



# The AIR WAR<sup>TM</sup> Game — a 1983 Variant

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Since the AIRWAR<sup>®</sup> Game was first published by Simulations Publications, Inc. in 1977 and updated and expanded in 1979, there have been many developments in aerial warfare. Nearly all of these changes have involved new aircraft and weapons systems. As complex and comprehensive as the AIRWAR Game is, it still hasn't been able to keep abreast of some of the most recent developments in air warfare in recent years.

This article introduces aircraft and weapons systems that were not included in either the original game or the update kit. Since many of the aircraft and weapons included here are new systems or else are developed or projected models of existing systems, many of the values assigned to these systems should be considered speculative. Particularly in the case of new Russian and Chinese aircraft, or with the latest model planes, information is classified or otherwise unavailable on performance and avionics; in that case, an educated guess has been made as to the parameters of weapon or aircraft performance. Whenever a conflict arises between rules presented in this article and the original and updated AIRWAR rules, the official rules should take priority in resolving any conflict. Because many of the aircraft

presented here are recent developments of existing planes (like the F-111, FB-111 and the projected FB-111H) or else are similar to existing planes already represented (like the B-52 or the Avro Vulcan), adaptation of existing game equipment is encouraged. Players may wish to use existing counters already included in the game to simulate planes, or may find it necessary to create new counters to represent new types of aircraft. These can be made by using blank counters and an appropriately-colored "razor-point" felt-tipped pen; vertical views of planes should be used from aircraft books and recognition manuals, or else the mock-ups in this article may be used as a guide. With many of these planes and weapons, the performance charts from two or more different aircraft may be used in order to simulate the new unit. Any new details on planes or missiles which use AIRWAR charts, rules, or other data will be listed with each new plane described below, along with any relevant special rules or exceptions.

Also found with some of the descriptions for new aircraft are suggestions for new scenarios or modifications to existing scenarios. Examples of this approach would be the use of the British Tornado plane equipped with cruise missiles and used in a strategic bombing role, or the use of two French Mirage IV-A aircraft, one of which is an unarmed tanker concealed from an opponent, in Scenario 32.6.

## THE AIRCRAFT

### Dassault-Breguet Super Etendard

The Dassault Etendard is a shipboard strike fighter which first entered service with the French Navy in 1962; the improved version, the Super Etendard, entered service in 1979. During the production run strike, fighter, photo-reconnaissance, and tanker versions were produced. The Super Etendard incorporates a more powerful engine, updated avionics, slatted wings, and an improved load-carrying capacity. It is a much more capable plane than the original model and has four missions: aerial cover, interception, attack, and photo-recon. There is also a tanker capability which enables a Super Etendard to act as a flight refueling tanker for other Etendards.

The Super Etendard is used by both the French and the Argentine navies. During the Falklands/Malvinas conflict in 1982, the Argentines scored considerable successes with the aircraft when attacking from low altitude with Exocet anti-shiping missiles. Usually two planes participated in such an attack: one plane to locate the targets and act as tanker; and the other plane, which would then launch an Exocet missile at low altitude from some twenty miles away at the British warships lying off the island group.

### BASIC AIRCRAFT INFORMATION TABLE

**Aircraft Type:** Shipboard Strike Fighter

**Cannon Type:** G

**Cannon Shots:** 5

**RH Missiles:** 0

**HS Missiles:** 2

**Damage Capacity:** 9

**Ceiling:** 210

**Max., Min. Throttle Settings/Max. Energy Within Altitude Groups:** Same as BAC/Sepecat Jaguar.

**Max. Energy Add per Game-Turn:** 3

**Special Rules:** None

**Other Versions:** A photo-recon version. The plane may also conduct nuclear-armed strikes.

This aircraft uses the same internal jammer, radar and ECM as the Mirage F-1; it also uses the F-1's Acceleration Table. The Super Etendard uses the A-4 Turn Mode Table and the Jaguar's Climb, Dive, Flight Parameter, and Loaded Characteristics Tables. It also uses the A-4 row on Table 28.3, except that the maximum ASM load is 4.

### British Aerospace Sea Harrier

This is a navalized version of the Harrier and is the same in all respects except that it may visually search its rear arc. The Sea Harrier may carry up to 4 Sidewinder heat-seeking missiles (HSM).

### General Dynamics FB-111 Strategic Medium Bomber

Use the F-111 counter and all F-111 tables, as well as post-1976 ECM. The FB-111's conventional bomb and ASM capacity is increased over the F-111's by one-third. No napalm, bomblets, or internal guns can be carried. The FB-111 may carry either SRAM's or gravity bombs to deliver nuclear warheads.

### General Dynamics FB-111H Strategic Medium Bomber (Second Version)

This version of the FB-111 functions exactly as the FB-111 does above, except that it may not use the F-111's Roll and Acceleration Tables, substituting the B-1's tables instead. It may carry a conventional bombload equivalent to that of the B-52H and may carry a load of ASM's equal to twice the load of the F-111. The F-111 counter is used out the Aircraft Size is 8. The FB-111H may carry nuclear weapons and is subject to the same weapons restrictions as the FB-111.

### Northrop F-20 Tigershark

The F-20 Tigershark was formerly known as the F-5G and is a development of the F-5E. It is equipped with the same engine as the

F-15 and F-16. All F-5E tables, except for Roll and Acceleration, are used when simulating this aircraft; use those of the F-16 instead. Players may add up to 5 Energy Points (maximum) per game turn. The F-20 may accelerate while climbing and uses the F-16's Radar Table.

### McDonnell F-15E Strike Eagle:

This aircraft is a fighter-bomber version of the F-15 air superiority fighter and carries two crew members. It has a bomb load equal to the F-111's and uses the F-111 row of the Bomb Capacity Table. Use an F-15 counter to represent this aircraft. RHM's for air-to-air use may not be carried.

### General Dynamics F-16E

This is a projected variant of the F-16 equipped with a delta wing that will enable it to cruise for extended periods of time at supersonic speeds. Use an F-16 counter to represent it. All charts and tables remain the same except that the F-16E may carry 4 Sparrow RHM's and 4 Sidewinder HSM's. The F-16E's bomb capacity is increased by half over that of the F-16's.

### Mikoyan-Gurevich MiG-31 Foxhound

The Foxhound is a development of the MiG-25 Foxbat; this version carries two crew members and has a third-generation look-down shoot-down capability. This aircraft may track up to four targets at any one time but may lock on to only two at once. HSM's may be fired while lock-ons are maintained; it carries the same cannon as the MiG-25. Use a MiG-25 counter and all Foxbat-D tables to represent this aircraft.

### Soviet Heavy Bomber

This can be either a Mya-4 Bison jet-powered heavy bomber, or else a Tu-95 Bear turboprop-powered heavy bomber, both of which have nearly identical performance profiles. All B-52 tables are used; a B-52 counter may be used to represent this plane, or players may wish to make their own counters. The cruise speed for the Tu-95 is 3, and 4 for the Mya-4. Each aircraft carries 6 crew; 1 is subtracted from all values of the B-52 Turn Mode Table. Both planes may be used during the 1958-1980 time period; both use the MiG-25 ECM ratings; and both are armed with either a gravity bomb or an ALCM. The Mya-4 Bison is always treated as a loaded B-52 and has one rear-firing type N cannon with six shots. The Tu-95 Bear has both one forward-firing and one rear-firing type N cannon with six shots.

### Yakovlev Yak-36 Forger

The Forger is generally equivalent to the BAe Harrier and may be represented by using the Harrier counter; or players may wish to make their own units. The Forger uses the Harrier tables, but is treated as though it were loaded at all times; 1 is subtracted from all Acceleration values. The Forger is not able to use "viffing" and consequently may not use rules 104.42 and 104.43. Rule 104.45 may be used, but the Forger gains 1 Altitude Level less than the Harrier per turn. This airplane may hover as in Rule 104.44. No internal gun is carried, but the Forger may carry one type B cannon with three shots, and 2 HSM's; or else no gun and 4 HSM's, all of which are "Atoll" missiles. The Forger has a bomb capacity equivalent to the MiG-17's and uses the MiG-23's electronics rating.

### Mikoyan-Gurevich MiG-29 Fighter "L"

In 1979, Simulations, Inc. described an air-to-air fighter, type L, which has been determined to be the MiG-29 Fulcrum, a fighter similar in size, configuration, and capability to the US F-18 Hornet fighter. However, there is not yet very much hard data available on this aircraft. A modification should be made to the MiG-29 listed in the 1977 Edition rules, and to the Fighter "L" in the 1979 update kit - the MiG-29 may carry up to 2 AA-8 Aphid RHM's. Of the two aircraft

listings, the one for the Fighter "L" given in the 1979 update kit is probably the more accurate.



### Sukhoi Su-27 Flanker

Another Soviet fighter which is thought to be entering service soon is the Su-27 Flanker, which for all practical purposes is a Soviet version of the US Grumman F-14 fighter. Simulate this aircraft with a MiG-25 counter and use all MiG-25D tables except for the Turn-Mode-and-Roll Table and the Flight Parameter Table. Instead, substitute the three appropriate tables of the MiG-23 aircraft. The Su-27 is considered to have a third-generation look-down shoot-down capability (Rule 104.6) and is armed with up to 4 AA-6, AA-7 or AA-8 missiles; no cannon is carried. The Su-27 Flanker may track up to six targets at any one time, and may lock onto and fire at two targets it is tracking. HSM's may be fired while locked onto other targets. The Flanker is thought to be operational in 1985.



### Tupolev Tu-95 Blackjack

This is a Soviet bomber that strongly resembles the US Air Force's B-1 bomber in mission and configuration, though the Soviet craft is larger. When simulating this aircraft, use all of the information on the B-1 tables, with the exceptions of the aircraft size rating of 8 and damage capacity of 50. The Blackjack mounts a tail gun similar to the TU-22M or Tu-26 Backfire bomber's, and has the same range limitations and Roll and ECM Tables. The plane should be treated as a loaded B-1, which can carry twice the number of weapons as the Backfire. Nuclear weapons may be carried in addition to conventional weapons. The Blackjack is expected to be operational in 1987.



### Sukhoi Su-25 Frogfoot

The Su-25 is the Soviet Air Force's answer to the US Air Force's A-10 ground-support aircraft. All the A-10's tables and flight parameters should be used to simulate the Frogfoot, with the exceptions of a new Damage rating of 18, and 1 subtracted from all Climb and Dive Table value ratings (no ratings may be decreased to less than 1). This aircraft is operational in 1983, and may carry AS-7 and AA-8 missiles.

## SU-25 MUNITIONS TABLE

1000-lb. bomb		750-lb. bomb		Rocket Pods		Napalm		ASM
#	AM	#	AM	#	AM	#	AM	#
5	1	8	1	10	2	10	4	10



### Sukhoi Su-24 Fencer

Some NATO military intelligence specialists think that the Soviets may be considering producing an interceptor version of the Su-24 strike aircraft with which to replace other types of older and less capable interceptors in their arsenal. Players wishing to simulate this possibility should try using Su-24's equipped with MiG-25D radar and electronics, allowing them to carry up to 6 AA-6, AA-7, or AA-8 missiles. All other Su-24 tables, factors and flight parameters remain the same.



### Dassault-Breguet Mirage IV-A Strategic Medium Bomber

The Mirage IV-A is used only by France during the time period between 1966-1985 and carries two crew members. This aircraft is represented by a Mirage III counter and tables; the ceiling altitude for the Mirage 5 is used. The Mirage IV-A has the same internal jammer and ECM rating as the Israeli Kfir, with a damage capacity rating of 18 and a size rating of 7. It may be armed with nuclear weapons, and is treated as "clean" while in such a mode. When armed with conventional weapons, the Mirage IV-A may carry double the bomb capacity

of a Mirage 5, and may use the same altitude multiples, but may not carry rocket pods, napalm or bomblets. When carrying ASM's, the Mirage IV-A may carry up to 10 Martel ASM's.



### J-8 Finback Multipurpose Fighter

The Chinese have developed two Mach-2 class fighter aircraft, the J-8 and the J-12. The J-8 is basically a MiG-19 with swingwings. To simulate this aircraft, use a MiG-19 counter (or make your own) with the same basic aircraft information. Use the MiG-23's ratings for the Turn Modes, Acceleration, Climb and Dive Tables with the J-8. The MiG-23's Throttle settings, Flight parameters, Roll Tables and Loaded ratings are also used. The Su-7's Bomb Capacity and Altitude multiples for selecting air-to-ground weapons loads should be used.



### J-12 Supersonic Interceptor

The J-12 Supersonic Interceptor is the second Mach-2-capable aircraft developed by the Chinese, and is basically a MiG-19 with delta wings in shape. A MiG-19 counter and all basic MiG-19 aircraft information, turn modes, and Acceleration, Climb and Dive Tables, as well as the Loaded Characteristics Chart, should be used to represent this aircraft. The F-106's Roll and Flight Parameter Tables should be used, to match the delta-wing flight effects upon the J-12. The Chinese are also said to be developing a radar homing missile with which to arm both aircraft and the MiG-19's in Chinese service. This missile will be similar to the early Sparrow-type used by the US Air Force; up to 4 may be carried per aircraft.



### Vulcan Strategic Medium Bomber

This British bomber was used by Britain between 1958-1982, has 4 crew members, a size rating of 8, a Damage Capacity rating of 24, and uses all B-52 Radar, ECM, and general tables, except for Flight parameters; substitute the Backfire's Roll and Flight Parameters Tables instead. A B-52 counter can be used to represent this plane, or a player may wish to make his own. The Vulcan may be nuclear-armed and may carry either a gravity bomb or a Blue Steel ALCM when conducting a nuclear-strike mission. When armed with a Blue Steel missile, the craft is treated as if it were clean. The Vulcan may carry a conventional bombload equal to that of an F-111's, but uses B-52 Altitude multiples. No bomblets, napalm, or ASM's may be carried.



### AWACS

Recently, a new kind of combat aircraft has been introduced by the US, USSR, and Great Britain; the Airborne Warning and Control System aircraft. AWACS function as flying command posts which can detect hostile aircraft at great distances beyond an interceptor's radar, and then guides the friendly interceptors to the enemy planes. To simulate a NATO or US AWACS aircraft, use a completely-unarmed B-52 with post-1976 electronics ratings; to simulate a Russian AWACS plane, use a completely unarmed Tu-26 Backfire bomber. Neither plane has a tail gun or any other kind of armament except ECM equipment.

To be operational, friendly fighter aircraft must be within radar detection range of the AWACS plane at all times; the fighters may add 4 to their Radar Lock-On Strength (see Chart 16.7) when in this mode. The friendly interceptors may then use their modified Lock-On strength on hostile aircraft that they will attack with RHM's. The interceptors may fly at the edge of the AWACS' detection range and may attack enemy planes that are within range of the interceptors. This benefit is lost if the AWACS aircraft is destroyed. As there is little or no hard information available about this system, or how friendly fighters might function when working with an AWACS aircraft, players should bear in mind that this is a speculative mechanism to simulate this situation, as most information is classified. In such a scenario, the defending player should use the AWACS aircraft and 2 to 4 appropriate fighter planes; the attacking player should use at least 4 planes.



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## WEAPONS

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The following weapons are all air-to-surface missiles (ASM) that fall between cruise missiles and ASM's in performance:

### AS-3 Kangaroo

The world's largest ASM is essentially an unpiloted Su-7 Fitter aircraft equipped with a thermonuclear warhead, carried by a Tu-95 Bear bomber. All basic information is the same as for a Su-7 Fitter, except for the pilot. All cruise missile Throttle settings and rules (106.1) are in effect, except that the range is now set for 1000 hexes; the Su-7 Climb and Dive Tables are used; the Damage Capacity is 1.

### Blue Steel

The Blue Steel Missile is a stand-off missile used only by the RAF. All cruise missile rules (106.1) are in effect, with the exceptions of the Range rating now at 500 hexes, and the Speed rating now at 16. The weapon is nuclear-armed.

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### USAF SRAM

The US Air Force's Short-Range Attack Missile is also a stand-off missile like the Blue Steel, and has a Range of 500 hexes and a Speed rating of 18. It is also bound by all cruise missile rules (106.1). This weapon is also nuclear-armed.

In the case of the Blue Steel missile, the relatively short range is intended to reflect the 1960s technology used; in the case of the SRAM, this short-range rating is intentional. Both of these stand-off missiles are armed with strategic nuclear warheads and are intended for the Strategic Air Strike mission.

### USAF ASALM

The US Air Force's Advanced Strategic Air-Launched Missile will be used against either ground or airborne targets when it reaches service. Prime airborne targets would include Soviet AWACS aircraft or other flying command posts. The ASALM will be equipped with either a conventional or a nuclear warhead; when used against a ground target with a nuclear warhead, this weapon will function like a SRAM.

When used against an airborne target, an ASALM will function like a Blivet (a small tactical nuclear missile) when detonating and will be governed by all the appropriate rules (see 106.2 in the 1979 update kit). When attacking ground targets and when using a conventional warhead, the ASALM functions like a Shrike missile; against airborne targets with the same warhead, this operates as a Brazo missile. To simulate the ASALM, a player should use a Brazo anti-radiation missile counter, with a flight time of 11 turns. In most cases the ASALM should be used to attack airborne targets for game purposes, since other weapons with identical capabilities may be used to attack surface targets. The ASALM may be carried by B-52, B-1, FB-111, and FB-111H aircraft.

### Anti-Shipping Missiles

Ever since an Israeli destroyer was sunk by an Egyptian Soviet-supplied missile in the post-1967 War period, there has been constant development in this area; currently two of the most lethal missiles of this type are the French Exocet and the US Harpoon anti-shipping missiles, both of which may be launched by aircraft. In game terms, both missiles function as a Martel ASM (1000 lb. HE warhead, independent guidance), with the exception that both must descend to Altitude Level 1 after launching, and remain there for the full three turns of flight. At that altitude level, these weapons function like conventional ASM's; they do not carry nuclear warheads.

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## SCENARIOS

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### The Anti-Shipping Strike

This scenario is actually nothing more than a variation of the AIRWAR Game's ground support and bombing scenario (Rule 32.7). Warships (the only kind of shipping considered in this scenario) are represented by SAM launchers for game purposes. There are three kinds of ships: aircraft carriers, large escorts, and small craft, such as missile boats. Carriers and small craft require three hits to sink; large escorts require two hits. All rules from Scenario 32.7 are in force, with the exception that the attacking aircraft must enter the mapboard at Altitude Level 1 and then climb to Level 2 to launch anti-shipping missiles. Other ASM's and bombs may be used, and can be launched from any altitude. Surface-to-air missiles (SAM) used by the defending player may include the SA-2, the SA-6, the Hawk, or the AIM-7F Sparrow (Sea Sparrow), as well as any nonmobile gun. The SAM missile launchers representing warships may not move, as the ships are assumed to be in an immobile or nearly immobile state. All "ships" must be located on Map H within six hexes of each other, since they are assumed to be in formation.

### Falklands/Malvinas Islands

All of the above-mentioned rules are in force. The Argentine player is the attacker and may use 3 to 4 Super Etendards or A-4F Skyhawks. If the Super Etendard is used, only one Exocet missile may be carried (these aircraft flying in from the mainland are carrying drop-tanks, which permit only one missile to be used). Also, 1 or 2 Etendards may function as tanker aircraft; in such a situation, their identity is concealed from the opposing player. If A-4 aircraft are used, only bombs and unguided rockets may be carried. The British player receives one aircraft carrier, two large escorts and two small craft. The British player uses 1 to 2 Sea Harriers, which may carry 4 either AIM-9F or AIM-9L (Sidewinder) missiles. The Argentines win by sinking the carrier or any two other ships; the British win by preventing the Argentines from achieving their victory conditions.

This scenario has a lot of potential to be used as a sort of generic anti-shipping scenario: US, Chinese, and NATO aircraft could attempt to attack Soviet ships and vice-versa; the possibilities are endless. However, if Chinese ships are used in such a scenario, use AA guns instead of SAM's, as Chinese technology has not yet advanced to the point where they can produce a compact, onboard anti-aircraft missile system easily enough. The object, of course, is to "sink" one, some, or all of the defender's ships, depending on the scenario; any other result is considered a draw. Players devising their own scenarios based upon this suggested variant should keep within the bounds of the game rules and existing and possible technology.

### Variations on Mushrooms

The nuclear air-strike scenario (32.6) is somewhat cut and dried; players may wish to add to these rules, to add variety to the game. In all cases, all rules for the scenario are in force, except for the suggested variations: add 2 SAM units to the defending player's order of battle, especially if the defender is Russian, or if the scenario takes place before 1965; delete 2 fighters, replacing them with 2 SAM sites; use just 1 fighter and multiple SAM sites; use different aircraft not normally assigned to nuclear strike missions, such as the Bison, Bear, F-15 (with SRAMs), Panavia Toronado (with cruise missiles), Avro Vulcan (with bombs or missiles), F-100 Super Sabre (bombs only), and the F-111 versions (with bombs, SRAM's, or cruise missiles). Another option might be to try sending a French Mirage IV-A bomber, normally a short-range aircraft, on a nuclear strike mission with a second Mirage IV-A along as an unarmed refueling tanker. The identity of the second plane would be concealed from the opponent until it is shot down, or else the nuclear weapon is delivered.

We hope that these suggested rules variants, counters, and scenarios will add more variety and flavor to an already exciting air combat game. Players of the AIRWAR Game are encouraged to give us their own comments and suggestions; if there is enough interest, more articles on the game might be planned. ■■