TOP GUNNER™

Collection

Three Joystick Smashing Classics!

MIG ALLEY ACE

HELLCAT ACE

AIR RESCUE

3 IN 1
from
MICRO PROSE™

FLIGHT OPERATIONS MANUAL

TOP GUNNER™ Collection

CONTENTS

Software Authors!

MicroProse is always searching for new people and products, to bring you the most challenging and fun products. If you're creating quality simulation software, and/or are an expert in 6502, 8086 or 68000 programming, call or write us! We'd like to get you on our team and make you a MicroProse partner!

MICRO PROSE™
SIMULATION • SOFTWARE

120 Lakefront Drive, Hunt Valley, Maryland 21030

INTRODUCTION

The *TOP GUNNER COLLECTION* brings together three classic and exciting MicroProse programs — *Hellcat Ace, MiG Alley Ace* and *Air Rescue* — in a single package of unbeatable value. You'll get hundreds of hours of fun and challenge from these games as you experience the wind in your face and the intense dogfighting action of stick-and-rudder fighter flying!

HELLCAT ACE is the original MicroProse air-to-air combat simulation. It features loops, bailouts, ocean-ditching, limited ammunition and all the gripping action of World War II combat flying maneuvers. Competition for 1 to 4 players.

MiG ALLEY ACE takes you head-to-head against the enemy with a unique and thrilling split-screen view as you dogfight your way across the Korean skies of 1950. It was nominated best multi-player game of the year and is the ONLY game of its kind that has this exclusive one-on-one, pilot against pilot dogfighting capability. Competition for 1 to 4 players.

AIR RESCUE is an exciting arcade-style game that reinforces your pilot hand/eye coordination. You must skillfully maneuver your assault chopper through a treacherous underground labyrinth. Your mission: search out and rescue the captives trapped inside. This program demonstrates the need for quick action and expert helicopter fighter flying. For 1 to 8 players.

LOADING INSTRUCTIONS

A JOYSTICK(s) is required for all three games. Be sure that your joystick(s) is properly plugged into the correct port *before* turning on your computer and proceeding with loading instructions below. Since joystick attachment requirements differ with each game, please consult the "Flying Your Aircraft" sections of this manual (Pages 7, 18, 25) for specific instructions pertaining to the game you wish to play.

COMMODORE 64/128

(*NOTE for C-128 ONLY:* A C-128 must first be placed in the C-64 mode for proper operation. To do this, remove any disks in the drive and turn the computer off. Then hold down the COMMODORE key while switching the computer back on again. It is now in C-64 mode.)

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

When the *Top Gunner* title screen appears, select the desired program by pressing **1, 2** or **3**. The game you've chosen will then fast-load and appear shortly.

INTRODUCTION AND LOADING

ATARI 400/800/1200/600XL/800XL/130XE
Requires 48K RAM minimum.

Remove all cartridges. Place the program diskette in your disk drive and turn on the computer. The program will boot automatically. Leave the disk in the drive.

When the *Top Gunner* title screen appears, select the desired program by pressing **1, 2** or **3.** The game you've chosen will then fast-load and appear shortly.

Design and Development
by Sid Meier

Atari Programming
by Sid Meier

Commodore Translation
by Ron Verovsky and Dale Gray

for MICROPROSE SOFTWARE, INC.

HELLCAT ACE

OVERVIEW

HELLCAT ACE is a game which challenges your nerve, flying skill, and knowledge of air to air combat tactics. You fly your World War II plane against a computer controlled airplane(s) in one of fourteen different scenarios. Your goal is to complete five missions and become an ACE!

GAME OPTIONS

PLAYERS: The first screen allows you to select the number of players and the desired game scenario. First, hold down the key **F7** (on C-64) or **SELECT** (on Atari) until the desired number of players appears at the bottom of the screen; up to four players may play.

SCENARIO: Next, select the game scenario you wish to play. See the "Scenarios" section on Pages 8-9 for a description of the various missions you can fly. Scenario #1 is recommended for beginners . . . On C-64, simply press the corresponding number of the desired scenario. On Atari, hold down the **OPTION** key until the number of the desired scenario appears at the bottom of the screen; then press **START**.

DIFFICULTY: The next screen summarizes your mission in this scenario, and indicates the scores and victories accumulated thus far (if any). Here you also select the difficulty level by pressing **F1** (on C-64) or **OPTION** (on Atari). Difficulty level "0" is the easiest; level 3 is the most difficult. As you accumulate victories, the minimum difficulty level at which you play will increase until it reaches the No. 3 "top gunner" level.

> *ATARI ONLY:* You are also able to choose the number of opposing aircraft (1 or 2) you wish to fly against by pressing the **SELECT** key.

SKIP: A player may skip his turn on the scenario being played by pressing **F5** (on C-64) or the **OPTION** and **SELECT** keys together (on Atari). In multi-player games, the person who is about to play is indicated on the "Your Mission" line.

START: When you are ready to begin playing, press **F7** (on C-64) or **START** (on Atari). The game will commence in about five seconds.

PAUSE: To temporarily suspend play during a game, press once: **F7** (on C-64) or the **SPACE BAR** (on Atari). To resume play, press the same key — **F7/SPACE BAR** — once again.

THE GAME DISPLAY

Your instrument panel at the bottom of the screen provides you with the following information:

MIRROR: If your opponent is behind you he 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 below zero will result in the immediate termination of your mission.

COURSE: The direction in which your plane is flying, expressed in degrees. Zero degrees is due North, 90 degrees is East, 180 degrees is South, and 270 degrees is West.

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

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

The upper portion of the 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. 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.

Functional warning lights are located on each side of the cockpit. Green is normal, yellow cautionary, and red danger levels. The lights from left to right indicate speed, ammo remaining, altitude and power setting.

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.

The joystick in C-64's Port #2 (Atari: Port #1) is used in flying your plane and firing your guns. The joystick in C-64's Port #1 (Atari: Port #2) controls your throttle and allows you to bail out.

>   COMMODORE ONLY: If you have only one joystick, the keyboard
>   may be used in place of the joystick in Port #1. Decrease your power
>   by holding down the **LEFT ARROW** key (**not** cursor left!); increase
>   your power using the number '1' key.

To cause your plane to turn you must bank (tilt) your plane. Bank is controlled by pressing the C-64: Port #2 (Atari: Port #1) joystick 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 altitude and reduces the turn rate.

To cause your plane to climb, pull back on the stick in C-64: Port #2 (Atari: Port #1). 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 the joystick in C-64: Port #2 (Atari: Port #1). 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 altitude on the path of the 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 joystick in C-64: Port #1 (Atari: Port #2) controls your throttle. Pressing it forward increases power, pulling it back decreases power. Press the **SPACE BAR** (on C-64) or **PORT #2 JOYSTICK TRIGGER** (on Atari) if you wish to attempt to bail out. Reduce speed before trying to bail out. (Bailout below 2000 feet or above 150 knots is not likely to be successful.)

HELLCAT ACE

COMBAT TACTICS

Always keep in mind that this game 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.

The scenarios fall into two general categories: those in which your mission is to shoot down your opponent, and those in which your mission requires you to avoid being shot down yourself.

The former requires aggressive flying. Try to keep your opponent in front of you. If he gets behind you, try an Immelman 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 nimble Zero fighter.

(See Page 21 for diagrams of these maneuvers)

If the scenario calls for you to avoid being shot down you're generally flying a less maneuverable bomber. It will be difficult to keep your opponent in front of you. Keep your eye on the rear-view mirror. If he is close and closing, take evasive action immediately. A tight turn or deliberate stall are two possibilities.

Your opponent's plane also fires straight ahead, so you are in danger when you see him heading towards you. The screen will flash red when you are hit. On Commodore 64 only, you will also get bullet holes dancing across your canopy when hit. If your power drops to **zero** you have been severely damaged. Try to ditch or bail out.

THE SCENARIOS

FLYING TIGER – August 13, 1940 You are flying a P40 Tomahawk fighter with Colonel Claire Chennault's American Volunteer Group (Flying Tigers), contesting the Japanese invasion of China in early WWII. Ahead of you flies a Japanese medium bomber returning from a bombing mission. Your guns are loaded and primed. Shoot him down.

PEARL HARBOR – December 7, 1941 You are flying a Brewster Buffalo fighter on a single patrol over the main Pacific fleet anchorage at Pearl Harbor, Hawaii. Suddenly you spot a Japanese Floatplane circling Pearl at 10,000 feet reporting vital information to the approaching attack wave. If you don't shoot him down and disrupt the attack you will be overwhelmed when it arrives.

WAKE ISLAND – December 11, 1941 You are flying a F4F WildCat fighter. Offshore a Japanese invasion force is approaching the beach. You notice a Zero fighter dropping down for a strafing run against the Marine defenders.

CORAL SEA – May 8, 1942 The first carrier battle of the war. You are flying a WildCat fighter on combat control over the fleet. You drop down to intercept a bomber beginning a low altitude bombing run on the carrier YORKTOWN. If he sinks the carrier, you will have nowhere to land.

MIDWAY – June 4, 1942 The decisive sea battle of the war. US dive bombers sank four Japanese carriers. You are leading a squadron of SBD Dauntless bombers North to the Japanese fleet. Fly North and maintain your altitude while avoiding the Japanese defenders.

GUADALCANAL – September 3, 1942 A Japanese Army fighter makes a surprise early morning strafing run on the Marine airstrip. Two planes are blazing, but your fighter is intact. You run to your WildCat and roar off the runway as he banks for another pass over Henderson Field.

SANTA CRUZ – October 26, 1942 The carrier LEXINGTON is under heavy attack from Japanese dive and torpedo bombers. Two hits have been scored already and the "Lady Lex" has slowed and is listing. Above you at 12,000 feet VAL dive bomber is preparing to push over into dive. You must act quickly, this hit could be decisive.

GET YAMAMOTO – April 18, 1943 American Intelligence has broken the Japanese code and learned that Admiral Yamamoto has scheduled an inspection visit to the island of Ballale, just within range of the P-38 Lightning with drop tanks. You have flown over six hundred miles. Ahead you spot the Admiral's plane. You must complete your mission quickly before his Zero Escort drops down to intercept.

MARINAS – June 19, 1944 The last major carrier battle of the war. The Japanese launch massive air strikes against the American Task Force supporting the invasion of Saipan in the Marianas. You are flying a new F6F HellCat fighter, recently introduced as a replacement for the WildCat. As your second flight drops down to deal with a dive bomber squadron you engage the Zero escort.

LEYTE GULF – October 24, 1944 The Japanese launch a desperate naval attack on the American fleet covering the Philippines invasion. While the American carriers are drawn off to the North, the Japanese battleships slip through the Surigao Strait to attack the vulnerable transports. A group of planes is hastily pulled together and sent to slow the battleships. You are flying an old Devestator torpedo bomber. Your orders are to fly west (Course 270) to the Japanese fleet. Watch out for the Zeroes.

IWO JIMA – February 25, 1945 The invasion of Iwo Jima threatens the Japanese mainland, putting the major Japanese cities within range of Super Fortress bombers. They respond by sending the best of their remaining pilots to oppose the invasion. You are cruising at 10,000 feet when you are attacked by a Japanese ace in a new Zero fighter.

KAMIKAZE – March 3, 1945 The invasion of Iwo Jima also causes the Japanese to resort to Kamikaze attacks: filling planes with bombs and explosives and diving into the American carriers. This tactic causes severe damage to the American Fleet. You are flying Combat Air Patrol when you are vectored to intercept a rapidly approaching kamikaze.

OKINAWA – April 2, 1945 As the Americans invade the island of Okinawa, the Japanese intensify their night attacks on the fleet. You are flying a HellCat modified for night combat. Ahead you spot a Japanese night fighter.

BAKA – April 15, 1944 The Japanese continue their kamikaze attack by introducing the "Baka". A swift rocket powered bomb dropped from a bomber and flown to its target. In this final mission of the war, you must shoot down this dangerous weapon before it disables your carrier.

THE RESULTS

The object of the game is to accumulate the highest score and attempt to achieve five (5) victories to become an official "ACE". As you accomplish victories, the level of play automatically advances. After 5 victories the skill level is increased to level 3. At the end of the game you will receive a ranking based on victories, time, damage and ammunition used. Rankings are Rookie, Wingman, Pilot, Ace and W.G.F.P. (World's Greatest Fighter Pilot!).

There can be three results from a scenario: A VICTORY counts towards your total and allows you to continue to the next scenario, NO RESULT allows you to continue but does not contribute to your victory total, a LOSS ends the game. There are a number of ways in which a scenario may end:

1. *You shoot down your opponent(s).*
   This always counts as a VICTORY.
2. *The time expires or you fly out of range of your opponent.* In the MIDWAY and LEYTE GULF scenarios this counts as a victory. In the PEARL HARBOR, CORAL SEA, SANTA CRUZ, KAMIKAZE, and BAKA scenarios failing to complete your mission means your base is destroyed – you are captured after a forced landing. **This counts as a LOSS. In all other scenarios this counts as NO RESULT.**
3. *You bail out of your plane successfully.* You have a better chance if your speed is low. The results are the same as in Ending No. 2 above. With the MIDWAY and LEYTE GULF scenarios, there is no bail out option.
4. *You bail out and are captured.* **This always counts as a LOSS.**
5. *You ditch your plane in the water.* You may ditch your plane by slowly and gently taking it to zero altitude. You will be picked up by a friendly submarine. **Results are the same as Ending No. 2 above.**
6. *You crash.* **This always counts as a LOSS.**

HIGH SCORE

The highest score attained while playing the game is recorded on the disk at the end of the game so that it may be displayed in future games (If the disk is not write protected). If a new high score is set, it is not recorded on the disk until the final score screen appears, therefore if the game is restarted, or turned off, before the final score is displayed, the new high score will not be recorded.

ADVANCED COMBAT AEROBATICS

Loop – Build up speed. Pull back on the stick. You will climb and roll onto your back. Keep the stick back as you begin to dive until the horizon reappears again. You will be flying level in the same direction in which you started. Used to get behind a plane close on your tail.

Split-S – from level flight roll until you are flying inverted. Pull back on the stick until the horizon disappears and appears again. Used to reverse direction quickly and lose altitude.

Immelmann Turn – Build up speed, then pull back on the stick until you have completed a half loop and are flying inverted. Now roll until you are level again. Used to reverse direction quickly while gaining altitude.

(See Page 21 for diagrams of these maneuvers)   THE END

Design, Development and Programming
by Andy Hollis
for MICROPROSE SOFTWARE, INC.

F-86
Sabre Jet
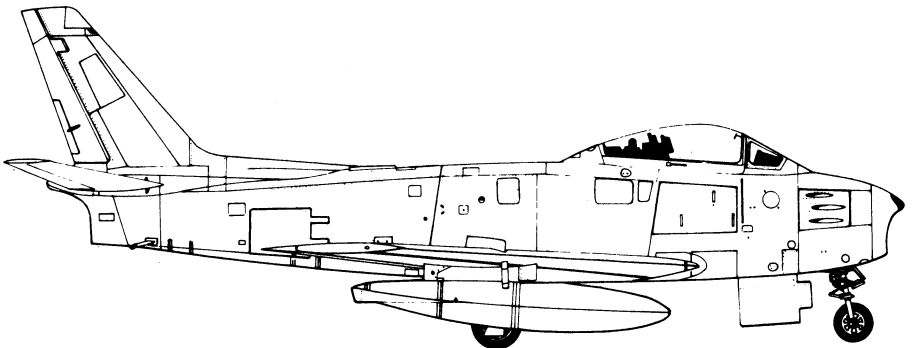
AUTHENTICATE	1	2	3	4
RESPONSE C-64	B	C	J	M

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

AUTHENTICATION CODES (Applies to COMMODORE only)

At the start of the game, 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 scattered throughout this section and type the countercode letter which matches the number displayed. (Example: the program asks you to "Authenticate (1)", you type "**B**".)

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

GAME OPTIONS

Until you become familiar with all the controls, you may find it helpful to use the keyboard reference chart on Page 15 to determine the correct keys to press for your computer.

PLAYERS: The first screen allows you to choose the squadron configurations for each team. Hold down the key **F1** (on C-64) or **OPTION** (on Atari) to make your selection of: one player solo, two player head-to-head, or two player cooperative mode. To add an additional computer-controlled wingman to each team use the key **F3** (on C-64) or **SELECT** (on Atari); the limit is four planes in total.

Once the player selections have been made, you must advance to the next screen by pressing the key **F5** (on C-64) or **START** (on Atari).

SCENARIOS: The next screen summarizes the scenario about to be played (see Pages 19-20 for descriptions). It also indicates the current score, and shows how many "lives" each player has left. To change the scenario, use the key **F3** (on C-64) or **SELECT** (on Atari).

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

GAME OPTIONS (continued)

DIFFICULTY: To change the level of difficulty for each team, use the **TRIGGER** on joystick 1 for Team 1 and on joystick 2 for Team 2. Level "0" is the easiest; level 3 is the most difficult.

START: When you are ready to begin playing, press the key **F5** (on C-64) or **START** (on Atari). The game will commence in about five seconds. Expect a brief delay at the beginning of the very first round of play while the disk is verified.

PAUSE: To temporarily suspend play during a game, press once: **F3** (on C-64) or the **SPACE BAR** (on Atari). To resume play, press the same key – **F3/SPACE BAR** – once again.

RESTART: To restart the game from the beginning during play, press **F5** (on C-64) or **START** (on Atari).

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

THE GAME 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.

KEYBOARD

ATARI / C-64

ATARI	C-64
F1	OPTION
F3	SELECT
F5	START
F7	

ESC ← | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | + | − | £ | HOME | DEL

CTRL | Q | W | E | R | T | Y | U | I | O | P | @ | * | ↑ | RESTORE

RUN/STOP | SHIFT LOCK | A | S | D | F | G | H | J | K | L | : | ; | = | RETURN

SHIFT | Z | X | C | V | B | N | M | , | . | / | SHIFT

S P A C E B A R

CRSR ↕ | CRSR ↔ ATARI | CRSR ← | CRSR → | CRSR ↑ | CRSR ↓

KEYBOARD ENTRY
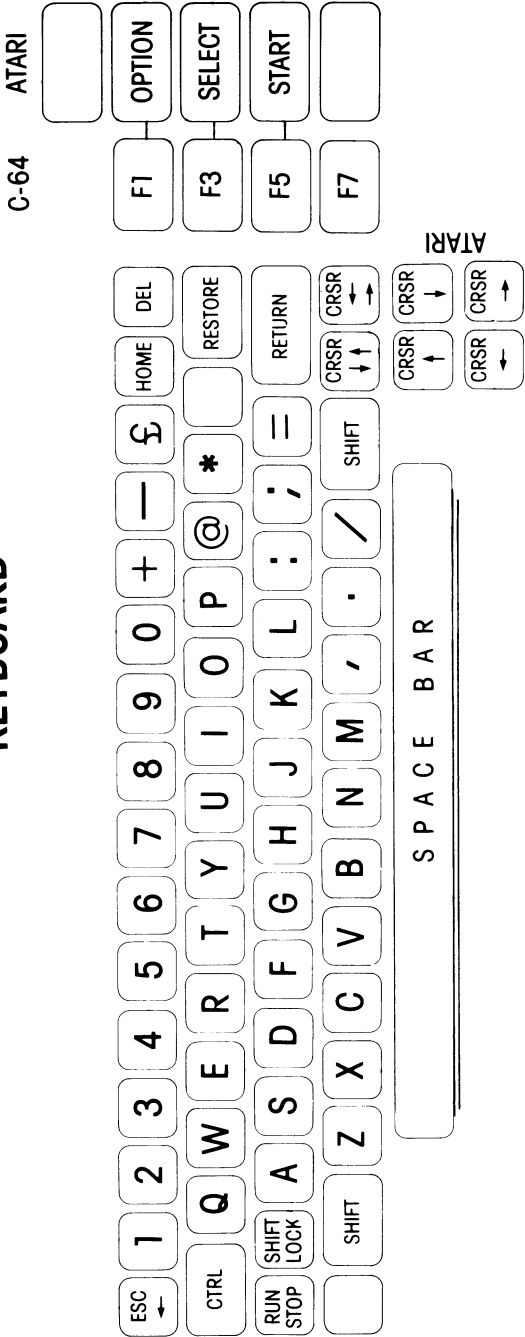
PLAYER 1		FUNCTION	PLAYER 2	
ATARI	C-64		ATARI	C-64
Q	E	BAIL OUT		
A	S	INCREASE THROTTLE	=	↑
Z	X	DECREASE THROTTLE	+	=
			/	CRSR ↕

COCKPIT LAYOUT: C-64

EXHAUST GAS TEMP. (EGT)
ENGINE POWER
SPEEDOMETER
LOW ALTITUDE INDICATOR
LOW AMMO INDICATOR
360° RADAR DISPLAY
ALTIMETER
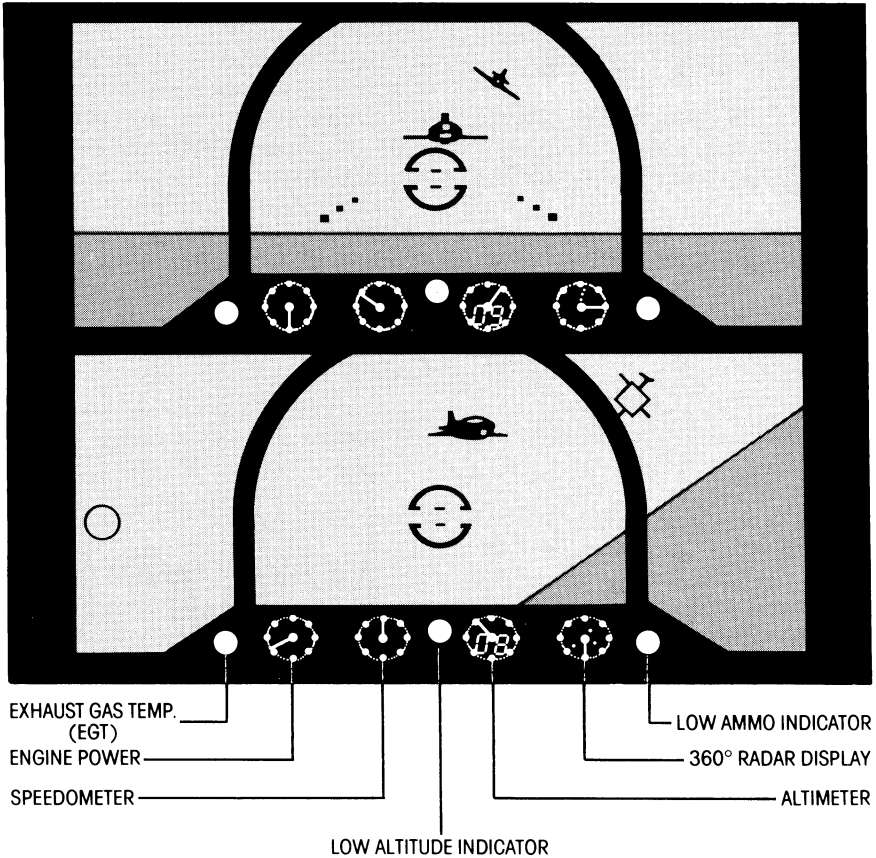
COMMODORE-64

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.

COCKPIT LAYOUT: ATARI

| POWER | ALTITUDE | MIRROR | SPEED | AMMO |
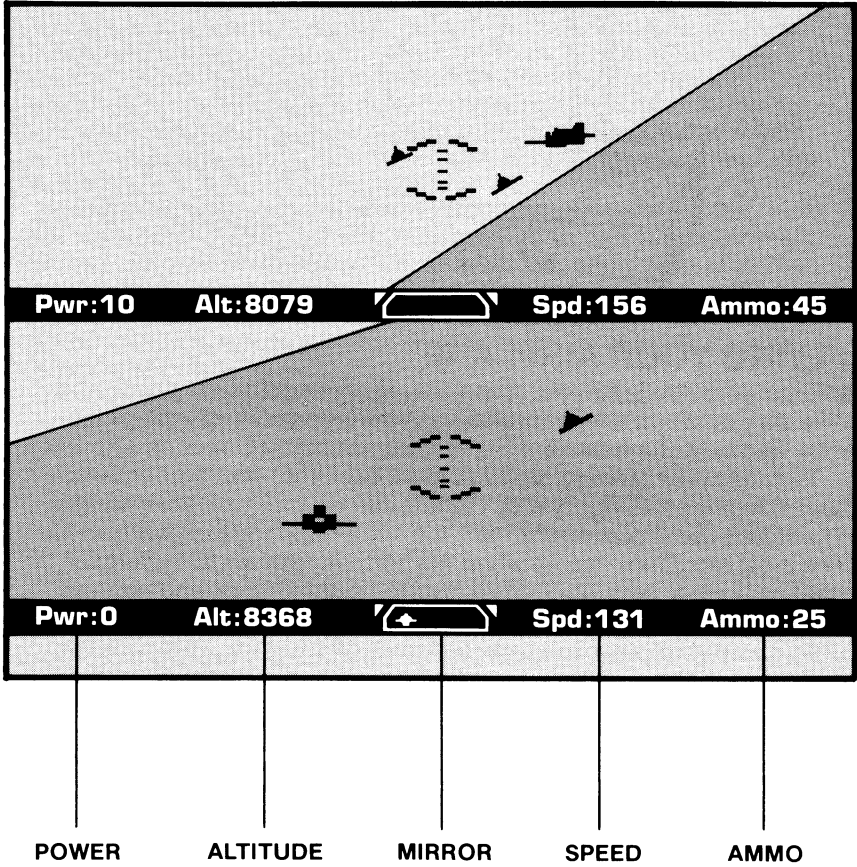
ATARI

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.

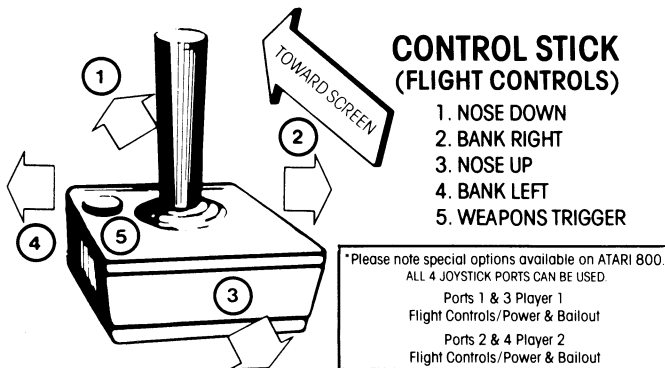**SPEED:** Your current speed in knots per hour. If your speed drops below 120 knots, you will stall and controlling the plane will be difficult.

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.

17

MiG ALLEY ACE

CONTROL STICK
(FLIGHT CONTROLS)

TOWARD SCREEN

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 15 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 Delano 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.

MiG ALLEY ACE

SINUIJU 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 inter-diction 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

LOOP

SPLIT "S"

IMMELMANN TURN
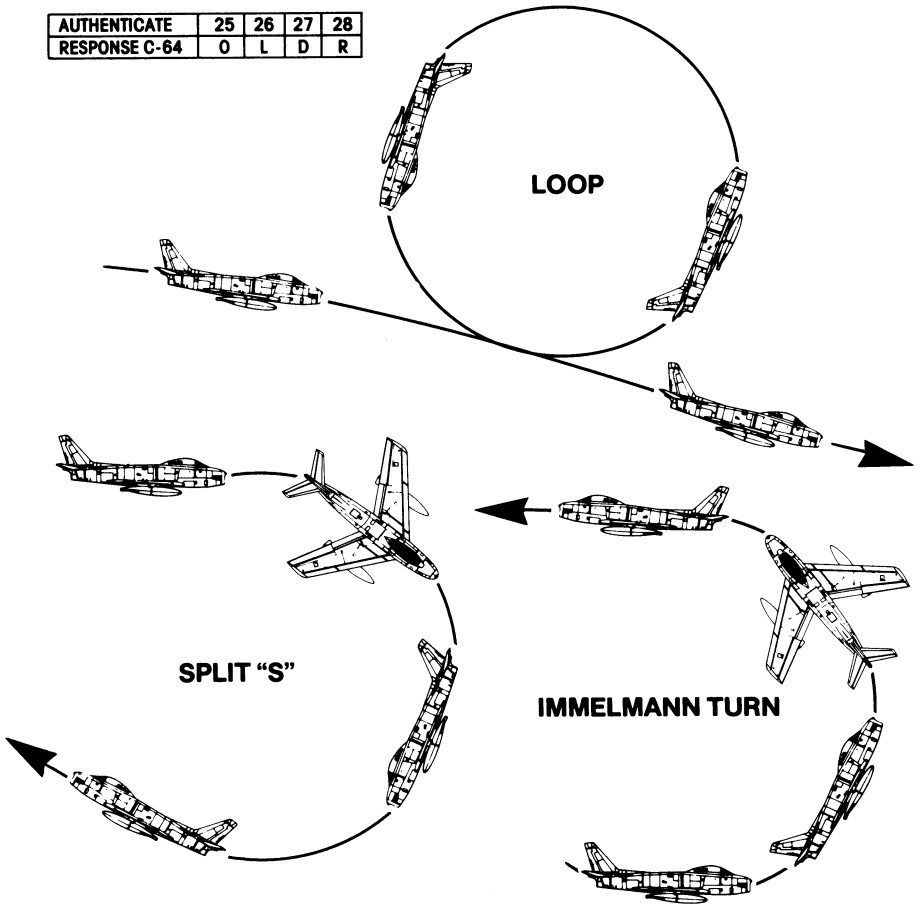
COMBAT TACTICS

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

THE END
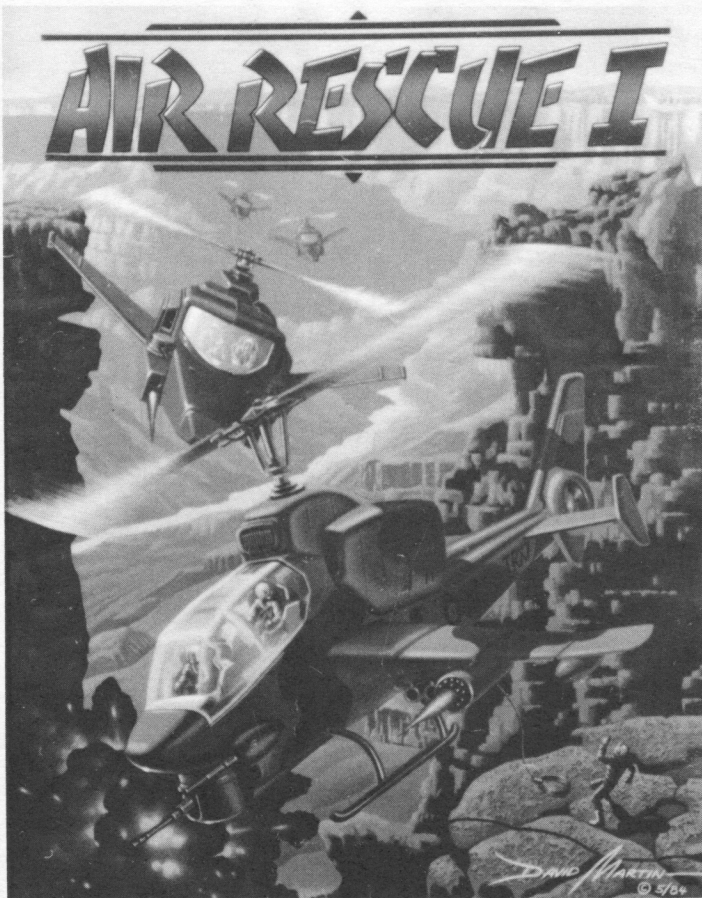
Design, Development and Programming
by Sid Meier and Al Duffy
for MICROPROSE SOFTWARE, INC.

AIR RESCUE

OVERVIEW

DEEP in the desert wastes of Northern Africa, Professor Englebert Smythe-Davies and an archeological team from the University of Casablanca explore the remains of an ancient civilization. Among the rock cliffs and underground caverns they make an amazing discovery. Spread throughout the dusty gorges are the remains of an ancient technical civilization. Suddenly, the intrepid explorers trip a hidden intruder detector and the long-dormant defenses spring to life: computer-controlled drone helicopters lift off to search out the intruders. Missile launchers scan the skies for air targets. Centuries old nuclear furnaces direct energy to the many defenses.

The archeologists are trapped! Frantically they radio for help. Their only hope is a daring helicopter pickup by the elite AIR RESCUE I airlift team. Your mission is to enter the treacherous Mandrango Gorge, blast your way through the enemy defenses, and rescue Professor Smythe-Davies and his team.

AUTHENTICATE	1	2	3
RESPONSE	A	K	C

FLYING YOUR CHOPPER

A joystick(s) is required to play this game. Here are directions for attachment of the joysticks to the correct port(s) on your computer. Please note that this step should be done *before* your computer is turned on and the program disk is loaded. Also note that Commodore users must enter "Authentication Codes" to unlock their controls before game play can begin.

COMMODORE 64

Joystick: Place your *pilot* joystick in **Port #2** (the one nearest the back of the computer). For optional team play, another joystick may be added in **Port #1** to create a *gunner* position.

Authentication Codes: At the start of the game, you will be asked to enter your secret Commodore 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 scattered throughout the AIR RESCUE portion of this manual to find the correct countercode letter which matches the number displayed on your screen. (EXAMPLE: If the program asks you to "authenticate (1)", you would look through the manual to find the chart containing No. 1 and then type the matching letter shown: "A".)

AUTHENTICATE	4	5	6
RESPONSE	P	E	F

ATARI

Joystick: Place your *pilot* joystick in **Port #1** for solo play. For optional team play, another joystick may be added in **Port #2** to create a *gunner* position.

OPTION SELECTION

Once the program is loaded you will see the option selection menu. The Commodore version begins in the demonstration mode. Pressing f7 at any time while the demonstration is in progress will terminate the demonstration and display the option selection menu. To start the game with the normal options, simply press f7 on the Commodore or START on the Atari. To change the difficulty level, press f1/OPTION. To select the first screen, press f3/OPTION. To select the number of players, press f5/SELECT, to select Solo or Team mode, press f2/SELECT. When you are ready to play, press f7/START.

AUTHENTICATE	7	8	9
RESPONSE	Q	H	K

PLAYING THE GAME

You control your AIR RESCUE I assault chopper using the pilot joystick. The trapped archeologists will wave at your chopper. Pick them up by moving your chopper on top of them. If you hit the walls or enemy missiles, your chopper will be destroyed.

Your chopper is equipped with swift missiles and powerful bombs. To fire a missile, point the chopper left or right and press the trigger. To drop a bomb, hold the joystick down and press the trigger. Missiles and bombs may be used to destroy the enemy defenses, drone choppers, minefields, and nuclear furnaces. In the solo mode, one joystick controls all game functions. In the team mode, the first

joystick controls the motion of the chopper while the second controls the bombs and missiles, allowing two players to play as a team.

The counter at the top left shows the amount of fuel in your chopper. When your fuel is exhausted the chopper will crash. There are ten trapped archeologists on each screen. When all ten are rescued, you are automatically advanced to the next screen. In multiplayer games, each player completes one screen before all players move to the next screen (the bottom of the options screen indicates which player is next).

You may PAUSE the game at any time by pressing f1 (C64) or the space bar (Atari), continue by pressing this key again. You may restart the game by pressing f7 (C64) or START (Atari).

SCORING

Points are awarded for rescuing the archeologists, destroying enemy patrol craft and defenses. Additional points are awarded at the end of each screen for any fuel remaining. Each player has three choppers with which to accomplish the mission. At various point levels bonus choppers are awarded. The upper right of the screen displays the number of choppers remaining (up to a maximum of three). A good score is 5,000 or more; 15,000 and above is outstanding.

PLAYING TIPS

Nuclear power is distributed to all the remaining missile launchers. As you destroy some launchers, the remaining launchers become more active. You may wish to leave some launchers undisturbed in order to prevent other launchers from getting too much energy.

You can drop your bombs so they slant to the left or right by holding the joystick in the down and left/right position when pressing the trigger. Clever pilots use this technique to avoid flying directly over a dangerous missile launcher.

There are three enemy patrol choppers active at all times. As soon as one is destroyed, another one takes its place.

Your missiles and bombs continue to travel until they hit something even if they are off the visible screen area. Once you are familiar with the screen layouts, you can take advantage of this to knock out targets from far away.

SCREEN MAPS

Professor Smythe-Davies left some crude maps of the Mandrango Gorge area. They may help you in planning your rescue mission.
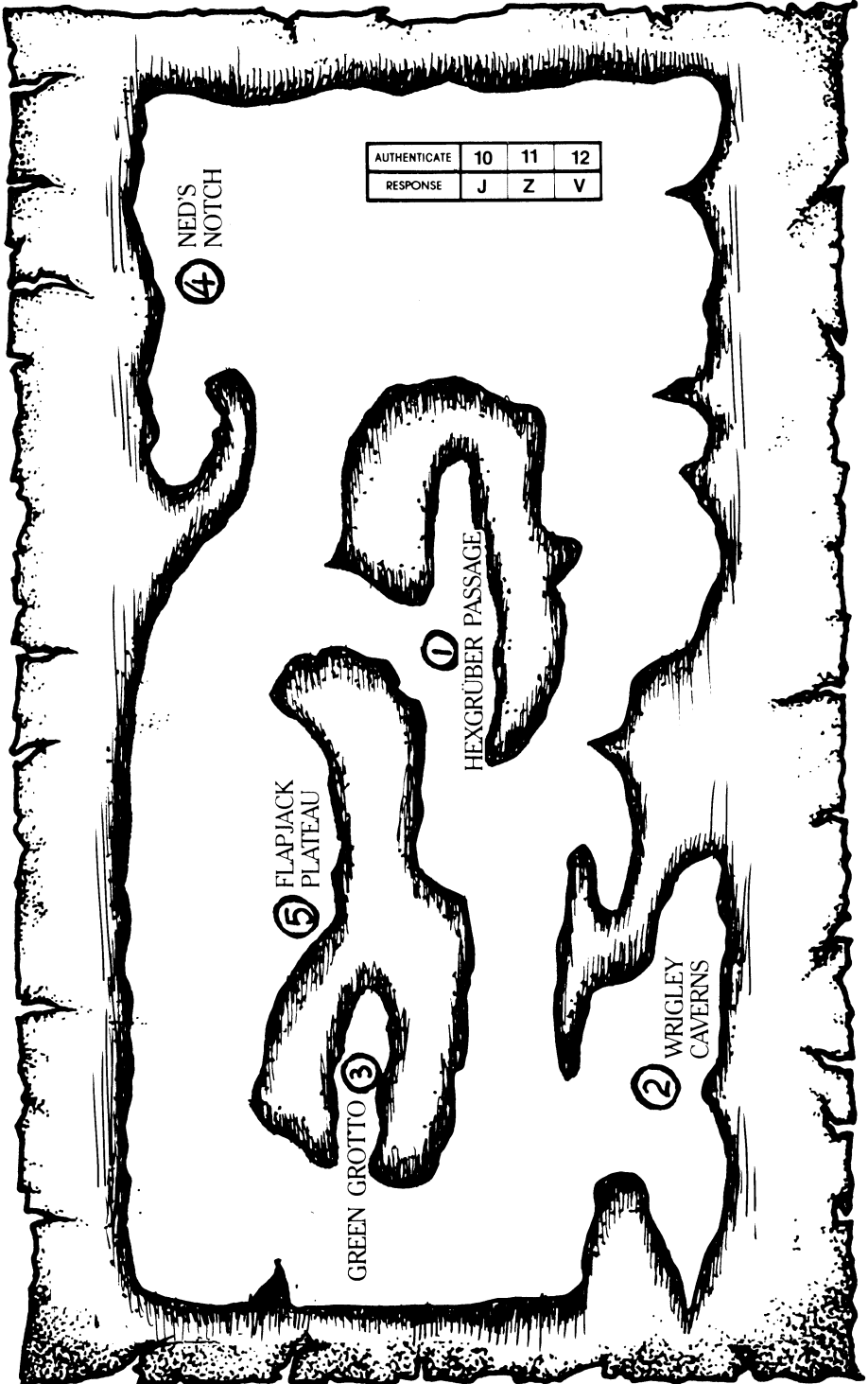
AUTHENTICATE	10	11	12
RESPONSE	J	Z	V

④ NED'S NOTCH

① HEXGRÜBER PASSAGE

⑤ FLAPJACK PLATEAU

③ GREEN GROTTO

② WRIGLEY CAVERNS

AIR RESCUE

SUNRISE PASSAGE ①

② SUNSET PASSAGE

MOONSHINE GORGE ④
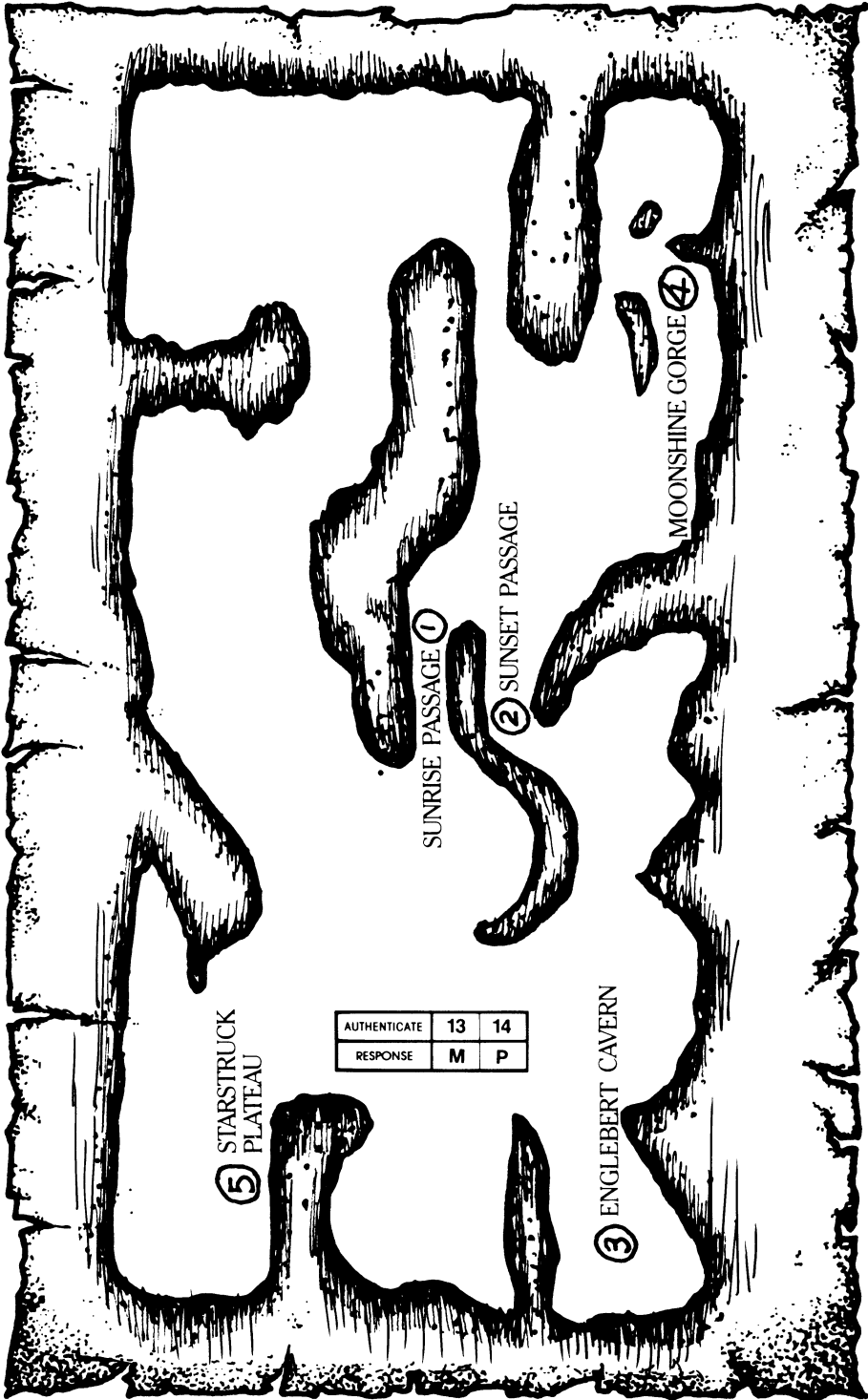
AUTHENTICATE	13	14
RESPONSE	M	P

⑤ STARSTRUCK PLATEAU

③ ENGLEBERT CAVERN

AUTHENTICATE	15	16
RESPONSE	O	Q

⑤ MARE LIBRIUM

⑥ MARSHAL GAP

SQUARE MAZE ③

① TWIN CAVERNS

②

④ TALL PASSAGE

HORIZONTAL PASSAGE ①
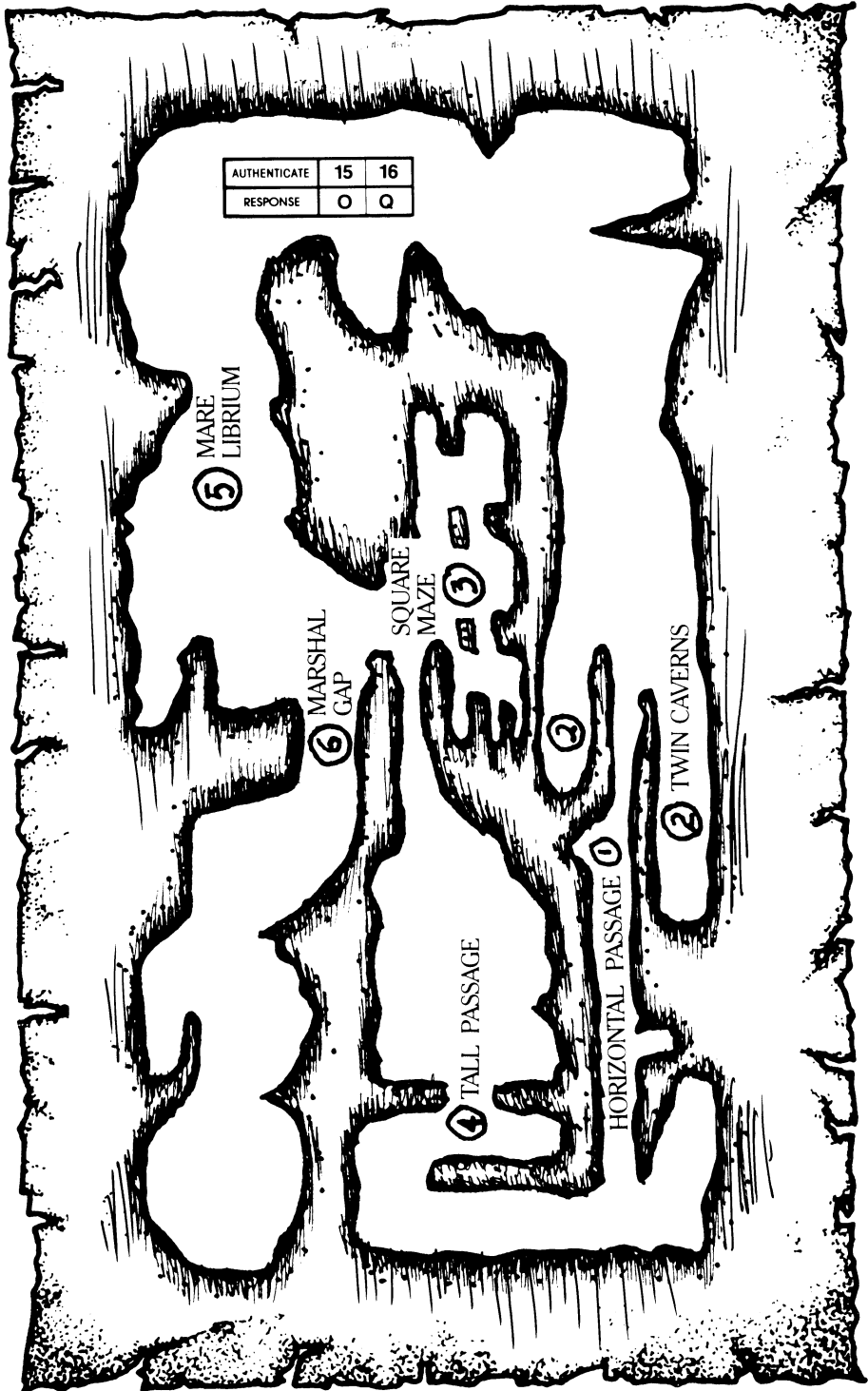
OK, Top Gunner, *READY* for more action?

A Special Message From MAJOR BILL...

Dear Friend,

Once you've mastered these high-flying adventures — Hellcat Ace, MiG Alley Ace and Air Rescue — you'll have earned your reputation as a "hot stick."

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Wild Bill

MAJOR BILL STEALEY, U.S.A.F. RESERVE
PRESIDENT, MICROPROSE SOFTWARE

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