F/A-18 HORNET 2.0

F/A-18 Hornet 2.0 and Korean Crisis Addendum

GRAPHIC SIMULATIONS CORPORATION

F/A-18 Hornet 2.0 / Korean Crisis Addendum

Introduction

This document describes new features for "F/A-18 Hornet 2.0" and is a supplement to the "Pilot Flight Manual" included with your purchase.

Major new features for Hornet v2.0 include:

• Native support for the Power Macintosh™ series.

• Radio voice messages that simulate communication with ground control, the control tower, and other personnel. (requires 8MB RAM).

• Radar Warning Receiver (RWR) which allows you to see other aircraft and approaching missiles from a 360 degree perspective.

• Enhanced 3D objects and entirely reworked missions.

• Improved instrumentation, physical effects, sounds, network function, enemy pilot AI, and much more.

F/A-18 Hornet 2.0 requires a Macintosh 68020, 68030, 68040 or Power PC CPU; with a minimum of 4MB RAM (8MB for radio voice messages); 1.44 MB floppy (or CD-ROM drive if applicable) and a hard disk with about 15 MB free space.

Installation

Installing "F/A-18 Hornet" v2.0 (New Purchase, Not Updating)

The package includes four (4) diskettes or one CD-ROM. You will need your serial number, located in the back of your "Pilot Flight Manual.."

• Insert "Disk 1" or the CD-ROM into the appropriate drive.

• Run (Open) the "F/A-18 Hornet 2.0 Install" program on the disk.

• Follow the instructions given to install new files onto your hard disk.

• Locate "F/A-18 Hornet 2.0" on your hard drive and run it. Enter your serial number when requested.

Updating "F/A-18 Hornet" from v1.x to v2.0

If you are upgrading from an earlier version of Hornet, follow the steps outlined below. You must have "F/A-18 Hornet 1.x" already installed on your hard drive. The update package includes four (4) diskettes.

• Insert "Disk 1" or the CD-ROM into the appropriate drive.

• Run (Open) the "F/A-18 Hornet 2.0 Update" program on the disk.

• Follow the instructions given to install new files onto your hard disk. The destination folder will be your existing "F/A-18 Hornet Folder."

• When the installation is complete, open the "F/A-18 Hornet Folder" and run (open) the "F/A-18 1.x --> 2.0" program in the folder. Follow the instructions to convert the file "F/A-18 Hornet 1.x" into "F/A-18 Hornet 2.0." When the process is complete, you may throw away the "F/A-18 1.x --> 2.0" program.

Installing "Korean Crisis"

"Korean Crisis" is an "F/A-18 Hornet 2.0" theater set that requires ownership of "F/A-18 Hornet" (any version). "Korean Crisis" only runs with "F/A-18 Hornet" version 2.0, but includes an update from earlier versions to version 2.0.

The "Korean Crisis" package includes four (4) diskettes or one CD-ROM.

• Insert "Disk 1" or the CD-ROM into the appropriate drive.

• Run (Open) the program "Korean Crisis Installer".

• Follow the instructions given to install new files onto your hard disk. The destination folder must be your existing "F/A-18 Hornet Folder."

• If you need to upgrade from version 1.x of Hornet, open the "F/A-18 Hornet Folder." Run (Open) the "F/A-18 1.x --> 2.0" program in the folder. Follow the instructions to convert the file "F/A-18 Hornet 1.x" into "F/A-18 Hornet 2.0." When the process is complete, you may throw away the "F/A-18 1.x --> 2.0" program. At this point, there is no visible sign that "Korean Crisis" is present.

• Run "F/A-18 Hornet 2.0." Immediately select "Choose Theater..." from the file menu. Click on "Korean Peninsula" to engage the theater set. You may wish to make Korea the "Default" theater for new pilots. Note that the theater can change ONLY BEFORE the first mission and IMMEDIATELY after choosing "Get Next Mission" from the mission menu.

New for v2.0 - Preflight

Compatibility with 1.x

"F/A-18 Hornet 2.0" will read and convert preferences saved by earlier versions of the game. It can also open and convert pilot documents created with earlier versions. During conversion, however, the pilot document loses any mission replay it might have. Networking version 2.0 with earlier versions IS NOT POSSIBLE.

Choose Theater

Use the menu item "Choose Theater..." under "File" to switch between theater sets. You may wish to make a theater the "Default" for new pilots. Note that the theater can change ONLY BEFORE the first mission and IMMEDIATELY AFTER choosing "Get Next Mission" from the mission menu.

Preferences

The "Preferences" dialog is new for version 2.0. To set default preferences, hold down the option key while selecting "Preferences..." from the "File menu."

• "Scenery Detail" should be set as follows:

- "Complex" for the Power Macintosh™ series.

- "High" for 68040 based computers.

- "Medium" for 25 MHz or faster 68030 computers.

- "Low" for all other computers.

• Check "Radio Voice Messages" to hear digitized voice messages from other personnel, such as the LSO (Landing Signal Officer) and your wingman. Because 8MB RAM is required to use voice messages, you may be required to enable virtual memory (see the section on memory). Note that Virtual Memory may be required to run missions even with "Radio Voice Messages" turned off.

• "Stick" menu now has two choices only:

- "Mouse/Keyboard" is also ideal for trackballs. DO NOT USE THIS OPTION WITH A JOYSTICK.

- "Joystick" works with all Macintosh joysticks and works with the mouse. Note that you must setup joystick control and buttons using the software that comes with your joystick.

• If you have difficulty controlling the aircraft, try CHECKING the "Slow stick control" option in the preferences. This option reduces the aircraft roll response. If you fly using the mouse rather than a joystick, this option is recommended.

• If your CPU is unable to maintain full frame rate at the desired detail level, you should UNCHECK the "High-res flight model" option. Leaving this option off will make the frame rate seem smoother on slow machines and will prevent frame skipping.

Difficulty

The "Difficulty" dialog allows you to adjust difficulty according to your personal tastes and skill level. Difficulty settings can change only BEFORE the first mission and IMMEDIATELY AFTER choosing "Get Next Mission" from the mission menu -or- when no pilot document is open. The dialog includes:

• "Your Aircraft" enables crashing and limits cannon rounds.

• "Your Aircraft Damage Enable" allows you control which aircraft systems can receive damage. Checking a damage category ENABLES damage for that system. Note that your aircraft cannot be destroyed unless ALL damage is enabled.

• "Enemy skill" only affects enemy pilot and gunnery operator's skill and aggressiveness.

• "Weapons Friend/Foe" alters the effectiveness of ALL missiles and cannon fire (yours and that of other aircraft.)

Mission Choice

Missions are assigned randomly -- one from each of seven groups of four missions (making a total of twenty-eight missions). Seven missions complete a career for each "Active Duty" theater. Before you begin a new mission, you may cycle through the four missions in the current group by holding down the option key while clicking on the "Briefing" button in the pilot window.

Replay

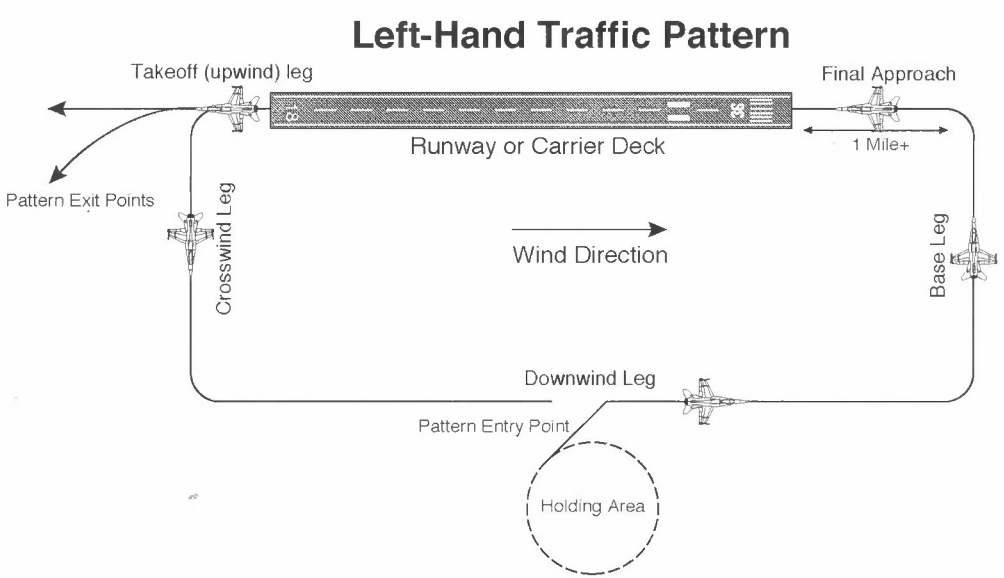
New for version 2.0 is a full-screen replay that also plays back view changes made during the mission. To execute a full screen replay, hold down the option key while choosing "Replay Film..." from the "Mission" menu. If you wish, you may disengage the replay of view changes by pressing the Esc key. Once disengaged, you have full control over views; however, view replay CANNOT BE RE-ENGAGED for the remainder of the replay.

This full-screen replay does not have VCR type buttons on the screen, so use the keyboard to control the replay: ⌥⌘P toggles STOP (PAUSE) mode, and ⌥⌘F toggles FAST-FORWARD. ⌥⌘Esc aborts the replay.

New for v2.0 - Flight

Airports/Bases

All major airports and air bases in Hornet 2.0 now feature FAA specification runways and taxiways that were constructed with accuracy to the nearest inch using diagrams contained in actual FAA documents. Although your current detail settings (in the preferences) will determine the number and complexity of objects displayed, you can be certain that those that are on screen are exactly where they would be in real life.



Hornet 2.0 also provides a number of taxiway markings including hold lines, taxiway and runway marker signs, centerlines, and facility markers.

Radio Voice Messages

Another new feature of Hornet v2.0 is its ability to communicate with you through "Radio Voice Messages." Through voice messages you can receive vital information on your current situation and the activity of your wingman. Some voice messages you receive passively, while others will require some initiation on your part. Since 8MB RAM is required to use Radio Voice Messages, they are optional. To hear radio voice messages, you MUST ENABLE them with the "Preferences" dialog.

Ground Controller

Many missions begin with your aircraft positioned in a hanger or elsewhere off the runway. Before you start rolling, contact the ground controller (Shift G) to get instructions on taxing to the current active runway. Taxi to this runway and stop. Just follow the signs and yellow stripes to get to the active runway. Stop just before actually moving onto the runway. After you have flown, contacting the ground controller will instruct you to "Taxi to parking."

The Tower

Before takeoff: When ready to get on the runway, contact the tower with Shift T. The tower either grants you clearance or instructs you to hold for traffic. If instructed to hold, you will be cleared as soon as the runway is vacant without re-contacting the tower.

Before landing: When you are ready to land, contacting the tower (Shift T) tells you which leg of the landing pattern to enter, then grants you clearance to land or instructs you to hold for traffic. If landing on a carrier, the tower will instruct "Go land launch," which means contact the LSO (see below.)

If you do not have "Radio Voice Messages" enabled, you will see the letter "C" meaning "clearance," or "H" meaning "hold for traffic" displayed in the instrument panel under the label "com 2."

Approach Control

Approach control (Shift A) tells which direction to fly to reach your destination base. Waypoint zero (0) is downwind of the active runway.

Landing Signal Officer (LSO)

The Landing Signal Officer (LSO) watches you from the carrier deck during at-sea landings. He will tell you how to adjust your approach speed and position along the glide path to land safely. The LSO should be used in conjunction with the ILS (instrument landing system).

Contacting the LSO (Shift L) beyond a few miles from the carrier asks for deck condition: either "clear deck, call the ball at 3/4 mile" or "deck is fouled."

Contacting the LSO (Shift L) within a mile or so begins approach guidance. If you previously contacted the LSO and were told to "call the ball at 3/4 mile," you may be reminded to re-contact the LSO with "Hornet in the groove, call the ball."

As you near the deck, the LSO will report corrections to allow a safe landing. If you hear "wave off!", your speed or approach alignment is unfavorable, and you should probably go around and try again. If you hear "Bolter! Bolter!", your hook has failed to catch an arrestor wire, and you will likely roll off the deck. Abort the landing and go around again.

Operations

Operations (Shift O) allows you to determine the status of your mission. "Mission successful..." means come home, your mission has been completed successfully. "Mission not successful..." means that you have failed to accomplish the mission objective. "Nothing to report" indicates that the mission is still in progress.

Messages from Hornet Two

Many missions include another F/A-18 aircraft. For these missions, your wingman — called "Hornet Two" — occasionally reports his activities or comments on your situation. Some messages include:

- "Hornet Two, contact <xxx>": First radar contact with the compass direction of the bogie.
- "Tally ho!": First visual sighting of a bandit (enemy aircraft).

• "Fox one!": Upon launch of an AIM120 missile.

• "Fox two!": Upon launch of an AIM9 missile.

• "Hornet Two's joker": When wingman's fuel is running low.

• "Hornet Two's bingo": When wingman has very little fuel remaining. He will break off and leave the fight.

• "Spike": when wingman is locked by another enemy radar.

• "Two's winchester missiles": When the wingman is out of missiles. He will continue to fight with cannon.

• "Two's winchester": When wingman is entirely out of ammo. He will break off and leave the fight.

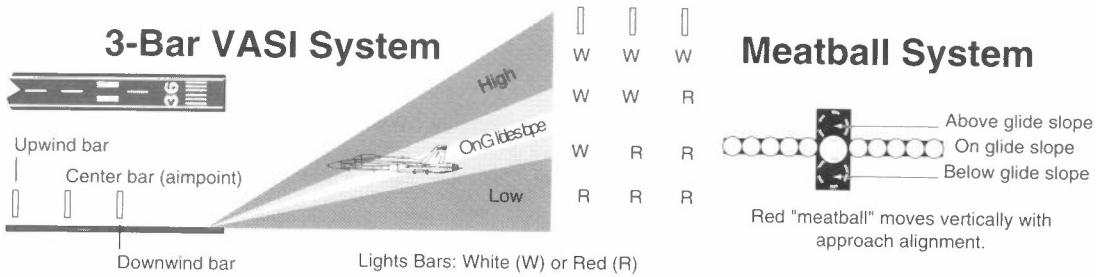
• "Two's punching out": When the wingman ejects from his aircraft.

• "Atoll! Atoll!": When the wingman detects a short range missile approaching him. Generally an aircraft launched missile.

• "Archer! Archer!": When the wingman detects a medium range missile approaching him. Generally a SAM launched missile.

VASI/Meatball

The VASI is a visual landing aid using directional lights that help you to determine your position on the glide path (proper approach path while landing). The "Meatball" serves the same function aboard the aircraft carrier. Refer to the illustrations below.



Carrier Launch (Catapult)

The carrier has three catapults, two on the bow and one amidships. To launch from the carrier, taxi onto the base of the nearest catapult, hold the brake down until you stop moving completely and raise your thrust to 100% (with or without afterburners). Your aircraft will pitch downward as the catapult tightens and your nose gear compresses. Press and release the brake to launch.

Moving Map

The moving map used in version 2.0 has improved detail and shows airbase locations and zones of control. The map can be zoomed in ([9]) enough to show taxi and runway configurations for the airport you are on. Zones are either red or blue (red for friendly control and blue for enemy control).

Reloading/Refueling

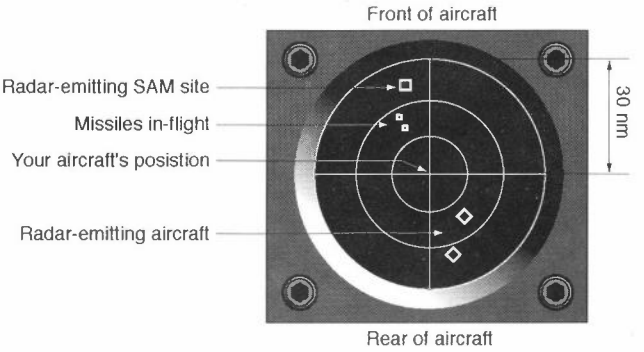
It is possible to reload fuel and restore arms (the load that you initially chose before flight). To refuel, taxi onto the designated fuel pad at any friendly airbase, come to a complete stop, and press [Shift][F] (Fuel). To reload arms and reload fuel stop on the pad and press [Shift][R] (Reload all). Fuel pads are typically located near fuel tanks and can be identified by a large white "F."

ALR-67 Radar Warning Receiver (RWR)

The Radar Warning Receiver (RWR) gives you a top-down, 360 degree view of potential threats. It is indicated both in the HUD and in the instrument panel while in "look-down" cockpit mode (view [2]). Toggle the RWR HUD display with ([Ctrl][Alt][W]) — "RR" shows in the HUD when the instrument is on.

The RWR shows the relative positions of nearby threats: aircraft, ground-based AAA and SAM sites, and approaching missiles. Both friendly and enemy units appear in the display.

ALR-67 30-NM Azimuth Display



The RWR HUD display consists of vectors emanating from the HUD center pointing outward in the relative direction of the threat. Threats more than 15 NM away do not appear in the HUD. At the end of each vector is a letter-number pair indicating the type and distance of threat. Possible letters are "A" for aircraft, "G" for AAA or SAM (ground unit), or "M" for approaching missile. A "+" indicates the threat's range is beyond 10 miles. The number indicates the distance to the object in miles.

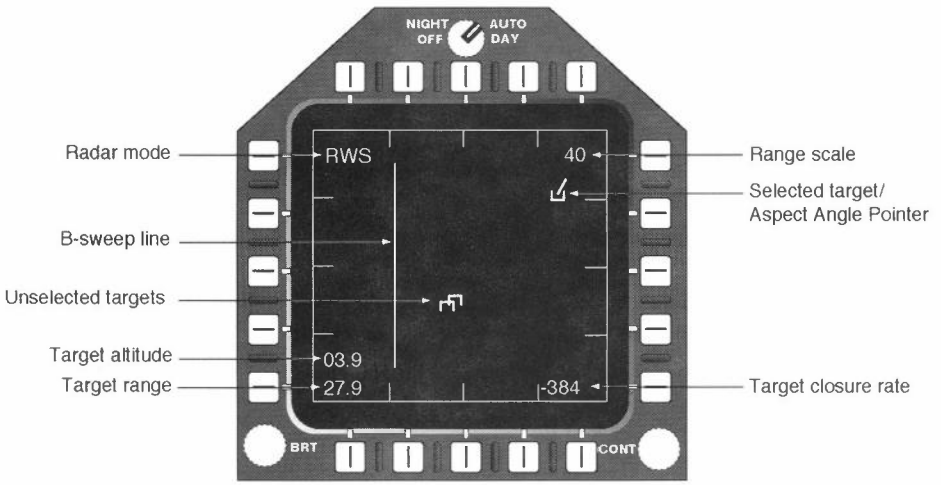
The instrument panel "look-down" RWR display shows the relative positions of all threats within 30 NM Aircraft appear as diamonds, ground units as squares, and approaching missiles as dots.

AN/APG-65 Radar System

The radar display has improved look and functionality for version 2.0 when the "Scenery Detail" level is "High" or "Complex" (Preferences). Aircraft bogies are displayed with an upside-down "U." The designated target appears as a right-side-up "U" with an aspect tail. The aspect tail is a short line that extends from the target and points in the direction the target is moving.

AN/APG-65 Radar Symbology (A/A mode)

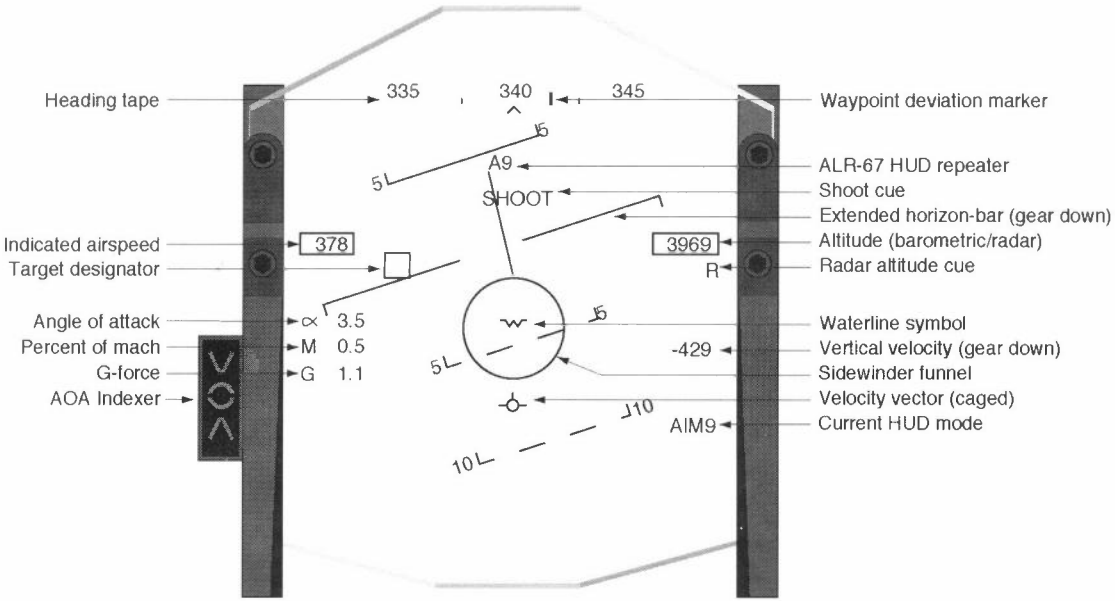
Note: All figures displayed are in knots and nautical miles



HUD

The HUD for version 2.0 is larger and has some new elements when the "Scenery Detail" level is "High" or "Complex" (Preferences). The aircraft AOA (angle-of-attack) appears with the "alpha" character and the pitch ladder has small "hooks" pointing toward the ground. The illustration below shows all HUD elements.

HUD Symbology (A/A mode, gear down)



New for v2.0 - Network

Requirements

"F/A-18 Hornet 2.0" allows network play for two to four players across any AppleTalk™ compatible network, including Apple Remote Access® (for modem play). Depending on the server used, it is likely that no more than two players may successfully fly using Apple Remote Access®.

All network players MUST have version 2.0 to establish a network connection. A player running a different version than that of the host will not be able to see the hosted mission in the "Join" dialog.

Room Popup

The "Host" and "Join" dialogs support nine "rooms" in which network missions may be played. When hosting a mission, select a room through the popup menu above the available mission list. Players wishing to join must choose the same room in the join dialog as the room selected by the host. These rooms allow each mission to be hosted by a maximum of nine players on any one network.

Host Options

A mission's host may alter two settings to optimize network function. The host options are transmitted to other players during flight.

• "Low Traffic Network" causes network players to exchange aircraft state data twice as often as when the option is UNchecked. This higher data rate increases accuracy of remote aircraft positions, but also creates a higher demand on the network. More than two players using either LocalTalk™ or ARA (Apple Remote Access™) networks may want uncheck this option. Two players using 9600 bps or faster modems should leave this item checked. If players experience excessive jerking when viewing other aircraft, uncheck this option.

• "Precision Positioning" changes the internal interpolation algorithm used. When checked, this option will give better apparent positions for remote aircraft (aircraft other than yours), but might cause excessive surging. You should probably check this option when all players are using fast computers. If the speed disparity between two players is great, this option should probably be UNchecked. Experimentation is the best way to decide which options should be checked.

Player Communication

F/A-18 Hornet 2.0 allows typed communication among players from the cockpit, as well as from the mission briefing window before flying. To send a message from the briefing window, simply type the message and press Return. To send a message from the cockpit, press ⌘ ⌥ ' type the message, then press Return. If a message is started in the cockpit, but no typing occurs for about four seconds, the message line will be cleared and the keyboard will again control the aircraft.

Messages can be exchanged between the briefing room and pilots in flight. Private messages (only seen by your team-mate) can be exchanged by holding down the Option key when pressing Return to send the message.

Network Difficulty Settings

During network play, "Default" difficulty settings override the settings of the "Difficulty" dialog.

Tactics/Tips

Avoiding detection

Your chance of detection by enemy radar is decreased by flying at low altitude, by turning off your radar system, and by turning off your radar and ECM.

• Low altitude flying makes it difficult for enemy radar to distinguish your airplane from ground objects. This advantage is greater with longer distances.

• Your radar also makes you more visible, so switch to "Silent" mode with S when you don't need radar.

• Electronic Counter Measures (ECM, toggled with C) activates the transmission of signals meant to confuse incoming radar-guided missiles. The additional signals emitted by the ECM make your airplane more visible to enemy radar. Turn off ECM when it is not needed.

Avoiding missiles

When an incoming missile is detected, your aircraft's Threat Warning Indicator (TWI) makes an audible beeping sound and lights a "Launch" indicator in the cockpit. Other than your own eyes, the Radar Warning Receiver (RWR) is the best tool for tracking incoming missiles. Using the RWR, you can track an incoming missile in the HUD (display is toggled with ⌘ ⌥ W). When a launch is detected, turn on ECM — you can just leave it on until all danger has passed. Look on the HUD for the letter "M" followed by its distance in nautical miles. For example "M4" indicates a missile approaching from four miles. When the missile is within two miles, quickly turn 90 degrees to its approach path. You will see the "M" move to either the 3:00 or 9:00 position on the HUD. Begin to release chaff and flares in an attempt to confuse the missile. When the missile is about a mile away, make a sharp, 180 degree course change while either climbing or diving, and deploying chaff and flares every two seconds. The missile will be confused long enough that, as it regains its lock, it will be unable to turn sharply enough to intercept you.

Other tactics include putting something between yourself and the missile. In planning flights, choose a route between mountains if possible. When the TWI picks up a launch, tuck yourself behind a mountain and wait it out.

There is no foolproof way to avoid missiles, but you do need to know where they are in order to begin. USE YOUR RWR!

How to take out SAMs

SAM (Surface-to-Air Missile) sites are a major threat to your aircraft. All SAMs use a radar to track and lock-up their target, and then launch radar-guided missiles. When a launch is detected, use the procedure outlined above (avoiding missiles). SAMs are easily killed using AGM-88 air-to-ground missiles.

1) When flying into a SAM-infested area, switch your radar to "Air-to-ground/ARAD" mode. This mode reports radar-emitting entities on the ground.

2) Locate and lock up a radar target with the [\] key.

3) Select an AGM-88 missile. You will need to have about 1000 feet of altitude for every mile you are away from the target.

4) When the HUD reports "IN RNG", fire the missile. Once released, the missile automatically tracks the target — you are free to do other things, like avoid colliding with the missile just launched by the SAM you are targeting.

Using Iron Bombs — by Kris W. Amico

Iron bombs include the Mk82LD and Mk82HD, Mk83 LD, Mk84LD, CBU-59/B, Durandal BLU-107/B and B-57 tactical nuke. There are several basic delivery methods using this model:

The Basic delivery method:

1) Select the weapon and approach the target with a steady, slow speed of approximately 200-250 knts.

2) Line up the velocity vector with the base of the target and press the trigger once. This is called "pickling" the target. A diamond appears at the selected location.

3) Gently pull the nose up such that the velocity vector remains in the fall line, while leveling out your aircraft. By keeping the velocity vector lined-up with the fall line, you ensure that the impact azimuth will remain aligned with the target.

4) When the impact point intersects the designated target, the bomb will automatically release. A quick glance at the right side of the HUD just below the altitude readout, will give you the distance to auto-release in feet. Note that you do not need to be able to see the impact point symbol in the HUD. In most cases, it will be out of sight, somewhere below your aircraft. You can manually release the weapon at any time by pressing the trigger a second time before auto-release.

If at any time during the bomb run, you decide you want to cancel the target, press the [\] key and the target will be cleared, removing the diamond from the HUD.

Level Bombing

This is a common delivery method usable from any altitude and is practical for most free-fall weapons. It is most useful when you wish to (or need to) maintain a safe altitude and a steady flight path. It builds on the basic model from step 3 above.

3) Gently pull up to a level flight path while keeping the velocity vector in line with the fall line and stabilize your speed.

4) Maintain level flight and steady speed until the bomb releases.

5) Pull up and/or turn away if needed.

Dive Bombing

This method is used for bombing targets nearly or directly beneath you. It is useful for minimizing the bomb's horizontal travel to slightly improve accuracy.

1) Select your weapon and give yourself plenty of altitude so that you don't "auger in."

2) Nose down and pickle your target as accurately as possible. If the target is not directly below you, use the rudders to line up rather than rolling. You may want to hit the brakes occasionally to curtail excess acceleration.

3) Gently pull up, placing the impact point on the designated target.

4) The bombs will release. Remember to pull up so that you don't get a case of SDT (Sudden Deceleration Trauma).

Toss Bombing

This is a variation of level bombing. Use it when you want to take a low-altitude approach without cooking yourself. This is typically most practical when you have pickled your target from BVR (Beyond Visual Range). The method below is recommended for advanced pilots, as it often proves difficult.

1) Select your weapon and make a level, low-altitude approach (500-1200 ft depending on the weapon).

2) When in range, pickle your target. From this low altitude, it may be difficult, so be patient.

3) Nose up 15-30 degrees and keep it steady. You may also want to increase the throttle to maintain a steady speed. Remember to keep the velocity vector in the fall line.

4) The bomb(s) will release.

Pop-Up Bombing

This method is the marriage of a stealthy, low-altitude approach and dive-bombing. Approach at low altitude. When you are about 1-4 miles from the target, hit your afterburners and pull almost straight up! Reduce power and dive bomb the target. This method is fun, and you can impress your friends with the replay film of it.

BVR(Beyond Visual Range) pickling

Iron bombs can also be pickled from beyond visual range by a little clever use of your FLIR or E/O weapons. For complete details, refer to section on using FLIR and E/O weapons.

Using FLIR and E-O weapons — by Kris W. Amico

Using the FLIR Pod

If you have the right equipment, you can begin pickling your target from as far away as radar will allow, and in the case of the FLIR pod, in any visibility conditions. Just load out a FLIR (Forward Looking Infra-Red) pod, AGM-65 or AGM62, and you're in business. You can borrow the target acquisition system of one of these stores and "hand off" the acquired target to your bombs! Just follow these steps, using the FLIR as an example:

1) Say you're 10 NM from your target (a small building). Head towards it and engage the autopilot. Select the FLIR as your weapon and set your radar to SSS at 20 NM.

2) Hit [E] to bring your center MFCD (Multi-Function Color Display) to E-O mode. Select your building and use enemy view ([5]) to visually verify the target.

3) Wait until you are within 5 NM and look down at the FLIR image in the MFCD. Have the crosshairs stopped moving and appear to be fixed on a target? If so, great. If not, wait a little longer as the camera slews.

4) When your FLIR has a positive fix, press the trigger once to designate the target. A diamond should appear. Sometimes you won't get a positive lock on a target using E/O weapons or FLIR. This is normal since the camera needs to be able to identify the target as a legitimate object as opposed to ground clutter.

5) When your target is accurately pickled, "hand off" the target to your bombs simply by selecting them, and drop the bombs using whichever method you prefer (refer to section on using iron bombs).

Using AGMs

Taking out fixed structures:

1) Fly in the direction of your target and switch to autopilot. Arm your AGM. Select the radar mode most appropriate for designating your target. Hit [E] to bring the center MFCD to E-O mode.

2) Select your target and verify it using the enemy view if necessary.

3) Wait until you are within acquisition distance (which depends on target size) and check your E-O screen. Select your target (hit the trigger once) once the E-O crosshairs are stable. Verify the pickle by observing the diamond. If it has locked onto the base of the object, you have a positive lock. If not, deselect the target and try again.

4) When using the AGMs, "-RNG-" will flash on the E-O screen when you are within firing range.

5) Fire the weapon and forget it. Verify the target's destruction with the missile-eye or enemy view.

Try to release your AGMs with plenty of altitude so that they will reach their targets. This is particularly important when using the Walleye, as it is a glide weapon. A good rule-of-thumb is a thousand feet of altitude for each mile that it will have to travel.

Taking out vehicles:

AGMs can be released reliably from short range without even checking the MFCD screen. In the case of moving vehicles such as tanks, it is often necessary (if not mandatory) to be able to lock onto the target using a ground radar mode alone. The TV guidance system is fairly reliable and can be trusted as long as you are well within the weapon's range. Using radar to help the camera find the target is fairly straight forward:

1) Select a target in ground radar mode such as GMTI.

2) Select a maverick or walleye.

3) Wait several seconds for the camera to slew towards, and identify the target.

4) Once the target is acquired by the camera and the "-RNG-" cue is flashing, press the trigger to fire.

Scoring

Besides receiving score for enemy hits, you get additional score as follows:

• You get 4000 points for successfully completing your mission objective.

• You get 2500 points for safely landing your aircraft only after a SUCCESSFUL mission.

• You LOSE 2500 points if you fail to land (or ditch) your aircraft in friendly controlled territory (Red Zone on the moving map).

Memory

You will need to increase the "Preferred Memory Size" for the application "F/A-18 Hornet 2.0" if:

• You choose a flight window size larger than "Medium - 640 pixels" in "Preferences". In this case, adding 1000 to the default size should be enough.

• You choose "Panorama - 3 monitors" in "Preferences". In this case, adding 3000 to the default size should be enough.

To change the Preferred Memory Size:

1) Quit "F/A-18 Hornet 2.0".

2) Locate the application "F/A-18 Hornet 2.0".

3) Select the application icon and choose "Get Info" from the "File" menu (from the Finder.)

4) Change the "Suggested Memory Size" and close the info window.

If a mission fails to start due to insufficient memory, try one or more of the following:

- Before Running Hornet -

• If other applications (other than the Finder) are running, quit other applications BEFORE opening "F/A-18 Hornet 2.0". This will insure that Hornet has a chance at all available memory, up to the "Suggested Memory Size" set for the application.

• Remove unneeded extension or restart your computer with extensions off. Extensions can be removed with an "Extensions Manager." To restart with all extensions disabled, hold down the shift key during system startup.

• Turn on "Virtual Memory" with the "Memory" control panel. For best performance, set the virtual memory size to only 1 MB larger than the amount of physical RAM in your computer. Close the control panel and restart the computer. Note that this will increase load time when you fly a mission and can cause occasional short delays during flight.

- While Running Hornet -

• Close all open pilot documents. Save them if you like.

• Choose a lower "Scenery Detail" level. This gives up some visual detail but can save memory. In many cases, this is better than using virtual memory, since virtual memory can cause occasional short delays during flight.

• Turn off radio voice messages if you don't use them much. This saves about 2 MB!