

# APPENDICES



IN A HURRY

MULTI-PLAYER

GROUND

COCKPIT

COMBAT

CAMPAIGNS

PRO MISSIONS

TECHNOLOGY

SPECS



## APPENDICES

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## APPENDIX A: ACRONYMS

<b>AA</b>	<b>Anti-Aircraft.</b> Weapons used to down aircraft.
<b>AAA</b>	<b>Anti-Aircraft Artillery.</b> Also “Triple-A” or “flak;” heavy version of the AA gun, often mounted on an armored vehicle.
<b>AAM</b>	<b>Air-to-Air Missile</b>
<b>AB</b>	<b>AfterBurner capability; AirBase</b>
<b>ACM</b>	<b>Air Combat Maneuvering</b>
<b>AGL</b>	<b>Above Ground Level.</b> Measure of a plane’s altitude above the terrain it is flying over. In other words, a plane may be flying at 1,500 ft ASL, but be only 500 ft off the ground.
<b>AGM</b>	<b>Air-to-Ground Missile</b>
<b>AIM</b>	<b>Air-Intercept Missile</b>
<b>ALARM</b>	<b>Air-Launched Anti-Radiation Missile.</b> Missile with active infrared transmitter in nose that homes in on targets emitting heat energy.
<b>AMRAAM</b>	<b>Advanced Medium-Range Air-to-Air Missile.</b> Missile with active radar transmitter in nose that tracks target, allowing “fire and forget” tactics.
<b>AoA</b>	<b>Angle of Attack.</b> Aerodynamic angle formed between the chord of an airfoil and the direction of the relative wind.
<b>AoT</b>	<b>Angle off Tail.</b> Angle between the flight path of an attacker and its target.
<b>ASE</b>	<b>Aircraft Survivability Equipment.</b> An aircraft’s defensive systems (i.e., RWR, jammers, chaff and flares).
<b>ASL</b>	<b>Above Sea Level.</b> Aircraft’s altitude above sea level (in feet).
<b>ASTOVL</b>	<b>Advanced Short Take-Off and Vertical Landing.</b> X-32 fighter development program.
<b>ATF</b>	<b>Advanced Tactical Fighter.</b> Group of fighter prototypes that employ state-of-the-art design, materials, avionics and weaponry to enhance combat performance. Term comes from the original name for the F-22 program.
<b>ATGM</b>	<b>Anti-Tank Guided Missiles.</b> Missiles used against armored ground vehicles; guided by lasers, wires or infrared signals (such as Hellfire and TOW-2).



<b>AWACS</b>	<b>Airborne Warning And Control System.</b> Aircraft fitted with long range radar that provide tactical and target information to air and ground control units. Usually big, slow and extremely high priority, both to defend and to attack.
<b>BARCAP</b>	<b>Barrier Combat Air Patrol.</b> Fighters form a “barrier” to prevent enemy aircraft from entering a designated airspace or approaching a friendly target. Generally set up along most probable corridor of approach, often involves fighter relays.
<b>B/N</b>	<b>Bombardier/Navigator.</b> US Navy term for co-pilot operator that handles navigation and targeting operations on bombing missions.
<b>BVR</b>	<b>Beyond Visual Range</b>
<b>CAP</b>	<b>Combat Air Patrol.</b> Cruising at medium-to-high altitude over a certain area in search of enemy planes.
<b>CAS</b>	<b>Close Air Support.</b> Dropping bombs in support of ground troops — also known as an air strike.
<b>CM</b>	<b>Countermeasures.</b> Used by airborne vehicles in defense against air-to-air or SAM weapons (e.g., chaff, flares and jammers).
<b>ECM</b>	<b>Electronic Countermeasures.</b> Countermeasures that use the electromagnetic spectrum to confuse or defeat enemy radar and sensor systems.
<b>EFM</b>	<b>Enhanced Fighter Maneuverability.</b> Aircraft designed with the aim of increasing turn and AoA performance during combat.
<b>FBW</b>	<b>Fly By Wire.</b> Computer-aided flight control — flight computer corrects pilot control input according to the flight condition data (altitude, airspeed) it receives, and uses this to adjust flight surfaces.
<b>FLIR</b>	<b>Forward-Looking InfraRed.</b> Sensor that “reads” the heat signatures of nearby objects.
<b>GIB</b>	<b>Guy In Back.</b> Slang term for WSO, RIO and B/N.
<b>HARM</b>	<b>High-speed, Anti-Radiation Missile.</b> Missile whose seeker head homes in on radar-emitting sources.
<b>HUD</b>	<b>Heads-Up Display.</b> Glass mounted at the front of the cockpit. The pilot looks forward through the glass, and important combat and flight information is reflected onto the HUD and superimposed over his view of the outside world.
<b>HVM</b>	<b>High-Velocity Missile</b>
<b>IFF</b>	<b>Identification Friend or Foe.</b> A coded message sent to a target's IFF transponder. If correct coded reply is received, the IFF interrogator reports “friendly.”



<b>ILS</b>	<b>Instrument Landing System.</b> A radio device at airfields that assists pilots in low-visibility landings.
<b>IR</b>	<b>Infrared.</b> Range of the electromagnetic spectrum where a signal's intensity is directly related to its heat signature.
<b>LGB</b>	<b>Laser-Guided Bomb</b>
<b>MIGCAP</b>	<b>MiG Close Air Patrol.</b> Patrol of an area in search of enemy aircraft, no specified objective to protect.
<b>PGM</b>	<b>Precision Guided Munition.</b> "Smart bomb" (a guided bomb).
<b>PNVS</b>	<b>Pilot's Night Vision Sensor.</b> Device that aids night vision by translating heat emissions into pictures.
<b>RIO</b>	<b>Radar Intercept Officer.</b> US Navy term for back-seat weapons and targeting systems operator.
<b>RAM</b>	<b>Radar Absorbent Material.</b> Material containing thousands of absorbent pockets that convert radar beams into heat or small electromagnetic fields, reducing overall radar cross-section.
<b>RCS</b>	<b>Radar Cross Section</b>
<b>RWS</b>	<b>Range While Search.</b> Radar mode that uses continuous wave emissions to provide contact range and bearing at extremely long range.
<b>RWR</b>	<b>Radar Warning Receiver.</b> Aircraft device that warns the pilot if he is being tracked by an enemy missile guidance system or air intercept radar.
<b>SAM</b>	<b>Surface-to-Air Missile</b>
<b>SARH</b>	<b>Semi-Active Radar Homing.</b> Radar-guided missile that relies on aircraft radar guidance.
<b>SSM</b>	<b>Surface-to-Surface Missile</b>
<b>TWS</b>	<b>Track While Scan.</b> Radar mode that uses pulse-Doppler radar to target a contact, providing detailed tracking information at short range.
<b>VSI</b>	<b>Vertical speed indicator</b>
<b>STOVL</b>	<b>Short TakeOff and Vertical Landing.</b> Group of aircraft that redirects thrust using vanes, nozzles or lift fans for yaw and/or pitch maneuverability.
<b>WSO</b>	<b>Weapons Systems Officer.</b> US Air Force term for back-seat weapons and targeting systems operators.



## APPENDIX B: GLOSSARY OF TERMS

*Note: Definitions for acronym terms appear in the Appendix A: Acronyms, p. A.1.*

**Airfoil.** Curved wing or blade surface designed to produce lift when air passes over it.

**Airframe.** Basic construction of the aircraft (doors, landing gear, seats, cabin, etc.).

**Angels.** Altitude in thousands of feet. “Angels ten” indicates 10,000 feet of altitude.

**Angle of attack (AoA).** Aerodynamic angle formed between the chord of an airfoil and the direction of the relative wind.

**Angle off tail (AoT).** Angle formed between the flight path of an attacking aircraft and a target.

**Aspect angle.** Angle from which a target is viewed. 45R means a view of the target’s right wing from a 45° angle.

**Bandit.** Confirmed enemy aircraft.

**Bogey.** Unidentified aircraft.

**Canard.** Small fixed or variable wings in front of an airplane’s main wings. Canard means “duck” in French — the name comes from the pre-WWI plane that first featured these wings and was nicknamed “The Duck.”

**Center of gravity.** Single, imaginary point where the resultant force of all weight forces occurs (also known as center of lift).

**Chaff.** Strips of metal film released to confuse and reflect signals from radar-guided weapons.

**Chord.** Imaginary line that passes through the leading and trailing edges of an airfoil. See angle of attack.

**Composites.** Plastic or resin materials reinforced with other fibrous materials to create a strong, lightweight material that bends only in one direction.

**Corner speed.** Point at which maximum lift occurs with the least amount of airspeed.

**Drag.** Force that counteracts an object in motion through the air, such as air resistance.

**Flight Envelope.** Graphical guide showing the aircraft’s limits in airspeed, altitude and G-load, and the aircraft’s current position within those limits.

**Flare.** Cartridge-shaped source of heat energy used to divert infrared-homing missiles.

**Jammer.** Electronic countermeasure that emits microwaves to distort/confuse enemy radarscopes.

**Knot.** Measure of speed equal to one nautical mile per hour. (See nautical mile.)

**Lag pursuit.** Refers to pointing an aircraft’s nose just behind an enemy’s flight path during a turn.



**Lead pursuit.** Refers to pointing an aircraft's nose just ahead of an enemy's flight path during a turn.

**Leading.** Refers to aiming just ahead of an enemy's flight path.

**Mach.** Speed of sound at sea level (760 ft/s) that is measured in multiples (Mach 1, Mach 2, etc.).

**Nautical mile.** Aeronautical measurement of distance equal to 6,076ft.

**Ordnance.** Expendable armament, such as missiles and ammunition.

**Point of impact.** Point along the leading edge on an airfoil where the air separates and flows over the top and bottom of the airfoil.

**Radar signature.** Indication of an aircraft's visibility to radar, also called its radar cross section (RCS). Radar waves reflect off of vertical surfaces and sharp corners and create signatures on the detecting radarscope.

**Relative wind.** Force created as an airfoil moves through the air. It equals the airfoil's forward velocity, but acts in the opposite direction. This is a method of looking at an airfoil moving through the air from a different frame of reference in which the airfoil is stationary and a wind equal to the actual forward velocity of the blade is passing over it.

**Resultant force.** Sum of all forces acting on an object. On a plane, the resultant force is the total effect of lift vs. gravity and thrust vs. drag. The resultant force determines what direction the aircraft moves.

**Stall.** "Loss of lift" condition that occurs when the angle of attack is too steep for the airfoil to provide any lift. During a stall, the normally streamlined flow of air over the blade is disrupted.

**Thrust.** Horizontal, directional force that overcomes drag and powers the aircraft in the desired direction (usually forward, although some aircraft can direct thrust at an angle).

**Turbofan/turbojet.** Jet engine that produces thrust by passing external air into the engine, moving it through several stages and igniting a fuel-air mixture.

**Turn rate.** Number of degrees per second a particular aircraft can turn. The higher the rate, the faster the turn.

**Turn radius.** Radial distance required to complete a turn. The smaller the radius, the shorter the turn.

**Vectored thrust.** Thrust that is redirected using angled nozzles or vanes, or lift fans. Some aircraft (such as the F-22) can vector in the pitch axis; the XF-31 can vector in both the yaw/pitch axes.

**Weapon envelope.** Effective area of attack for a weapon. Enemies within this envelope are vulnerable to gun or missile fire.

**Zero-zero.** Ejection seat that can save a crew member's life down to zero air-speed and zero altitude (full crash impact), as long as the aircraft is not inverted.



## APPENDIX C: PRE-FLIGHT MENU BARS

### ? MENU

This menu appears on all screens. On pre-flight screens, it has one option — EXIT TO WINDOWS. On the *In-Flight* menu bar, it has two — END MISSION and EXIT TO WINDOWS.

Screens will not be listed if the ? menu is the only menu available.

## Choose Activity Screen

### PREF MENU

GRAPHICS PREF ...	Toggle graphics effects. See <i>Install Guide</i> .
SCREEN RESOLUTION	Adjust the resolution of for in-flight screens to 320x200, 640x480, 800x600 or 768x1024.
SOUND PREFS ...	Adjust the volume of music and sound effects. See <i>Install Guide</i> .

### MULTI-PLAYER MENU

SERIAL	Set up a serial (or null-modem) connection and game. <b>Direct Serial</b> , p. 32.
MODEM	Set up a modem connection and game. <b>Modem</b> , p. 34.
IPX/SPX NETWORK	Set up a LAN connection and game. <b>IPX/SPX Network</b> , p. 36.
TCP/IP NETWORK	Set up an internet connection and game. <b>TCP/IP Network</b> , p. 38.
DISCONNECT	Disconnect from any type of connection.
AIRBASE ASSAULT	Set up an Airbase Assault Game.

## Fly Single Mission Screen

### AIRCRAFT MENU

FLY ALL	Fly any aircraft in the game.
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## Quick Mission Creator Screen

### AIRCRAFT MENU

FLY ALL	Fly any aircraft in the game.
ERA	Limits the FLY ALL option to include aircraft (and weapons used) in the era checked — 1956-1976/1956-1982/1956-1996/1956-FUTURE.



## Mission Brief Screen

In single missions, only the ? menu appears. In campaign missions, the CAMPAIGN menu also appears.

### CAMPAIGN MENU

REPLAY THIS MISSION	Return to the <i>Mission Brief</i> screen.
EXIT CAMPAIGN	Return to the <i>Choose Activity</i> screen.

## Mission Map Screen

### VIEW MENU (P. 167, P. 202)

SCROLL LEFT	Move mission map left.
SCROLL RIGHT	Move mission map right.
SCROLL UP	Move mission map up.
SCROLL DOWN	Move mission map down.
CENTER MAP AT CURSOR	Center mission map on mouse cursor.
CENTER MAP AT SELECTION	Center map on selected icon.
ZOOM IN	Magnify mission map.
ZOOM OUT	Decrease magnification of mission map.
SMART ZOOM	When active, the selected icon remains in the center of the map as you zoom.

### WAYPOINT MENU (P. 168, P. 209)

ADD	Add a waypoint for the selected icon.
DELETE	Delete the selected waypoint.
CREATE LOOP	Create a loop between waypoints. Choose the end waypoint and click a waypoint previous to it.
DELETE LOOP	Delete selected loop. Click the end waypoint in the loop and then choose this option.
SELECT PREV WAYPOINT	Highlight the previous waypoint in reverse alphabetical order.
SELECT NEXT WAYPOINT	Highlight the next waypoint in alphabetical order.

## SHOW MENU (P. 201)

PLANES	Hide/display bombers, fighters and helicopters.
SAM SITES	Hide/display SAM sites.
AAA SITES	Hide/display AAA sites.
SHIPS	Hide/display ships (other than aircraft carriers).
AIRPORTS	Hide/display airports and carriers.
VEHICLES	Hide/display all vehicles (tanks and unarmored).
OTHER	Hide/display structures and miscellaneous objects.
MISSION ITEMS ONLY	Display only mission objectives, targets, home air-bases, etc.
SAM THREAT RANGES	Dark red circles indicate the range of SAM and AAA sites.
DISTANCE GRID	Put a distance grid over the mission map. Each square on the grid is 5nm on a side.

In campaign missions, the **CAMPAIGN** menu also appears.

## CAMPAIGN MENU

REPLAY THIS MISSION	Return to the <i>Mission Brief</i> screen.
EXIT CAMPAIGN	Return to the <i>Choose Activity</i> screen.

## Aircraft Selection Screen

In single missions, only the ? menu appears. In campaign missions, the **CHEAT** and **CAMPAIGN** menus also appear.

## CHEAT MENU

ALLOW FLYING ANY PLANE	Allows you unlimited aircraft for the campaign. (While this is active, you will be ineligible for medals and promotions.)
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## CAMPAIGN MENU

REPLAY THIS MISSION	Return to the <i>Mission Brief</i> screen.
EXIT CAMPAIGN	Return to the <i>Choose Activity</i> screen.



## Load Ordnance Screen

In single missions, only the ? and WEAPONS menus appear. In campaign missions, the CAMPAIGN menu also appears.

### WEAPONS MENU

UNLOAD ALL	Unload all weapons from all of your hardpoints.
CHEAT (LOAD ANYTHING ANYWHERE)	Load any type of weapon on your hardpoints. (During a campaign, you will not receive medals or promotions while this is active.)

### CAMPAIGN

REPLAY THIS MISSION	Return to the Mission Brief screen.
EXIT CAMPAIGN	Return to the Choose Activity screen.

## Mission Creator Screen (Pro Missions)

### FILE MENU (P. 197)

NEW MISSION	Clear map and create a new mission.
LOAD MISSION	Load a mission.
SAVE MISSION	Save the mission you're working on.

### VIEW MENU

See p. 202.

### WORLD MENU (P. 198)

SET MAP	Choose mission theater: CUBA, EGYPT, FALKLAND ISLANDS, FRANCE, GREECE, IRAQ, KURIL ISLANDS, NORTH VIETNAM, NORTH/SOUTH KOREA, PAKISTAN, PANAMA, PERSIAN GULF, TAIWAN, THE BALTICS, UKRAINE, or VLADIVOSTOK.
SET WEATHER	Set visibility conditions for the mission: CLEAR/CLOUD COVER/FOG/SUNRISE/SUNSET/NIGHT
SET FRIENDLY & ENEMY SIDES	Assign allied and enemy nations.
SET SCREENS	Choose screens ( <i>Mission Brief</i> , <i>Mission Map</i> , <i>Aircraft Selection</i> , <i>Load Ordnance</i> ) player sees before takeoff.
FRIENDLY PILOT SKILL	Set default skill level for friendly aircraft and other vehicles.
FRIENDLY SAM SKILL	Set default skill level for friendly SAM and AAA sites.
ENEMY PILOT SKILL	Set default skill level for enemy aircraft and vehicles.
ENEMY SAM SKILL	Set default skill level for enemy SAM and AAA sites.

## OBJECT MENU (P. 204)

<b>ADD</b>	Add an object to the mission map.
<b>Duplicate</b>	Duplicate the selected object.
<b>DELETE</b>	Delete the selected icon.
<b>ADD TO WING</b>	Add the selected object to a wing or create a new wing for the selected object.
<b>REMOVE FROM WING</b>	Remove the selected object from a wing.
<b>MAKE WINGLEADER</b>	Make the selected object leader of the wing.
<b>ADD TO GROUP</b>	Add selected TRUCK or TANK icon to a group.
<b>REMOVE FROM GROUP</b>	Remove selected TANK or TRUCK icon from a group.
<b>MAKE GROUP LEADER</b>	Make selected object the leader of the group.

## WAYPOINT MENU

See p. 209.

## SHOW MENU

See p. 201.

## MULTI-PLAYER MENU

<b>TIME LIMIT</b>	Set the maximum length of the mission — UNLIMITED, 1, 2, 5, 10, 20 or 30 minutes.
<b>NUMBER OF KILLS</b>	Set the number of kills needed to win — UNLIMITED, 1, 2, 3, 5, 10, or 20.
<b>END SCENARIO CONDITIONS</b>	Set who must make the specified number of kills (TOTAL, BY ONE SIDE, BY ONE PLAYER, or BY ENEMY SIDE).
<b>NUMBER OF REVIVES</b>	Set how many lives each player gets — UNLIMITED, 0, 1, 2, 3, 5 or 10.
<b>REVIVE TIME DELAY</b>	Set time delay between death and revival — NO DELAY, 10 or 30 SECONDS or 1, 2 or 5 MINUTES.
<b>REVIVE DISTANCE</b>	Set how far from the battle players are revived — AT STARTING POINT, 5, 10, 20, or 40 MILES away.

## AIRCRAFT MENU

<b>FLY ALL</b>	Allows the player to choose any fixed wing aircraft in the game for this mission.
<b>ERA</b>	Limits the fly all option, so that the player can choose only the aircraft and weapons available between 1956-1976/1956-1982/1956-1996/1956-FUTURE.



## Reference Screen

### OBJECTS MENU (P. 241)

<b>FIGHTERS</b>	Display fighter database
<b>BOMBERS</b>	Display bomber database (includes cargo and surveillance aircraft)
<b>HELICOPTERS</b>	Display helicopter database
<b>SAMS</b>	Display SAM database
<b>AAA</b>	Display AAA database
<b>TANKS</b>	Display tank database (includes APCs and IFVs)
<b>SHIPS</b>	Display ship database (includes aircraft carriers)
<b>OTHER VEHICLES</b>	Display unarmored-vehicle database
<b>STRUCTURES</b>	Display structure database
<b>MISSILES</b>	Display missile database

### MISC MENU (P. 241)

<b>NEXT PAGE</b>	View next photo or page of a description
<b>PREV PAGE</b>	View previous photo or page of a description
<b>SHOW BACKGROUND IN 3-D VIEW</b>	Toggle sky, water and ground textures on/off

## APPENDIX D: IN-FLIGHT MENU BAR

Press **[Esc]** during flight to display/hide the *In-Flight* menu bar.

### CONTROL MENU

STICK	Choose flight stick: KEYBOARD, JOYSTICK, CH F-16 FLIGHT STICK, CH F-16 COMBAT STICK, CH FLIGHT-STICK PRO, JANE'S COMBAT STICK or MS SIDEWINDER 3D PRO.
RUDDER	Choose rudder control: KEYBOARD or RUDDER PEDALS.
THROTTLE	Choose throttle control: KEYBOARD or THROTTLE STICK.
HAT	Controls the function of the joystick hat — SLEW VIEW (as in <i>USNF</i> ) or VECTOR THRUST (as in <i>ATF</i> ).

### PREF MENU

GRAPHICS ...	Toggle graphic effects. See <i>Install Guide</i> .
SOUND ...	Adjust volume of music and sound effects. See <i>Install Guide</i> .
TIME	Choose a time compression: PAUSED, SLOW MOTION (half of normal speed), 1X, 2X, 4X, or 8X
ACCELERATED TIME?	Accelerates any time compression by 33%.
HUD PITCH LADDER?	When active, displays pitch ladder on the HUD.
DIM HUD	Reduces the brightness of the HUD.
BRIGHTEN HUD	Increases the brightness of the HUD.
SHOW COCKPIT?	When active, displays the cockpit.
REAR VIEW WINDOWS?	When active, rear view windows in the cockpit let you “check six” without shifting your head. (Cockpit must be displayed.)
LARGE WINDOWS?	When inactive, windows are smaller than normal.
AUTHENTIC RADAR CRT AND SEEKER	When active, displays “authentic” radar CRT in Radar Window. See <b>Standard Radar CRT vs. Authentic Radar CRT and Seeker</b> , p. 98.
SHOW TARGET INFO?	When active, each target's identity (i.e., F-22, MiG-29, <i>Viceroy</i> ) appears below it in forward view. If the target is an airplane, its current maneuver appears as well. This information is orange unless the object is targeting you, in which case it is red. In multi-player games, each player's callsign also appears below his aircraft.

**IR/LASER ADVANCED TARGETING?**

When this is active, and your IR sensor is on, brackets appear on your viewscreen around all IR targets. You can then target IR targets and radar targets simultaneously.

See **IR/Laser Advanced Targeting**, p. 112.

**RADIO SILENCE?**

When active, you hear limited wingman or RIO chatter. They reserve their messages for the most important situations, such as missile launches.

**VIEW MENU**

The **VIEW** menu allows you to choose different views. See **View Controls**, p. 103 for details on these options.

**VIEW TRANSITIONS**

When active, views pan as you switch between them. When inactive, views snap when you switch between them.

**WINDOW MENU**

The **WINDOW** menu allows you to select different Instrument Display Windows. See **Instrument Display Windows**, p. 88 for details.

**CHEAT MENU****DAMAGE**

Choose INVULNERABLE, NORMAL or REALISTIC. (NORMAL is the default.)

**UNLIMITED AMMO?**

When active, provides you with unlimited ammo. Note that the types of weapons you're carrying remain the same.

**UNLIMITED FUEL?**

When active, provides you with unlimited fuel.

**EASY AIMING?**

When active, near misses become hits.

**NO CRASHES?**

When active, your aircraft will survive crashes.

**NO SPINS?**

When active, your airplane will not enter a spin.

**NO TURBULENCE?**

When active, plane does not experience turbulence.

**PULL EXTRA G?**

When active, you can pull a few extra G's over your normal limit.

**IGNORE WEAPON WEIGHTS?**

When active, your airplane will perform as if it were carrying no weapons.

**NO SUN WHITEOUT?**

When active, no glare appears on canopy.

**NO REDOUT OR BLACKOUT?**

When active, you do not suffer redouts or blackouts from excessive positive and negative G-loads.

**NO SCREEN-SHAKING?**

A No-penalty cheat. When active, screen does not shake from explosions.

**ENEMY AI?**


Sets computer enemy skill levels to NOVICE, AVERAGE or UNCHANGED.



### IGNORE MID-AIRCOLLISIONS?

When active, you can't crash into another airplane.

### EASY TARGETING

When *inactive*, the TD box only drifts to the edge of the HUD, and the Target Window () can only be opened if the target is in visual range. When *active* the TD box moves to the edge of the screen, and the Target Window can be opened even if the target is BVR.

### AIR COMBAT GUNS ONLY?

When active, all air-to-air missiles are removed from all aircraft.

## POSITION MENU

This menu allows you to change where you are located, either READY FOR TAKE-OFF, 10,000 FT, 40,000 FT, or FINAL APPROACH. This menu can only be used when you go into free flight from the *Player Aircraft Reference* screen.

## MULTI MENU

### REDUCE BULLET ACCURACY

Reduce bullet accuracy to 30% or 60%.

### REDUCE BULLET DAMAGE

Bullets inflict less damage per hit.

### REDUCE MISSILE ACCURACY

Missiles hit less often.

### REDUCE MISSILE DAMAGE

Missiles inflict less damage per hit.

### REDUCE ENGINE THRUST

Lowers engine thrust and reduces climbing ability.

### REDUCE RADAR LOOK-DOWN

Reduces the effective of player's radar.

### ALLOW FIND NEAREST OBJECTS CHEAT

When active, allows players to use the , , and  keys.

### SHOW PLAYER SCORES

Displays players' kill totals onscreen.

## MAP MENU

### PAUSES FLIGHT?

If *active*, the game is paused when you open the in-flight nav map in single-player missions (this does not effect multi-player missions).

### DISPLAY WINDOWS?

Your Instrument Display Windows appear onscreen when you're looking at the in-flight nav map.

### SHOW

Controls which items are displayed on the in-flight nav map. See SHOW MENU, p. 201.



## APPENDIX E: OBJECT LIST

The objects listed in this section can be added to the mission map in the Pro Mission Creator. For statistical information on these objects, or to see what they look like, choose REFERENCE from the *Choose Activity* screen.

Aircraft that can be flown in single-player missions are marked with \*\*

### ANTI-AIRCRAFT



(SHOW MENU CLASS: AAA SITE)

KS-12 85mm AAA

KS-19 100mm AAA

M1939mm AAA

M1939mm AAA ZONE\*

M163 APC

ZIF-31 TYPE 76

ZSU-23-4 SHIKA

ZSU-57-2 SPARKA

\*THE M1939 ZONE IS A GROUP OF SEVERAL HIDDEN

M1939 AAA GUNS.

### AIRCRAFT CARRIERS



(SHOW MENU CLASS: AIRPORT\*)

CLEMENCEAU CLASS

EISENHOWER

KITTY HAWK

KIEV

WASP

\*DESCRIPTIONS UNDER SHIPS OPTION ON REFERENCE SCREEN

### AIRPORTS



(SHOW MENU CLASS: AIRPORT)

AIRPORTS (1-7)

SMALL AIRPORT

### BOMBERS/TRANSPORTS/AWACS



(SHOW MENU CLASS: PLANE)

A-1 SKYRAIDER

A-4E SKYHAWK

A-6 INTRUDER

A-6E INTRUDER

A-37 DRAGONFLY

AC-130U SPECTRE\*\*\*

AIR FORCE 1

AIRBUS 310

AN-74 'COALER'

ATLANTIQUE 2

AURORA SPY PLANE

B-1B LANCER

B-2 SPIRIT\*\*\*

B-52G STRATOFORTRESS

BAE BUCCANEER

BAE STRIKEMASTER

BOEING 707

BOEING 747

C-130 HERCULES

C-17 GLOBEMASTER

C-5B GALAXY

E-2C HAWKEYE

E-3 SENTRY

E-8C J-STARS

EA-6B PROWLER

F-105 THUNDERCHIEF

F-111F AARDVARK

F-117A NIGHT HAWK\*\*\*

IL-76 MAINSTAY

IL-96

KC-135A STRATOTANKER

P-3C ORION

SEPECAT JAGUAR

SF.260

SU-24 'FENCER-D'

SU-34 PLATYPUS

TORNADO IDS

TU-160 'BLACKJACK-A'

TU-26 'BACKFIRE-C'

TU-95 'BEAR-H'

## FIGHTERS



(SHOW MENU CLASS: PLANE)

A-10 THUNDERBOLT  
 A-7A CORSAIR II\*\*\*  
 A-7E CORSAIR II\*\*\*  
 AIDC CHING KUO  
 ALPHA JET  
 AV-8B HARRIER II\*\*\*  
 BAE HAWK  
 EUROFIGHTER 2000  
 F-104 STARFIGHTER\*\*\*  
 F-14D TOMCAT\*\*\*  
 F-15C EAGLE  
 F-15E STRIKE EAGLE  
 F-15J EAGLE  
 F-16A FALCON  
 F-16C FALCON\*\*\*  
 F-22A\*\*\*  
 F-4B PHANTOM II\*\*\*  
 F-4G WILD WEASEL PHANTOM  
 F-4J PHANTOM II\*\*\*  
 F-5E TIGER  
 F-8J CRUSADER\*\*\*  
 F/A-18D HORNET\*\*\*  
 FIGHTER SUPPORT-X  
 IAI KFIR  
 J7-E FISHBED  
 MIG-17F 'FRESCO'\*\*\*  
 MIG-21 'FISHBED'  
 MIG-21\*\*\*  
 MIG-23 'FLOGGER-B'  
 MIG-25 'FOXBAT'  
 MIG-27 'FLOGGER-J'  
 MIG-29  
 MIG-29M  
 MIG-31 'FOXHOUND'  
 MIRAGE 2000  
 MIRAGE 5  
 MIRAGE F1  
 MIRAGE III  
 MITSUBISHI F1

Q-5 FANTAN  
 RAFALE C\*\*\*  
 SAAB AJ37 VIGGEN  
 SAAB GRIPEN  
 SAAB J35F DRACEN  
 SEA HARRIER FA.2\*\*\*  
 SU-7 'FITTER'  
 SU-25 FROGFOOT  
 SU-27 'FLANKER-B'  
 SU-33 'FLANKER-D'\*\*\*  
 SU-35\*\*\*  
 SUPER ENTENDARD  
 X-29 FSW\*\*\*  
 X-31 EFM\*\*\*  
 X-32 ASTOVL\*\*\*  
 YAK-141 FREESTYLE\*\*\*

## HELICOPTERS



(SHOW MENU CLASS: PLANE)

AH-1 COBRA  
 AH-64 APACHE  
 ANTI-STEALTH BLIMP  
 CH-47 CHINOOK  
 GAZELLE  
 HAC TIGER (EUROCOPTER TIGRE)  
 KA-50 'HOKUM-A'  
 MI-17 HIP  
 MI-24 HIND-D  
 RAH-66 COMANCHE  
 SH-3A SEA KING  
 SH-60 SEAHAWK  
 SUPER FRELON  
 UH-60  
 V-22 OSPREY  
 WESTLAND LYNX

## MISCELLANEOUS

(SHOW MENU CLASS: OTHER)

BIG ROCKS (A-E)  
CAT OFFICER  
CONTAINERS (1-3)  
CRATES (1-4)  
CRATER  
DESTROYED VEHICLE  
DOWNED PILOT  
MAN  
MOOSE  
PILOT  
ROADS (VARIOUS)  
ROCKS (A-E)  
SOLDIER(S)  
WATER BUFFALO

## SHIPS

(SHOW MENU CLASS: SHIP)

BARGE  
CARGO SHIP  
CIMMARON OILER  
CONTAINER SHIP  
CYCLONE  
FISHING BOAT  
IOWA CLASS  
JIANGHU II CHINA  
JIANGHU II EGYPT  
JOHN C. BUTLER  
JUNK  
KIEV CLASS  
KIROV CLASS  
KNOX CLASS  
KRIVAK III  
LCAC 34  
LCAC 38  
OLEKMA CLASS  
OSCAR CLASS  
POMORNIK  
RIVERBOAT  
SACRAMENTO CLASS

SARANCHA  
SEA SHADOW  
SOVREMENNY  
TICONDEROGA CLASS  
TYPE 69 A

## SAMs

(SHOW MENU CLASS: SAM SITE)

ZS6 TUNGUSKA  
CROTALE SAM  
FIM-92 STINGER  
M48 CHAPARRAL  
MIM-23 HAWK  
MISTRAL SATCP  
ROLAND  
SA-13 'GOPHER'  
SA-14 'GREMLIN'  
SA-15 'GAUNTLET'  
SA-16 'GIMLET'  
SA-2A 'GUIDELINE'  
SA-3 'GOA'  
SA-6 'GAINFUL'  
SA-7 'GRAIL'  
SA-9 'GASKIN'  
SCUD LAUNCHER

## TANKS/ARMORED VEHICLES

(SHOW MENU CLASS: VEHICLE)

BMP-2  
BTR-80  
M-1975  
M-113  
M-1 ABRAMS  
M-2 BRADLEY  
T-72  
T-80  
T-90



## OTHER VEHICLES



(SHOW MENU CLASS: VEHICLE)

FUEL TANKER TRUCK  
HMMVV (HUMVEE)  
LONG TRACK RADAR  
MULES (A-C)  
SAM-CARRYING TRUCK  
STEALTH RADAR (1 AND 2)  
STRAIGHT FLUSH RADAR  
TRUCK

## STRUCTURES



(SHOW MENU CLASS: OTHER)

APARTMENTS (VARIOUS)  
BARRACKS (1-2)  
BRIDGE (VARIOUS)  
BRIDGE ENDS/MIDDLES  
BUNKER  
CASTLE  
CITY BLOCKS (1-7)  
CITY SLUMS (1-2)  
COMMERCIAL BLOCKS (1-3)  
COMMAND HQ (1 AND 2)  
COMMUNICATIONS CENTER  
CONTROL TOWERS (VARIOUS)  
CRANE  
CROP FIELDS (1 AND 2)  
DOCK  
DOCK HOUSE (1 AND 2)  
FACTORIES (VARIOUS)  
FACTORIES (1-2)  
FUEL TANKS (1-2)  
GCI RADAR  
HANGERS (1 AND 2)  
HARDENED C&C BUNKER  
HARDENED SHELTERS (1-8)  
HOCH BLOCKS  
HOUSE (1 AND 2)  
INDUSTRIAL BLOCKS (1-2)  
LARGE CITIES (1-3)  
MICROWAVE DISH  
MICROWAVE TOWER

MIM-23 SITE  
MISSILE SILO  
OIL RIG  
OIL STATION WELL  
PARKING LOT  
PASSIVE RADAR (1 AND 2)  
PRISON COMPOUND  
REACTOR (VARIOUS)  
RESIDENTIAL BLOCKS (1-2)  
ROADS (VARIOUS)  
RUNWAY FLAGS (VARIOUS)  
SA-3 SITE  
SHELTER  
SHOPS  
SLUM BLOCKS (1-2)  
STORAGE  
SUPER HARDENED C&C BUNKER  
TALL KING RADAR  
TENTS (VARIOUS)  
WINDMILL



## APPENDIX F: BIBLIOGRAPHY

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## NOTES

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