major | Mohammad Vaseqi |
| 4 | Babolsar | Major | Naser Hazineh |
| 5 | Bushehr | Major | Jamshid Minoee |
| 6 | Behbahan | Captain | Rahmatullah Jahangiri |
| 7 | Bandar Abbas | Major | Sadegh Ahangar |
| 8 | Tabriz | Major | Siyavash Bayani |
| 9 | Tehran | Major | Ezatullah Izadyar |
| 10 | Jask | Major | Habibullah Farazjo |
| 11 | Chabahar | Captain | Davod Niyazi |
| 12 | Kharg | Major | Hossein Namaziyan |
| 13 | Dezful | Major | Gholamhossein Adabaee |
| 14 | Tactical radars in the Chakosh garrison | Major | sayyid Mahmmod Yamini |
| 15 | Shahr Abad | captain | Ghasemi |
| 16 | Shiraz | Major | Mohammad Damavandi |
| 17 | Kish | Major | Yazdan Safdariyan |
| 18 | Mashhad | Major | Habib Reyhani |
| 19 | Hashem Abad | Major | Mehdi Toloee |
| 20 | Hamedan | Technical Major | Aliasghar Anari |

At that time, the air defense commander was the Control Colonel Commander Nasser Eskandar Afshar, Deputy of Operation was Colonel Sohrab Nowroozi, and the Air Defense Operation Center (the IRIAF headquarters command center was headed by Major Abdullah Minoee.

Table 3.2 Some areas of the expansion of the IRIAF defense weapons

In the vicinity of critical and vital facilities of the country

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Expanded to | Type of weapons | Number | Main unit |
| 1 | Jamaran region | Oerlikon 35 mm twin cannon equipped with the Oerlikon Radar | 6 | Tehran Air Defense Group |
| 2 | Jamaran region | ZU-23 mm anti-aircraft autocannon | 4 | Tehran Air Defense Group |
| 3 | Mehrabad Airport | Rapier missile system | 5 | Tehran Air Defense Group |
| 4 | Mehrabad Airport | Oerlikon 35 mm twin cannon equipped with the Oerlikon Radar | 7 | Tehran Air Defense Group |
| 5 | Mehrabad Airport | ZU-23 mm anti-aircraft autocannon | 23 | Tehran Air Defense Group |
| 6 | Tehran refinary | Rapier missile system | 4 | Tehran Air Defense Group |
| 7 | Tehran refinary | Oerlikon 35 mm twin cannon equipped with the Oerlikon Radar | 2 | Tehran Air Defense Group |
| 8 | Panha Company | Oerlikon 35 mm twin cannon equipped with the Oerlikon Radar | 1 | Tehran Air Defense Group |
| 9 | Panha Company | ZU-23 mm anti-aircraft autocannon | 1 | Tehran Air Defense Group |
| 10 | Manzariyeh Qom | Rapier missile system | 3 | Tehran Air Defense Group |
| 11 | Manzariyeh Qom | ZU-23 mm anti-aircraft autocannon | 7 | Tehran Air Defense Group |
| 12 | Scout around Tehran | shoulder-fired missile Sahand-3 | 6 | Tehran Air Defense Group |
| 13 | Dez Dam | ZU-23 mm anti-aircraft autocannon | 2 | Dezful Air Defense Group |
| 14 | Dezful Bridge | ZU-23 mm anti-aircraft autocannon | 2 | Dezful Air Defense Group |

Table 3.3 Identity and specifications of fixed radar systems of air defense command

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No. | Radar station | Search radar | Number of Shuttle | Height Finder (HF) | Number of Shuttle | Search Identification radar SIF/IFF | Number of Shuttle | Manufacturer country | Date of service |
| 1 | Babolsar | TYPE80 Hydra | 2 | HF-200 | 1 | AN/UPX-6 | 2 | The UK | 1983 |
| 2 | Tabriz |  | 2 |  | 1 |  | 2 |  | 1963 |
| 3 | Tabriz | AR-5 | 2 |  |  | AN/UPX-26 | 2 |  | 1970 |
| 4 | mashhad | S-266 | 3 | S-244 | 1 | AN/UPX-6 | 2 |  | 1966 |
| 5 | Shahr Abad |  | 3 |  | 1 |  | 2 |  | 1969 |
| 6 | Hamadan | FPS-100 | 2 | FPS-89 | 1 |  | 2 | The US | 1967 |
| 7 | Dezful |  | 2 |  | 1 |  | 2 |  | 1967 |
| 8 | Jask |  | 2 |  | 1 |  | 2 |  | 1971 |
| 9 | Kish |  | 2 |  | 1 |  | 2 |  | 1971 |
| 10 | Bandar Abass |  | 2 |  | 1 |  | 2 |  | 1971 |
| 11 | Bushehr |  | 2 |  | 1 |  | 2 |  | 1971 |
| 12 | Karaj | ADS-4 | 2 | HF-200 | 2 | AN/UPX-23 | 2 |  | 1977 |
| 13 | Bandar Abass (Geno) | ADS-4 | 2 | HF-200 |  |  | 2 |  | 1977 |
| 14 | --- | ADS-4 | 12 | HF-200 | 14 |  | 12 |  | 1977 |

Note-1:

1. The advanced 5-AR search radar (listed in row 3) was installed and operationally used at Tabriz Radar Station in 1970. After the radar was installed, the previous radar was used only in case of necessity.
2. The radar system (row 13) was installed on the Geno site to investigate the effects of unwanted return jumps from the sea level, known as " Sea clutter ", which, after investigations, was described as a "back up" of Bandar Abbas's navigator radar (listed in the row 10) and remained on the site.
3. The radar systems (in row 1), as the newest and most advanced radars purchased, and should have been installed by Americans on predictable radar sites remained unused at the Air Force Logistics Depots after the victory of Islamic Revolution and the departure of the advisers.

Table 3.4 Identification and characteristics of the mobile radar systems of Air Defense Command

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No. | System type | Number | Type of Identification radar (IFF/SIF) | Number | Manufacturer country | Date of service | Comments |
| 1 | Tonic | 2 | AN/UPX-6 | 4 | The UK | 1969 | Each of the radar systems had a separate side-finder (type 330-S) and a height finder (type 404-S) |
| 2 | 11- GPS | 8 | AN/U PX-23 | 16 | The US | 1972 | The system was a three-dimensional advanced radar |

Note -2:

1. In October 1980, a tonic radar system was installed and operated at the highs of Ahwaz.

2. The 11-GPS radar system was used on, Behbahan and Chabahar radar sites before the outbreak of the imposed war and after the destruction of the Dehloran radar (September 29, 1980), a system of this type of radar was located near the Dez dam around Dezful and started operation on October 17, 1980.

3. The rest of the radar systems were kept in the tactical radar group and were ready to be expanded in the operational regions concerned by the Air Defense.

B. The structure of the Air Defense command and control system

Basically, the command system basics were carried out in two ways by air defense:

1. The hierarchy of command, which, like other military organizations, vertically commands and controls all the operational, training, support, administrative and ... activities.
2. Command and control (linear or horizontal management) that during the time of peace and war, independently carry out operational tasks, and the hierarchy of command (vertical) only in the policy and principles of this system carries out the required flexibility and changes.

In other words, the defense of the country's sky and territory is controlled by the command and control network at an appropriate time and without the intervention of the hierarchy of command (vertical), which is referred to as decentralization guidance and implementation.

- The main elements of the Air Defense Command and Control Network prior to the outbreak of the imposed war, as discussed in the preceding discussion, have been as follows.

* Air Defense Operations Center in Tehran;
* Babolsar, Hamedan and Bandar Abbas Regional Operations Centers;
* Control centers and reports of Babolsar, Mashhad, Shahr Abad and Karaj, which were operationally under the command of the Babolsar Regional Operations Center.
* Control and reporting centers of Hamedan, Tabriz, Abdanan and Dezful, operationally under the command of the Hamadan Regional Operations Center.
* Control and reporting centers of Bandar Abbas, Kish, Jask, Bushehr, Behbahan and Chabahar, operationally under the command of the Bandar Abbas Regional Operation Center.

Anyway, with this description, now the Air Defense Command should expand its units to all parts of the country on the basis of the thoughts of the President (also as the Commander-in-Chief appointed by the late leader of the Islamic Republic of Iran. The IRIAF commander could not have prevented the plan from happening.

Consequently, the Air Defense Commander faced overwhelming ongoing problems despite its dangerous mission, so that it was not even able to feed its staff to artillery and missile positions because it was not organized for such matters.

Anyway, internal problems and a reduction in the credibility of commanders in the air force would have disrupted the order in the measures taken by the IRIAF. In such a situation, the imposed war began suddenly and the people and authorities expected suppressing the enemy. If the air force provided a justifiable reason for not completing a mission, it was immediately accused of negligence in duties and neglect of the Islamic Republic of Iran.

C. Air Defense System of the IRIAF Airbases

The bulk of air defense weapons include ground-to-air missiles, artillery shells, and combatant battalions, which we briefly describe only how the bases of Forward Edge of the Battle Area (FEBA) defended at the front line of the battlefield.

1. First Airbase (Mehr Abad)

Mehr Abad Air Base with 12 Rapier Battalions and two "Hawk" missile batteries constituted and expanded Tehran's air defense group on Khavaran and Behesht Zahra sites. Base defense was provided by a number of nearly 20 ZU-23 mm anti-aircraft autocannon. In addition, four F-4 aircrafts in the state of alert were provided to the radar of the Air Defense Operation Center in order to fly as soon as the "Scramble" command and radar guidance were sent to the intercepted targets (two fighter aircrafts in the 15 minutes’ state of alert and two substitutes for 30 minutes).



Figure 3.5 Colonel Siavash Bayani, commander of Tabriz Air Defense Group on the brink of imposed war

1. This mission was led by Lieutenant Mahmoud Jadid and Samad Ebrahimi described in the first chapter. [↑](#footnote-ref-1)
2. Marxist regime of Afghanistan aggressions are listed in a table at the end of the first chapter. [↑](#footnote-ref-2)
3. Mahmoud Khordand et al., (1998): "Air Defense: At the Eight Years of Sacred Defense": Tehran Office of the IRIAF Strategic Studies. [↑](#footnote-ref-3)
4. Mahmoud Khordand et al., (1998): "Air Defense: At the Eight Years of Sacred Defense": Tehran Office of the IRIAF Strategic Studies. [↑](#footnote-ref-4)
5. According to Volume 1, on the Tabas section, before the victory of the Islamic Revolution, the installation of many radar surveillance systems was identified by Americans with the presence of operational and air defense personnel after the geographic considerations of site and then the radar coverage map “RCI Radar Coverage Indicator “was prepared after the installation " RCI Radar Coverage Indicator ". American advisers located all the appropriate places to deploy equipment throughout the country and advised radar development. That is why during the event of the Tabas, invading aircrafts and helicopters, using radar blind spots, would use the routes to enter Iran's sky. [↑](#footnote-ref-5)
6. Mahmoud Khordand et al (1998): "Air Defense: At the Eight Years of Sacred Defense": Tehran Office of the IRIAF Strategic Studies. [↑](#footnote-ref-6)
7. This well-known wise Amir, who was chosen as the fourth Commander to the IRIAF, was briefly referred to in the first volume, Second Edition, p. 89. According to evidence, he preferred to be in the position of deputy director of the project, to cooperate with Major General Amir Bahman Bagheri. [↑](#footnote-ref-7)
8. The image of this document (letter) is included in the first volume of “History of the Air Battle of the Sacred Defense”, Second Edition, Chapter II, entitled Introduction of the IRIAF Command System, p. 90. [↑](#footnote-ref-8)
9. Detailed Events of Tabas in Volume I, Second Edition of this Collection of “History of the Air Battle of the Sacred Defense”, pp. 244-317 [↑](#footnote-ref-9)
10. Although the language is official and respectable administrative, the other point is that the performance of these units has been unreliable and incidental. [↑](#footnote-ref-10)
11. The plot for the coup “Neqhab” (Shahid Nojeh) is presented in Volume I, Second Edition, History of the Air Battle of the Sacred Defense”, pp. 317-329. [↑](#footnote-ref-11)
12. Of course, as previously mentioned these cases were not exclusive to the air defense command and were prevalent in most of the IRIAF units and the Islamic Republic of Iran Army. [↑](#footnote-ref-12)
13. Mahmoud Khordand et al (1998): "Air Defense: At the Eight Years of Sacred Defense": Tehran Office of the IRIAF Strategic Studies. [↑](#footnote-ref-13)
14. The cancellation of the contract for seven AEW&C radar planes with 160 F-16 fighter aircrafts are described in the previous volume [↑](#footnote-ref-14)
15. Dehloran Radar Station located at the Aveshlibi Khat altitudes (west of Shush and Karkheh river) on September 29, 1980 was seized by Iraqi forces and its radar devices were bombed by insider aircrafts to prevent enemy use (full explanation of the fall this station will be in the fifth volume), therefore, a 11-GPS moving radar system stationed near Dez Dam on October 17, 1980 instead of the aforementioned radar system. [↑](#footnote-ref-15)
16. Five missile sites were constructed for Hawk missile system; sites number 1, 2, and 3 located east of the Karkheh River each had a full load of Hawk missile system; and sites 4 and 5 located west of the Karkheh River, that were seized by the Iraqi forces as that of Dehloran Radar Station on September 29, 1980, lacked missile equipment, and was completely destroyed when Iraqi forces retreated. Missile site number 1 was transferred to Mahshahr missile site on December 7, 1980. [↑](#footnote-ref-16)