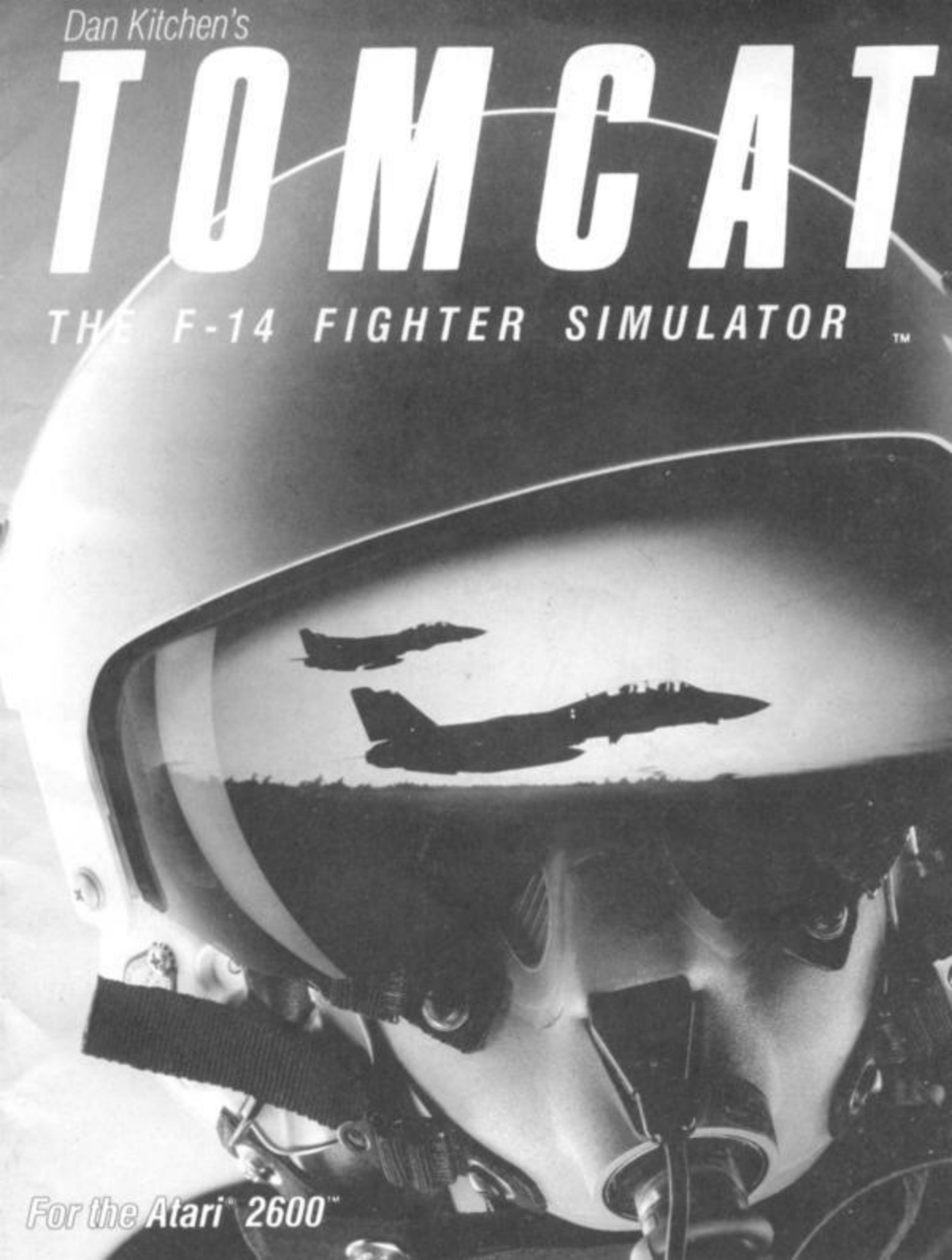
Dan Kitchen's

TOMCAT

THE F-14 FIGHTER SIMULATOR™



For the Atari® 2600™



NOTES FROM A TOP GUNNER
by **Dan Kitchen**
Designer of TOMCAT
THE F-14 FIGHTER SIMULATOR™

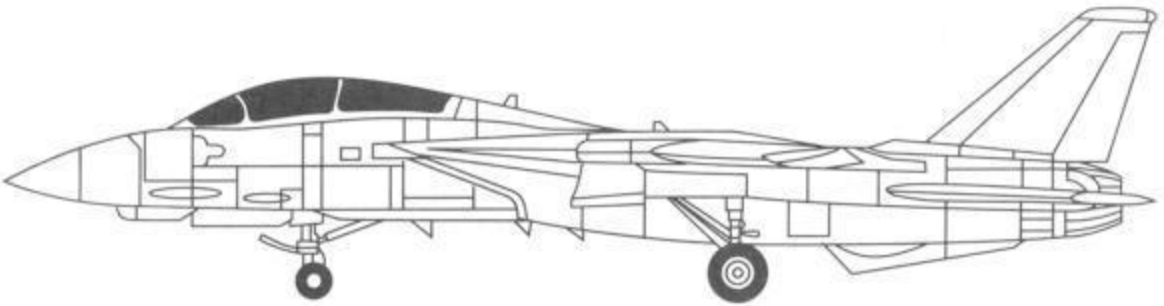
I've always been fascinated by the technology of military fighter aircraft and admired the courage of the pilots who routinely defy the odds in the skies above. I've tried to incorporate the spirit and challenges of actual fighter jet combat into this game and I've consulted with many actual fighter pilots to ensure the accuracy of TOMCAT THE F-14 FIGHTER SIMULATOR™.

I owe many thanks to my brother and co-designer Steven Kitchen, without whose help we would not have made it off the flight deck.

Here's thumbs up in your quest for Top Gun!



Flight Manual for TOMCAT: THE F-14 FIGHTER SIMULATOR™



TO BEGIN:

1) With power OFF, insert your TOMCAT F-14 FIGHTER SIMULATOR™ cartridge into your Atari 2600™ game system according to manufacturer's instructions.

2) Plug joystick into left controller port.

3) Turn power ON.

4) Press RESET to begin game. At this point the cockpit controls of the F-14 TOMCAT will light up and you will see the deck of the aircraft carrier U.S.S. Enterprise through your cockpit canopy.

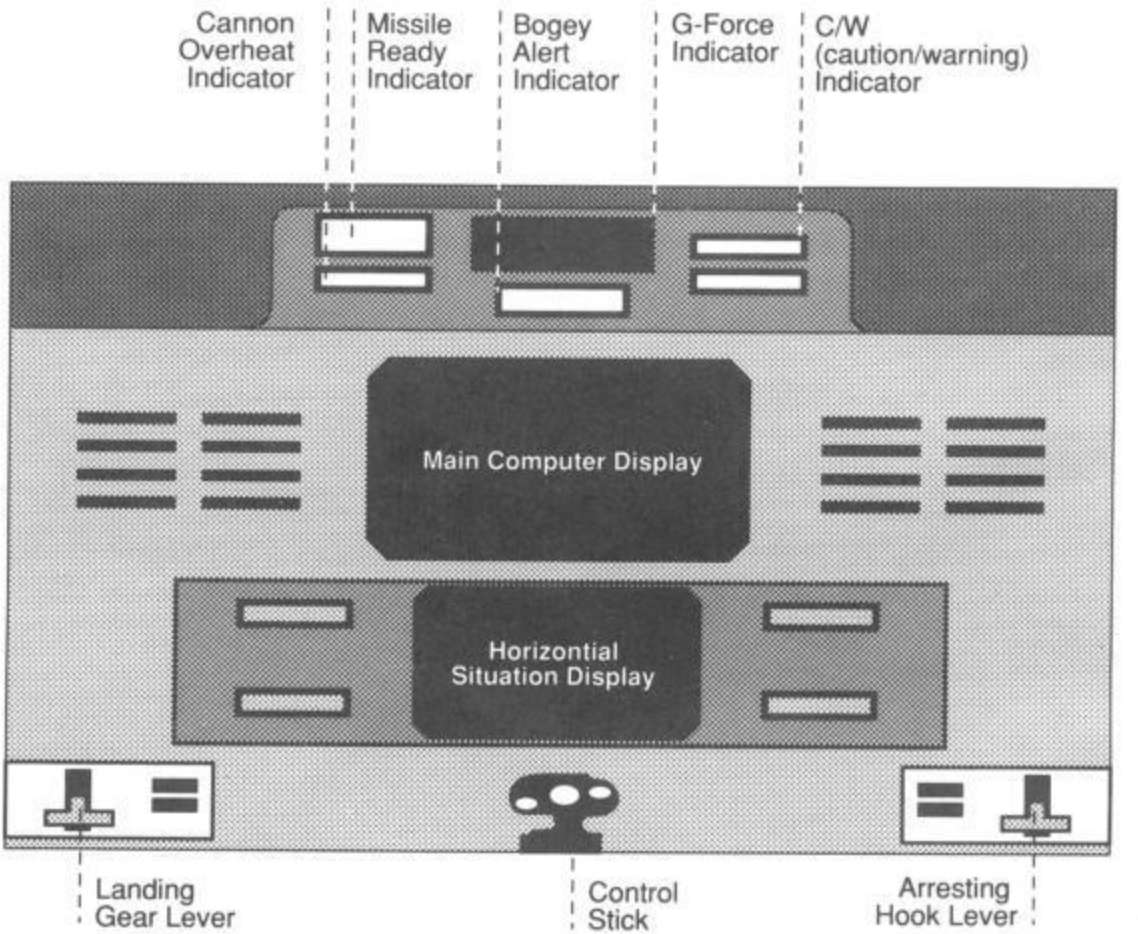
Your TOMCAT F-14 FIGHTER SIMULATOR™ features an intelligent RESET function to guard against resetting the game by mistake. If you're in the middle of a game and you hit RESET, you must hold it down for at least 2 seconds before a new game will start.

READY FOR FLIGHT:

You're at the controls of your F-14 TOMCAT fighter at 1900 hours, waiting to receive authorization for take off from the U.S.S. Enterprise. During your mission you'll face the enemy's most challenging air combat forces. At your disposal are the state-of-the-art computer controls and weapons systems of one of the U.S. Navy's most sophisticated fighters: the F-14 TOMCAT.

Your first take-off will be during daylight hours. But by the time you receive orders to return to the U.S.S. Enterprise, you'll notice the approach of dusk and you'll have to successully perform a most dangerous nighttime landing on the aircraft carrier. Your next mission will be a night mission. You'll have to take off, engage in combat and return to the Enterprise in total darkness, relying more on your computer control systems to see you through safely.

After each successful return to the aircraft carrier, or if you crash or are shot down, you'll receive a MISSION RATING score (from 0 to 9) that is based on your flying skills, the number of weapons fired, and kills. There are four phases of flight operation: LAUNCH, FLYING, COMBAT, and LANDING.



CONTROLS:

TOMCAT THE F-14 FIGHTER SIMULATOR™ uses both console and joystick control.

Console:

Reset -	Starts game. Enters select mode from THREAT screen.
Select -	Cycles through computer display screens.
Right difficulty -	Raises/lowers arresting hook.
Left difficulty -	Raises/lowers landing gear.

Joystick:

Forward-	Dives aircraft/or moves highlight when in select mode. Increases thrust when **Joystick button** is pressed.
Back -	Climbs aircraft/or moves highlight when in select mode. Decreases thrust when **Joystick button** is pressed.
Right -	Banks aircraft to the right.
Left -	Banks aircraft to the left.

Joystick Button:
Fires weapons when THREAT screen is up.
Chooses options when in select mode.

LAUNCH:

You're on the flight deck of the U.S.S. Enterprise, waiting for your F-14 TOMCAT to be fueled and readied for take-off. After your fuel reaches its total capacity of 3080 gallons and the angle of your wings opens to 20°, the FLIGHT DECK OFFICER (in the yellow jacket) will come out to signal you to move onto the carrier catapult. Press and hold down the joystick button and push the joystick forward to increase engine thrust. When you're locked on to the catapult, the F.D. OFFICER will wave his hand in a circular motion to indicate that it's time to throttle up. Press and hold down the button and push the joystick forward until the **ENG%** indicator on your MAIN COMPUTER DISPLAY shows that your engine has reached its full afterburner thrust of 216%. The F.D. OFFICER will salute you, indicating that you are "go for launch" after which you'll be automatically catapulted from the flight deck. After you clear the flight deck, you'll hear the crash warning klaxon horn. Pull back on the joystick to raise your nose (Angle Of Attack) and increase your altitude. You will hear this warning sound whenever you are flying below an altitude of 500 feet with the aircraft in a diving position. On launch remember to flip the LEFT DIFFICULTY SWITCH on your console to raise your landing gear.

FLIGHT:

Once you're airborne, your MAIN COMPUTER DISPLAY will automatically switch from the LAUNCH screen to the STATS 1 screen, which will show your **SPEED** (measured in mach), your **ALT**itude (measured in feet from sea level: 0'-999' when below 1000' or 1K' - 56.0K' when above 1000'), your nose **A**ngle **O**f **A**ttack (from -50° to +55°), and your **ENG**ine % of thrust (from 0% to 100%, 200% to 216% for afterburners).

Pressing the SELECT button on your console will switch your MAIN COMPUTER DISPLAY to show various information screens describing the condition of your aircraft. For example, STATS 2 shows your **WING** angle (from +20° to +68°), your **ALT**itude, your compass heading (**C-HDG**, 0° to 358°), and the amount of **FUEL** remaining.

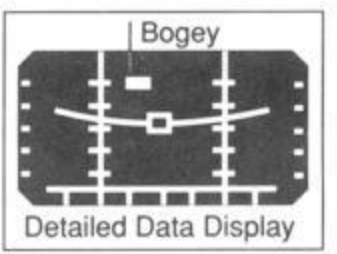
To increase or decrease your engine thrust, you must press and hold the joystick button and move the joystick. Pushing the joystick forward increases thrust, pulling it backward decreases engine thrust. When you are controlling engine thrust, the STATS 1 screen appears automatically. The only time in which you are unable to change thrust is when the THREAT screen is visible on the computer display.

To maneuver the aircraft, simply move the joystick forward, back, left or right. Pulling the joystick back will raise your nose **A**ngle **O**f **A**ttack, making the aircraft climb. Pushing forward on the joystick will reduce the nose **A**ngle **O**f **A**ttack, making it dive. Moving it left or right will bank the aircraft. At the altitude of 5000 feet you will hear a signal indicating that operating altitude has been reached. The enemy aircraft will not engage before you have reached this altitude. When your aircraft crosses the sound barrier (1.0 Mach) you will hear a distant sonic boom.

COMBAT:

For air combat, your F-14 TOMCAT is supplied with a sophisticated computerized defense system, machine guns, and three types of air-to-air missiles.

OFFENSIVE WEAPONS AND MANEUVERS:



Detailed Data Display

When an enemy aircraft, or BOGEY, enters your air space, the THREAT screen will automatically appear on your MAIN COMPUTER DISPLAY. The DETAILED DATA DISPLAY (DDD) screen will also appear on the HORIZONTAL SITUATION DISPLAY to show the exact location of the enemy aircraft. The BOGEY will appear as a flashing blip on this top view display.

The THREAT screen shows the condition of both your offensive and defensive weapons systems. You can bring the THREAT screen up at any time while you're

in flight by pressing the SELECT button on your console until the THREAT screen appears.

On your THREAT screen:

RNG shows the distance of the enemy from your F-14, measured in feet.
or **KILLS** will show the number of enemy aircraft shot down.
AIM indicates the type of missile you have ready.
EC-M shows whether your counter measures are operating.
M-61 indicates the on/off condition of your machine gun.

Each time a new BOGEY enters your air space the klaxon horn sounds, the THREAT screen appears and the BOGEY ALERT INDICATOR will flash. The HEADS UP DISPLAY (HUD) will also appear on your visual screen. Through the threat screen you can arm your F-14 with missiles or machine guns and fire them only when the THREAT screen is up.

To choose a weapon, simply press the RESET button on your console to enter the select mode (be careful not to hold the RESET button for more than 2 seconds, since this will reset the game). On launch your F-14 is ready and armed with an **AIM 54** missile.

You can choose between selecting a missile type, turning on/off your Electronic Counter Measures (**EC-M**), and turning on/off your M-61 machine guns. Moving the joystick up or down will highlight **AIM-**, **EC-M**, or **M-61**. Pressing the joystick button will select one of these options.

Pressing the joystick button while **EC-M** is highlighted will turn on/off your counter measures and bring you back to the flying mode.

When the enemy is at close range you should select your **M-61** machine gun. You start with 675 available rounds. The CANNON OVERHEAT INDICATOR will light green, indicating that your guns are operational. When firing your guns, the CANNON OVERHEAT INDICATOR will flash red to warn you that your guns are in danger of overheating. When it turns bright red, your guns are overheated and will automatically be shut down for cooling. When the lamp returns to green, you can fire your guns again.

Pressing the joystick button while **AIM-** is highlighted allows you to select a missile type. The ARMAMENTS screen will now appear.

You have a choice of three types of Air Interception Missiles:

AIM 7: Sparrow, infrared missiles (most effective when the BOGEY is visible on your viewing screen).
AIM 9: Sidewinders, heat-seeking missiles (most effective when you are on your opponent's tail).
AIM 54: long range missiles (the best choice for a novice pilot).

You have 15 missiles available of each type. Move the joystick to highlight the missile type you want and press the joystick button to arm your aircraft. At this point you'll return to the flying mode. By pressing the joystick button, you fire missiles or machine guns. When the BOGEY is within machine gun range (aprox. 500 feet) the HUD will flash red. You must continually fire the guns for about three seconds to destroy the enemy aircraft.

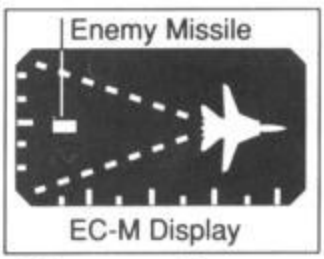
Each time you fire a missile you must wait until the MISSILE READY INDICATOR lights to fire another missile.

If you run out of a missile type, the computer will automatically select the most effective missile type from your remaining armaments. You may also select another type of missile by bringing up the THREAT screen and pressing the RESET button.

When using missiles, use the HEADS UP DISPLAY to lock your missile onto your target by moving the BOGEY into the center of the HUD. The HUD flashes red when your computer has locked on to the target. Firing at this time guarantees a hit.

If you run out of machine gun ammunition, the computer will automatically not allow you to turn on your machine guns and arms any remaining missiles. If you use all of your missiles, the computer will not allow you to select a missile type.

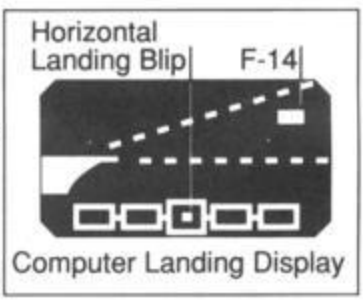
DEFENSIVE WEAPONS AND MANEUVERS:



When the BOGEY is on your tail and fires a missile at you, the CAUTION WARNING INDICATOR (see cockpit diagram) will flash. As the enemy missile approaches the C/W INDICATOR will flash faster. If your electronic counter measures (**EC-M**) are on, the EC-M screen will automatically appear on your Horizontal Situation Display. The on-coming missle will appear as a flashing blip approaching your aircraft.

In order to avoid the missile you will want to take evasive action by banking, climbing or diving. When the C/W INDICATOR has stopped flashing you have successfully avoided the missile.

LANDING:



When you are running low on fuel or have used up most of your available armaments, you'll be called back to the aircraft carrier. The LANDING screen will appear on your MAIN COMPUTER DISPLAY showing your **SPEED**, **ALT**itude, range (**RNG**, your distance from the carrier), and your **A**ngle **O**f **A**ttack, along with an audible return signal.

Press the select button until STATS 2 screen apprears on your main computer display. To land you must bring your compass heading (**C-HDG**) to approximately 30° (30° to 40°) by banking to the right or left and lower the altitude of your F-14 to below 2,000 feet. Also, lower your engine thrust to 30% in order to reduce aircraft speed for landing.

After your F-14 has dropped below 2,000 feet at a compass heading of approximately 30° you will enter the landing corridor and, in a few seconds, you'll see the carrier appear as a dot in the distance. The COMPUTER LANDING DISPLAY (CLD) screen will appear on your HORIZONTAL SITUATION DISPLAY.

The CLD has two graphs showing your position relative to the aircraft carrier. The top graph displays your altitude and range. Maintain the blip between the upper and lower limits of your vertical glide path by adjusting your altitude. Try to keep the aircraft's altitude between 60 and 80 feet. The graph below allows you to center your aircraft horizontally. As you approach the carrier you may encounter cross winds. Simply bank the aircraft to the right or left to center yourself for a successful landing on the flight deck. You must keep the blip in the center of the graph to ensure a safe landing. When your aircraft is over the flight deck you will hear a warning sound. Push the joystick forward to drop the aircraft onto the deck.

When approaching the carrier and you're landing gear or arresting hook is not in the correct "down" position, a klaxon horn will sound. Flip the LEFT DIFFICULTY switch on your console to lower your Landing Gear and flip the RIGHT DIFFICULTY switch to lower the Arresting Hook so the aircraft can catch the carrier cable.

If you have landed successfully, you'll be back on the deck of the aircraft carrier. Reduce your thrust to 0%. The RATING SCREEN will appear on your MAIN COMPUTER DISPLAY, showing the number of KILLS, missiles FIRED, and providing an overall RANK for your mission. Press the joystick button and you'll be on the deck ready for another take-off.

If you forget to put your landing gear or your arresting hook down, come in too low, too high, or too far right or left on the carrier deck, you will crash and receive a final rating. Hit RESET to start a new game.

FLYING AT NIGHT:

When flying at night, you must depend more on your instrumentation, especially when engaged in combat.

RATINGS:

0 - CIVILIAN
1 - SWABO
2 - RECRUIT
3 - SEAMAN
4 - LIEUTENANT J.G.
5 - LIEUTENANT
6 - LIEUTENANT COMMANDER
7 - COMMANDER
8 - CAPTAIN
9 - TOP GUN GRADUATE

TIPS FROM THE DESIGNER:

It is a good idea to turn on your Electronic Counter Measures as soon as you're launched from the flight deck.

To avoid an enemy missile, adopt an eccentric flight path. Dive, climb and bank quickly. If you haven't turned on your Electronic Counter Measures before an enemy attack, you still have time to do so once a missile has been fired at you.

During combat, try to keep the BOGEY on your viewing screen at all times and stay on his tail. This will keep him from getting behind you.

While approaching the aircraft carrier for a landing, you'll see the carrier landing lights before you. Keep the center line of lights straight to ensure that you're centered on the flight deck.

Approach the carrier at a speed well below 1.0 Mach to insure a safe landing.

To reduce the amount of fuel used during flight, throttle back your engine thrust to below 100%.

The altitude of the flight deck at landing is aproximately 60 feet.

GLOSSARY

ACM - AIR COMBAT MANEUVERING
AIM - AIR INTERCEPTION MISSILE
AOA - ANGLE OF ATTACK
BOGEY - UNDEFINED AIRCRAFT
CANOPY- GLASS BUBBLE OVER THE COCKPIT
C/W - CAUTION/WARNING
ECM - ELECTRONIC COUNTER MEASURES
G - UNIT OF ACCELERATION
HSD - HORIZONTAL SITUATION DISPLAY
HUD - HEADS UP DISPLAY
CLD - COMPUTER LANDING DISPLAY

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Warranty Officer
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P.O. Box 116
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