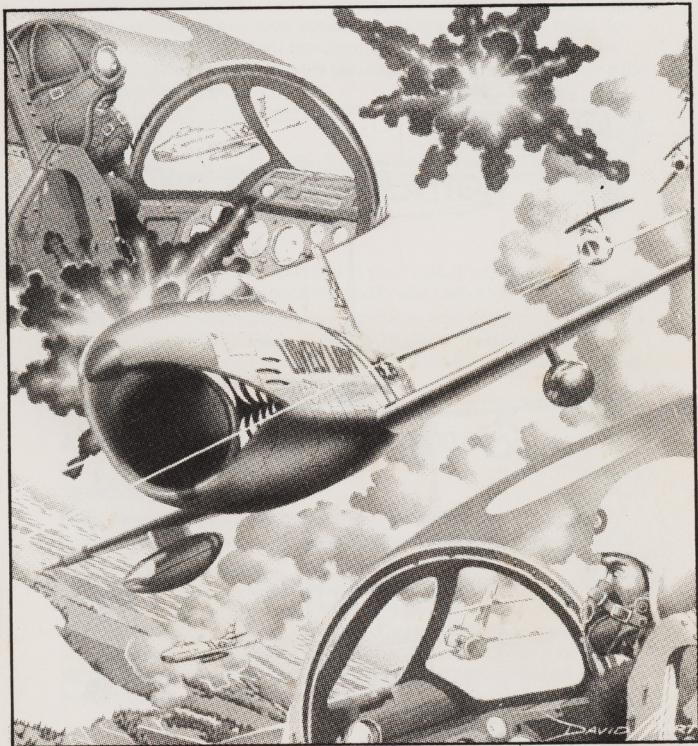
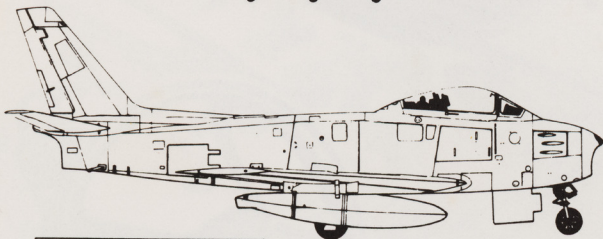
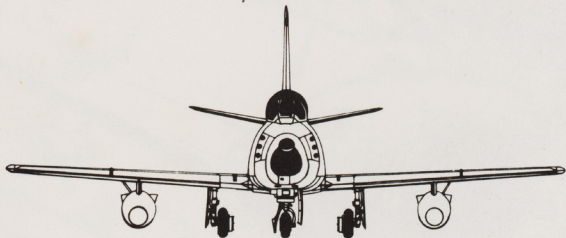
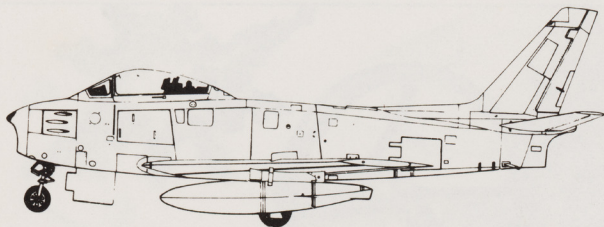


MIG ALLEY ACE



FLIGHT OPERATIONS MANUAL

F-86



AUTHENTICATE	1	2	3	4
RESPONSE C-64	B	C	J	M

SIMULATION OVERVIEW

It's 1950 in the midst of the Korean War, and you must lead your squadron into airborne conflict, engaging the enemy, and destroying him. In exciting split-screen action, two players can battle head-to-head or cooperatively fight the computer-controlled enemy, in five different scenarios. Solo players can challenge the computer vying for high score and ranking.

AUTHENTICATE	5	6	7	8
RESPONSE C-64	N	T	P	A

LOADING THE SIMULATION

COMMODORE 64

DISK: Place the program diskette in your disk drive. Type: **LOAD** **"**", 8, 1**. The program will boot automatically. Leave the disk in the drive.

CASSETTE: Place the program cassette in your program recorder (rewind if necessary). Press **RUN/STOP** while holding down the **"COMMODORE"** key. Press **PLAY** on the cassette recorder. Loading requires at least 10 minutes.

ATARI 400/800/1200/600XL/800XL

REQUIRES: 48K RAM.

REMOVE: All cartridges.

DISK: Place the program diskette in your disk drive and turn on your computer. The program will boot automatically. Leave the disk in the drive.

CASSETTE: Place the program cassette in your cassette recorder (rewind if necessary). Press **START** and power the computer on. (For XL computers, press both **START** and **OPTION** as the computer is turned on.) Depress **PLAY** on the cassette recorder and hit the **RETURN** key. The program will load automatically and start after 6-8 minutes.

AUTHENTICATE	9	10	11	12
RESPONSE C-64	J	P	D	E

AUTHENTICATION CODES

At the start of the simulation, you will be asked to enter your secret MIG ALLEY ACE authentication code. It is important to enter the correct code in order to gain access to all flight and weapons systems.

Consult the Authentication Code charts in this manual and type the countercode letter which matches the number displayed. (Example: the program asks you to "Authenticate (1)", you type "B".)

SIMULATION OPTIONS

The first screen allows you to choose the squadron configurations for each team. Use the computer conversion chart (below) to determine the correct key to press for your computer. The **F1** key for C-64, **OPTION** key for Atari selects 1 player solo, 2 player head-to-head, or 2 player cooperative. Use the **F3** key for C-64, **SELECT** key for Atari to add additional computer controlled wingman to each team up to a maximum total of four planes. Then press the **F5** key for C-64, **START** key for Atari to start the simulation.

The next screen summarizes the scenario about to be played, indicates the current score, and shows how many "lives" each player has left. Use the **F3** key for C-64, **SELECT** key for Atari to change the scenario and the **TRIGGER** on joysticks 1 and 2 to change the difficulty level for teams 1 and 2, respectively. Level 0 is the easiest and level 3 is the most difficult.

Press the **F5** key for C-64, **START** key for Atari when you are ready to start the simulation. In about 5 seconds the simulation will commence.

There will be a brief delay at the beginning of the first simulation round while the disk is verified. To **PAUSE** the simulation during play, press the space bar (ATARI) or the F3 key (Commodore) once. When you are ready to resume play press the space bar or the F3 key again. To **RESTART** the simulation from the beginning during play, press the **F5** key for C-64, **START** key for Atari.

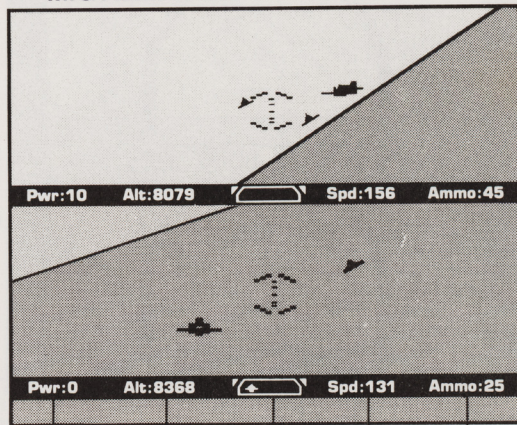
AUTHENTICATE	13	14	15	16
RESPONSE C-64	O	G	I	N

AUTHENTICATE	17	18	19	20
RESPONSE C-64	C	C	M	F

THE SIMULATION DISPLAY

The screen is split into cockpit views for the two players of the simulation. In solo simulations, the bottom screen displays the view for one of the active computer-controlled planes, changing to a different plane when it is shot down. The upper portion of each split screen shows the view out of your windscreen. The object in the center of the screen is your gunsight. The sky and ground are light blue and green, respectively. The orientation of the horizon indicates your current altitude and attitude. If the horizon is below your sight, you are climbing. If the horizon is above your sight, you are diving. If the horizon is tilted to the right, you are banked to the left. If the horizon is tilted to the left, you are banked to the right. Your opponent's plane(s) will be visible if he is in front of you.

MIG ALLEY ACE COCKPIT LAYOUT



POWER ALTITUDE MIRROR SPEED AMMO

ATARI

The instrument panel at the bottom of each split screen gives you the following information:

MIRROR: (ATARI) Planes that are behind you will generally appear in your rear-view mirror. This indicates where and how far away he is. The mirror is of little use in the night scenarios.

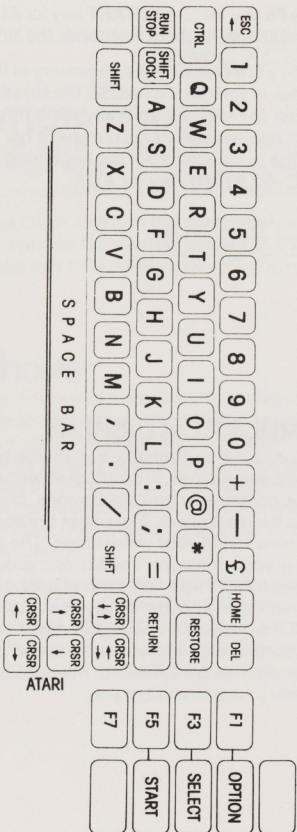
SPEED: Your current speed in knots per hour. If your speed drops below 120 knots, you will stall and controlling the plane will be difficult.

ALTITUDE: Your current altitude in feet. Allowing your altitude to fall to zero will result in a crash, terminating your mission.

AMMO: The number of bursts of ammunition in your guns.

POWER: Your current throttle setting (0 to 20). Twenty is maximum power.

KEYBOARD



C-64 ATARI

KEYBOARD ENTRY

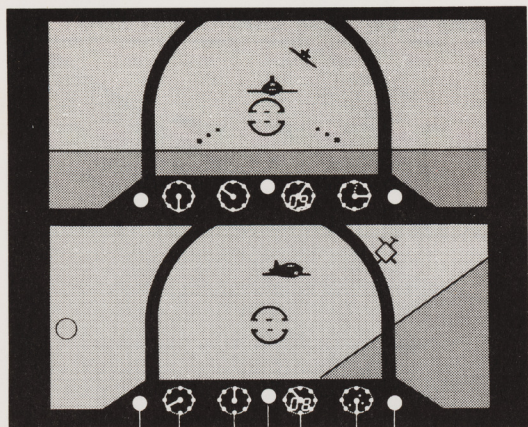
PLAYER 1		PLAYER 2	
ATARI	C-64	ATARI	C-64
Q	E	=	↑
A	S	INCREASE THROTTLE	
Z	X	DECREASE THROTTLE	
		/	CRSR ↑↓

FUNCTION

BAIL OUT

INCREASE THROTTLE
DECREASE THROTTLE

MIG ALLEY ACE COCKPIT LAYOUT



EXHAUST GAS TEMP. (EGT)
ENGINE POWER
SPEEDOMETER
LOW ALTITUDE INDICATOR
LOW AMMO INDICATOR
360° RADAR DISPLAY
ALTIMETER

COMMODORE-64

Exhaust Gas Temperature (EGT) Indicator — When hit by enemy gunfire, your jet engine(s) may falter and overheat, causing a loss of power. If the temperature gets too extreme, the engine will explode. This indicator shows green below 300° C, yellow between 300° & 500°, and red above 500°.

Engine RPM Gauge — Displays percentage (0-100) of engine power used.

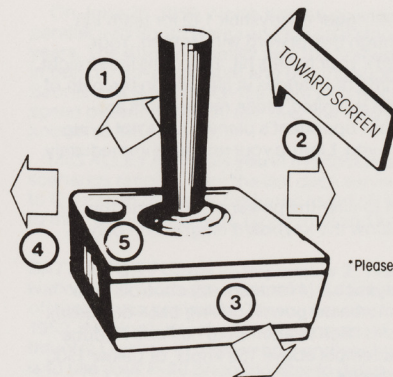
Airspeed Indicator — Indicates airspeed in miles per hour. 1 dial revolution = 500MPH.

Low Altitude Indicator — If your altitude falls below 1000 feet, this indicator will flash yellow. Below 100 feet it flashes red.

Altimeter — Contains a digital readout of altitude in thousands of feet, and a dial indication of fractions thereof.

Radar Display — Gives a 360° display of all objects in your air space.

Low Ammo Indicator — Flashes yellow when less than 10 bursts are left and red when guns are empty.



CONTROL STICK (FLIGHT CONTROLS)

1. NOSE DOWN
2. BANK RIGHT
3. NOSE UP
4. BANK LEFT
5. WEAPONS TRIGGER

*Please note special options available on ATARI 800.
ALL 4 JOYSTICK PORTS CAN BE USED.

Ports 1 & 3 Player 1
Flight Controls/Power & Bailout
Ports 2 & 4 Player 2
Flight Controls/Power & Bailout

FLYING YOUR AIRPLANE

In order to skillfully fly your plane, you must learn to turn, climb, and dive. As you become more proficient you will find yourself doing loops, rolls, and split-S maneuvers.

To cause your plane to turn you must bank (tilt) your plane. Bank is controlled by pressing joystick 1 (2 for team #2) to one side or the other. The steeper your plane is banked, the more rapid the turn will be. The most rapid turn occurs when the horizon appears to be vertical. Banking further puts you into an inverted flight attitude and reduces the turn rate.

To cause your plane to climb, pull back on the stick. This pulls the nose of your plane up. Your speed will generally decrease when climbing. If you have enough speed you can loop or half-loop the plane by pulling back until the horizon appears again.

To dive push the stick forward. Your speed will increase when diving. If your plane is steeply banked, it is much less responsive to the elevator: climbing and diving are more difficult. This situation often results in a snap roll or spin. During a spin your plane will gyrate uncontrollably.

To fire your guns, press the trigger on joystick 1 (2 for team #2). You will see your tracers through the forward windscreen. Your opponent's plane will flash red if your bullets hit. Your guns fire straight ahead; note the effect of turning or changes in altitude on the path of your bullets. Your ammunition is limited, close range shots are recommended. Try to lead your opponent's plane if he is not flying directly towards or away from you. Line up your next shot immediately, don't wait!

The keyboard can be used to alter the power settings and trigger a bail out. Follow the chart below the keyboard diagram on page 5 for the correct keys.

On Atari 800 computers joystick 3 (4 for team #2) controls your throttle. Pressing it forward increases power, pulling back decreases power. Press the trigger on this stick to attempt to bail out. Reduce speed before bailing out as attempts above 150 knots, or below 1500 feet, are not likely to be successful.

AIR WAR IN KOREA (1950-1953)

The Korean Conflict was a culmination of historical events that began in 1910 with the annexation of Korea by Japan. In November 1943 President Franklin D. Roosevelt met with Prime Minister Winston Churchill and Generalissimo Chiang Kai-Shek at the Cairo Conference and agreed that Korea should become a free and independent state after WWII. The Soviet Union was not committed to the Pacific War and was not represented.

After the collapse of Japan in the summer of 1945, the Soviet Union took advantage of their late entry into the Pacific War by occupying the area of Korea north of the 38th parallel. This separation of Korea between Communist and United States dominated governments, and the respective attitudes of their military planners led to the reduction of U.S. forces in Korea and the build-up of North Korean Communist forces.

On June 25, 1950, North Korean divisions stormed across the 38th parallel into South Korea and set off a bloody conflict that lasted three years. The Korean Conflict saw the first extensive use of jet aircraft in both air-to-air combat and ground support roles. American F-86 Sabres and Soviet MIG-15s were often locked in combat close to the speed of sound, 30,000 feet over the Yalu River in that deadly area known as MIG ALLEY.

MIG ALLEY ACE puts **you** in the cockpit as squadron leader in battle scenarios ranging from the last ditch survival at Pusan in August 1950, to Operation Strangle, designed to cut off North Korean supply routes to the front in June 1951. Good luck and keep it in the air!

BATTLE FOR PUSAN — September 2, 1950 Pusan was the United Nations' last foothold in South Korea before being completely shoved off the Korean peninsula. Throughout the first two weeks of September 1950, the North Korean 6th Division attacked the defending U.S. 25th Infantry Division in a seemingly endless human wave. Your mission is to use your F-80 Shooting Star to defend U.S. troops against aerial attack by enemy YAK-9 fighter-bombers.

SUNCHON AIRDROP — October 20, 1950 The United Nations ground forces landed at Inchon during mid-September, 1950, and drove north across the 38th parallel in the ensuing months. General MacArthur ordered the paratroops of the 187th Airborne Combat Team into action, dropping behind enemy lines to disrupt the North Korean supply lines. Your mission is to successfully pilot your modified, machine gun armed, C-119 transport plane across enemy lines, withstanding the enemy YAK-9 fighter attack.

MIG ALLEY — December 7, 1950 During November 1950, North Korea introduced the awesome MIG-15. It was 100 knots faster and could outclimb, outdive, and outturn the F-80 Shooting Star and the Navy F9F Panther. Home to these mighty jetfighters was the airspace known as MIG ALLEY, bounded on the north by the Yalu River and China, and extending 100 miles south into Korea. Some of the most intense air-to-air combat occurred here as experienced U.S. pilots used their combat prowess to overcome their planes' limitations in the battle for air superiority. Your mission is to fly your F9F Panther into MIG ALLEY, engaging and destroying all the MIG-15s you encounter.

SINUJU AIRFIELD — January 23, 1951 By the end of January 1950, the Communists had retaken much of the ground won in the United Nations counterattack. The North Koreans rebuilt Sinuiju Airfield and protected it with numerous anti-aircraft guns and MIG-15 air cover.

On January 23, 1951, a squadron of F-84 Thunderjets flew strafing and bombing missions at Sinuiju. Your mission is to provide air cover against the MIG defense in your F-86 Sabrejet.

OPERATION STRANGLE — June 20, 1951 By the middle of 1951, the United Nations high command had decided to launch a massive interdiction campaign against the North Koreans between the 39th Parallel and the front line. Known as Operation Strangle, this campaign targeted road junctions, bridges, and the railway system, with B-26s of the 3rd Bombardment Wing providing the firepower. Your mission is to provide air cover for the bombers in your F-86 Sabrejet against the rallying MIG-15s.

AUTHENTICATE	21	22	23	24
RESPONSE C-64	G	Q	R	A

THE RESULTS

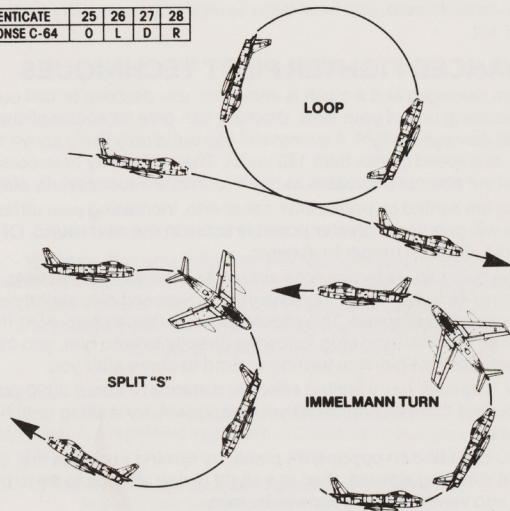
The object of the simulation is to shoot down as many of the opposing team's planes before he shoots you down three times. Points are accumulated along the way for each plane shot down, and the team with the highest point total at the end of the simulation wins. Points given for each plane range from 1200 to 2400 based on time used and difficulty level. Your final point total will determine a ranking as follows: up to 2000 - Novice, over 2000 - Wingman, over 4000 - Pilot, over 10,000 - Ace, over 25,000 - WGFP (World's Greatest Fighter Pilot).

There can be 3 results from a scenario: **A VICTORY** adds to your point total. **NO RESULT** allows you to continue to the next scenario. **A LOSS** counts against your "lives" and may terminate the simulation. In general, any time a plane is shot down a **VICTORY** is scored and points are given to the opposing team. If the plane is player-controlled and the pilot does not successfully ditch or bail out, then a **LOSS** is given and one of the lives for that player's team is used up. Specifically:

1. You shoot down your player-controlled opponent. This counts as a **VICTORY** for you and a **LOSS** for him.

2. You shoot down a computer-controlled plane. This counts as a **VICTORY** for you. Note that this will not cause the scenario to end unless you have destroyed the last plane in the enemy squadron.
3. You bail out of your plane successfully. This counts as a **VICTORY** for your opponent.
4. You bail out of your plane and are captured or your parachute fails. This counts as a **LOSS** for you and a **VICTORY** for your opponent.
5. You ditch your plane in the water. This counts as a **VICTORY** for your opponent.
6. You crash. This counts as a **LOSS** for you and a **VICTORY** for your opponent.
7. The time limit expires. This counts as **NO RESULT**.

AUTHENTICATE	25	26	27	28
RESPONSE C-64	O	L	D	R



COMBAT TACTICS

Always keep in mind that this simulation takes place in a three-dimensional airspace. Try to visualize where your opponent is relative to your plane and what maneuver you are executing. Note also in what direction your opponent is flying. Try to get behind him or cause him to fly into your sights. If he gets behind you, try an Immelmann or split-S (a half-roll followed by a half-loop). Turning contests are sometimes successful against heavy enemy bombers, but it is usually hard to get a clean shot against a more maneuverable enemy fighter.

Your opponent's plane also fires straight ahead, so you are in danger when you see him heading towards you or on your tail. Keep an eye on your rear-view mirror or radar. If the enemy is close and closing, take evasive action immediately. A tight turn or deliberate stall are two possibilities. The screen will flash bright red when you are hit. If your power drops to zero, you have been severely damaged. Try to ditch or bail out.

ADVANCED FIGHTER PILOT TECHNIQUES

- When damaged and a crash is imminent, use ditching or bail out to avoid using one of your lives. Ditching can only be accomplished when damage is slight. A successful bail out is only likely above 1500 feet, at a speed of less than 150 knots. The probability of success in a bail out attempt decreases as more rounds are successfully played.
- If you are behind on points after a scenario, increasing your difficulty level will give you a greater possible score in the next round. Of course, it will be harder to achieve.
- When flying an underpowered aircraft and the enemy seems to be running away from you, increase your power and dive slightly to increase your airspeed. This should allow you to catch up. Also, if you change direction and stop following directly behind him, you can sometimes fool him into turning around to come after you.
- Your firepower has a limited effective distance of about 2000 yards. If you find that you cannot hit your opponent, try waiting until he is closer.
- If you can't find an opponent's plane, try turning in circles first in a slight climbing attitude, then in a slight diving attitude to try to bring him into view through your windscreen.

- The amount of ammunition allocated decreases as the difficulty level increases. It is wise to pick your shots carefully at the higher levels or you may find yourself defenseless against a squadron of enemy fighters!
- When battling against a very maneuverable enemy plane, turning contests become futile. A better approach is to fly away from the enemy for a short time, and then turn to face him head on. Remember to increase your power and dive slightly to increase your airspeed when running, resuming normal power when flying head on.

AUTHENTICATE	29	30	31	32
RESPONSE C-64	F	G	Q	P

We hope that you will enjoy this MicroProse simulation. Please send us your comments on this simulation or suggestions for other simulations you would like to see. MicroProse is dedicated to bringing you the most entertaining and challenging computer simulations available.

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