PRODUCT MANUAL

Skyraider

17 articles · Complete website edition

Includes all article text, tables and available illustrations. Videos and interactive resources are linked. Printed page numbers restart with each article. Use the clickable contents or PDF bookmarks to navigate.

Contents

01. Welcome to the Skyraider

02. Introduction

03. Disclaimer and Credits

04. Product Support

05. Paint Kit

06. Quick Start Guide

07. Normal Procedures

08. Keybinding Guide

09. Overview - External

10. Overview - Internal

11. Engine and Failures System

12. Fuel System

13. Autopilot System

14. Communication and Navigation Systems

15. Weapons Systems

16. Loading Weapons

17. Deploying and Using Weapons

Miltech Simulations Skyraider

Welcome to the Skyraider

In partnership with Blackbird Simulations

Caution
SIMULATION USE ONLY - DO NOT USE THIS DOCUMENTATION ON A REAL AIRCRAFT
An active internet connection is required on initial activation of the aircraft.

Caution
Beware of Engine Failure Conditions
Familiarize yourself with the system. More information: Engine and Failures System

Note
This product has been independently developed using open-source information. This product is an artistic impression of the aircraft, protected under the 1st Amendment, and does not accurately represent (nor intends to represent) the performance, systems, design and/or features of any real-life aircraft. The depiction of any weapon or vehicle in the simulator does not indicate affiliation, sponsorship or endorsement by any weapon or vehicle manufacturer.

Overview

The Skyraider is a legendary aircraft, renowned for its rugged design, unmatched versatility, and ability to carry an extraordinary payload. Serving with distinction throughout the Korean and Vietnam Wars, the Skyraider earned its place in history as the ultimate close air support and ground-attack platform. It is one of the most important and remembered carrier-based aircraft of the second half of the 20th century, and among the few that successfully transitioned to large-scale land-based operations. With over 3,000 aircraft built and more than four decades of service, it was a true workhorse of military aviation.

The Skyraider saw service from the late 1940s through the early 1980s. It was operated by the entire trio of United States fixed-wing aircraft services (USAF, USN, and USMC), along with other operators such as the British Royal Navy, the Republic of Vietnam Air Force, as well as the French Air Force.

It was nicknamed the ‘Spad’ after the WW1-era French biplane, and saw extensive combat in the theaters of the time, including both the Korean War and Vietnam War, with the Skyraider scoring the first air-to-air gun kill of the Vietnam War against a VPAF MiG-17.

Miltech Simulations has once again partnered with Blackbird Simulations to create a faithful rendition of this aircraft for MSFS2020 and MSFS2024.

Get Started

We've put together some helpful guides for you to get set up with our product quickly and easily.

Requirements

- Microsoft Flight Simulator - PC or Xbox. Latest version available. MSFS2020 or MSFS2024
- A valid product license from Miltechsimulations.com, IniBuilds or the MS Marketplace
- Joystick Controller (Recommended) or Xbox controller

- CPU: Quad-core processor or better.
- GPU: At least 6GB of dedicated memory, Nvidia 1060 or better.
- RAM: 8GB Minimum.
- Hard Disk: At least 4GB Recommended.

Where to Buy?

1. Miltech Simulations: https://miltechsimulations.com/collections/aircraft
2. IniBuilds Store
3. Microsoft Flight Simulator in-game Marketplace

Installation - Miltech Simulations Webstore

Products distributed via Miltechsimulations.com are downloaded and updated via Contrail. Download the Contrail App here: https://cdn-eu.29palms.de/contrail/releases/ContrailSetup.exe

1. Download and Launch Contrail
2. Click on **"Accounts"** on the bottom left corner and "Connect" Miltech Simulations Account (log-in with your Miltech Simulations credentials)
3. Click on **"Downloads"**. Your products will download and install automatically.'

Installation - MS Marketplace

1. Launch Microsoft Flight Simulator
2. Open the Marketplace
3. Search the product
4. Click “Install” and wait for the product to install successfully.

Ready to Fly? ✈

Follow our Quick Start Guide

Removal

The product can be removed from the Contrail App or the MS Marketplace, by clicking on the uninstall button.

Miltech Simulations Skyraider

Introduction

Thank you very much for purchasing Miltech Simulations Skyraider, in partnership with Blackbird Simulations.

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We hope you enjoy the product,

Miltech Simulations.

Characteristics

- Crew: 1
- Length: 38 ft 10 in (11.84 m)
- Wingspan: 50 ft (15.24 m)
- Height: 15 ft 8 in (5.715 m)
- Empty weight: 11,968 lb (5,429 kg)
- Power plant: 1× Wright R-3350-26WD Duplex-Cyclone 18-cylinder air-cooled radial piston engine producing 2,700 hp
- Propeller: 4-bladed Aeroproducts constant-speed propeller
- Propeller diameter: 13 ft 6 in (4.118 m)
- Fuel capacity: 380 U.S. gal (1,400 L) internal; up to 3x 300 U.S. gal (1136 L) external drop tanks

Performance

- Cruise speed: 172 knots (198 mph, 319 km/h)
- Maximum speed: 280 knots (322 mph, 518 km/h) at 18,000 ft (5,500 m)
- Range: 1,144nm (1,316 mi, 2118 km)
- Service ceiling: 28,500 ft (8,700 m)
- Rate of climb: 2,850 ft/min (14.5 m/s)

Miltech Simulations Skyraider

Disclaimer and Credits

Note
SIMULATION USE ONLY - DO NOT USE THIS DOCUMENTATION ON A REAL AIRCRAFT

Note
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Note
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Note
This product has been developed using the available resources. The scope is limited to “As realistic as practical”, and though some systems have been accurately developed, others have been greatly simplified. For that reason, the systems, performance, operations, and procedures shall be considered purely fictional and not representative (nor intends to accurately represent) the real counterpart.

Credits

- Programming: Maryadi, Gabriel V, Chris G, Blackbird Simulations
- 3D Modeling & Texturing, Animations: Gabriel V, Daniel D, Brayan L, Blackbird Simulations
- Flight Dynamics: Maryadi, Gabriel V, Chris G, Jonathan H, ElectronVolt
- Special Effects and Weapon Systems: Maryadi, Gabriel V, Liam T
- Sounds: Maryadi, Echo19 Audio LLC
- Liveries: Vasy, Blackbird Simulations
- Documentation: Gabriel V
- Distribution: Gabriel V, Vantech North America LLC, IniBuilds, Microsoft, Lars Pinkenburg

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Miltech Simulations Skyraider

Product Support

All support for this product will be handled initially by Miltech Simulations. Support is available via our support forum: https://miltechsimulations.talkyard.net/latest

Our support is also offered via email in a 1-to-1 manner, through our Email Address: contact@miltechsimulations.com

For company/business inquiries, please contact hello@vantech.dev

Miltech Simulations Skyraider

Paint Kit

Warning

The use of the Blender Model, as well as the texture files, is EXCLUSIVE FOR THE CREATION OF LIVERIES FOR MILTECH SIMULATIONS A-1 SKYRAIDER. Any other use is strictly prohibited.

This includes:

- Reusing the model for any other application.
- Exporting the model in any format.
- Modifying the model for use in any other application.
- Distributing the model, or textures, to any other third party.

It is strictly prohibited to use this paint kit to create payware livery packs.

Download here: https://www.dropbox.com/t/sm0h6mamiCrZ5gRl

Miltech Simulations Skyraider

Quick Start Guide

Getting Started

The **A1 Skyraider** is a powerful, single-seat attack aircraft equipped with a large radial engine, robust carrier-capable landing gear, and a wide range of mission equipment. This Quick Start Guide is designed to help you get airborne as fast as possible.

What You Need to Know Before Flight

- The aircraft requires **proper mixture, fuel boost, and propeller settings** to start and run smoothly. Good mixture management is required to achieve optimal performance from the engine as you fly higher (e.g., leaner mixtures will increase manifold pressure at higher altitudes, thereby providing more power).
- The **tailwheel locks** for takeoff and landing; unlocking improves taxi maneuvering.

> Caution
> **Beware of Engine Failure Conditions**
> Familiarize yourself with the system. Engine and Failures System

- **Cowl flaps**, **carb air**, and **blower** settings directly affect engine temperatures and performance. High temperatures may lead to engine failures. You may deactivate the engine failure system by switching **off** the **↔ Beacon Audio switch, located on the front panel**, left of the Manifold Pressure Gauge.
- **Negative G and Inverted Flight Limitations:** The fuel system is gravity-fed. **Negative-G or inverted flight beyond 5-10 seconds** will cause fuel starvation and complete engine loss. You may deactivate these conditions by using the Beacon Audio switch as explained above.
- **Propeller Collision Risk:** The A-1H's large four-blade propeller sits **low** to the ground. Any prop-to-ground contact causes instant and catastrophic engine failure. You may deactivate collision detection using the Beacon Audio switch as explained above.
- Takeoff and landing speeds vary depending on **field** or **carrier** operations, and weight of the aircraft. Optimal landing speed for a 3-point landing is 80 knots, with approach speeds of 90-100.
- The aircraft configuration varies slightly between variants. A1-H features a dive break, weapons system and supports external fuel tanks. AD-3W and AD-4W Variants do not support external fuel tanks or weapons, nor have a dive break.
- This aircraft uses the **PMS GTN750 GPS** module, which is a **required PC** download to enable full GPS and navigation functionality. You can download the PMS GTN750 for free from the official developer's website: https://pms50.com/msfs/

This download is **not required on Xbox**

Starting the Aircraft

We strongly recommend reviewing the Keybinds Guide and configure your controls accordingly.

Follow our checklists for detailed startup procedures: Normal Procedures

Quick System Overview

Autopilot Systems

What might come as a surprise to those not familiar with the aircraft, the Skyraider comes fitted with an autopilot, albeit a very primitive one.

This autopilot system only provides PITCH and ROLL hold modes. For more information, Autopilot System

Weapons Systems

The Skyraider features a comprehensive and historically inspired weapons suite, offering an extensive selection of rockets, bombs, and forward-firing guns modeled within the limitations of Microsoft Flight Simulator.

While the system delivers immersive visuals, authentic handling, and functional release logic, it is restricted to PC and is **unavailable on Xbox or Marketplace copies** due to platform rules. All armament operates cosmetically only: rockets, bombs, and guns produce visual and training effects without damage, scoring, or network synchronization, ensuring a realistic but non-destructive representation of the Skyraider's ground-attack capabilities.

More information: Weapons Systems

Communications

The Skyraider is originally equipped with a UHF radio set, which historically served as the aircraft's primary communication system. For MSFS functionality and compatibility with AI and online traffic, this panel has been adapted to operate on VHF frequencies instead. Additional radio tuning and controls are also available through the PMS GTN750 unit.

For more information, Communication and Navigation Systems

Navigation

The Skyraider's navigation suite blends period-accurate equipment with modern avionics. Its primary navigation aid is the Automatic Direction Finder (ADF) to follow NDB-Based navigation. For contemporary operations, the aircraft also incorporates the PMS GTN750 GPS as an optional secondary aid, providing full modern flight-planning, VOR/ILS tuning, and moving-map capabilities.

For more information, Communication and Navigation Systems

Configure Aircraft

The aircraft is equipped with a Tray Table configuration system, which allows you to manage all external stores and fuel options. From this panel, you can load weapons onto the pylons, set gun ammunition, and install external tanks or additional fuel as needed.

For more information, Loading Weapons



Engines and Failure Systems

The A1 Skyraider is powered by the Wright R-3350, one of the most powerful piston engines ever fitted to a single-engine aircraft. The A1H Skyraider’s radial engine requires careful management of manifold pressure, cylinder head temperature (CHT), and water-injection duration. Exceeding the limits below may result in partial or complete engine failure.

Refer to the Engines page: Engine and Failures System

Miltech Simulations Skyraider

Normal Procedures

Caution

Beware of Engine Failure Conditions

Familiarize yourself with the system. More information: Engine and Failures System

PRE-START

Hydraulic Bypass ..... IN\ Fuel Selector ..... MAIN\ Fuel Boost ..... ON\ Tailwheel ..... LOCKED\ Aileron Boost Release ..... WIRED\ External Stores Release Handles ..... IN\ Dive Brakes ..... RETRACT\ Oil Cooler ..... AUTO\ Cowl Flaps ..... OPEN\ Flaps ..... UP\ Carb Air ..... DIRECT\ Blower ..... LOW\ Throttle ..... 3/4 INCH FWD (900-1100 RPM)\ Prop ..... FULL INCREASE\ Mixture ..... IDLE CUTOFF\ Canopy ..... OPEN\ Oxygen .....100% - 1100 LBS MINIMUM, MASK CONNECTED\ Gear Handle ..... DOWN\ Magnetos ..... OFF\ Water Injection Switch ..... OFF\ Armament Panel ..... ALL SWITCHES OFF\ Altimeter ..... SET\ Circuit Breakers ..... IN\ Battery Switch ..... ON\ Pitot Heat ..... OFF\ AC Generator ..... ON\ AC Power Switch ..... OFF\ Wing Fold ..... MATCHING WINGS\ Interior Lights ..... OFF (DAY) / ON (NIGHT)

STARTING ENGINE

Manifold Pressure (MAN) ..... CHECK\ Exterior Lights ..... BRIGHT & STEADY\ Throttle ..... CHECK - 3/4 IN OPEN\ External Power (AC Power EXT) ..... CONNECTED EXT\ Fuel Boost ..... ON - 16 PSI MINIMUM\ Outside Area ..... CLEAR\ Starter ..... ENGAGE\ Prop Rotation ..... COUNT 16 BLADES\ Magneto Switches ..... ON - BOTH\ Primer ..... PUSH ON\ Mixture ..... ADVANCE TO RICH

AFTER START

Battery ..... BAT/GEN\ External Power ..... DISCONNECTED\ Fuel Boost Pump ..... OFF, then ON

TAXI

Mixture ..... RICH\ Master Radio Switch ..... ON\ IFF ..... STBY\ Flaps ..... CHECK FULL DOWN, then SET TAKEOFF\ Wings ..... SPREAD IF NEEDED\ Flight Controls ..... WASHOUT\ Exterior Lights ..... BRIGHT & FLASH

GROUND RUNUP

Throttle ..... IDLE STOP\ Magnetos ..... BOTH\ Brakes ..... ON\ Throttle ..... 1600 RPM\ Propeller ..... FULL DECREASE\ Propeller ..... FULL INCREASE\ Blower ..... HIGH, then LOW\ Boost Pump ..... ON\ Throttle ..... 1600-1800 RPM\ Fuel Selector ..... SWITCH TO EXTERNAL TANKS\ Boost Pump ..... OFF\ Fuel Selector ..... MAIN\ Primer ..... MOMENTARY PRIME\ Mixture .....SLOWLY TOWARD IDLE CUT-OFF, then FULL RICH

PRE-TAKEOFF

Fuel ..... MAIN TANK - CHECK QTY & PRESS\ Fuel Boost ..... ON\ Mixture ..... RICH\ Propeller ..... INCREASE\ Blower ..... LOW\ Carb Air ..... DIRECT\ Cowl Flaps ..... OPEN\ Wing Lock ..... LOCKED\ Canopy ..... CLOSED (Field) / OPEN (Carrier)\ Controls ..... CHECK\ AC Power Switch ..... INT

FIELD TAKEOFF CONFIGURATION

Rudder Trim ..... 5° NOSE RIGHT\ Horizontal Stabilizer ..... 0°\ Aileron Tab ..... 0°\ Flaps ..... 1/2\ Tail Wheel ..... LOCKED\ Canopy ..... CLOSED

DECK LAUNCH CONFIGURATION

Rudder Trim ..... 6° NOSE RIGHT\ Horizontal Stabilizer ..... 2° NOSE UP\ Aileron Tab ..... 6° RIGHT WING DOWN\ Flaps ..... FULL\ Tail Wheel ..... UNLOCKED\ Canopy ..... OPEN

CATAPULT LAUNCH CONFIGURATION

Rudder Trim ..... 6° NOSE RIGHT\ Horizontal Stabilizer ..... 2° NOSE UP\ Aileron Tab ..... 6° RIGHT WING DOWN\ Flaps ..... FULL\ Tail Wheel ..... UNLOCKED\ Canopy ..... OPEN

TAKEOFF

Brakes ..... HOLD\ Throttle ..... 60%\ Brakes ..... RELEASE\ Stick ..... FULL BACK\ Throttle ..... FULL POWER\ Airspeed ..... 15 KIAS - RELEASE STICK\ Airspeed ..... 90-95 KIAS - ROTATE\ Landing Gear ..... UP WHEN SAFE

CRUISE

Airspeed ..... 140-150 KIAS (Climb)\ Cowl Flaps ..... SET FOR CHT 160-200°F\ Boost Pump ..... OFF\ Climb Power ..... 45.5 MAP\ Cockpit Sweep & Instruments ..... COMPLETE\ Mixture ..... NORMAL - LEAN AS ALTITUDE INCREASES\ Cowl Flaps ..... AS REQUIRED

LANDING

Armament ..... SAFE\ Fuel ..... MAIN TANK\
Fuel Boost ..... ON\ Mixture ..... RICH\
Blower ..... LOW\ Carb Air ..... DIRECT

FIELD LANDING

Tailwheel ..... LOCKED\ Hook ..... UP or DOWN (as required)\ Dive Brake ..... CLOSED\ Wheels ..... DOWN\ Flaps ..... FULL DOWN ON BASE (≈130 KIAS)\ Engine ..... 20 MAP ON BASE\ Propeller ..... INCREASE\ Brakes ..... OFF\ Canopy ..... CLOSED (Field) / OPEN (Carrier)\ Final Speed ..... 90-95 KIAS\ Touchdown Speed ..... 80-85 KIAS

CARRIER TRAP

Tailwheel ..... LOCKED\ Hook ..... DOWN\
Dive Brake ..... CLOSED\ Wheels ..... DOWN\
Flaps ..... FULL DOWN\ Propeller ..... INCREASE\ Brakes ..... CHECKED\ Canopy ..... OPEN\ Approach Speed ..... 88-95 KIAS\ Altitude ..... 350 FEET

AFTER LANDING

ON FIELD

Flaps ..... UP\ AC Power Switch ..... OFF\ Fuel Boost Pump ..... OFF\ Non-Essential Electrical ..... OFF

ON CARRIER

Hook and Flaps..... UP\ Wings ..... FOLDED\ Tailwheel ..... UNLOCK\ Runway ..... VACATE ASAP

SHUTDOWN

Engine ..... IDLE\ Mixture ..... LEAN UNTIL ~50 RPM DROP, THEN SET\ Radio & NAV Gear ..... SECURED\ Mixture ..... IDLE CUTOFF\ Fuel Selector ..... OFF\ Magnetos ..... OFF\ Battery ..... OFF\ Lights ..... ALL OFF

Miltech Simulations Skyraider

Keybinding Guide

Caution
Ensure that your **elevator and aileron control curves are set to fully linear**.\ The aircraft's control response is designed for linear input, and using any non-linear curve can interfere with handling and negatively impact your flying experience.

Note
CLICKABLE IN COCKPIT COLUMN
: There is no clickable switch in the cockpit, keybind/axis bind must be used
: There is a physical button in the cockpit, keybind is optional

Primary Flight Controls

Description	Keybind	Clickable in Cockpit/Notes
Throttle	THROTTLE AXIS	
Elevator	ELEVATOR AXIS	
Aileron	AILERONS AXIS	
Rudder	RUDDER AXIS	
Parking Brake (Toggle Wheel Chocks)	TOGGLE PARKING BRAKE	. Skyraider didn't have a Parking Brake. Aircraft would be chocked down when stationary on the ground; otherwise, the pilot would hold the brakes. We have enabled TOGGLE PARKING BRAKE keybind as "Toggle Wheel Chocks"
Flaps	INCREASE FLAPS RETRACT FLAPS OR FLAPS AXIS	, when using Increase/Retract keybinds, one must press+hold the key until flaps are extended/retracted to the desired position.
Mixture	SET MIXTURE RICH SET MIXTURE LEAN OR MIXTURE AXIS (0 TO 100%)	
Propeller RPM Control	INCREASE PROPELLER PITCH DECREASE PROPELLER PITCH OR PROPELLER AXIS	
Elevator Pitch	ELEVATOR TRIM UP ELEVATOR TRIM DOWN	
Aileron Pitch	AILERON TRIM LEFT AILERON TRIM RIGHT	

Description	Keybind	Clickable in Cockpit/Notes
Supercharger (Blower)	TOGGLE PRIMER 4	
Landing Gear	TOGGLE LANDING GEAR	
Wing Fold	TOGGLE WING FOLD	
Tail Hook	TOGGLE TAIL HOOK HANDLE	
Tail Wheel Lock	TOGGLE TAIL WHEEL LOCK	
Dive Brake (airbrake)	TOGGLE SPOILERS	

Autopilot System

Description	Keybind	Clickable in Cockpit/Notes
Autopilot Master	AUTOPILOT MASTER	
Increase Pitch Reference (UP)	INCREASE AP PITCH HOLD REFERENCE	
Decrease Pitch Reference (DN)	DECREASE AP PITCH HOLD REFERENCE	
Increase Bank Reference (RIGHT)	INCREASE AUTOPILOT REFERENCE ALTITUDE	
Decrease Bank Reference (LEFT)	DECREASE AUTOPILOT REFERENCE ALTITUDE	

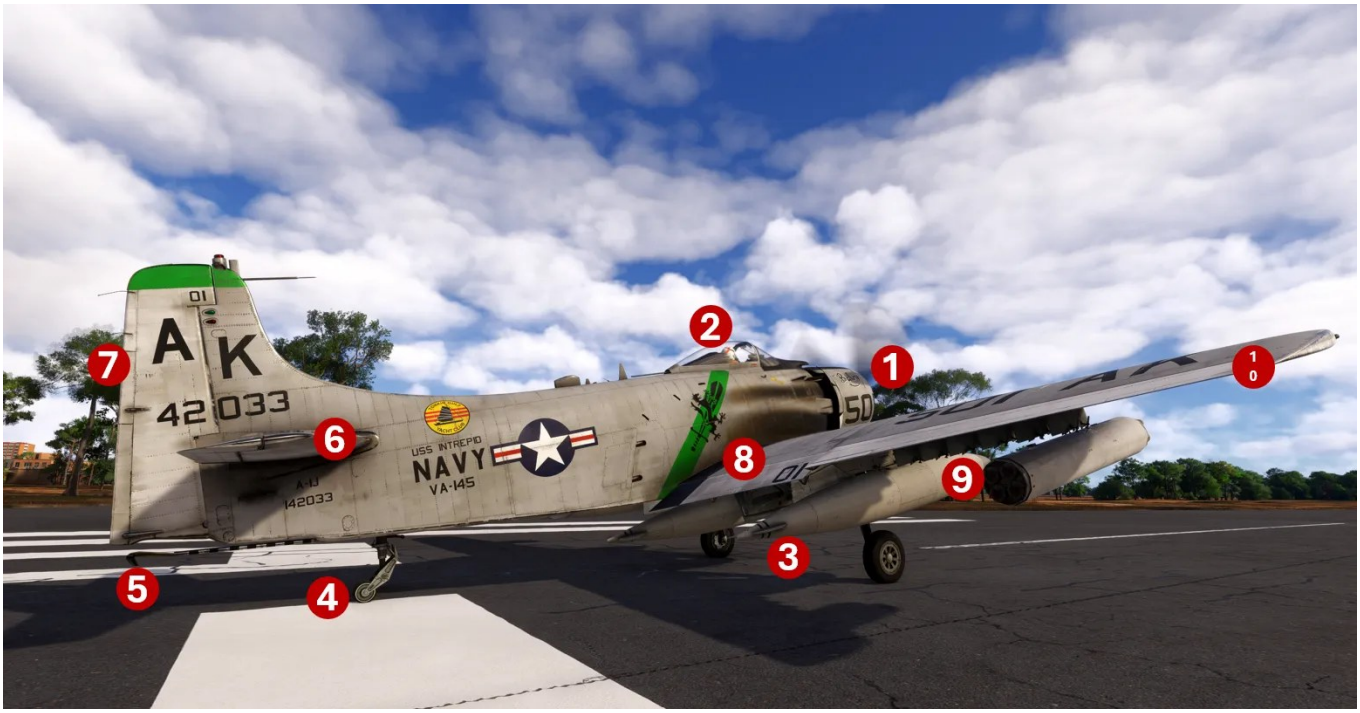
Weapon Systems

> Warning
> Do not use on Xbox or Marketplace Copies. Weapon systems are not supported, and using these keybinds may lead to CTDs.

Description	Keybind	Clickable in Cockpit/Notes
Shoot Guns	ELT OFF	, More info Deploying and Using Weapons
Release/Shoot Weapons (Missiles, Bombs)	TOGGLE WATER RUDDER (FS20 and FS24) or ANNUNCIATOR SWITCH OFF (FS24)	, Same keybind is used for all, however, only shoots the selected and armed weapon. More info Deploying and Using Weapons

Miltech Simulations Skyraider

Overview - External



1. **Engine and Propeller**
2. **Canopy**
3. **Main Landing Gear**
4. **Tail Landing Gear**
5. **Tail Hook**
6. **Horizontal Stab and Elevators**
7. **Vertical Stab and Rudder**
8. **Flaps**
9. **Pylons/Weapons/Fuel Tanks**
10. **Aileron**

Miltech Simulations Skyraider

Overview - Internal

Front Instrument Panel



Front Panel

1. **↔ Compass Control Switch**
2. **Accelerometer (G-Meter)**
3. **Radar Altimeter:** Displays radar altitude up to 20,000ft
4. **Gun Sight Elevation Control:** For display only, no function in-sim
5. **Magnetic Compass**
6. **↔ Marker Beacon Switch:** Used to deactivate engine failures (inversions, overRPM, negative G, collisions).
7. **Manifold Pressure Indicator (MAN)**
8. **Airspeed Indicator,** in Knots
9. **Attitude Indicator (ADI)**
10. **Radio Magnetic Indicator:** Functional compass. The thin needle will point towards the ADF Station. The wide "double needle" will point at VOR1, as tuned on the GPS Unit.
11. **LABS:** Search radar, will display nearby traffic. This instrument can also be swapped by a GTN750 GPS by clicking the button on #31.
12. **▣ Fuel Quantity Test Button**
13. **Fuel Quantity Indicator**

14. **Engine RPM Indicator**
15. **Barometric Altimeter** and Altimeter Setting Knob
16. **Turn Coordinator**
17. **Engine Elapsed Time Indicator**
18. **Vertical Speed Indicator**
19. **Engine Gauge Unit:** Displays engine Oil Temperature, Oil pressure and Fuel Pressure.
20. **Range/Course Indicator:** Used to intercept VORs and ILS Systems. The VOR Frequency is exclusively entered via the PMS50 GPS System.
21. **Wheels and Flaps Position Indicator**
22. **↔ Magneto Switch**
23. **↔ Water Injection Switch**
24. **Armament Panel:** More information on Deploying and Using Weapons
25. **CHT Indicator:** Cylinder Head Temperature indicator. More information on Engine and Failures System
26. **Generator Warning Light**
27. **OAT/Carb Air Temperature**
28. **Clock**
29. **Tail Hook Handle**
30. **▣ Toggle Gunsight Button**
31. **▣ Toggle GPS/Radar Scope Button**

Left Instrument Panel

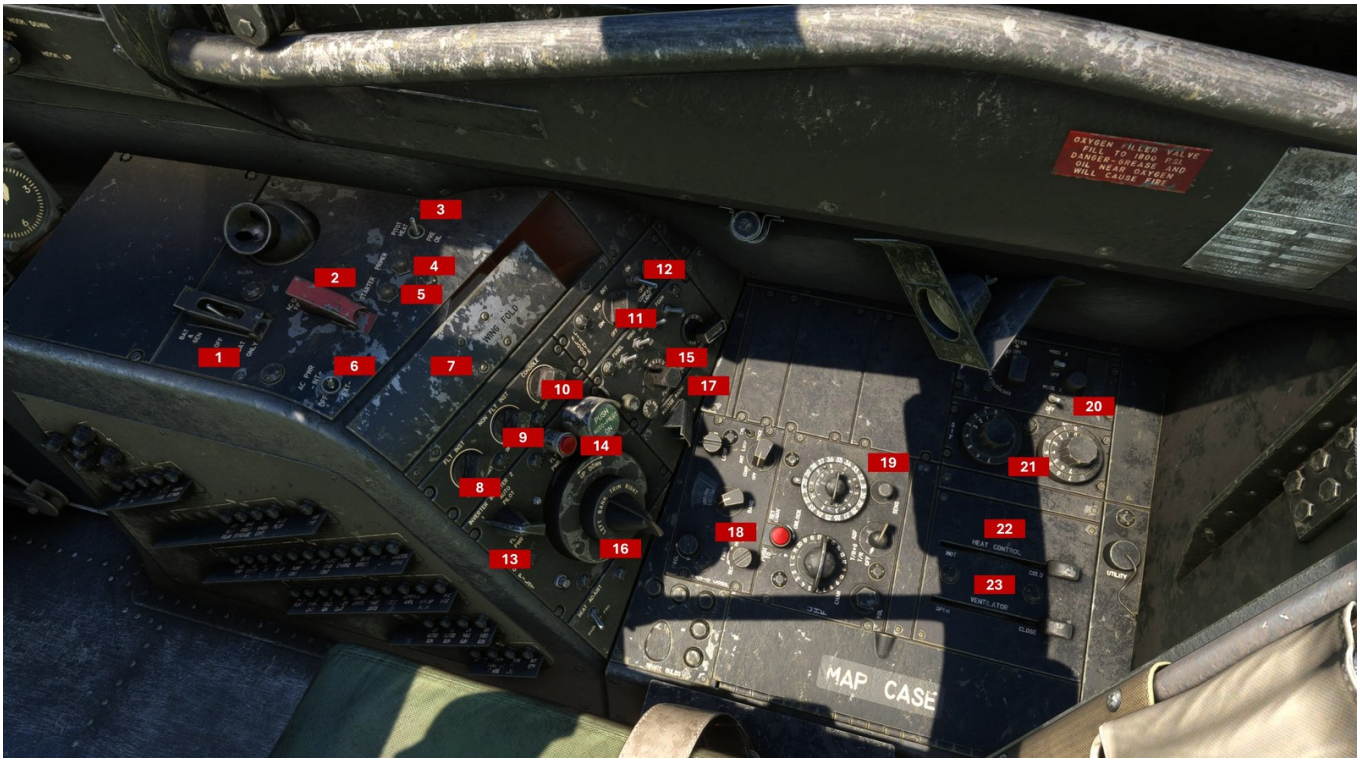


Left Side Panel

1. **Hydraulic Emergency Bypass:** No function in-sim.
2. **Autopilot Emergency Release:** Emergency disconnect for the Autopilot System.
3. **Tailwheel Lock Control:** Locks/Unlocks the tail wheel.
4. ↔ **Fuel Boost Switch:** Boost fuel pressure, used during the startup procedure.
5. ◇ **Fuel Tank Selector:** Select fuel tank source - OFF, MAIN, LEFT/RIGHT/CENTER Drop tanks. Note that if the selected tank is not installed or empty, the engines will shut down due to fuel starvation.
6. **Emergency Hydraulic Pump:** No function in-sim.
7. **Rudder Trim Control:** Use this knob to adjust Rudder Trim. Trim setting will display on the indicator.
8. **Aileron Boost Release:** No function in-sim.
9. **Elevator Trim Control:** Use this lever to adjust Elevator Trim. Trim setting will display on the indicator.
10. **Dive Brake Control:** Extend/retract the Dive Brake. Dive Brakes are only equipped on the A1-H variant of the Skyraider. Other variants do not have this lever.
11. **Aileron Trim Controls:** Use this knob to adjust Aileron Trim. Trim setting will display on the indicator.
12. ↔ **Cowl Flap Switch:** Open/close the Cowl Flap. Center position is "Automatic" - the aircraft will automatically manage Cowl Flaps based on temperatures.
13. **Mixture Control:** Adjusts the air-to-fuel mixture. Moving the lever forward selects *Rich* (higher fuel proportion), while pulling it aft progressively leans the mixture. Beyond the aft detent, the lever enters the Fuel Cutoff position.
14. **Propeller Control:** Increase/Decrease the Propeller RPM. More information Engine and Failures System
15. **Oil Cooler Door Control:** Open/AUTO/Closed. More information Engine and Failures System
16. **Throttle Control:** Increase/decrease throttle. More information Engine and Failures System
17. **Supercharger Control:** More information Engine and Failures System
18. **Inboard Bomb Release:** Release (jettison) all weapons or fuel tanks attached to the three inboard pylons, under the aircraft fuselage.
19. **Outboard Bomb Release:** Release (jettison) all weapons attached to the outboard pylons, on the folding part of the wings.
20. ↔ **Canopy Jettison Switch:** Not implemented.
21. **Canopy Control Lever:** Open/Close the aircraft Canopy.
22. **Wing Flap Control:** Extend and Retract Wing Flaps.
23. ↔ **Canopy Jettison Test Switch:** Not implemented.
24. **Canopy Jettison Test Light:** Not implemented.
25. ↔ **Carburetor Air Switch:** More information Engine and Failures System
26. **Oxygen Supply Control:** Close/Open Oxygen Supply.
27. **Oxygen Saturation:** Control the Oxygen Saturation.
28. **Oxygen Quantity Indicator**
29. **Gear Horn Silence:** Not modeled.

30. **Landing Gear Lever:** Release and Fold the Landing Gear. Requires hydraulic pressure to operate.

Right Instrument Panel



Right Side Panel

1. ↔ **Battery/Gen Switch:** BAT ONLY/OFF/BATTERY AND GENERATOR. Power up the aircraft. When engine is running, it must be set to Battery and Generator.
2. **AC Generator Field:** No simulator function.
3. ↔ **Pitot Heat Switch:** Turns on/off Pitot Heat.
4. ↔ **Engine Primer Switch:** More information Engine and Failures System
5. ↔ **Engine Starter Switch:** Engine Starter Switch. More information Engine and Failures System
6. ◇ **AC Power Selector Switch:** Selects Interior/OFF/Exterior (GPU) AC Power source. When set to Exterior and on the ground, the Ground Power Unit will display externally on the ground, and will be connected to the aircraft.
7. **Wing Fold Control:** Pulling this lever will fold the wings. Note that hydraulic pressure is required to fold/unfold the wings (eg. engines must be running).
8. **Flight Instrument Lighting:** Increase/decrease brightness of flight instruments (gauges) lights.
9. **Non-Flt Instrument Lighting:** Increase/decrease brightness of non-flight instrument lights.
10. **Console Lighting:** Increase/decrease brightness of console lights (backpanel lighting).
11. **Flood Light Brightness:** Increase/decrease the brightness of red flood lights.
12. **Compass Light Brightness:** Increase/decrease the brightness of compass lights.
13. ↔ **Autopilot Inverter Switch:** Selects the power source to the Autopilot System. More information Autopilot System

14. **Autopilot Clutch:** Autopilot Master Switch**.** More information Autopilot System
15. **Exterior Light Controls:** Controls exterior lighting: Fuselage, Wings, Tail, Formation, and light modes.
16. **Autopilot Controller:** Controls the pitch and roll attitudes held by the autopilot system. More information Autopilot System
17. ↔ **Master Radio Switch:** Powers up the aircraft radios.
18. **Radio Compass Panel:** Automatic Direction Finder Panel (ADF). More information Communication and Navigation Systems
19. **VHF Radio Control Panel:** Very High Frequency Radio Panel. More information Communication and Navigation Systems
20. **IFF Panel:** Information Friend or Foe/Transponder panel. More information Communication and Navigation Systems
21. ◇ **IFF Transponder Code Selector:** More information Communication and Navigation Systems
22. **Ventilator Control Lever:** No simulator function.
23. **Heat Control Lever:** No simulator function.

Miltech Simulations Skyraider

Engine and Failures System

Engine

The A1 Skyraider is powered by the Wright R-3350, one of the most powerful piston engines ever fitted to a single-engine aircraft. This 18-cylinder, two-row radial engine produces approximately 2,700 horsepower, delivering the raw torque and reliability needed for the Skyraider's demanding combat and carrier-based operations.

In the A1 Skyraider (or any large piston-engine aircraft), climb performance is closely tied to the correct balance between throttle, propeller RPM, and mixture.



Engine Failure System

Caution

The Engine Failure System is enabled by default. To disable it, simply turn **off** the **↔ Beacon Audio switch, located on the front panel**, left of the Manifold Pressure Gauge.

- Engine instrument readings (CHT, Manifold Pressure, RPM) become frozen or unresponsive after catastrophic failure. Flaps, dive brakes, etc. will also fail.
- Sound effects and vibration cease gradually as the propeller slows.
- Restart of the engine is **not possible** once a mechanical failure has occurred. Flight must be restarted.

The A1H Skyraider’s radial engine requires careful management of manifold pressure, cylinder head temperature (CHT), and water-injection duration. Exceeding the limits below may result in partial or complete engine failure. The simulation models both cumulative and instantaneous stresses on the powerplant.

1. Cylinder Head Temperature (CHT)

- **Maximum Safe CHT:** 250 °C
- **Behavior:**
- When CHT exceeds 250 °C, the engine begins to experience thermal stress that may lead to detonation and failure.

Cooling Procedures:

- Open the cowl flaps to increase airflow and reduce CHT rise.
- You may use the "Auto" position on the Cowl Flaps switch as a "Set and forget" - the aircraft will automatically manage the cowl flaps based on the temperature.
- Engage water injection to temporarily assist cooling; water supply lasts approximately **30 seconds** of continuous use.
- Reduce manifold pressure and engine RPM to bring CHT back into safe range.

2. Manifold Pressure (MAN)

- **Normal Operation:** ≤ 50 inHg
- **Caution Range:** 50 - 54 inHg
- **Critical Range:** > 54 inHg

Notes:

- Operation above **54 inHg** automatically engages water cooling.
- If the water supply is exhausted, further operation above this limit will cause CHT to exceed safe levels and eventually result in engine failure.
- Continuous operation at **> 57 inHg** is time-limited to a **total of 1000 seconds cumulative** over the entire flight. Exceeding this cumulative duration may trigger permanent engine failure.

4. Fuel and Inverted Flight Limitations

- The engine fuel system is gravity-fed and not fully pressurized.
- **Negative-G flight or Inversions exceeding 5-10 seconds** can cause fuel starvation.
- Recover by re-establishing positive-G and applying mixture and throttle adjustments.

5. Propeller Collision

- The A1H Skyraider’s large, four-blade propeller sits low to the ground and is highly susceptible to damage if excessive pitch, roll, or sink rate is maintained during taxi, takeoff, or landing. Any contact between the propeller and the ground results in **immediate and catastrophic engine failure**.

Power Plant Controls

The throttle, mixture, propeller, and supercharger controls are mounted in a control unit \ installed on the left side of the cockpit. Each control moves through a quadrant in operation. For ease of handling, the engine control unit is plainly marked with the name and position of each control.



From Left to Right: Blower, Throttle, Propeller, Mixture

THROTTLE CONTROL

The throttle control is located on the engine control unit on the left side of the cockpit.

Primary control to monitor is manifold pressure (MAN), which determines how much air (and thus power) the engine is producing. On climb:

- Set full or nearly full throttle up to the maximum allowable manifold pressure.
- As you climb, manifold pressure will drop because air density decreases - you'll need to gradually advance throttle and/or mixture to maintain MAN until you reach full throttle and can't maintain pressure anymore.

MIXTURE CONTROL

Standard mixture controls are implemented. The Mixture Increment and Decrement commands adjust the setting through the entire operational range - from IDLE CUTOFF to FULL RICH (HIGH).

For normal flight operations, the mixture should typically remain within the NORMAL range. The HIGH setting is intended primarily for takeoff and landing, where maximum power is required.

As altitude increases, **air density decreases**, so the **mixture becomes too rich** if not adjusted. During climb:

- **Gradually lean the mixture** as you gain altitude to maintain peak engine performance and prevent fouling.
- Watch **MAP (Manifold Pressure)** or **RPM** - lean until you see a slight rise, then enrich slightly again.
- At cruise, lean more aggressively for efficiency.

The mixture control also plays a vital role in regulating Cylinder Head Temperature (CHT). A leaner mixture results in hotter cylinder temperatures, providing greater fuel efficiency but at increased thermal stress. Pilots should monitor CHT carefully to ensure temperatures remain within operational limits. If CHT becomes excessive, first attempt to open the cowl flaps or reduce throttle before adjusting the mixture. Avoid abrupt or unnecessary mixture changes unless operationally required.

PROPELLER CONTROL

The constant-speed propeller control is located directly to the left of the mixture control. Move the control up to increase RPM, and down to decrease RPM.

Note
Note: Maximum RPM should be used **for takeoff only**.

This control adjusts the constant-speed unit (governor). The control itself does not directly alter the blade angle. Rapid changes in either throttle or propeller control settings may cause the engine RPM to momentarily overshoot the selected value before stabilizing. Smooth and deliberate adjustments are recommended to maintain optimal performance and prevent unnecessary stress on the engine and propeller system.

↔ WATER INJECTION MASTER SWITCH

The Water Injection Switch is used to harness the additional power produced by reducing the fuel-air mixture temperature during high-power operations.

When activated, a mixture of water and methyl alcohol is injected into the engine induction system, lowering the charge temperature and allowing for higher manifold pressures without detonation.

SUPERCHARGER (BLOWER) CONTROL

The Skyraider’s engine is equipped with a two-stage supercharger induction system, consisting of a main stage impeller driven directly by the crankshaft and an auxiliary stage impeller that operates through oil-actuated clutches. These clutches allow the auxiliary impeller to engage in either of two fixed gear ratios-Low Blower or High Blower.

The High Blower setting should be used only when the desired manifold pressure can no longer be maintained in Low Blower, ensuring maximum available power at higher altitudes. Specifically, the shift to High Blower should not be made until it is impossible to obtain 50 inHg of manifold pressure at full throttle in Low Blower. To prevent unnecessary mechanical strain and maintain engine reliability, transitions between blower stages should not occur more frequently than once every five minutes.

COWL FLAP CONTROL

The cowl flap control switch is located directly below the mixture control. The cowl flaps are fully opened automatically whenever compression of the landing gear struts is detected, so manipulation of the control on the ground should be unnecessary.

The flaps should not be closed while on the ground, but can be adjusted to the pilot's preference in order to maintain and regulate CHT. Open about two-thirds for takeoff and climb and closed, or open slightly if required for high-speed and cruising level flight.

↔ CARB AIR SWITCH

The carb air switch is located directly above the flap control switch. This control has two positions: DIRECT and ALT. When in ALT, warm air from the engine accessory section is directed into the carburetor.

OIL COOLER DOOR CONTROL

The control for the oil cooler door is located to the left of the cowl flap control switch. The quantity of cooling air admitted to the oil coolers is regulated by the oil cooler door. In the AUTO mode, the door is thermostatically operated; however, it may also be manually positioned at the pilot’s discretion by moving the switch to either OPEN or CLOSE.

Miltech Simulations Skyraider

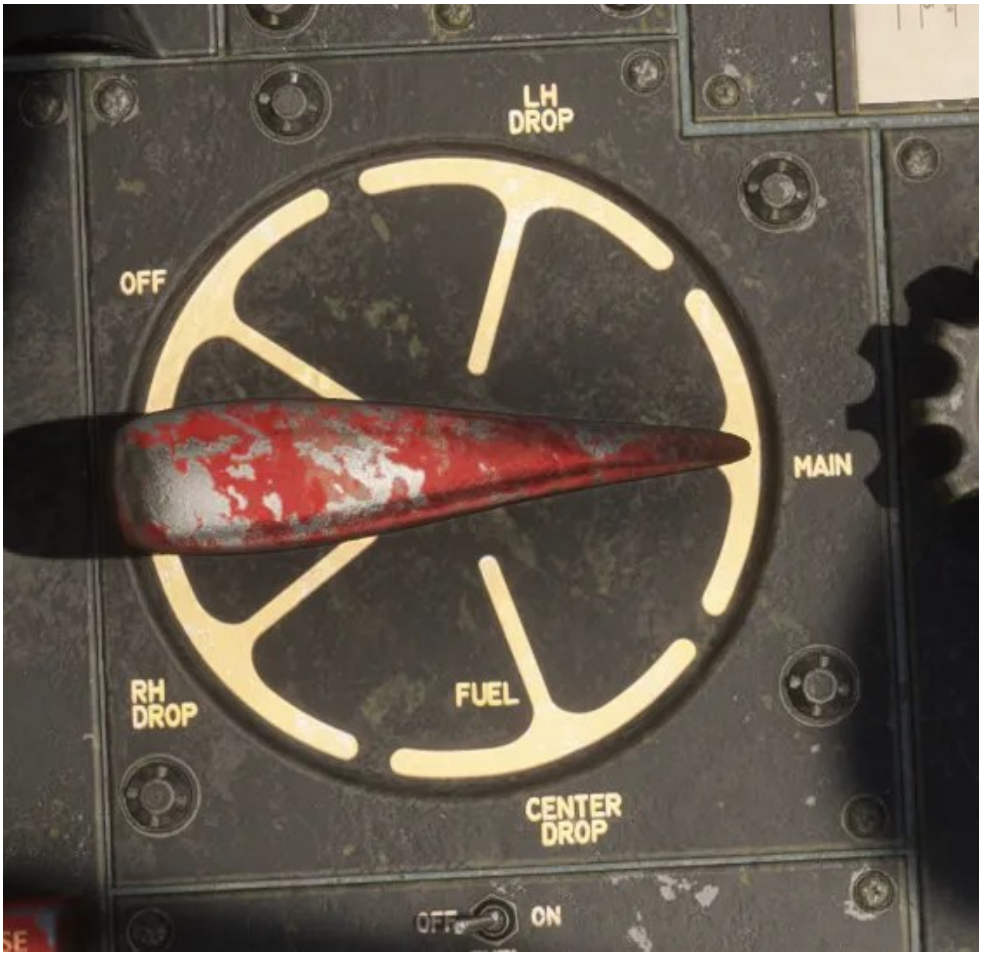
Fuel System

Caution
External Fuel Tanks are only available on the A1-H Variant. AD-3W and AD-4W Variants do not support external fuel tanks at this time.

The Skyraider carries fuel primarily in a single internal tank with a total capacity of **380 gallons**. For extended range operations, the aircraft can also be fitted with up to **three external drop tanks**, each capable of holding an additional **300 gallons** of fuel.

These external tanks are fully optional and can be equipped or removed using the same in-sim Loadout Worktable employed for managing weapons and stores. More information here: Weapons Systems

Active Fuel Tank can be selected using the handle located on the left side of the cockpit. Please note that it takes a few seconds for fuel to start flowing from the new tank when it has been switched.



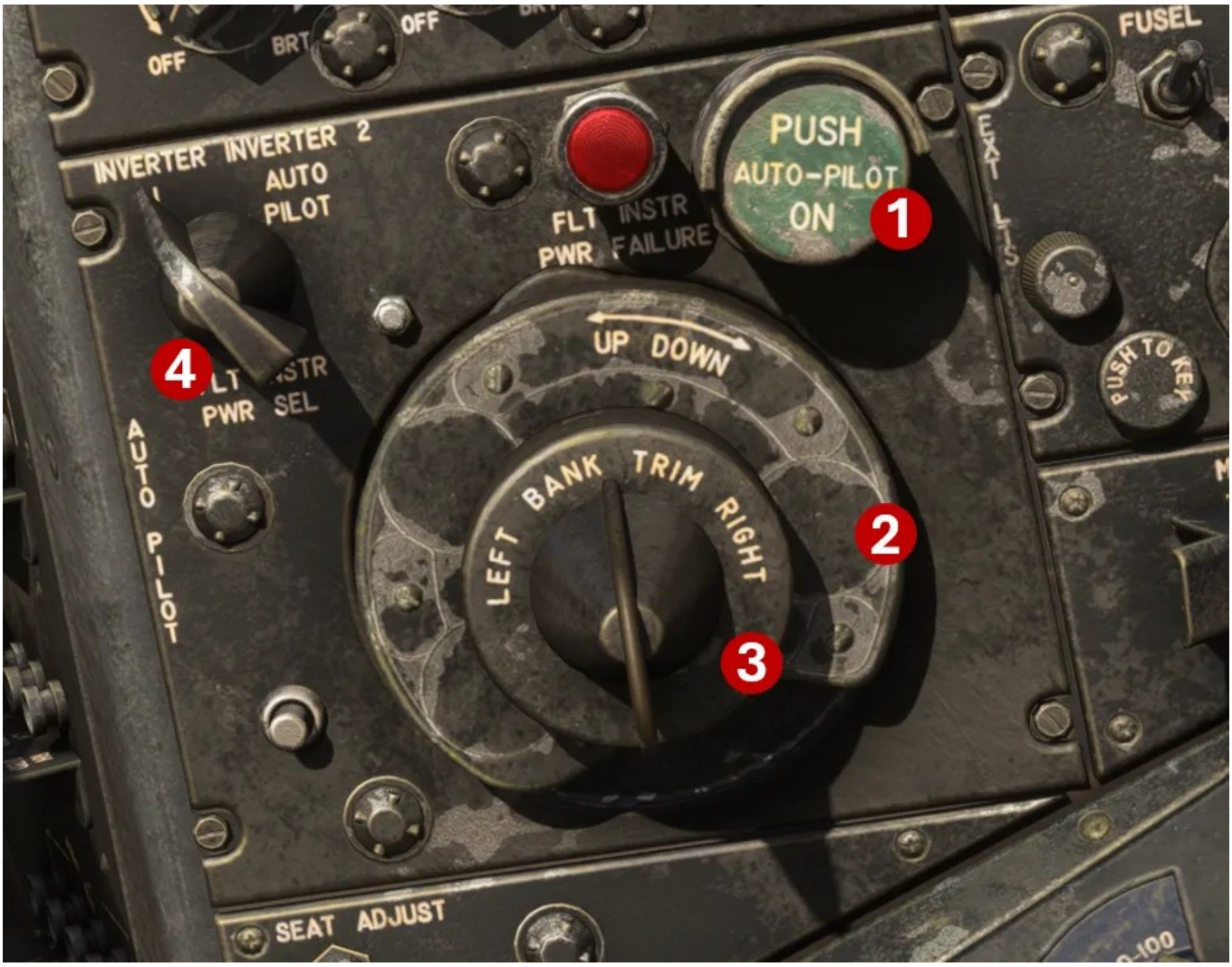
The Fuel Quantity Gauge on the right side of the front panel displays the total fuel quantity, in Pounds. Please note that there is no gauge displaying fuel quantity per individual tank, so you must monitor closely the quantities while flying to avoid starving your engine. You may use the Skyraider Loadout worktable to monitor fuel quantity of each tank individually.

Miltech Simulations Skyraider

Autopilot System

What might come as a surprise to those not familiar with the aircraft, the Skyraider comes fitted with an autopilot, albeit a very primitive (not to mention convoluted) one. The autopilot control panel is located on the right console, next to the light control panel.

This autopilot system is limited to PITCH and BANK Hold control.



Autopilot Panel

1. ↔ **Autopilot Master Switch:** Press this switch to engage and disengage the autopilot system.
2. ◉ **Pitch Up/Down Adjustment Knob:** To climb, turn the pitch-trim control counterclockwise UP. To Dive, clockwise DOWN.
3. ◉ **Bank Left/Right Adjustment Knob:** To bank, turn the bank-trim clockwise to raise the left wing, and counterclockwise to raise the right wing.
4. ↔ **Inverter Switch:** Energizes the system from Inverter 1 or Inverter 2.

To operate the Autopilot System, simply engage the Autopilot Master switch and turn the Pitch and Bank Controls, making small adjustments until the desired attitude is achieved.

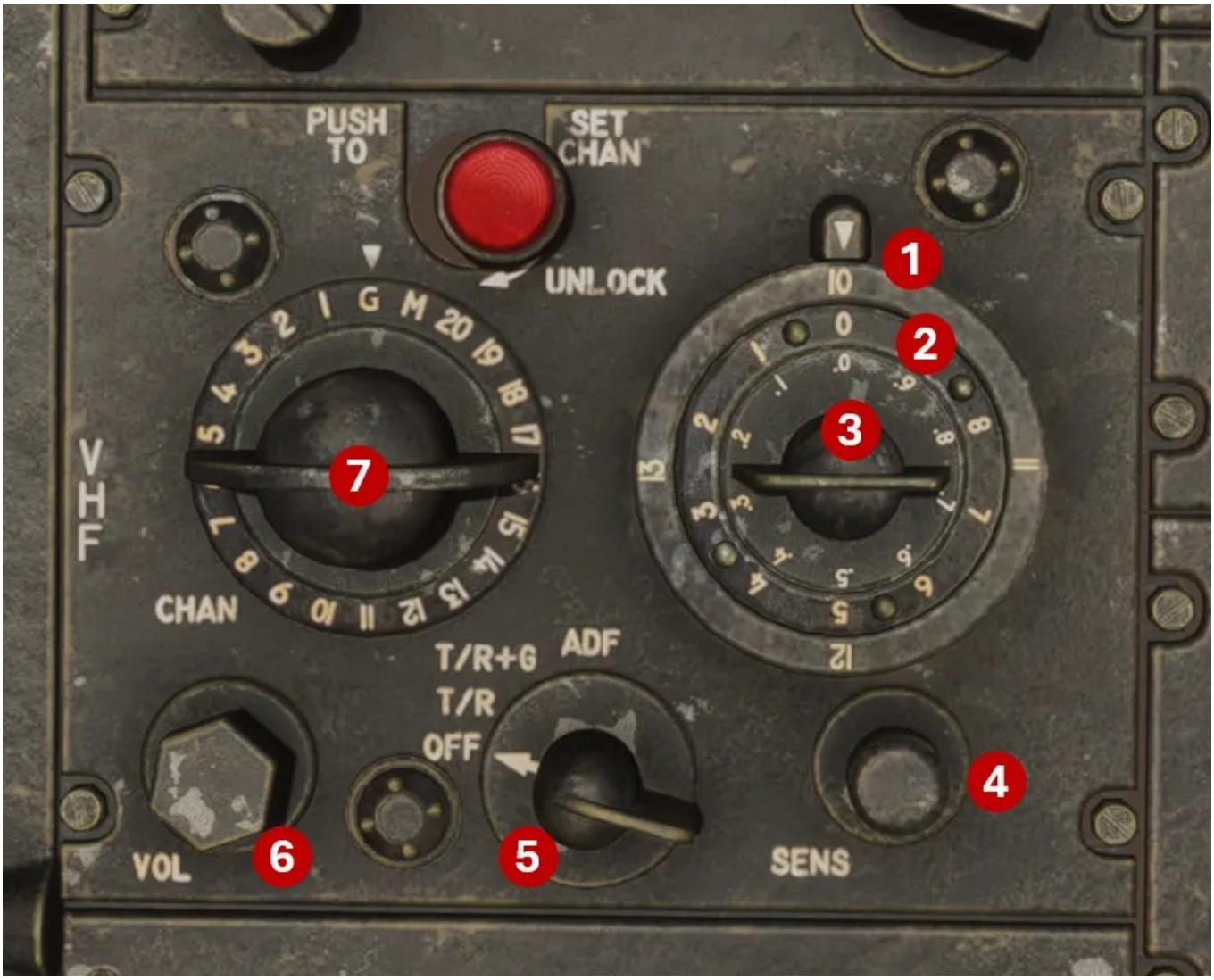
Miltech Simulations Skyraider

Communication and Navigation Systems

Communication Systems

VHF Radio

UHF Radios served as the primary means of communication on aircraft of this era (50s Skyraider). However, due to the limitations of the MSFS Platform, and compatibility with traffic addons (AI or Online), the UHF panel has been adapted to VHF. Additional radio controls are accessible through the PMS GTN750.



VHF Radio

1. ***Hundreds & Tens* Rings:** Used to set the first two digits of the VHF tuning frequency (e.g., **XX0.000**).
2. ***Units* Ring:** Sets the third digit of the frequency (e.g., **00X.000**).
3. ***First Decimal* Ring:** Controls the first digit after the decimal point (e.g., **000.X00**).

4. **Fine-Tune / *Second Decimal*◉ Knob:** Provides fine adjustment for the final two decimal digits (e.g., **000.0XX**). Because older radios do not show the full frequency clearly, refer to the tooltips or the GTN750 display to confirm the exact tuned value.
5. **OFF/Transmit/Receive/AFD:** Not used, only applies to UHF Radios.
6. **Radio Volume Knob.** No in-sim function, radio is set at max volume by default.
7. ◇ **Channel Selector:** Not used, only applies to UHF Radios.

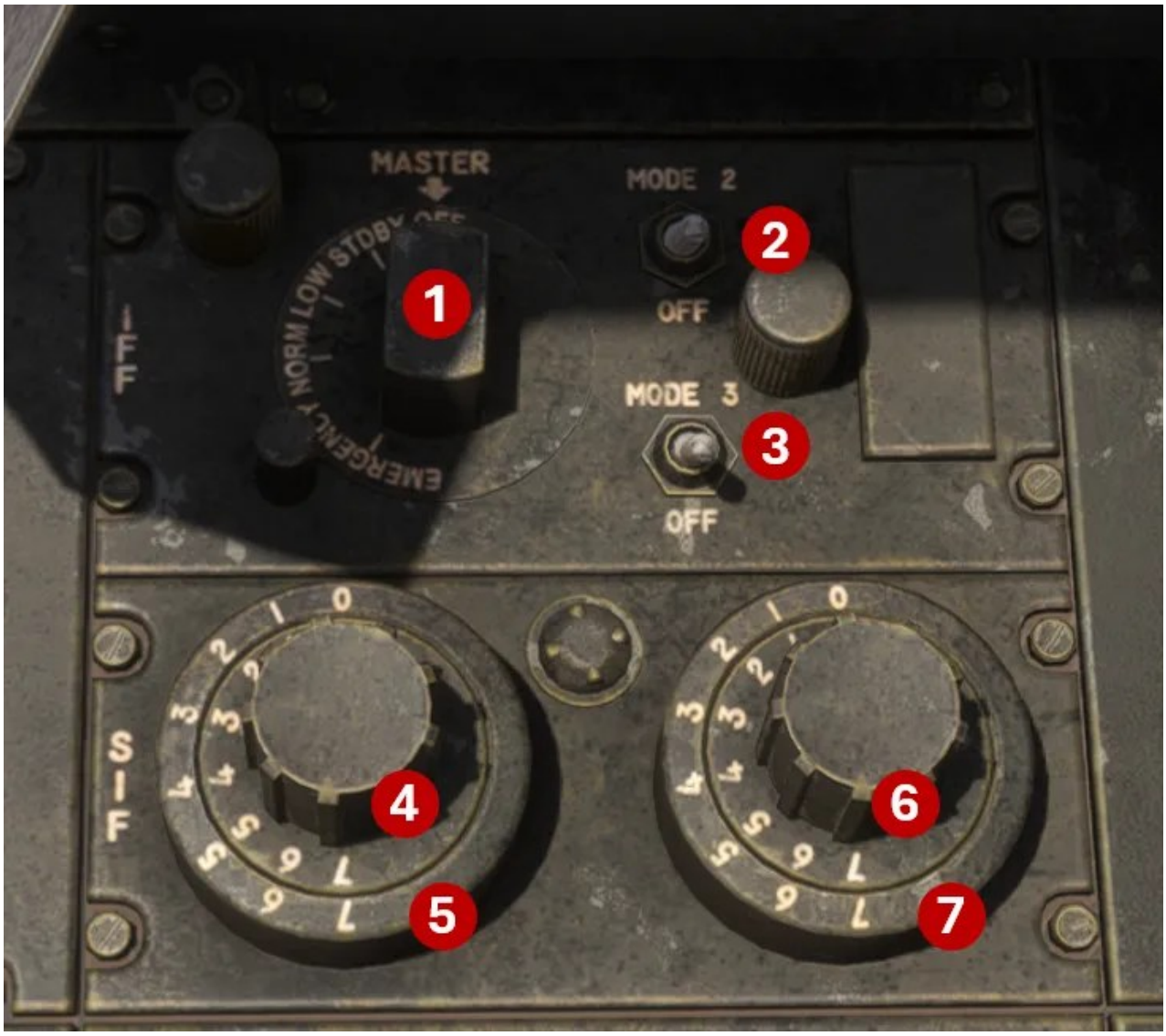
In the example shown above, the radio is set to 100.000, which is not a valid VHF frequency, so no communications will be received. By adjusting the tuning rings, you can set a proper frequency - such as 121.525 - which will allow normal radio operation.

Additionally, VHF/COMM Radios can be easily tuned and managed using the PMS GTN750 Unit.

Transponder

Information Friend or Foe or as known in Skyraider-era aircraft "Selective Identification Feature (SIF)", is an early military identification system that uses coded pulse patterns transmitted by the aircraft's IFF transponder. When interrogated, the aircraft replies with a specific programmed code, allowing friendly units to identify it. Its similar to transponders you may find on today's aircraft.

SIF Codes are entered as four digits, ranging from 0 to 7 (octal). It is the same format used in modern transponders.



Transponder Panel

1. **IFF Mode:** Select Transponder Mode - OFF, Standby, Low, Normal, Emergency.
2. **↔ IFF Mode 2 Switch:** Turn ON for Military Identification (does not apply to MSFS).
3. **↔ IFF Mode 3 Switch:** Turn ON for Civilian Identification (Squawk Code).
4. **SIF Digit 1:** Controls the *thousands* place of the SIF code (e.g., **X000**).
5. **SIF Digit 2:** Controls the *hundreds* place of the SIF code (e.g., **0X00**).
6. **SIF Digit 3:** Controls the *tens* place of the SIF code (e.g., **00X0**).
7. **SIF Digit 4:** Controls the *units* place of the SIF code (e.g., **000X**).

Accordingly, you set the SIF code by rotating each knob until the digits line up vertically. For example, the code **3257** would appear as: **Digit 1 = 3**, **Digit 2 = 2**, **Digit 3 = 5**, **Digit 4 = 7**.

Navigation Systems

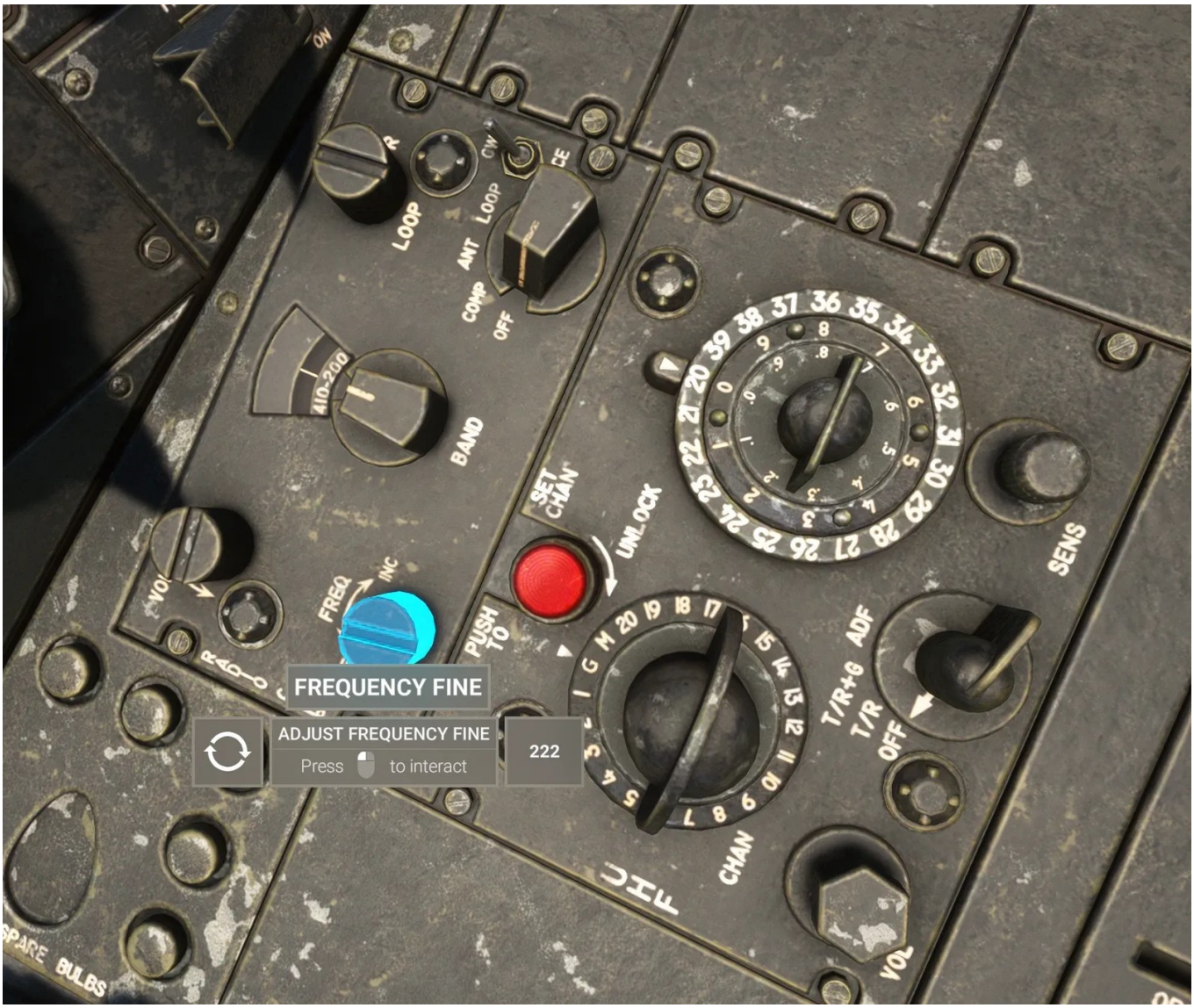
To maintain historical accuracy for this aircraft's era (50s Skyraider), ADF has been implemented as the primary means of navigation. For modern usability, an optional GPS unit (the PMS GTN750) has been integrated as a contemporary secondary navigation aid. VOR and ILS navigation aids are fully supported and can be used through the cockpit instruments. However, their frequencies must be tuned via the PMS GTN750 equipment.

Automatic Direction Finder (ADF)

The Automatic Direction Finder (ADF) is a radio navigation system that allows the aircraft to determine the direction to a ground-based Non-Directional Beacon (NDB). ADF Systems often only provide direction, enabling the pilot to navigate toward or away from the beacon.

Before digital tuners and precise frequency readouts, ADF receivers often used analog tuning dials that would be aurally tuned to the right frequency. The pilot would tune by ear - literally listening to the audio signal transmitted by the NDB beacon. The pilot would select a Band, and then slowly rotate the ADF Frequency knob until they could hear the beacon's Morse code identifier clearly in the headset.

In MSFS, Station Morse codes are not audible, and frequencies must be exact for ADF to function correctly. As such, we have made the exact ADF Code always available on the **tooltips when hovering above the FREQ Knob.**



Note the selected ADF frequency on the Tooltips (222kHz).

1. **Locate RADIO COMP Panel:** The panel is located on the right side panel, above the VHF Radio Panel (Radio Compass Control Unit).
2. ◉ **Use BAND Knob to select the desired Band Range:** The Band selector knob is used to select the desired frequency band of operation. The Band range is displayed on the screen above the knob.
3. 100-200 kHz
4. 200-410 kHz
5. 410-850 kHz
6. 850-1750 kHz
7. ◉ **Use the FREQ Knob to fine-tune to the desired frequency:** The Frequency (FREQ) tuning knob has two indicated directions - DEC and INC. Moving this knob to the right will increase the frequency within the selected band, and moving it to the left will decrease it. Tooltips on this knob will indicate the selected ADF Frequency.
8. ◇ **Set the Mode Selector Switch to COMP (Compass):** When in the COMP (ADF) position, the set receives the beacon signal.
9. **Use the Radio Magnetic Indicator needle** (#10 on the Front Instrument Panel Overview - Internal) to follow the direction of the beacon. The small needle will point towards the ADF Station.



Small Needle displaying bearing to ADF.

PMS GTN750 GPS

Caution
The **PMS GTN750 GPS** module is **required on PC** to enable full GPS and navigation functionality.\ You can download the PMS GTN750 for free from the official developer's website:\ https://pms50.com/msfs/
PMS GTN750 GPS Premium is now available on **MS Marketplace for Xbox**. A valid license of the unit is required on console if you wish to make use of the GPS Unit.

The PMS GTN750 is an advanced avionics suite designed to replicate the Garmin GTN 750 GPS/NAV/COM system within Microsoft Flight Simulator. Developed by PMS50, it integrates modern navigation, communication, and flight-planning features into a single, touchscreen-based interface.

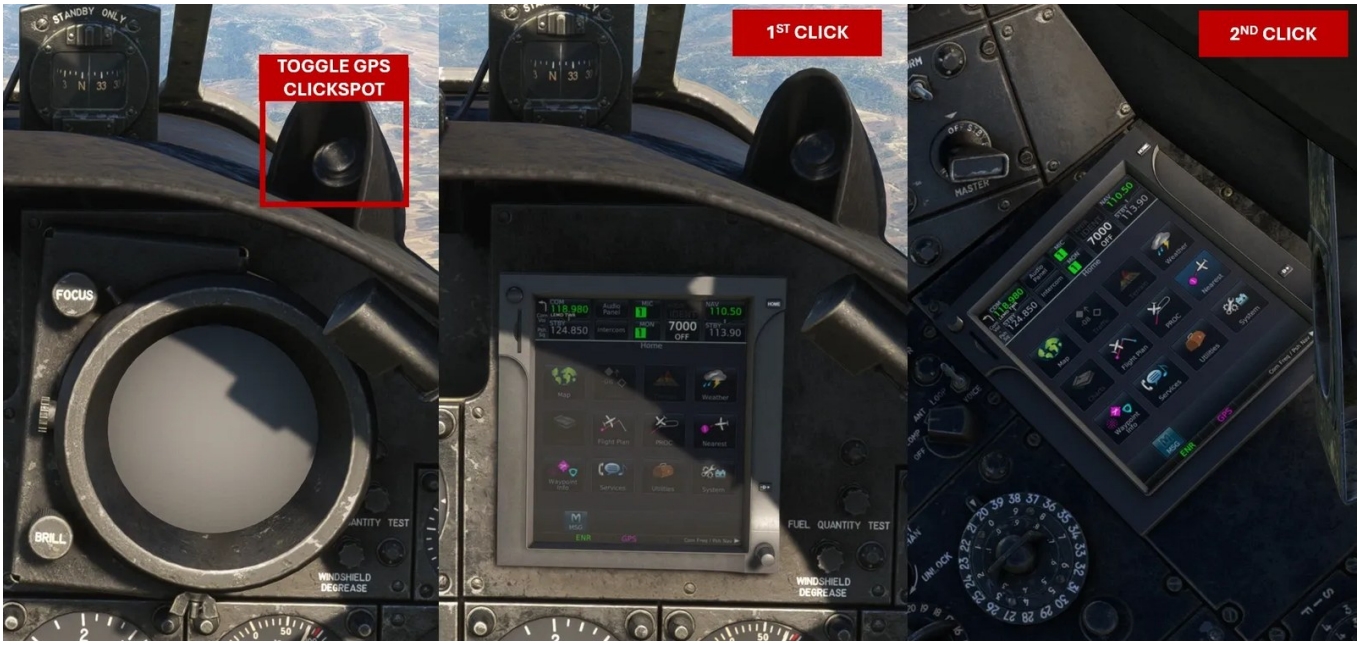
Available in Free and Premium versions, with the latter offering extended features such as weather radar, traffic, and more.

Toggle the GPS Unit

To toggle the GPS Unit, locate the clickspot on the top-right corner of the Front Panel.\ This control allows you to show or hide the GPS display and choose its placement:

- 1ST CLICK: Replace the LABS Radar (front panel position), or
- 2ND CLICK: Move it to the right-side console.
- 3RD CLICK: Hide GPS Unit

This feature lets you customize your cockpit layout, depending on whether you prefer to operate with the LABS Radar or the PMS GTN750 GPS.



Location of the PMS GTN750 Navigation Unit; and Toggle GPS Clickspot

1. GPS

The PMS50 GTN750 GPS provides advanced flight planning and route management capabilities. Pilots can create and modify flight plans directly from the touchscreen interface, including adding, deleting, or editing waypoints. The unit supports direct-to navigation, departure and arrival procedures (SIDs/STARs), and approach selection for both VFR and IFR operations. A moving map displays the active route with real-time aircraft position, terrain, airspaces, and navaids.

Routes are exclusively

2. VOR/ILS

The PMS50 GTN750 is the primary and only input method for VOR and ILS navigation aids on this aircraft. Pilots can manually enter the VOR/ILS Frequencies directly from the touchscreen interface.



NAV Frequency Input

The PMS50 Instrument includes integrated HSI/CDI navigation displays, allowing pilots to track navigation signals directly from the GPS screen. Additionally, the Course-Bearing/OBS Indicator, located on the right side of the front panel, displays the bearing to the tuned VOR station (indicated by the rounded-tip needle) and provides both glideslope and localizer indications during ILS approaches.



Course-Bearing/OBS Indicator on the bottom-right corner indicating direction of VOR Station

Additionally, the bearing to the VOR is displayed on the Radio Magnetic Indicator, where the thick needle indicates the direction of the station.

3. VHF Radio and Transponder

VHF/COMM radios and transponder settings can be conveniently tuned and managed through the PMS GTN750 interface. This does not replace the primary means of input (VHF/IFF Panels on the right ride console, respectively), however, it does provide a convenient input method for the pilot.

Miltech Simulations Skyraider

Weapons Systems

Caution
Weapon Systems are only available on the A1-H Variant. AD-3W and AD-4W Variants are unarmed.

Caution

- Keybinds must be configured for Weapon and Defensive systems to work correctly. Please refer to the Keybind Guide for more information.

The armament selections we have included with the Skyraider are plentiful, and include rockets such as the LAU-68 and LAU-10, dumb bombs like the Mk-82, Mk-83 and Mk-84, the Mk-117 demolition bomb, and even the famous Toilet Bomb (yes, this was actually loaded onto an aircraft and dropped).

Accompanying the bombs, rockets and...sanitation unit are 4, forward-firing 20mm guns mounted in the wing panels with 2 guns per side. Each gun is capable of carrying 200 rounds of ammunition, which equates to a cool 800 20mm rounds to fire into the opposition.

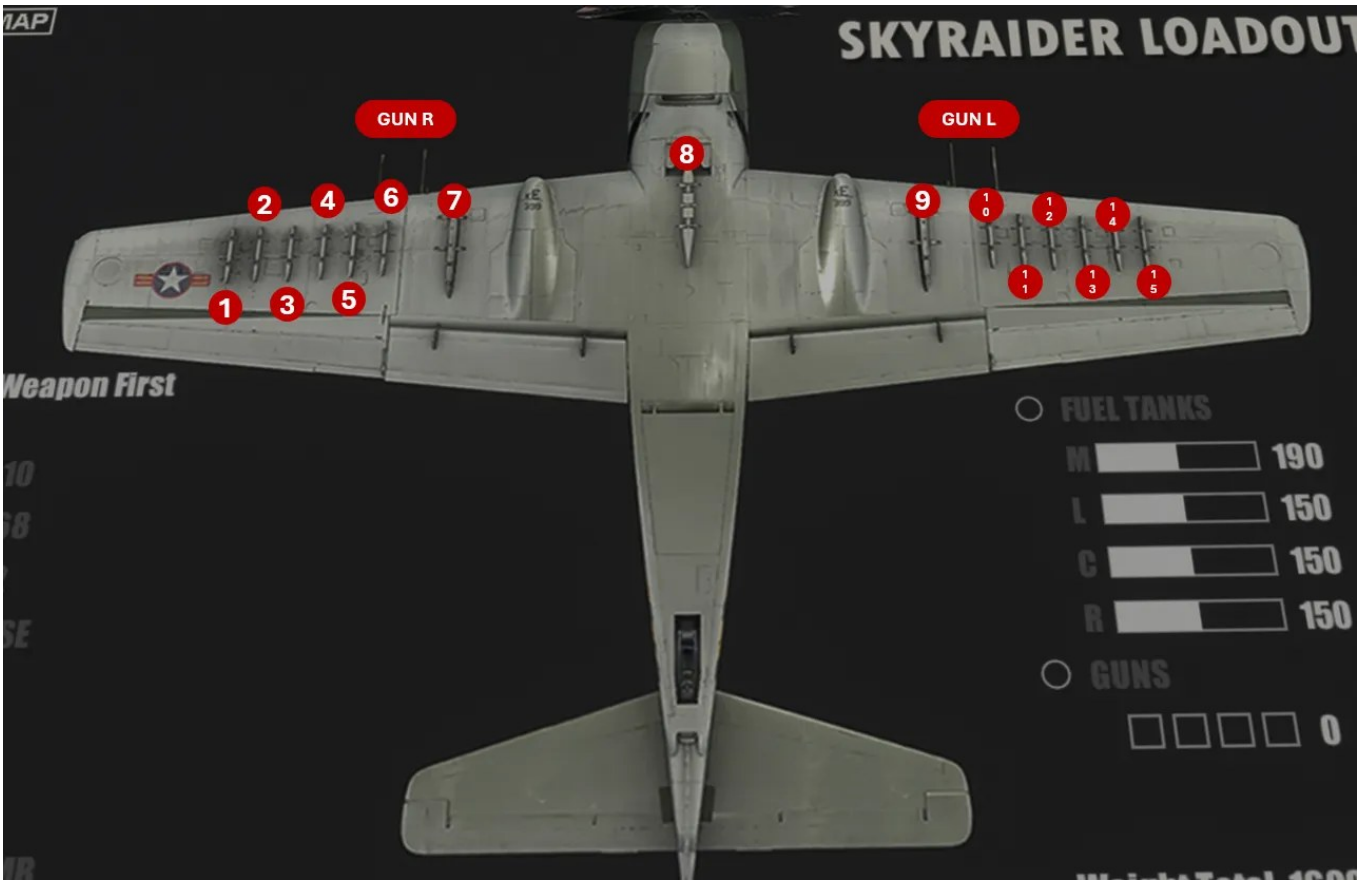
The weapons system is simulated within the limitations of Microsoft Flight Simulator and includes support for both immersive visual effects and functional target engagement.

The Weapons System is designed exclusively for **PC-based installations** and does **not function on Xbox consoles**. Due to Marketplace restrictions, **the system is not available or functional on copies of Microsoft Flight Simulator purchased via the MS Marketplace**, as Marketplace Rules do not permit the distribution of functional weapons systems. Cosmetic Weapons are still enabled.

As with all weapon systems in MSFS, **no damage or network-synchronized impact effects** are supported. Rockets, bombs and missiles function purely for visual and training purposes. Multiplayer users will **not see projectiles or effects**, and there is **no hit registration or scoring**. Missile launches and bomb drops produce only **cosmetic visual effects** (eg. impact craters on the ground) and no explosions are displayed.

Weapon Types and Stations

Note
Stations 1-6 and 10-16 on this diagram are considered "OUTBOARD", while stations 7, 8 and 9 are considered "INBOARD".



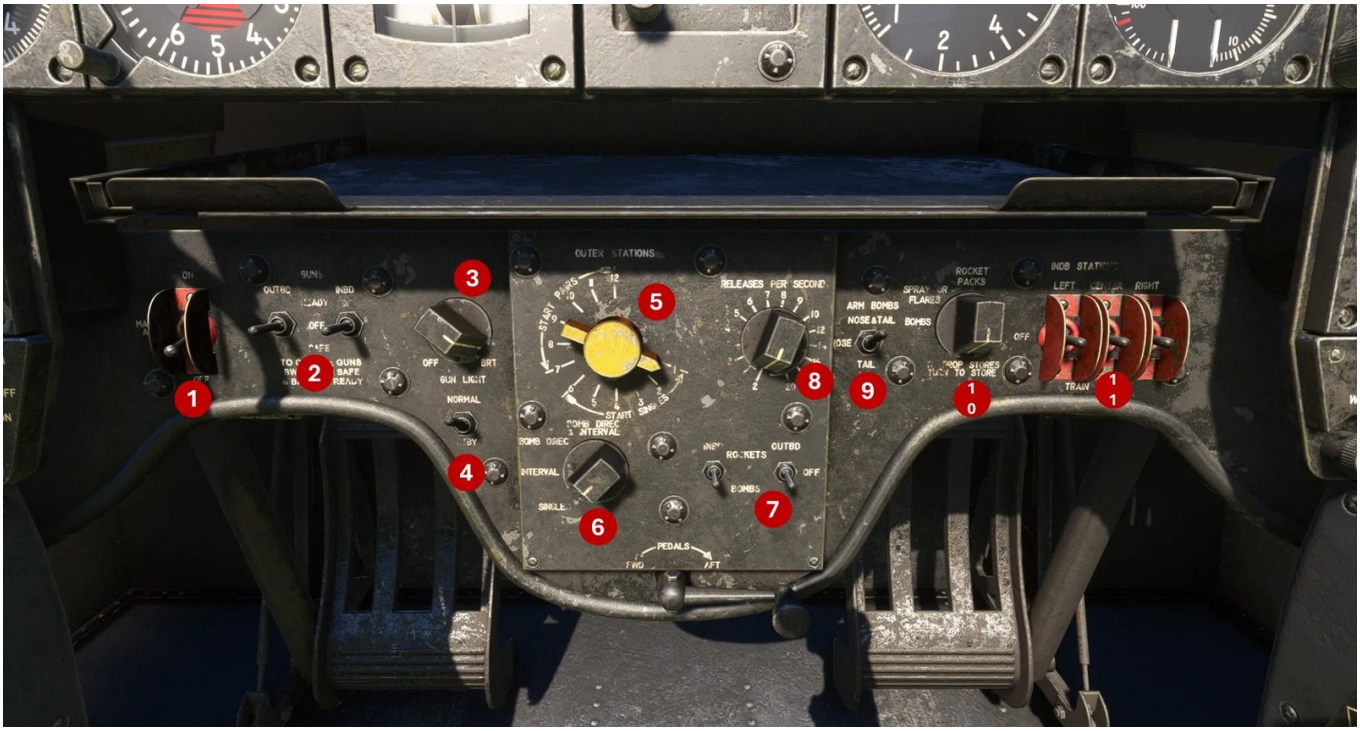
Weapon Type	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
HVR															
LAU-10															
LAU-68															
MK-82															
MK-82SE															
MK-83															
MK-84															
MK-117															

Weapon Type	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
TOILET BOMB															

Weapon Types

- **HVR:** High Velocity Rocket. Unguided air-to-ground rockets, used for strafing, anti-armor, and general close air support.
- **LAU-10:** A rocket launcher pod carrying four 5-inch Zuni rockets. These heavier rockets packed a powerful punch and were ideal for destroying bunkers, fortified positions, and vehicles.
- **LAU-68:** A rocket pod carrying seven 2.75-inch Hydra 70 rockets. Lighter than Zunis, these were used for suppressive fire, anti-personnel strikes, and marking targets with smoke or illumination.
- **MK-82:** A 500-pound general-purpose bomb, part of the U.S. Mk 80 series. Used widely for bombing enemy positions, infrastructure, and vehicles.
- **MK-82SE:** A variant of the MK-82 fitted with retarding fins (Snake Eye), allowing for low-altitude bombing without the aircraft being caught in the blast.
- **MK-83:** A 1,000-pound general-purpose bomb, larger than the MK-82. Provides greater destructive power for hardened targets or when a wider blast radius is needed.
- **MK-84:** A 2,000-pound general-purpose bomb, the largest in the Mk 80 series. Used for maximum destruction against fortified structures, bridges, and large enemy concentrations.
- **MK-117:** A 750-pound general-purpose bomb used during the early Vietnam era. Eventually phased out in favor of the Mk 80 series but still seen on Skyraiders during earlier missions.
- **TOILET BOMB:** A humorous psychological warfare weapon, literally a toilet modified to drop like a bomb. Famously dropped by a Skyraider as a prank and morale booster; it had no explosive charge but symbolized the irreverent spirit of some Skyraider crews.

Armament Panel



More information on Deploying and Using Weapons

Loading and Deploying Weapons

Loading Weapons

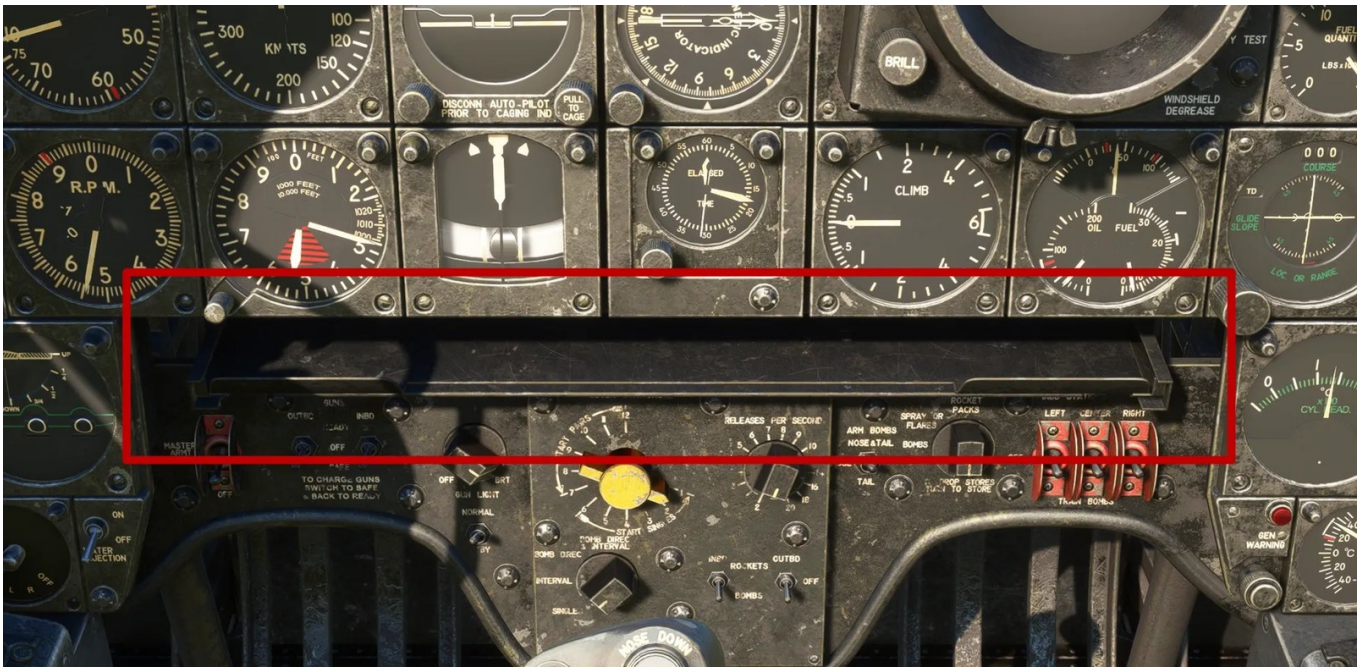
Deploying and Using Weapons

Miltech Simulations Skyraider

Loading Weapons

To load weapons, locate and open the tray table loadout configurator menu. Click on the upper left corner to change from Map view to Loadout view.

- Aircraft must be on the ground, stationary and with the parking brake on to load weapons.
- Armament Master Arm must be off to load weapons.

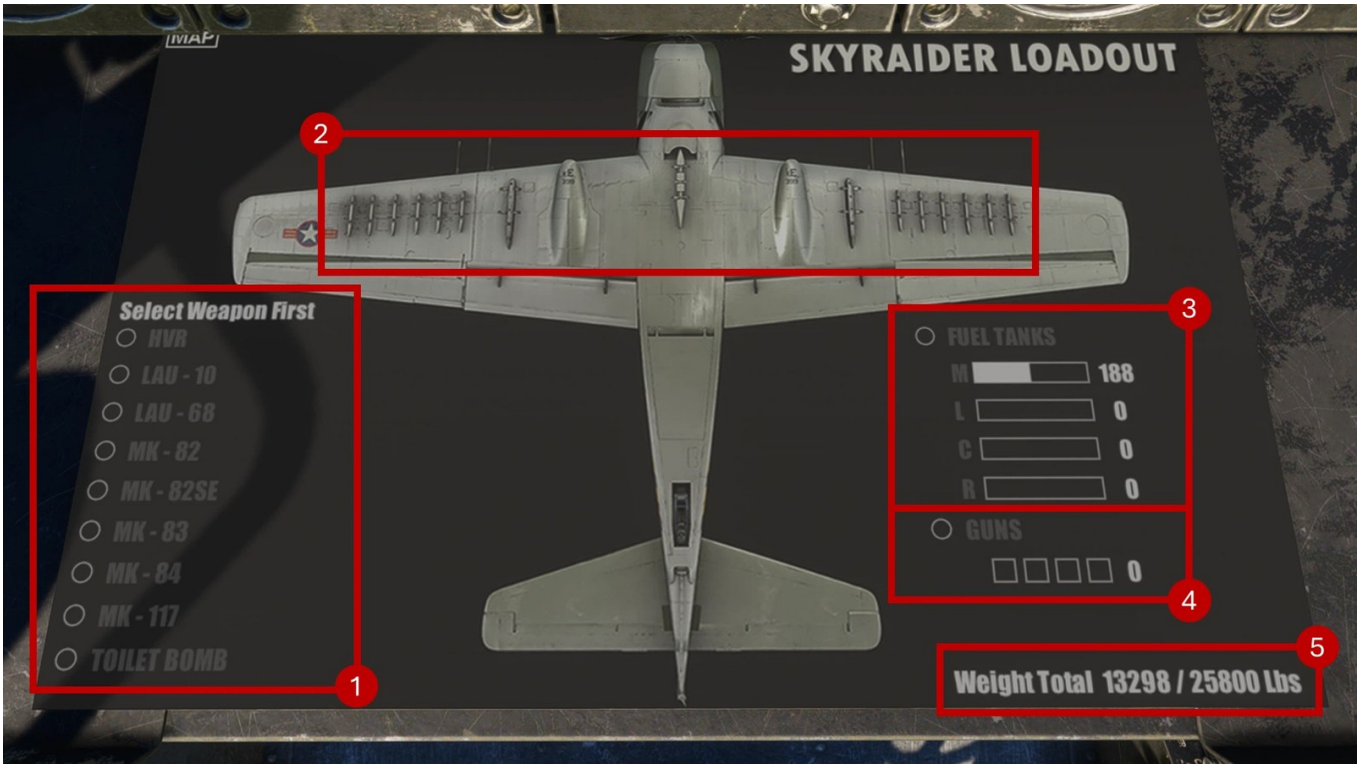


Location of Work Tray Table



Change from Map Mode to Loadout

Loadout UI



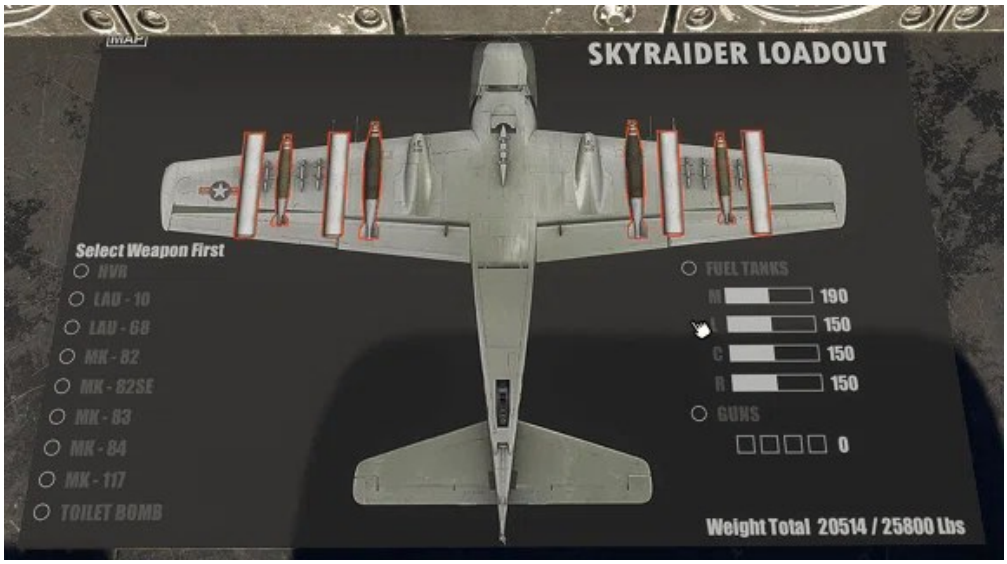
1. ◇ **Weapon Selector Menu:** Select weapon to load on the pylon.
2. ***Hover*** *on any option to display available pylons for such weapon type.*
3. ***Click on the circle*** *to select weapon type for loading.*
4. ◇ **Pylon Selector:** Configure weapons freely by adding any combination of weapons to each corresponding pylon.
5. *Select a weapon, then click a pylon to attach a weapon or fuel tank. Click a loaded pylon to remove it.*
6. ◇ **External Fuel Tank Selector:** Configure external tanks and modify the fuel quantity on them.
7. ***Click on the circle*** *and load external tanks to their corresponding pylons.*
8. ***Hover*** *on the fuel quantity selectors to modify the quantity of fuel on each corresponding tank.*
9. ◇ **Gun Selector:** Select ammo quantity to load.
10. **Weight Indicator:** Displays the current aircraft weight alongside the maximum takeoff weight for reference.

Functional Demo

1. Load and Unload Weapons. *Weapons are loaded and indexed by pylon. Hover over a weapon type to highlight compatible pylons. Select a weapon, then click a pylon to install it.*



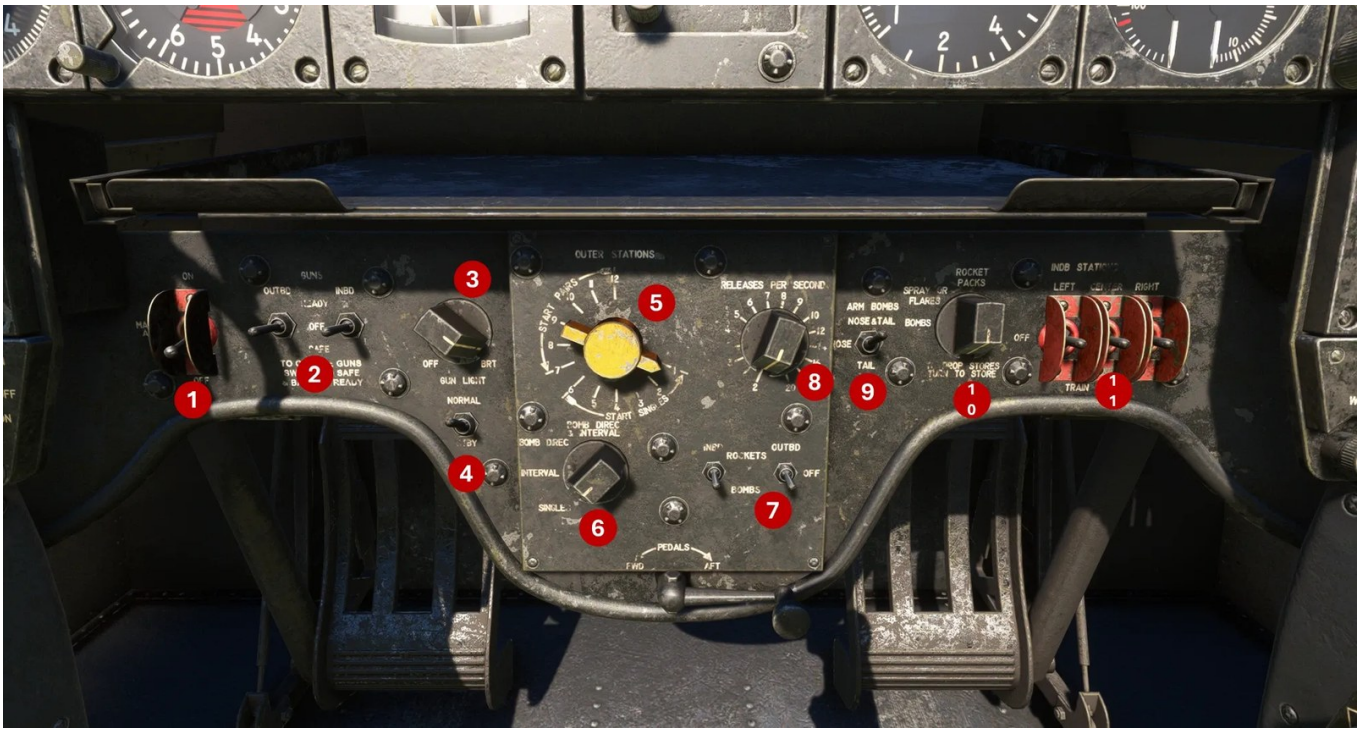
2. Load Fuel Tanks and Gun Ammo. *Fuel Tanks are loaded similarly to weapons, by attaching to an available pylon. Hover over fuel selector to adjust fuel quantity. Load gun ammo by rounds of 200.*



Miltech Simulations Skyraider

Deploying and Using Weapons

Armament Panel



1. ↔ **Master Armament Switch:** Enables and disables the aircraft weapons system.
2. ↔ **Gun Control Switches (OUTBD/INBD Guns):** Ready/Off/Safe. The two gun control switches are used to charge the guns. Use the left-hand switch to control the two outboard (OUTBD) guns, and the right-hand switch to control the two inboard (INBD) guns.
3. ◉ **Gun Sight Light Brightness Knob:** Regulates the brightness of the Gun Sight projection.
4. ↔ **Gun Sight Light Switch:** Turns on/off the Gun Sight projection.
5. ◇ **Outboard Station Selector:** Controls power routing and firing authorization to the two outboard wing pylons (Stations 1 and 12 on the A-1H). These pylons typically carry lighter ordnance such as rockets, gun pods, or drop tanks.
6. ◇ **Method Selector:** Determines how ordnance on a selected station or weapon group is released when the pilot actuates the pickle. Only single-release is supported at this time.
7. ↔ **(INBD/OUTBD) Station Switch:** The Station Switch selects the ordnance function for pylons grouped as INBOARD (INBD) or OUTBOARD (OUTBD). It configures the selected station group to either carry and release bombs, carry and fire rockets, or remain OFF.
8. ◇ **Interval Selector:** The interval selector is only used in the interval method of delivery. Interval release is not supported at this time.
9. ↔ **Arm Bomb Switch:** No function in the simulator.
10. ◇ **Inner Station Selector:** Configures the inboard wing station group for the specific type of stores fitted: bombs, spray or flares, or rocket packs.

11. ◇ **Inboard Station Selector:** Controls power routing and firing authorization to the inboard pylons individually.

Weapon Deployment

Loading Weapons

Follow the Loading Weapons guide: Loading Weapons

Firing the Gun

> Warning
> Do not use on Xbox or Marketplace Copies. Weapon systems are not supported, and using these keybinds may lead to CTDs.

Assuming you have correctly loaded ammunition using the Loadout Menu:

1. Select the gun via the **↔ Gun Control Switches**. **[2]**
2. Cycle the switch **OFF → SAFE → READY** to charge.
3. Use the keybind: ELT OFF to shoot.

Operating the Gun Sight

There are 3 different gun sight reticles available to the pilot: Day, Combination, and Night. Switching between these is done via a control knob just in front of the gun sight itself.



- Gun Sight requires electrical power from the Battery-generator.
- Use the **↔ Gun Sight Light Switch** to turn on/off the sight projection. **[4]**
- **Gun Sight Brightness** can be adjusted using the knob in the armament panel. **[3]**

Firing Rockets

> Warning
> Do not use on Xbox or Marketplace Copies. Weapon systems are not supported, and using these keybinds may lead to CTDs.

Firing rockets can feel confusing at first, but it's simple once you get the hang of it.

The Keybind to fire rockets (known as **"PICKLE")** is: TOGGLE WATER RUDDER (FS20 and FS24)\ or ANNUNCIATOR SWITCH OFF (FS24)

SINGLE FIRE (INNER STATIONS)

1. Inboard Station Switch.....ROCKETS

2. Inboard Station Selector.....LEFT AND/OR RIGHT
3. Method Selector Switch.....SINGLE
4. Master Armament Switch.....ON
5. Pickle.....DEPRESS

SINGLE FIRE (OUTER STATIONS)

1. Outboard Station Switch.....ROCKETS
2. Outboard Station Selector.....AS DESIRED
3. Method Selector Switch.....SINGLE
4. Master Armament Switch.....ON
5. Pickle.....DEPRESS

Dropping Bombs

> Warning
> Do not use on Xbox or Marketplace Copies. Weapon systems are not supported, and using these keybinds may lead to CTDs.

In the Skyraider, dropping bombs is a straightforward (and fun!) affair.

The Keybind to drop bombs (known as **"PICKLE")** is: TOGGLE WATER RUDDER (FS20 and FS24)\ or ANNUNCIATOR SWITCH OFF (FS24)

SINGLE RELEASE (INNER STATIONS)

1. Inboard Station Switch.....BOMBS
2. Inboard Station Selector.....AS DESIRED (LEFT/CENTER/RIGHT)
3. Method Selector Switch.....SINGLE
4. Master Armament Switch.....ON
5. Pickle.....DEPRESS

SINGLE RELEASE (OUTER STATIONS)

1. Outboard Station Switch.....BOMBS
2. Outboard Station Selector.....AS DESIRED
3. Method Selector Switch.....SINGLE
4. Master Armament Switch.....ON
5. Pickle.....DEPRESS

Emergency Jettison

In cases where it is necessary, provisions are provided for jettisoning any loaded external stores, whether they be rockets, bombs, or fuel tanks.

On the left-hand console, two handles placarded CTR WING BOMB RELEASE and OUTBD WING BOMB RELEASE are present. The CTR WING BOMB RELEASE handle jettisons stores on the 3 inner payload stations, and the OUTBD WING BOMB RELEASE \ handle jettisons all stores hung on the outer wing stations.