PRODUCT MANUAL

M2K-C

28 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.

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Miltech Fighters: M2K-C

Welcome to the M2K-C

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.

Tip

New on V1.2.0:

- FS20 and FS24: Over-the-cloud loading of INS Flight Plans Inertial Navigation System
- FS24 Only: Flight Plans created with the Tablet EFB can now be sent to the INS Unit. Inertial Navigation System

The M2K-C is a multirole, single-engine, delta-wing, fourth-generation jet fighter inspired by French aircraft design.

This aircraft boasts impressive maneuverability, speed, and versatility, making it suitable for a wide range of missions, including air superiority, ground attack, and reconnaissance. Its design is sleek and agile, reflecting the French emphasis on aerodynamic efficiency and performance.

M2K-C is powered by a single engine providing 54.0 kN Thrust, with a single-stage Afterburner boosting the aircraft to 84 kN (19,000 Lbf). Maximum speed is Mach 2.2 at 60,000 ft, and a range of roughly 850 Nautical Miles, which can be extended with external tanks.

Though primarily an interception and air-to-air combat, the M2K-C can conduct multirole operations, ranging from Aerial Bombing, Air-to-Air combat, Air Support, among others.

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
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Ready to Fly? ✈

Follow our Frequently Asked Questions

Removal

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

Miltech Fighters: M2K-C

Introduction

Thank you very much for purchasing Miltech Simulations M2K-C.

At Miltech Simulations, we continue innovating. This time, we present to you the **First Fourth-Gen aircraft with a functional Weapons System in MSFS.**

The M2K-C is a multirole, single-engine, delta-wing, fourth-generation jet fighter inspired by French aircraft design.

This aircraft boasts impressive maneuverability, speed, and versatility, making it suitable for a wide range of missions, including air superiority, ground attack, and reconnaissance. Its design is sleek and agile, reflecting the French emphasis on aerodynamic efficiency and performance.

M2K-C is powered by a single engine providing 54.0 kN Thrust, with a single-stage Afterburner boosting the aircraft to 84 kN (19,000 Lbf). Maximum speed is Mach 2.2 at 60,000 ft, and a range of roughly 850 Nautical Miles, which can be extended with external tanks.

The M2K-C can conduct multirole air combat operations, ranging from Aerial Bombing, Air-to-Air combat, Air Support, among others. It is quite prevalent in Dog Fighting, as the Delta Wing provides a very high sustained turn rate, and the ability to perform instantaneous turns.

This product is once again the result from a successful partnership with Maryadi, a talented developer who has worked in very well-known projects since the FSX Days. As result of such collaboration, we now present our rendition of the M2K-C for Microsoft Flight Simulator 2020 and 2024.

We hope you enjoy the product,

Miltech Simulations.

Miltech Fighters: M2K-C

Disclaimers

Warning
WARNING: This product may potentially trigger seizures for people with photosensitive epilepsy. If you suffer from this condition, please do not flight the aicraft at night.

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

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Credits

- Programming: Maryadi, Gabriel V, Christopher Grybowski
- 3D Modeling & Texturing: Gabriel V, Max Eugenio, Brayan Lopez, Daniel Dunn, Rhys Brown
- Scenery Design: Gabriel V, Jonathan Hilarie, Brayan Lopez
- Animations: Gabriel V, Maryadi

- Flight Dynamics: Maryadi, Gabriel V, Christopher Grybowski
- Sounds: Maryadi, Echo19 Audio LLC
- Liveries: Rhys Brown, Vasy
- Documentation: Gabriel V
- Distribution: Gabriel V, Vantech North America LLC, IniBuilds, Microsoft, Lars Pinkenburg
- Marketing: Gabriel V, Captain Kenobi, IniBuilds, Lars Pinkenburg
- Video and Promotion Materials: AviationLads, Captain Kenobi, IniBuilds

Special Thanks to all independent Beta Testers:

- Giorgio La Pira, JinxxDCS, Jonathan Hilarie

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Miltech Fighters: M2K-C

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 Fighters: M2K-C

Glossary

- PRET: French for "Ready", often represented as "P"
- ARRET: French for "Stop" or "Off", often represented as "A"
- PCA: *Poste de Commande Armement* - Weapons Control Panel
- PPA: *Poste de Préparation Armement* - Weapons Configuration Panel
- RWR: Radar Warning Receiver
- HUD: Head Up Display
- AB: Afterburner.
- PC: French for "Postcombustion", Afterburner.
- CCIP: Constantly Computed Impact Point
- VTB: Visualisation Tête Basse, Heads Down Display
- HDD: Heads Down Display

Miltech Fighters: M2K-C

Frequently Asked Questions

1.Why do features (Weapons System) differ on MS Marketplace vs. Other Distributors?

MS Marketplace has strict guidelines regarding the modeling of weapons in MSFS. Though cosmetic depiction of weapons is now permitted, usability of these weapons is still severely regulated. We must comply with these rules and regulations.\ Refer to Weapon and Defensive Systems for more information.

2.How to Release Bombs/Missiles/Use the Gun?

Release of ordinance makes use of keybind TOGGLE WATER RUDDER

Please make sure this keybind is correctly configured on your keyboard or hardware controllers to make use of it during weapon operations. For general procedures, refer to Weapon and Defensive Systems

3.How to Release Flares?

Release of flares makes use of keybind TOGGLE ALTERNATOR 3

Please make sure this keybind is correctly configured on your keyboard or hardware controllers to make use of it during flare release operations. For general procedures, refer to Countermeasures

4.How to Align/Use the INS System?

The Inertial Navigation System requires user familiarization with flight planning, alignment and use in navigation. Please refer to the following section in this manual: Inertial Navigation System

5.(CAMBRAI SCENERY) Orb Lights are visible near the runway, during the night, FS24

This is a known issue. Cambrai is no longer an active airbase, and several warehouses and roads have been built in the area where formally there was a runway.

FS24 includes recent street data, and as a result of this, lighting is automatically spawned along these roads. This can generally be easily excluded, but due to an existing FS24 Bug, it cannot. This issue has been reported to Asobo, and we continue experimenting with other solutions at this time: https://devsupport.flightsimulator.com/t/streetlights-exclusion-not-working-on-fs20-scenery-loaded-in-fs24/12885

In the meantime, we recommend using Cambrai in FS24 during daytime, or FS20 during day or night.

6.Afterburner Effects are not visible

This issue may occur the first time the aircraft is loaded. On initial load, the WASM module is compiled for the first time. As a result, this initial load may sometimes fail to correctly render effects.

The issue is easily resolved by closing the simulator and restarting the flight. From the second flight onwards, this issue should not occur anymore.

If the issue persists, it may be a case of control bindings or deadzones. Afterburner only engages when throttle axis is set to exactly 100%. You will see the green "PC" advisory light up in the cockpit to confirm Afterburner is correctly engaged. If this advisory fails to light up, please verify your throttle axis deadzones.

Be also aware that FS24 renders lighting completely differently, and in clear skies conditions the AB effects may be very faint. AB is significantly more visible in cloudy/darker conditions.

Miltech Fighters: M2K-C

Quick Start Guide

Miltech Fighters: M2K-C

Normal Procedures

Note
WORK IN PROGRESS

- On Takeoff: Align with the horizon
- On approach: Use HUD symbology

Miltech Fighters: M2K-C

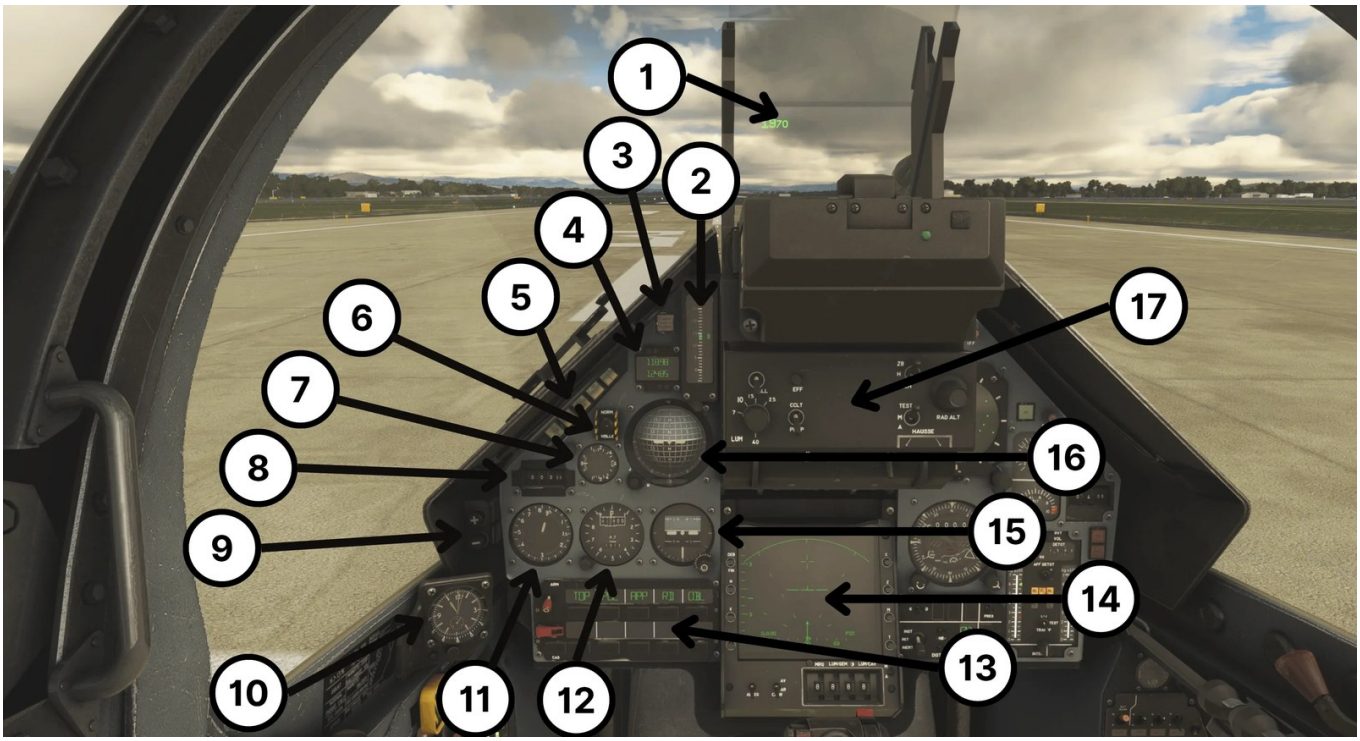
Keybinding Guide

Description	Keybind	Notes
Release/Shoot Weapons (Missiles, Bombs, Guns)	TOGGLE WATER RUDDER	Same keybind is used for all three, however, only shoots the selected and armed weapon. More info Weapon and Defensive Systems
Release Flares	TOGGLE ALTERNATOR 3	More info Countermeasures
Spoilers	TOGGLE SPOILERS	Spoiler axis, spoiler extend and spoiler retract will NOT work on this aircraft. Spoilers are binary (extended/retracted), and a "fake spoiler" is used to simulate drag induced by other components. As such, TOGGLE SPOILERS is the only valid keybind on this aircraft.
Afterburner	TOGGLE AFTERBURNERS	This aircraft follows the same afterburner logic as you may find on the F-18. Hence, afterburner toggle is a necessary keybind.
Nose Wheel Steering	TOGGLE ALTERNATOR 4	The default NWS Keybinds that you may be familiar with (SET NOSE WHEEL STEERING TO LIMIT) are not available for this aircraft. Due to the design, we needed a "TOGGLE" rather than a "SET" variable, hence why we chose to use this keybind variable.
Drag Chute	Not Available	It could be keybinded using the corresponding LVAR, but "native" keybinds are not planned at this time.

Miltech Fighters: M2K-C

Cockpit Overview

Front Panel, Left Side

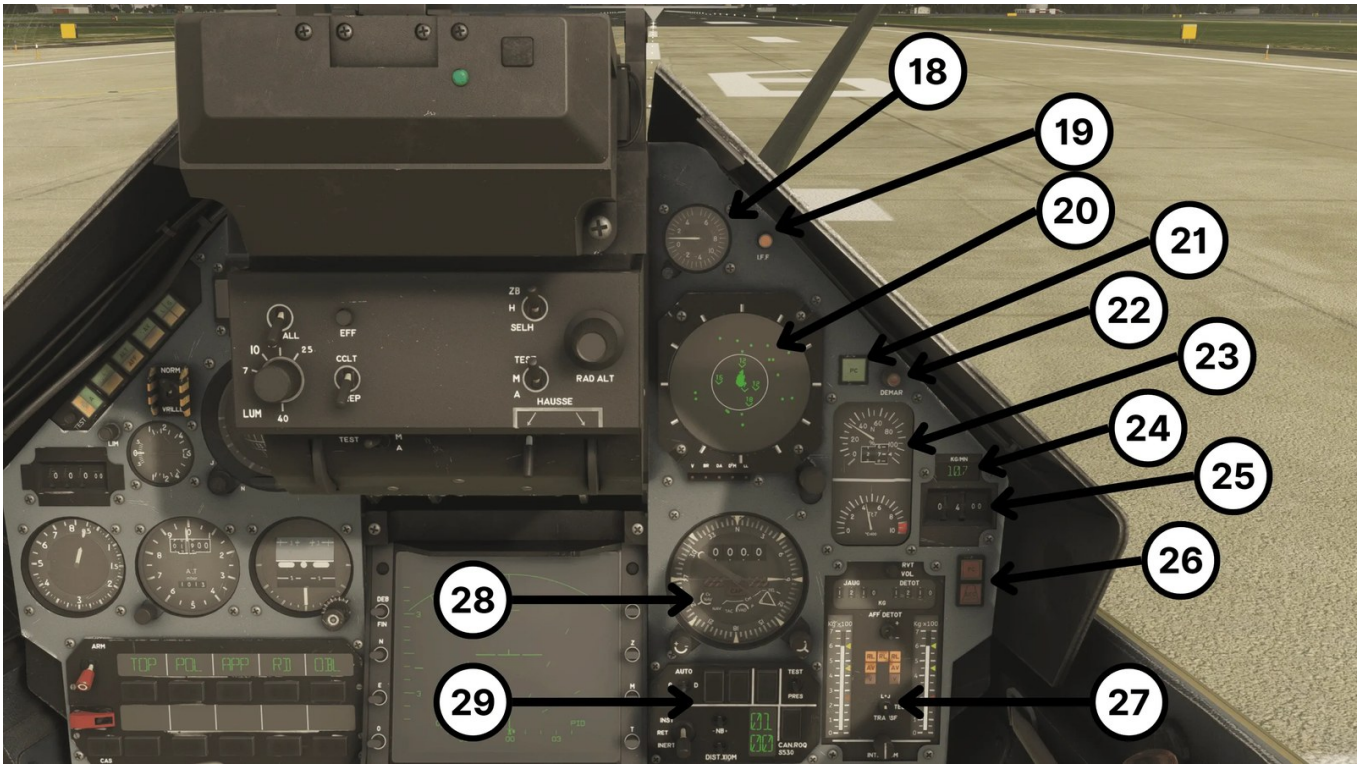


Front Panel, Left

1. **HUD:** Head-Up Display, more info here: Head-Up Display (HUD)
2. **Angle of Attack Indicator:** Indicates current Angle of Attack, in degrees. The Green Band indicates the ideal AoA during landing.
3. **Master Caution/Master Warning Indicators:** Amber Light indicates Master Caution, there is a problem but does not indicate imminent danger. Red Light indicates Master Warning, imminent danger. Both lights are directly linked to the warnings panel on the right side console. Pushing on either button will extinguish their respective lights and silence the alarms.
4. **Active/Standby Frequency Displays:** Displays active and standby COM1 Frequencies. For more info, Communication Systems
5. **Autopilot Panel:** Enables the selection, and displays status of the different autopilot modes. For more information, Autopilot System
6. ◇ **Fly By Wire Norm/Vrille Selector:** INOP
7. **Vertical Speed Indicator:** Displays vertical speed in feet/minute.
8. ◇ **Autopilot Altitude Selector:** Selects target altitude for ALT ATT Autopilot mode. More information here: Autopilot System
9. **DEST Waypoint Increase/Decrease:** Increases/decreases selected DEST Waypoint by one unit. More information Inertial Navigation System
10. **Clock:** Displays current ZULU Time

11. **Airspeed/Mach Indicator:** Displays current airspeed in Knots, and Mach Number.
12. ◉ **Altitude Indicator, Altitude Calibration Knob:** Displays current altitude in Feet, as well as altimeter setting in milibar. The altimeter setting can be changed using the selection knob.
13. **Poste de Commande Armement (PCA) Panel:** Weapons Control Panel, more information PCA and PPA Panels
14. **Visualisation Tête Basse (VTB) Display:** Radar Heads Down Display (HDD), more information VTB/HDD Display
15. ◉ **Standby Attitude Director Indicator, Cage Knob:** Displays current aircraft attitude in pitch and roll.
16. **Attitude Director Indicator/Magnetic Compass:** Main Attitude indicator, displays current aircraft attitude in pitch and roll, as well as current magnetic heading.
17. **HUD Pedestal/Control Panel:** Controls options in the HUD, more information Head-Up Display (HUD)

Front Panel, Right Side

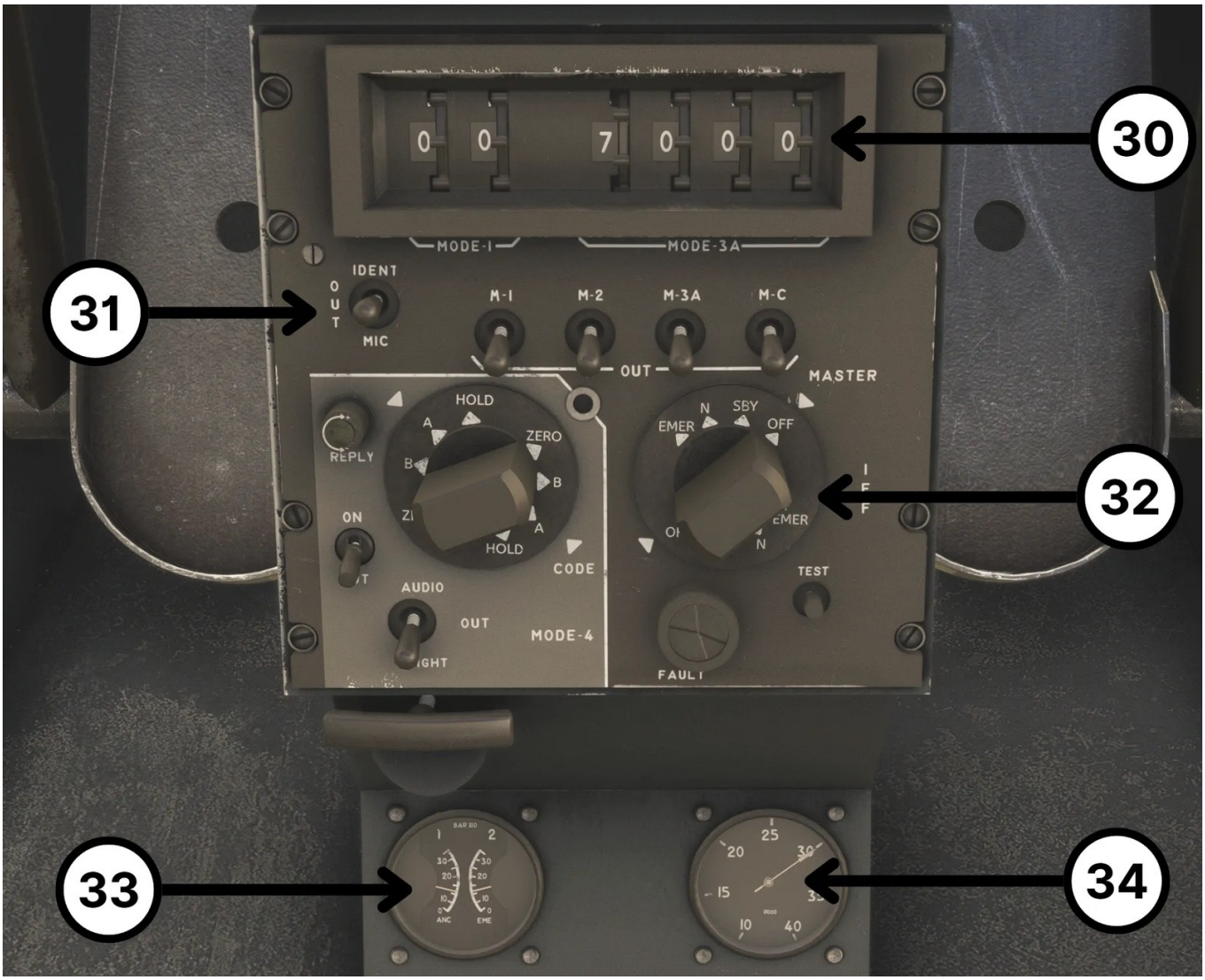


Front Panel, Right

18. **G-Meter Indicator:** Displays acceleration forces in G.
19. **IFF Light:** INOP
20. **Radar Warning Receiver (RWR):** Displays traffic sources near the aircraft. More information Radar Warning Receiver (RWR) System
21. **Post Combustion (Afterburner) Light:** Lights up if the engine Afterburner is toggled.
22. **DEMAR Light:** Lights up if the engine ignitor is engaged.
23. **Engine Instruments:** Displays engine RPM and Temperature, in degrees C*100.
24. **Fuel Flow Indicator:** Displays current fuel flow in Kg/min

25. ◇ **Bingo Fuel Selector:** Selects fuel quantity at which the Bingo warning will light up. Bingo fuel is defined as the safe quantity of fuel required to return to base.
26. **Engine Fire Indicators:** Not modeled due to lack of failure simulation in MSFS.
27. **Fuel Control Panel:** Displays fuel quantity and manages fuel transfers. More information Fuel System
28. **Bearing, Distance, Heading Indicator (BDHI):** Displays current heading, as well as bearing and distance to selected navigation source. More information, Bearing Distance Heading Indicator (BDHI)
29. **Poste de Préparation Armement (PPA) Panel:** Weapons Configuration Panel. More information PCA and PPA Panels

Front Panel, Bottom



Front Panel, Bottom

30. ◇ **Transponder Code Selector:** Used to select Squack code.
31. ↔ **Transponder IDENT Switch:** Used to set Transponder IDENT
32. **IFF (Information Friend or Foe) Panel:** Not Modeled, unsupported by MSFS.
33. **Hydraulic Pressure Indicators,** in bar x10
34. **Cabin Pressure Indicator,** in bar x1000

35. **Cockpit Canopy Handle:** Slider handle allows for the opening of the canopy, from 0% (Fully Closed), to 100% (Fully Opened).

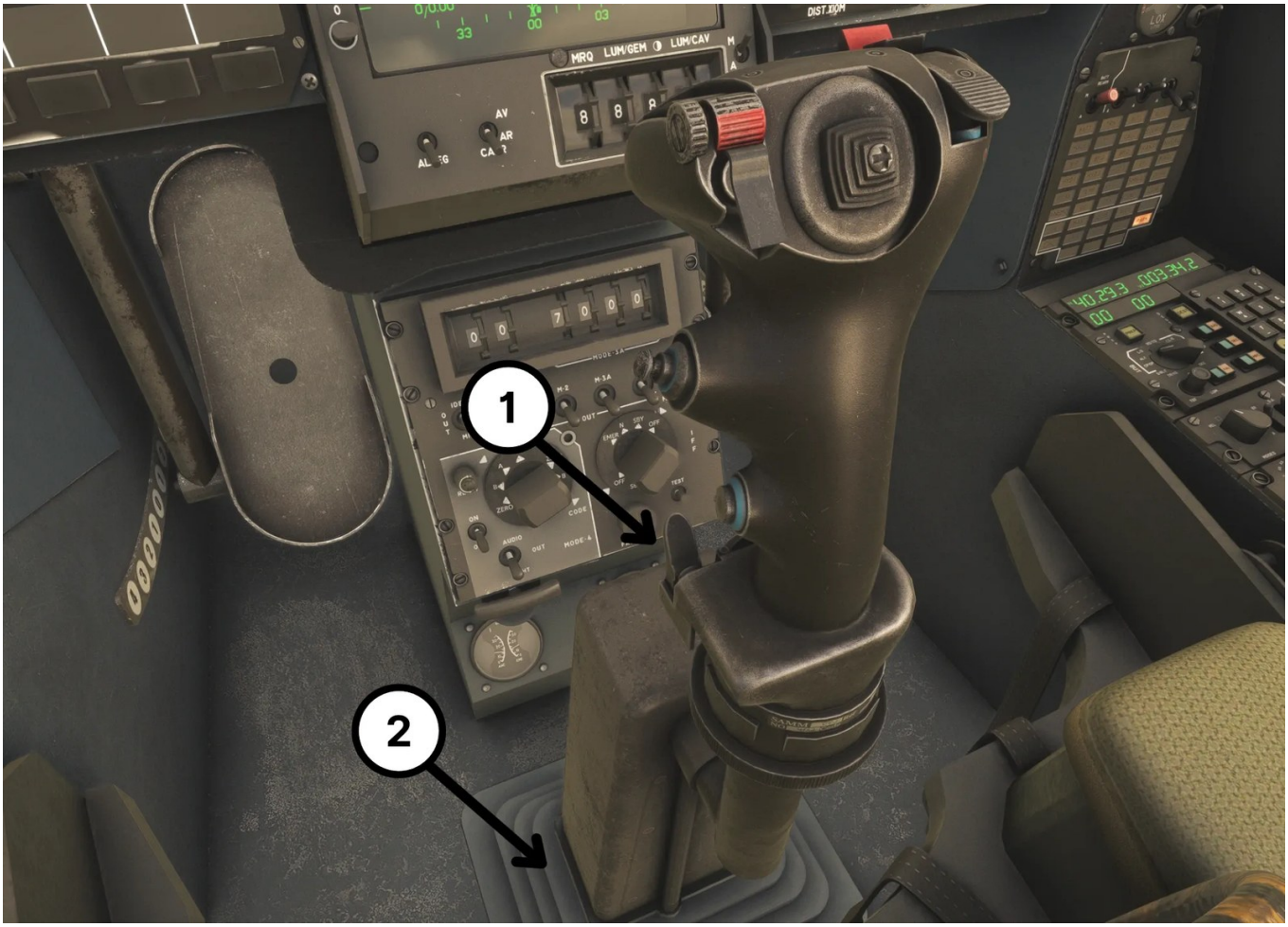
The handle also controls visibility of the Access Ladder, based on the following conditions: Canopy is fully opened AND engine is off AND parking brake is set.

36. **Drag Chute Handle:** The slider handle deploys the aircraft's drag chute. The chute will only deploy if the landing gear is down and the spoilers are extended. Drag chute is automatically ejected when aircraft's ground speed is lower than 30kts.

Miltech Fighters: M2K-C

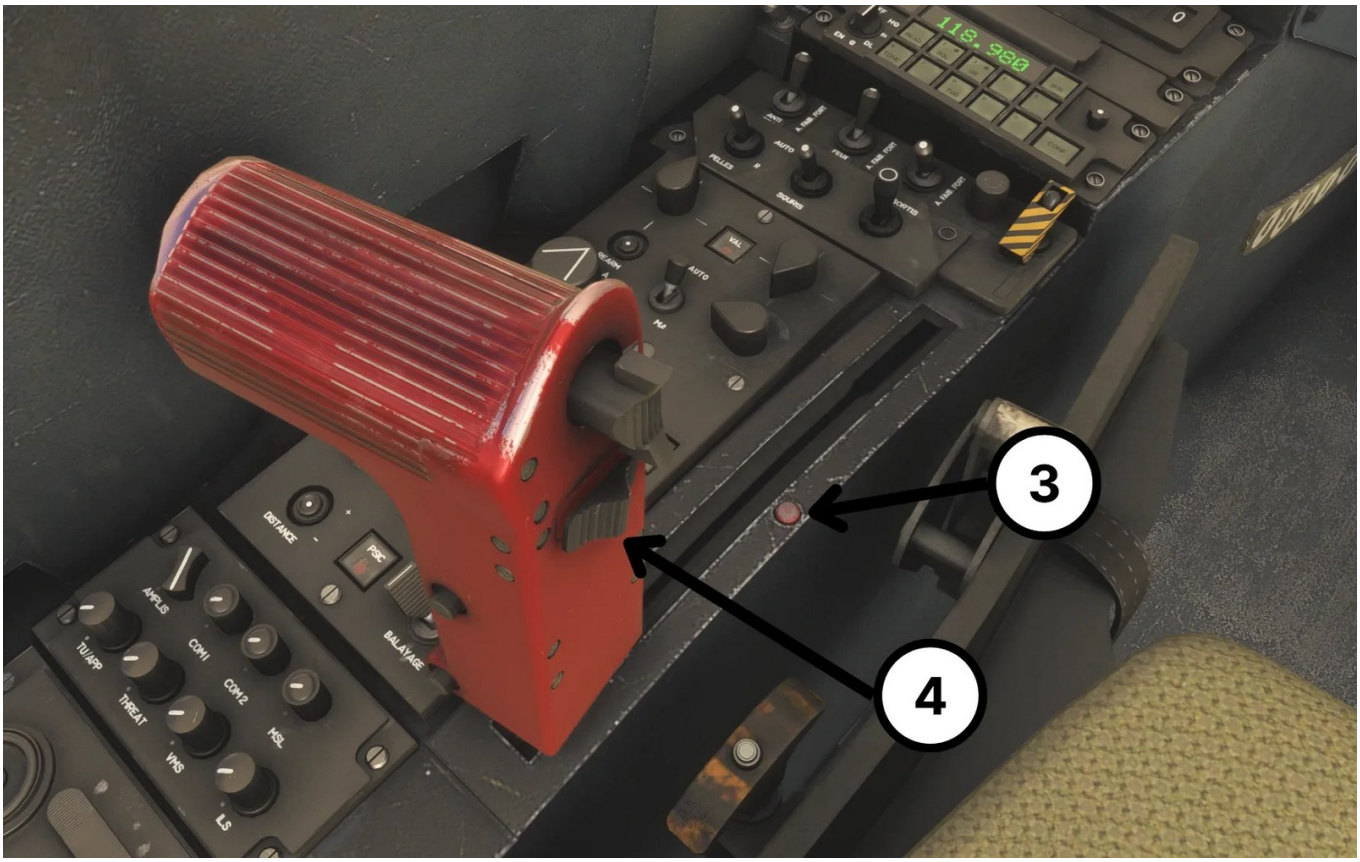
Hands-On-Throttle-And-Stick (HOTAS) System

As it is common in MSFS, most of the real functions of the HOTAS system (Trim, Spoilers, Shooting weapons, etc.) can be easily keybinded to hardware given the difficulties of interacting with the physical stick and throttle models in MSFS. Refer to our keybinding guide here Keybinding Guide



Stick

1. **Nose Wheel Steering:** Enables/Disables Nose Wheel Steering. At this time, this function cannot be keybinded - however, keybinding will be enabled in the near future.
2. **Hide Stick Clickspot:** Hides the stick for easier visibility of the IFF Panel.



Throttle

3. **Hide Throttle clickspot:** Hides the throttle for better access to the radar panel.
4. **Spoilers Toggle:** Extends/retracts the aircraft spoilers. It can also be keybinded.

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Fuel System

Miltech Fighters: M2K-C

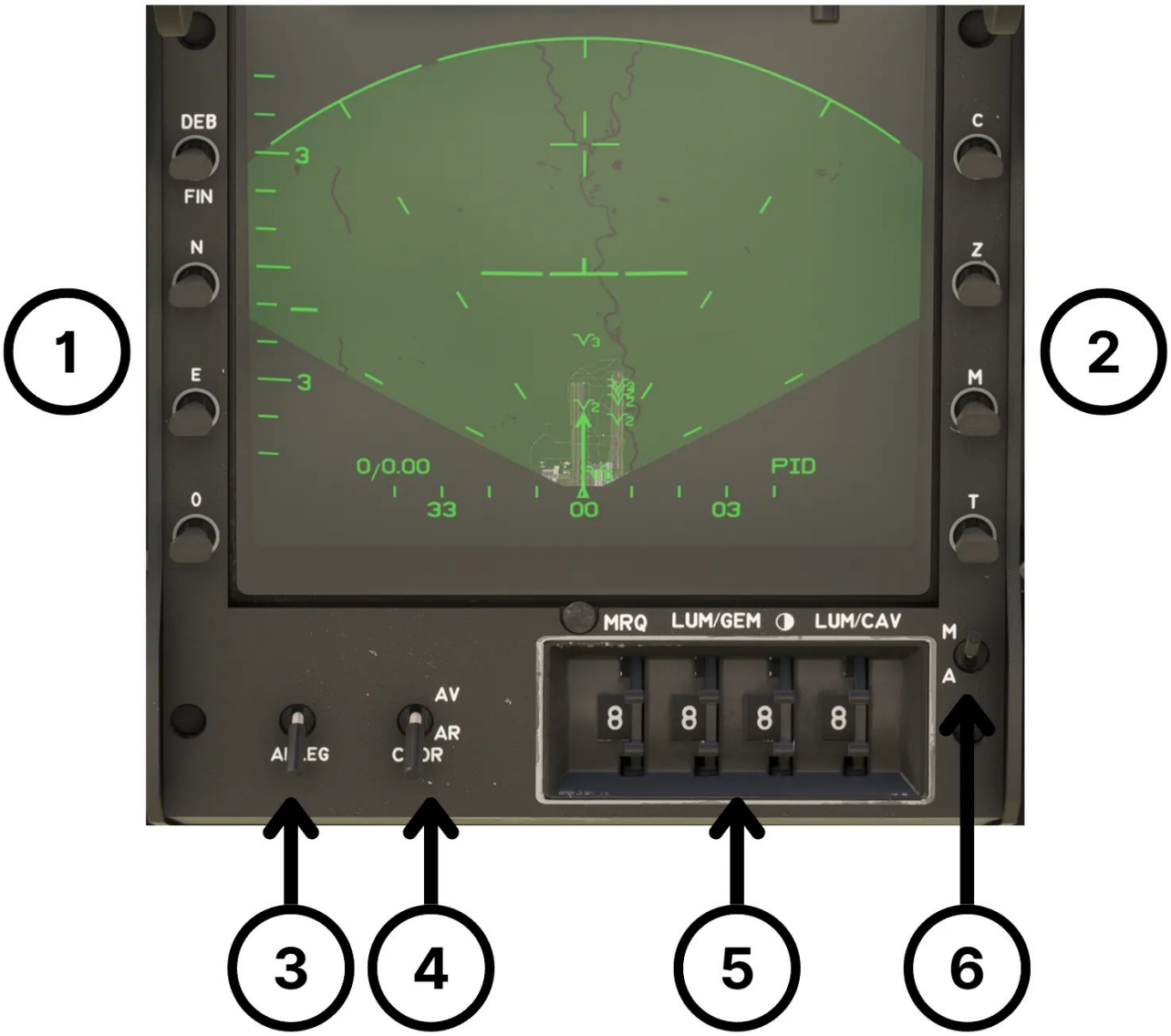
Avionics and Radar Systems

- VTB/HDD Display
- Head-Up Display (HUD)

Miltech Fighters: M2K-C

VTB/HDD Display

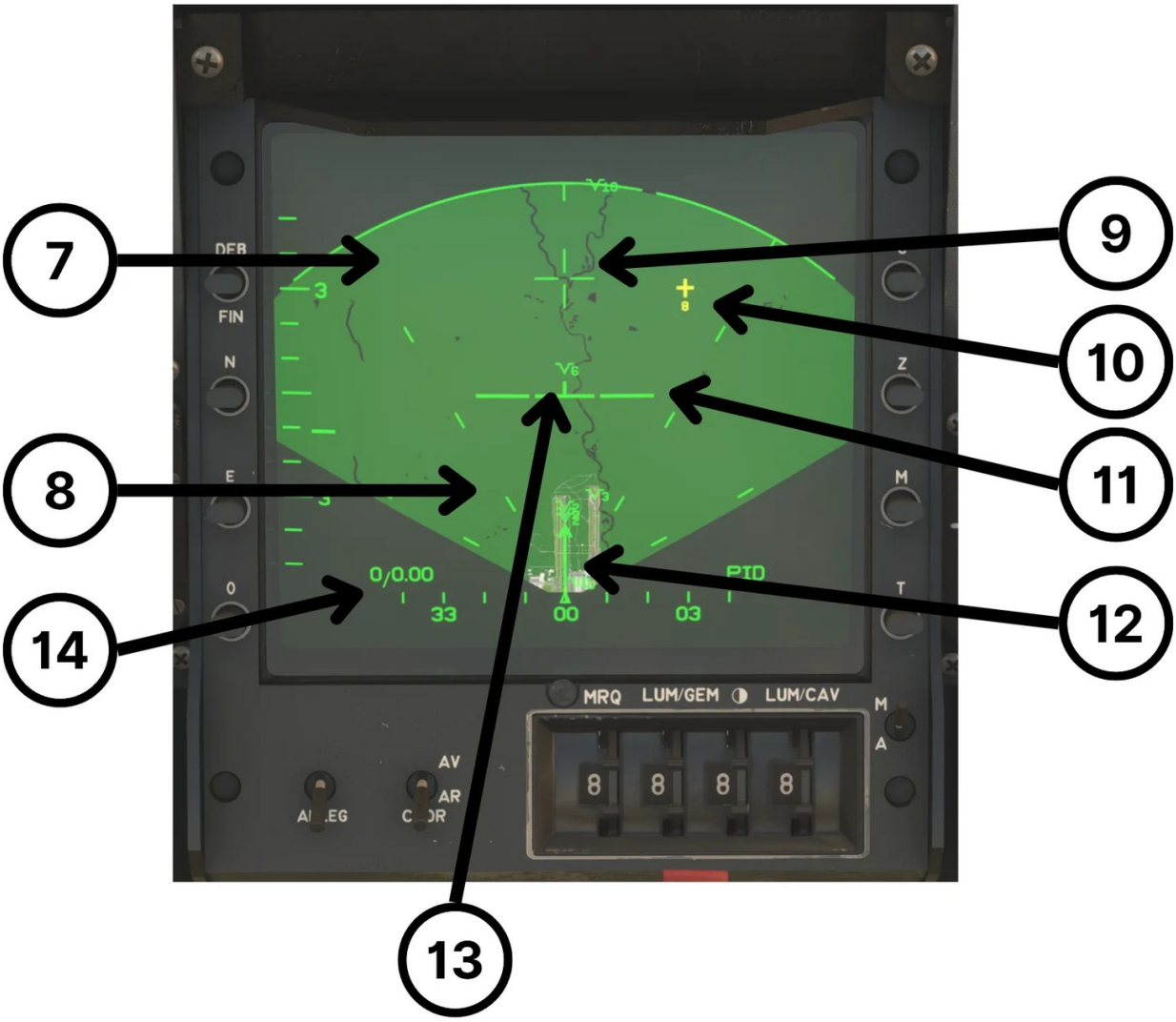
The Visualisation Tête Basse (VTB), also known as Heads Down Display (HDD), displays radar information along with WX, Terrain, navigation, traffic, and aircraft load out.



VTB/HDD Display

1. ▣ **Left Multifunction Buttons**
2. ▣ **Right Multifunction Buttons**
3. **Radar Declutter:** INOP
4. **Radar Mode:** INOP
5. ◉ **Brightness Knobs:** From left to right:
6. Angle Marker Brightness

7. Display Brightness
8. Traffic and Misc. Symbology Brightness
9. Aircraft ADI and Compass Brightness
10. **↔ VTB/HDD Power Switch**



VTB/HDD Display, Symbology and Terrain Mode Enabled

7. **Radar Background:** Three different modes are supported (Terrain, WX and OFF). For more information read Radar Control Unit section below.
8. **Radar Sweep Dashed Lines:** Delimit the radar sweep modes (60deg, 30deg, 15deg). For more information read Radar Control Unit section below.
9. **Cursor:** Currently INOP, but will be used in the future to select and lock into targets.
10. **INS Destination Waypoint:** Destination waypoints are depicted in the map as a yellow cross. Under the icon, the distance in nautical miles will be displayed.
11. **ADI Indicator:** Serves as a digital Attitude Director Indicator with respect to the horizontal line.
12. **Aircraft Velocity Vector and Compass:** The Arrow indicates the forward path that the aircraft will follow, straight forward. Under the arrow, the current magnetic heading is indicated by the compass strip.

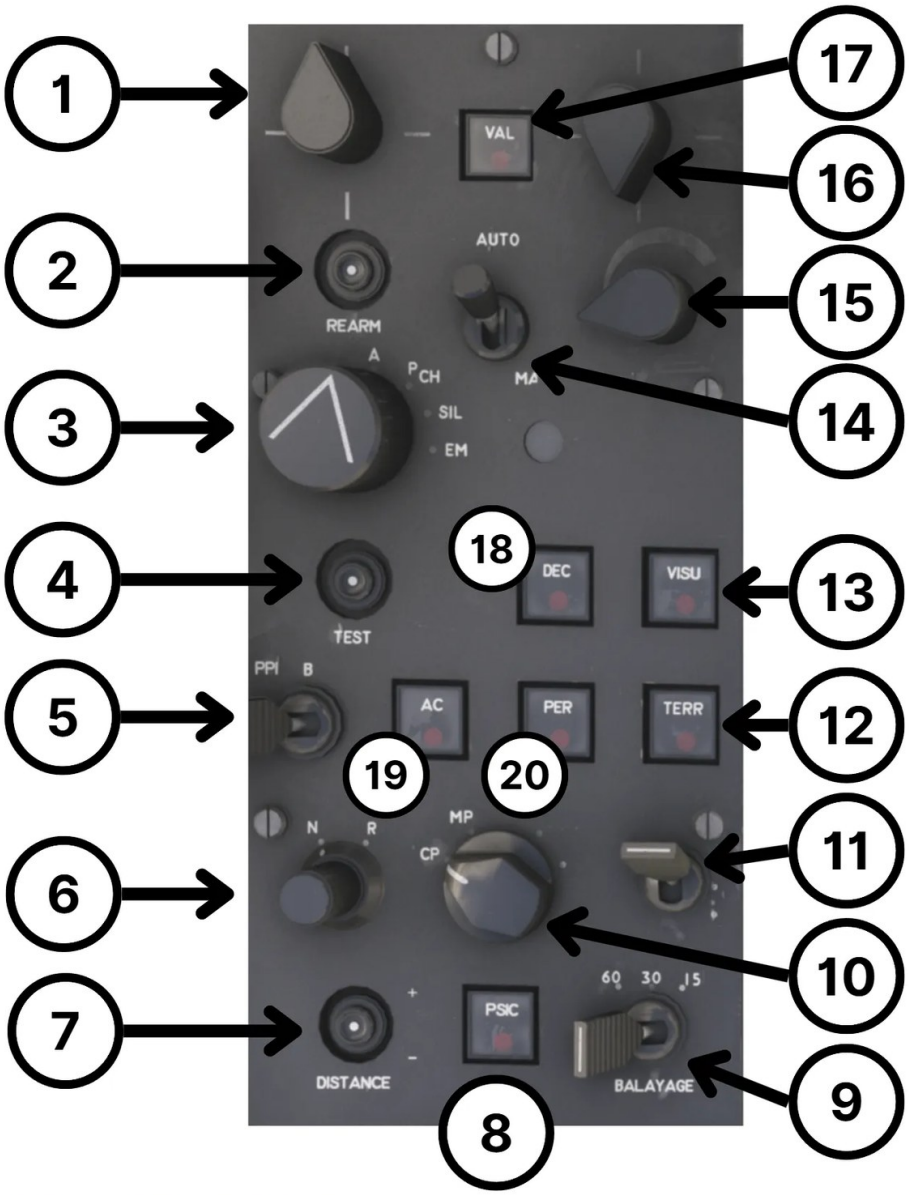
13. **Traffic Sources:** Traffic is displayed on the radar screen as an inverted "V" with a number attached, corresponding to the distance in nautical miles. Traffic will only display if traffic radar is set to ON in the Radar Control Unit. More information below.
14. **Wind Information:** Bearing and speed of wind displayed.



VTB/HDD Display, WX Mode Enabled during Thunderstorm

Radar Control Unit

The Radar Control Unit, located on the left side of the cockpit next to the throttle, controls the VTB/HDD Display.



Radar Control Unit

1. **Dimmer:** Not Modeled
2. **Rearm:** Not Modeled
3. ◇ **Master Selector:** Not Modeled
4. **Test:** Not Modeled
5. **Traffic:** Enables/Disables Traffic Radar, and traffic visualization on VTB/HUD/RWR
6. **Power Mode:** Not Modeled
7. **Rearm:** Not Modeled
8. **PSIC:** Not Modeled
9. **Sweep Mode:** 60/30/15, limits the Radar sweep mode, for all radar modes (Traffic, Terrain, WX)
10. ◇ **A/A Mode Selector:** Changes the VTB mode, from your typical "map mode" to a mode specifically designed for A/A attacks.
11. **Track Lines:** No function

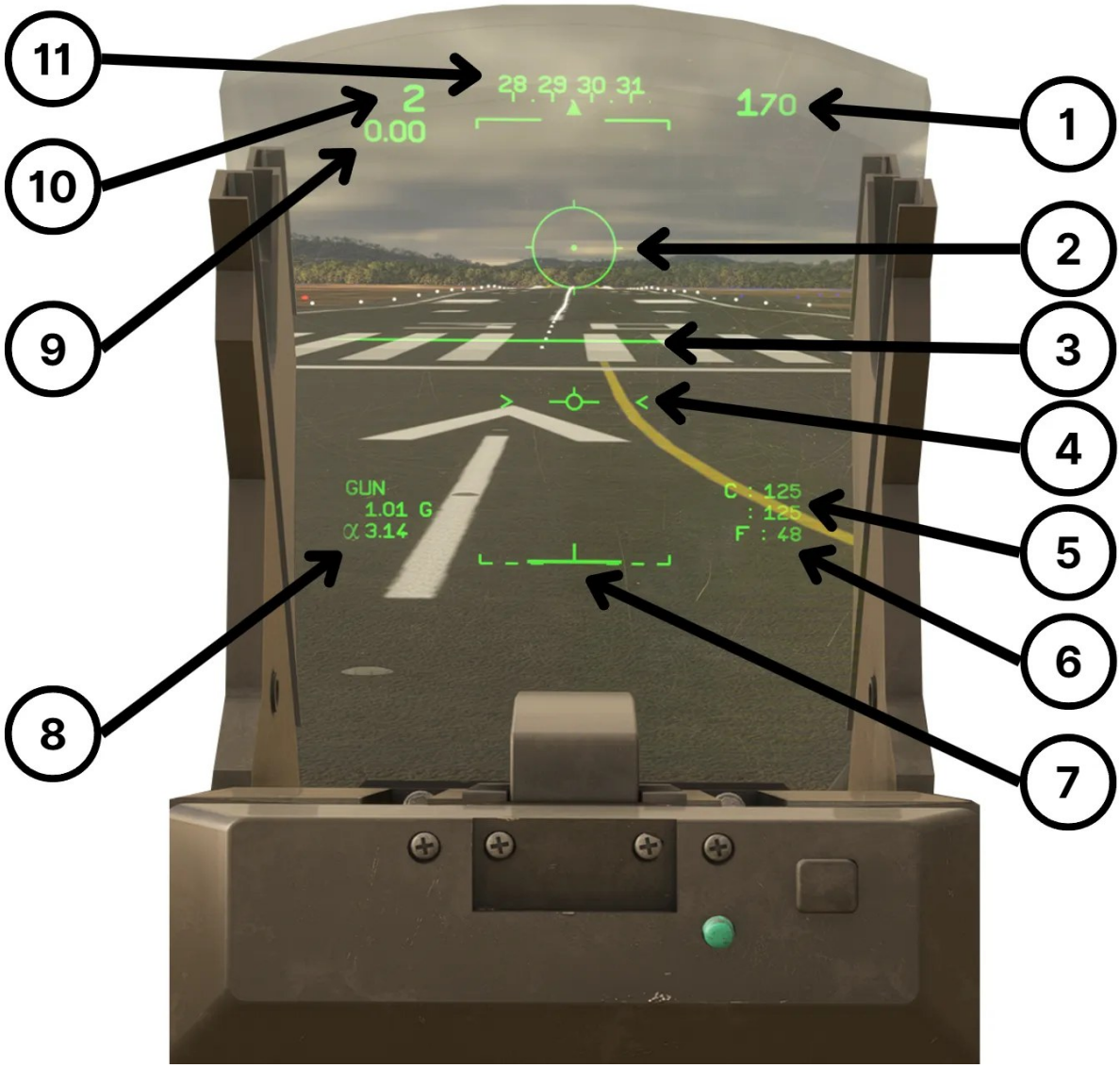
12. **TERR (Terrain):** Enables Terrain Visualization on the VTB display. The terrain will display in green on the VTB if the sampled altitude is equal to or greater than the current aircraft altitude minus a 500-foot buffer. This provides the pilot with sufficient margin to make corrections and avoid a potential collision with the terrain.
13. **VISU:** Enables Weather Radar visualization on the VTB Display.
14. **Mode:** No function
15. **Radar Gain:** No function
16. **Radar Range:** 10/20/40/80, adjusts Range ("zoom") of the VTB Radar Screen
17. **VAL:** When the aircraft is on the ground AND stationary (groundspeed of zero), the VAL Button is used to access the Loads Management menu from where weapons, external tanks and other ordnances can be loaded. For more information, Head-Up Display (HUD)
18. **DEC:** Access Weapons Data page on VTB.
19. **AC:** No function
20. **PER:** No function

Miltech Fighters: M2K-C

Head-Up Display (HUD)

Common HUD Symbols

Pictured here are the most common HUD Symbology. Other symbols that are mode-specific (eg. missile symbology, INS Navigation, Bombs, approach, etc.) may not be pictured here, but are explained in the mode subpages.



Common HUD Symbols

1. **Altimeter:** Displays altitude (BARO/RAD/MIN ALT), in Ft, depending on the mode selected on HUD Controls. When selected mode is BARO (Default mode), barometric altitude will be displayed. If RAD is selected, Radar Altitude will be displayed. When MIN ALT is selected, altimeter indicator will display "altitude to selected Min Alt". For more information, read "Altitude Display Selector" and "Minimum Altitude Selector" below.
2. **Gun Sight:** Indicates the aiming point for the aircraft gun system. The gun sight is displayed when the GUN ARM switch is on.

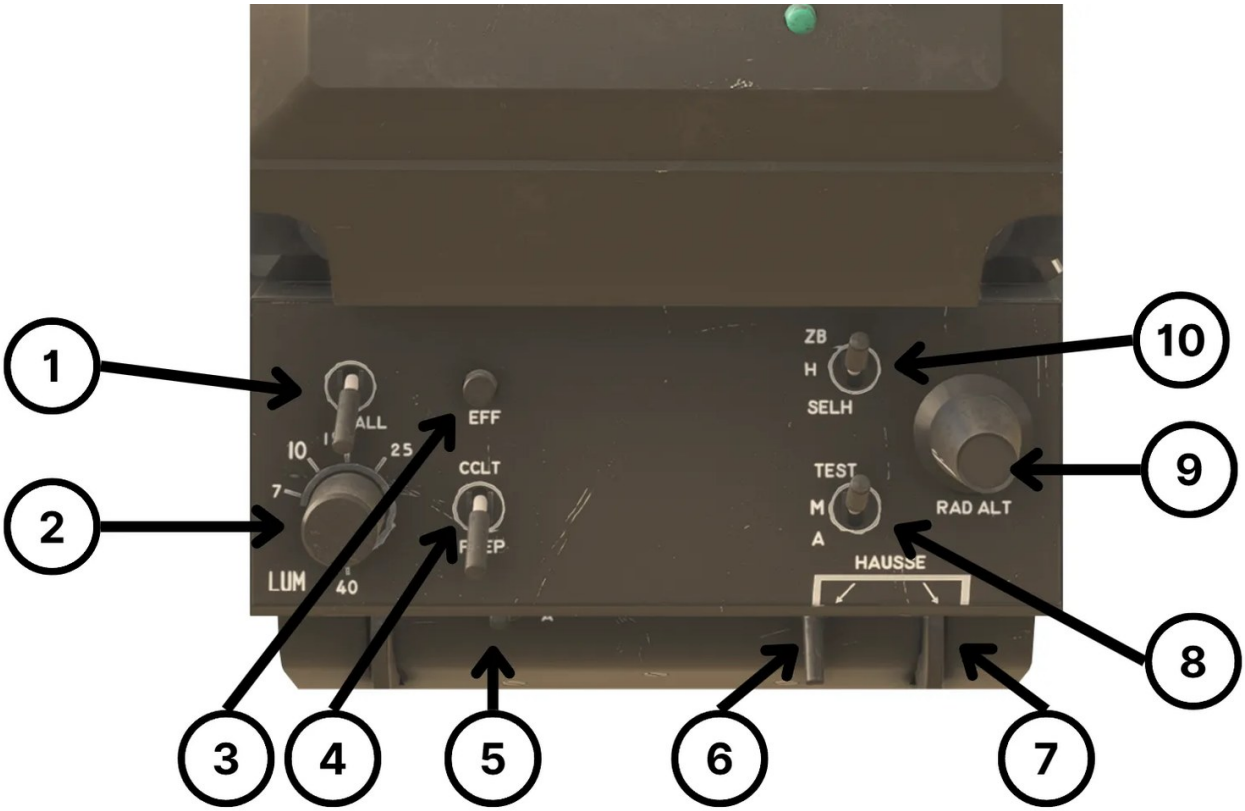
3. **Horizon Line:** Displays the relative position of the horizon.
4. **Flight Path Vector Marker/Acceleration Vector:** Indicates the flight path vector of the aircraft with respect to earth. Chevrons located on both sides indicate the longitudinal acceleration - displays aircraft energy state visually. When chevrons and FPV are aligned, the aircraft is flying at a constant speed.
5. **Cannon Rounds:** Displays the current count of ammunition loaded in the aircraft, for the left and right cannons respectively. Displayed when the GUN ARM switch is on.
6. **Flare Count:** Displays the current count of flares loaded in the aircraft. Displayed when master countermeasures switch is set to SA (Semiautomatic) or AU (Automatic)
7. **Rotation Pitch Indicator:** sets a 12deg pitch when aligned with the horizon on takeoff, for optimal rotation and tail clearance. It displays on Weight on Wheels condition. On takeoff, you should be aiming for pitch no greater than 14deg (place pitch indicator at, or slightly above horizon) to avoid a tailstrike.
8. **Attack Mode Data:** Displays aircraft G load and aircraft AOA for use in dogfights, when weapon systems are being used. Displayed when the GUN ARM switch is on, when Bomb CCIP Mode is enabled, or Missile Modes are enabled.
9. **Machmeter:** Indicates aircraft speed in Mach.
10. **Indicated Air Speed:** Displays indicated aircraft speed, in Knots.
11. **Heading Scale:** Displays current aircraft heading.



Jx Box

12. **Jx Box:** Longitudinal Acceleration Vector on the ground displays on Weight on Wheels condition. Displays the coefficient of acceleration, from 0.56 to -0.43 when the aircraft is on the ground.

HUD Control Panel



HUD Control Panel

1. ↔ **HUD Declutter Switch:** Used to hide traffic and other secondary information on HUD.
2. ◇ **Target Wingspan Selector:** INOP
3. ↔ **EFF Switch:** INOP
4. ◇ **Gun Piper Selector:** INOP
5. ↔ **HUD Power Switch:** Turns HUD Display on/off. (Not Numbered): HUD Brightness Knob, located to the left of the switch.
6. "**HAUSSE" Backup Boresight:** Toggles Backup Boresight on HUD.
7. "**HAUSSE" Backup Boresight Brightness:** Adjusts brightness of backup boresight.
8. **Radar Altimeter Test:** INOP
9. ◇ **Minimum Altitude Selector:** Selects an altitude from 0-1000ft above ground to be used as Minimum Altitude. If Altimeter Selector is on MIN ALT mode, altimeter on HUD will display altitude relative to Ground Alt+Minimum Altitude Selected. If aircraft altitude is under the selected Minimum Altitude, the altitude indicator on HUD will flash in 1 second cycle.
10. ◇ **Altimeter Selector:**

1. ZB: Barometric Altitude is displayed.
2. H: Radar Altimeter is displayed. Radar altimeter has a limit of 5,000 feet, asteriscs are displayed above this altitude.

3. SELH: Displays altitude relative to Ground Alt+Minimum Altitude as selected with the Minimum Altitude Selector. Min Alt Mode has a limit of 5,000 feet AGL, asteriscs are displayed above this altitude.

Special HUD Symbology

- **Traffic on HUD:** Diamonds will display on HUD tracking emissions from radar systems (generally AI or Multiplayer Aircraft).
- Traffic will only display if traffic radar is set to ON in the Radar Control Unit. More information VTB/HDD Display, under the Radar Control Unit section.
- Numbers under the diamonds indicate distance to the targets, in nautical miles.
- Traffic can be hidden from HUD by using the "Declutter" Switch on the HUD Controls Panel.



Traffic on HUD

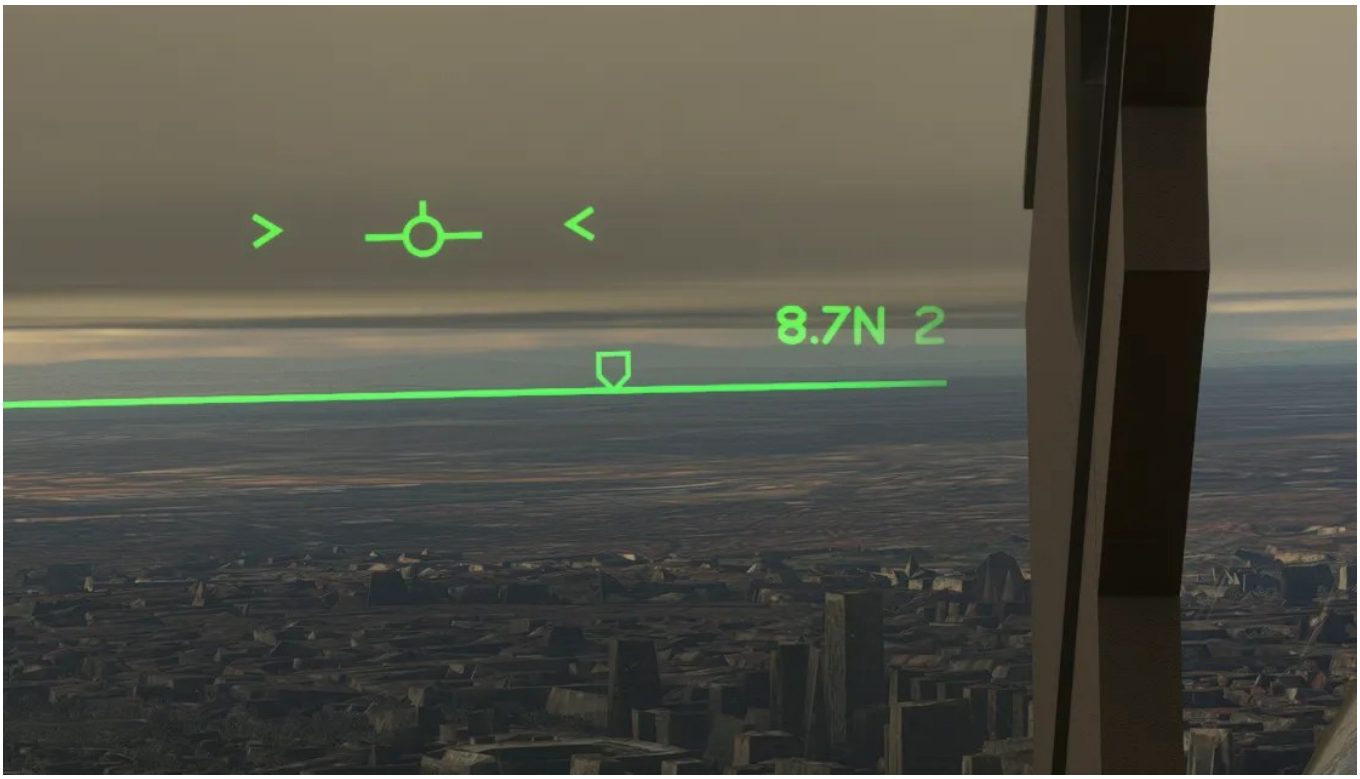
- **Approach Brackets:** Due to peculiarities and difficulties associated with landing a delta-wing aircraft, the M2K-C features HUD Symbology to assist in landing. The square brackets ("] " and " [") indicate approximately a 4-degree glideslope, that should be aligned with the runway touchdown zone.
- APPR HUD Mode will display based on the following conditions: Landing gear is down, and APPR mode is selected on the Weapons Control Panel (PCA). A yellow P will light up on APPR Button on PCA Panel when this HUD mode is enabled.
- The pilot shall aim to align the Flight Path Marker **and** acceleration vector chevrons with the square approach brackets. At the correct landing speed (around 145-150kts), the pilot should be descending at an AOA of 14 degrees, approximately.
- Acceleration chevrons shall remain within the square brackets to stay on the target AOA and glidepath for landing and maintain speed under control.

- We highly recommend using "LANDING" Camera preset when APPR Mode is enabled for best visibility of the symbology.



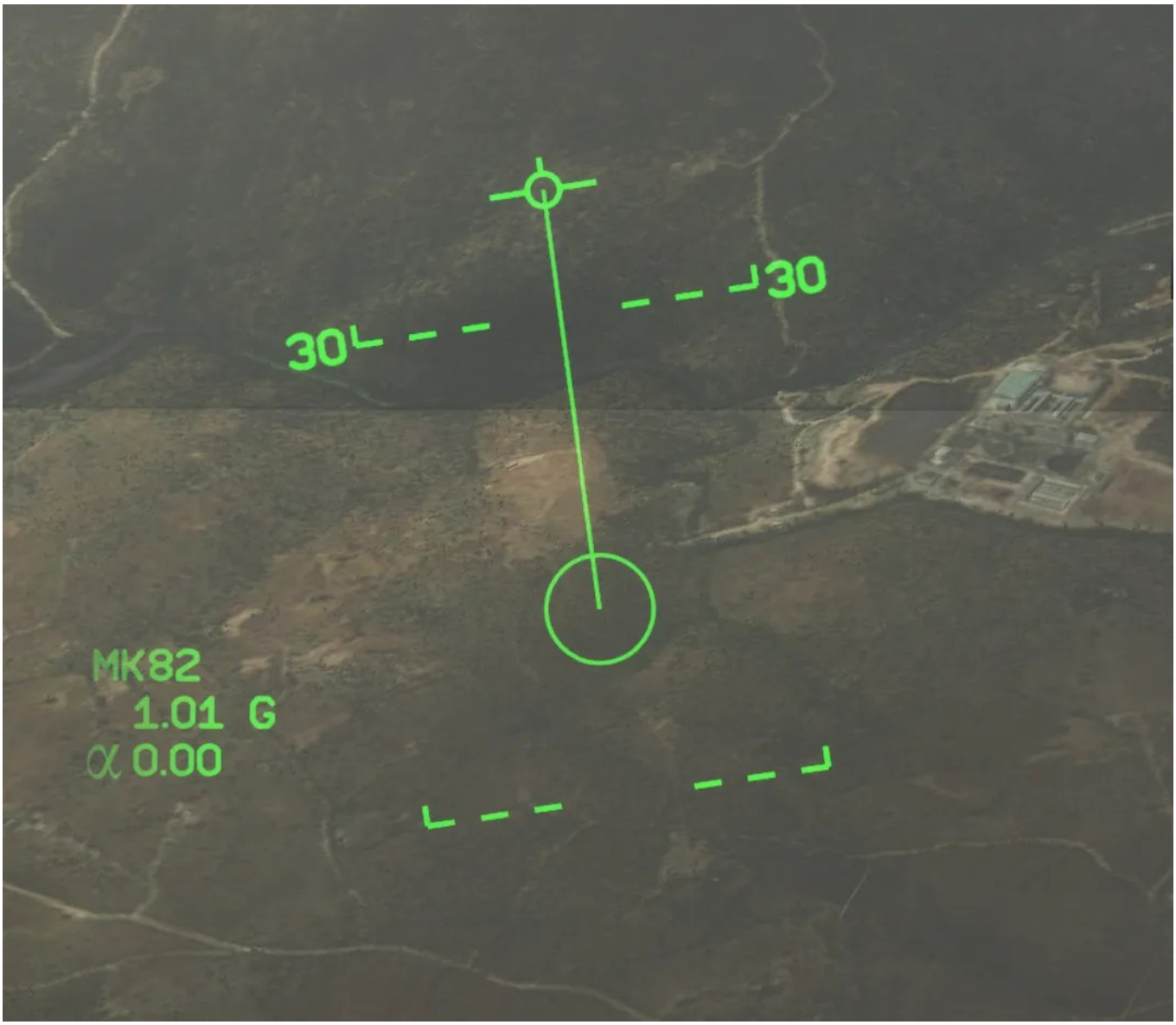
Approach Brackets

- **INS Navigation:** If a flight plan has been entered on the INS, PCN Selector is in NAV mode, and the DEST waypoint is valid, symbology will display on HUD to indicate the bearing and distance to the selected DEST waypoint.
- The "inverted house-shaped icon" on the horizon indicates bearing to the selected waypoint. If the icon is above the horizon, the waypoint is ahead of the aircraft. If it is under the horizon, the waypoint is behind the aircraft.
- Distance to waypoint is displayed on the right side of the HUD. In this example, "8.7N 2", indicating 8.7 nautical miles to DEST waypoint #2



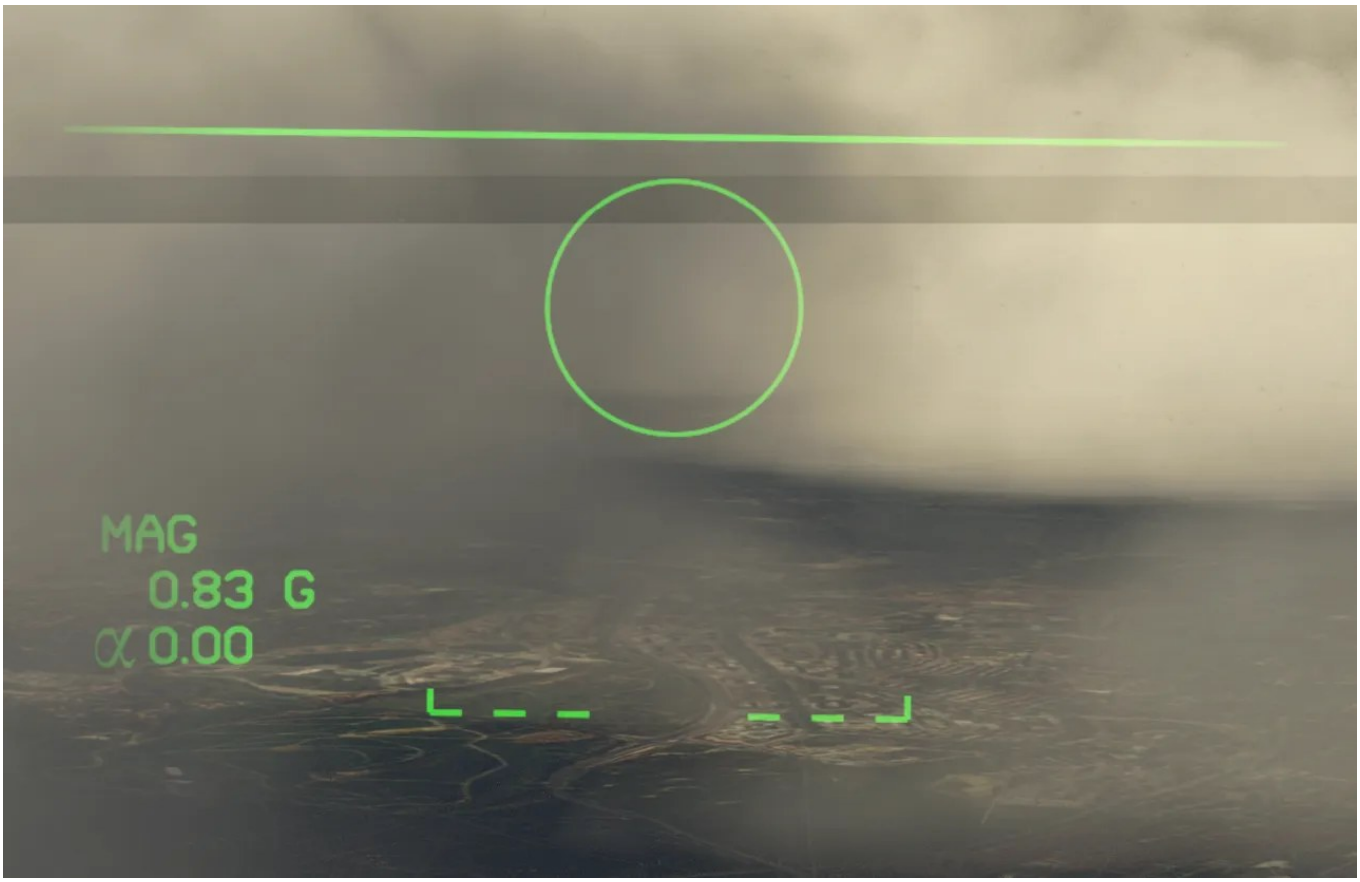
INS Navigation Symbology

- **Bomb Symbology (CCIP):** If a bomb (MK82 or GBU) is selected and ready for deployment (PREP), the CCIP Bomb symbology will automatically display on the HUD.
- This will render a possible impact location as calculated based on aircraft speed, altitude and attitude, and a launch vector that connects this target area with the aircraft´s FPV.
- On the bottom left corner, selected weapon type, as well as G-load and aircraft AoA is displayed.
- Beware that CCIP only provides a real-time estimate of the impact location. Bomb impact predictions as displayed on the HUD are subject to calculation uncertainty, which increases with speed and varies with attitude. Do not take these as a precise indication of where a bomb may impact the ground, but rather an approximate impact location. We will do continuous work to improve the accuracy of these predictions over time. Ideal airspeed for best target accuracy: 200-300 Kts, neutral pitch/roll attitude OR dive bombing.



CCIP Symbology

- **Missile Symbology:** If a missile (S530 or R550) is selected and armed, this mode will automatically display.
- At this time, this mode is rather basic, but we have plans to expand the symbology in the future to display tracked and locked targets.
- On the bottom left corner, selected weapon type, as well as G-load and aircraft AoA is displayed.



Missile Symbology

Miltech Fighters: M2K-C

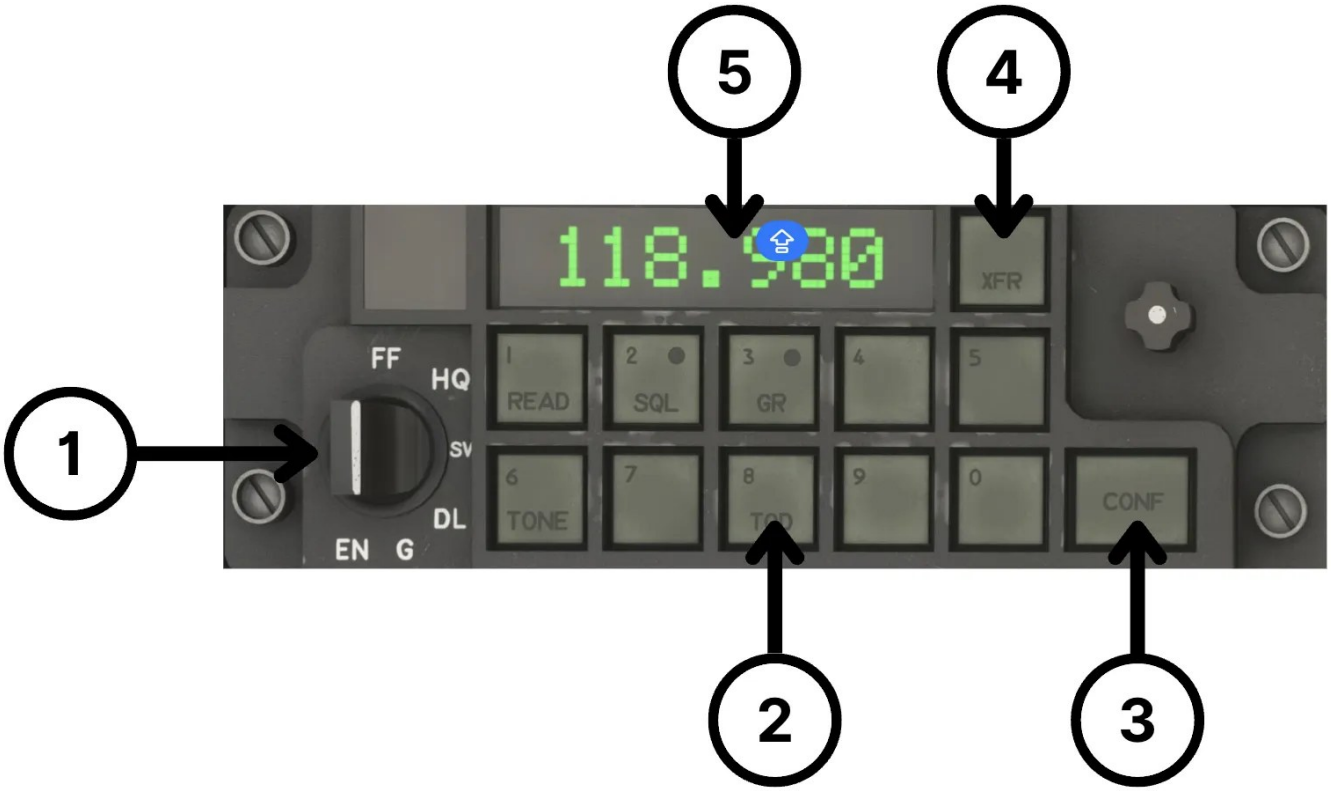
Navigation & Communication Systems

- Communication Systems
- Bearing Distance Heading Indicator (BDHI)
- Inertial Navigation System

Miltech Fighters: M2K-C

Communication Systems

The COMM Radio Panel is located on the left side panel of the cockpit.



Comm Radio Panel

1. ◇ **Radio Mode Selector:** Only FF (COM1) mode is supported.
2. **Keypad:** Used to enter frequencies.
3. **CONF (Configure):** Used to input a new frequency, and to confirm input.
4. **XFER:** Transfer button, switches frequency with standby frequency. Standby frequency is always the latest inputted frequency.
5. **Frequency Display:** Displays active COM1 Frequency selected.

Active frequency and standby frequency are also displayed on a small LCD Display on the front panel, near the AoA Indicator.



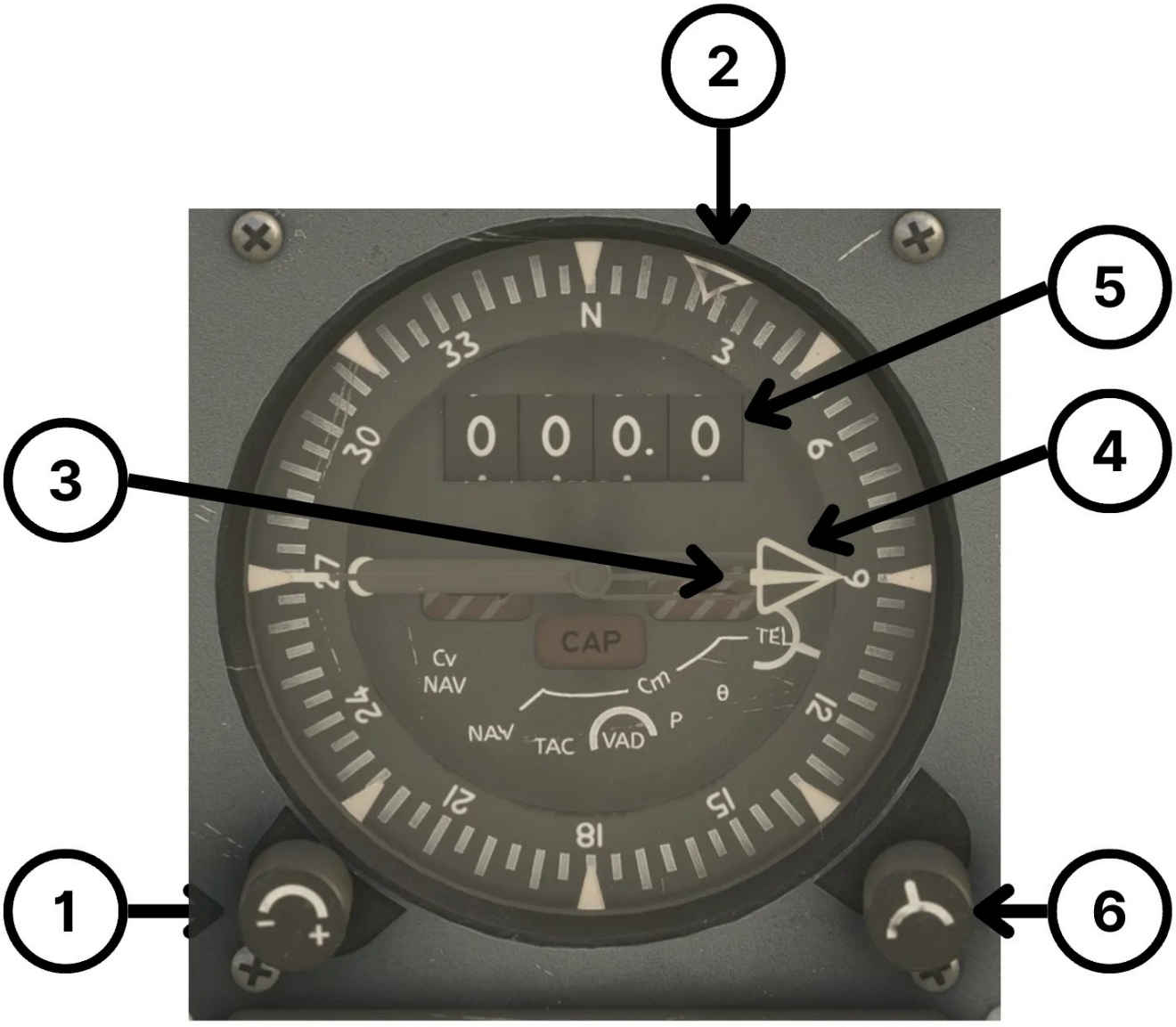
COM1 Frequency Display

Entering a new COM1 Frequency

1. Locate the COMM Radio Panel on the left side console.
2. Press the CONF Button to input a new frequency.
3. Enter the desired frequency, excluding any periods. A total of six digits must be entered.
4. Press the CONF Button to confirm input. If the frequency is valid, COM1 will now tune the new frequency inputted, and the previous frequency will automatically become the Standby Freq. If the entered frequency is invalid, no change will occur.
5. You may switch back to the Stby Frequency at any time by using the XFER Button.

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Bearing Distance Heading Indicator (BDHI)

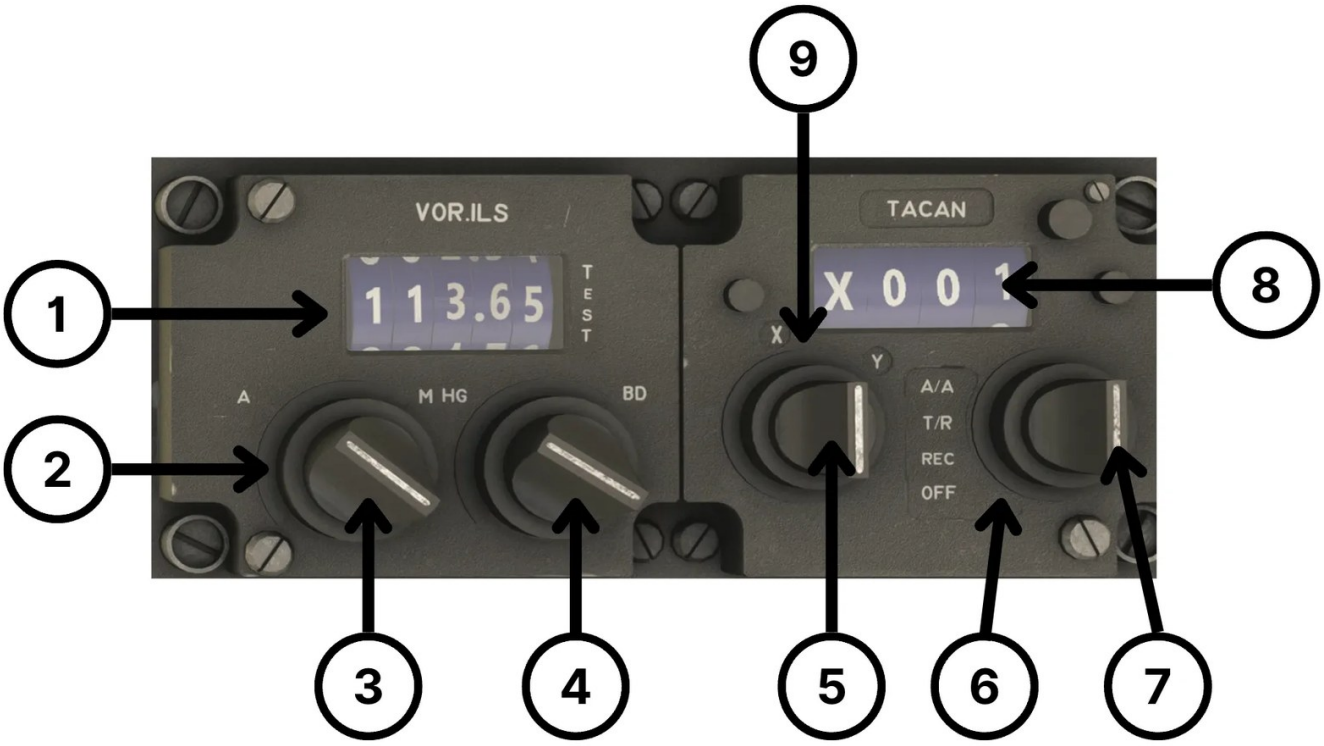


Bearing Distance Heading Indicator

1. ◇ **Heading Selector:** Selects heading, used by Autopilot NAV Mode
2. **Heading Bug:** Displays selected heading.
3. **Small Needle:** Always displays bearing to the VOR Station selected.
4. **Large Needle:** Displays bearing to navigation source as selected by the Mode Selector knob. For example, if NAV is selected on Mode Selector, bearing displayed will correspond to the INS Waypoint.
5. **Distance Drums:** Provides distance, in nautical miles, to navigation source as selected by the Mode Selector knob.
6. ◇ **Mode Selector:** Selects the navigation source

7. NAV CV: Provides bearing and distance to tuned VOR
8. NAV: Assuming the INS System is aligned, and a valid waypoint is entered and selected, it will provide bearing and distance to this waypoint
9. TAC: Provides bearing and distance to tuned TACAN Station
10. VAD: Not Modeled
11. RHO: Not Modeled
12. THETA: Not Modeled
13. TEL: Not Modeled

VOR and TACAN Selector Panels



VOR/ILS and TACAN Panels

1. **VOR/ILS Frequency Selected Drums**
2. **VOR Mode:** AUTO/Manual, no sim function
3. ◇ **VOR Frequency Selector Knob,** Integer Part
4. ◇ **VOR Frequency Selector Knob,** Decimal Part
5. ◇ **TACAN Channel Selector Knob,** Hundreds and Tens
6. ◇ **TACAN Mode Selector:** OFF/REC/TR/AA
7. ◇ **TACAN Channel Selector Knob,** Units
8. **TACAN Channel Selected Drums**
9. ↔ **TACAN X/Y Mode Switch**

Miltech Fighters: M2K-C

Inertial Navigation System

Caution
Toggling the Battery Off will erase the INS Memory (eg. all waypoints will be lost), and system alignment will be lost.
Alignment time is approx. 3-5 minutes. Instant alignment is also available. See Step 8 under "Alignment Procedures" for more information.

Tip

New on V1.2.0:

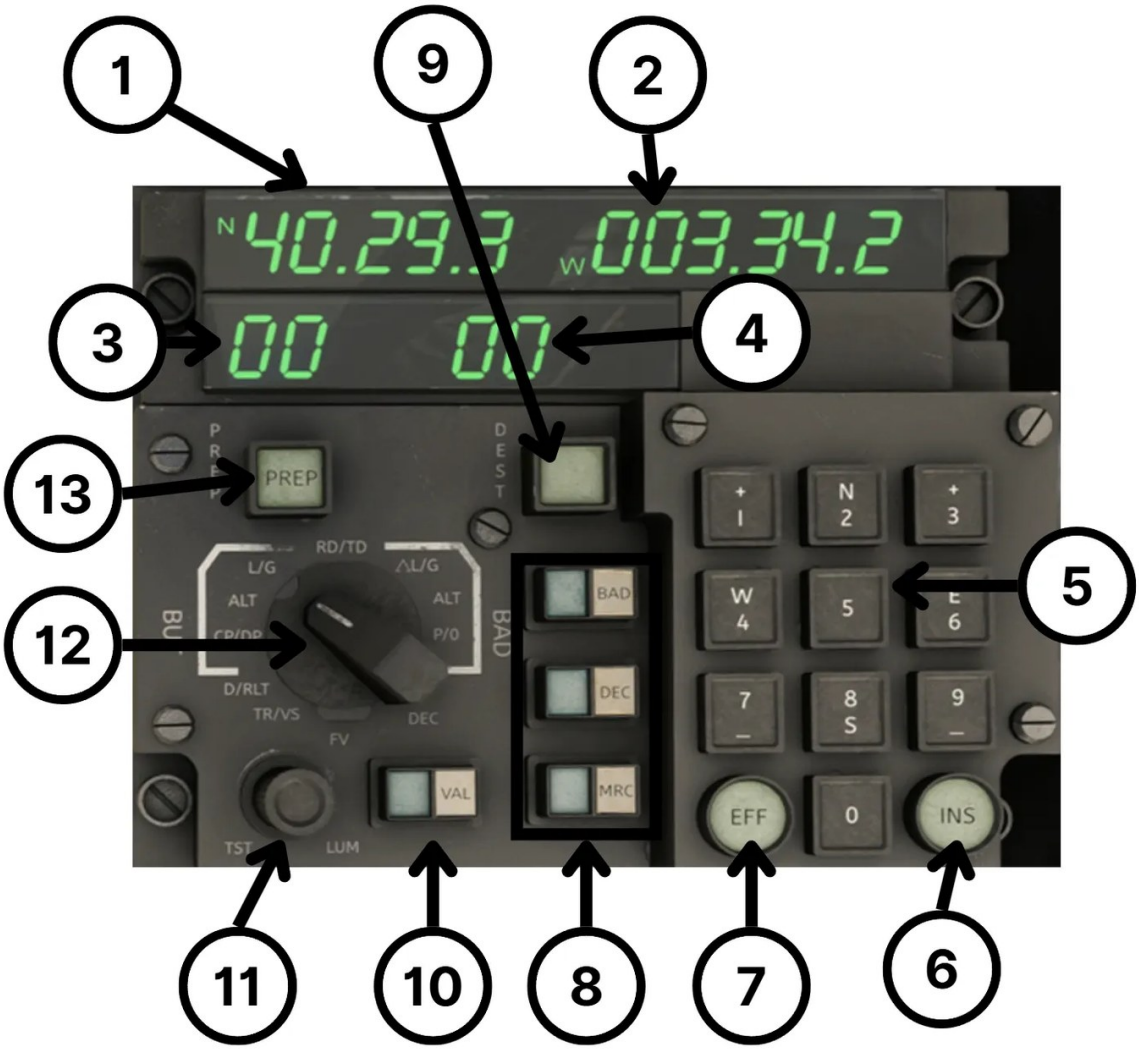
- FS20 and FS24: Over-the-cloud loading of INS Flight Plans Cloud Sync of Flight Plans (INS Planner)
- FS24 Only: Flight Plans created with the Tablet EFB can now be sent to the INS Unit. Importing Flight Plans from the MSFS 2024 Tablet (EFB)

The M2K-C features a fully functional Inertial Navigation System (INS). Inertial Navigation Systems rely exclusively on the use of gyroscopes and accelerometers to determine the location of the aircraft, and follow routes on a flight plan.

Miltech Simulations has created a Flight Planning tool that will facilitate the process for those pilots looking at following waypoint-to-waypoint flight plans. A few shortcuts have also been implemented for those users looking to perform a quick alignment.

Flight Plans on INS Systems are entirely coordinate-based, the aircraft does not follow typical approach or takeoff procedures using fixes, nor uses them while onroute. Instead, each point on the flightplan is determined by a latitude and longitude inserted into the INS. Waypoint 00 will always display the current location, regardless of alignment status.

Inertial Navigation Computer



INS Panel, Right Side Console

1. **Main LCD Display - Left Side:** Displays Latitude (North/South)/Altitude in Feet/Bearing/ETA, as per mode selected.
2. **Main LCD Display - Right Side:** Displays Longitude (West/East)/Altitude in Meter/Distance in Nm/Ground Speed, as per mode selected.
3. **Bottom LCD Display - Left Side:** Displays PREP (Preparation) waypoint selected. PREP are waypoints selected for modification. Range from 00 to 99.
4. **Bottom LCD Display - Right Side:** Displays DEST (Destination) waypoint selected. DEST are waypoints selected for navigation. Range from 00 to 99.
5. **Keypad:** Numbers from 0-9. Note that number 2=NORTH, 4=WEST, 6=EAST, 8=SOUTH; and number 1=SELECT LEFT LCD, 3=SELECT RIGHT LCD.
6. ▣ **INS (Insert) Button:** Inserts data in the system, as entered by the keypad. Upon entering in editing mode (L/G or ALT Pages), this button lights up to signal the input can be inserted.
7. ▣ **EFF (Erase) Button:** Erases data from the system, as selected with the keypad. Upon entering in editing mode (L/G or ALT Pages), this button lights up to signal the input can be inserted

8. **BAD/DEC/MRC:** Functions not modeled.
9. ▣ **DEST Button:** Pressing this button activates DEST Waypoint Input via the keypad. The button illuminates to indicate that the system is ready for a two-digit keypad entry. DEST are waypoints selected for navigation. Range from 00 to 10.
10. ▣ **VAL (Validate) Button:** Validates entered initial waypoint for alignment process to start.
11. ◉ **TST/Brightness Knob**
12. ↔ **INS Parameter Switch:** Switches INS System across different modes:

1. **TR/VS:** Time remaining to DEST Waypoint selected from current location (ETA), Ground Speed in Knots (READ ONLY)
2. **D/RLT:** Distance (Nm) and Bearing (Deg) relative to DEST Waypoint selected from current location. (READ ONLY)
3. **CP/DP:** Not Modeled.
4. **ALT:** Waypoint Altitude, in Ft and Meter (WRITE ONLY)
5. **L/G:** Waypoint Latitude/Longitude (WRITE ONLY)
6. **RD/TD:** Not Modeled.
7. **DELTA L/G:** Not Modeled.
8. **DELTA ALT:** Not Modeled.
9. **RHO/THETA:** Not Modeled.

13. ▣ **PREP Button:** Pressing this button activates PREP Waypoint Input via the keypad. The button illuminates to indicate that the system is ready for a two-digit keypad entry. PREP are waypoints selected for navigation. Range from 00 to 10.

Additionally, the following knobs control the Operational Mode and Operational Selector:

Operational Selector Panel



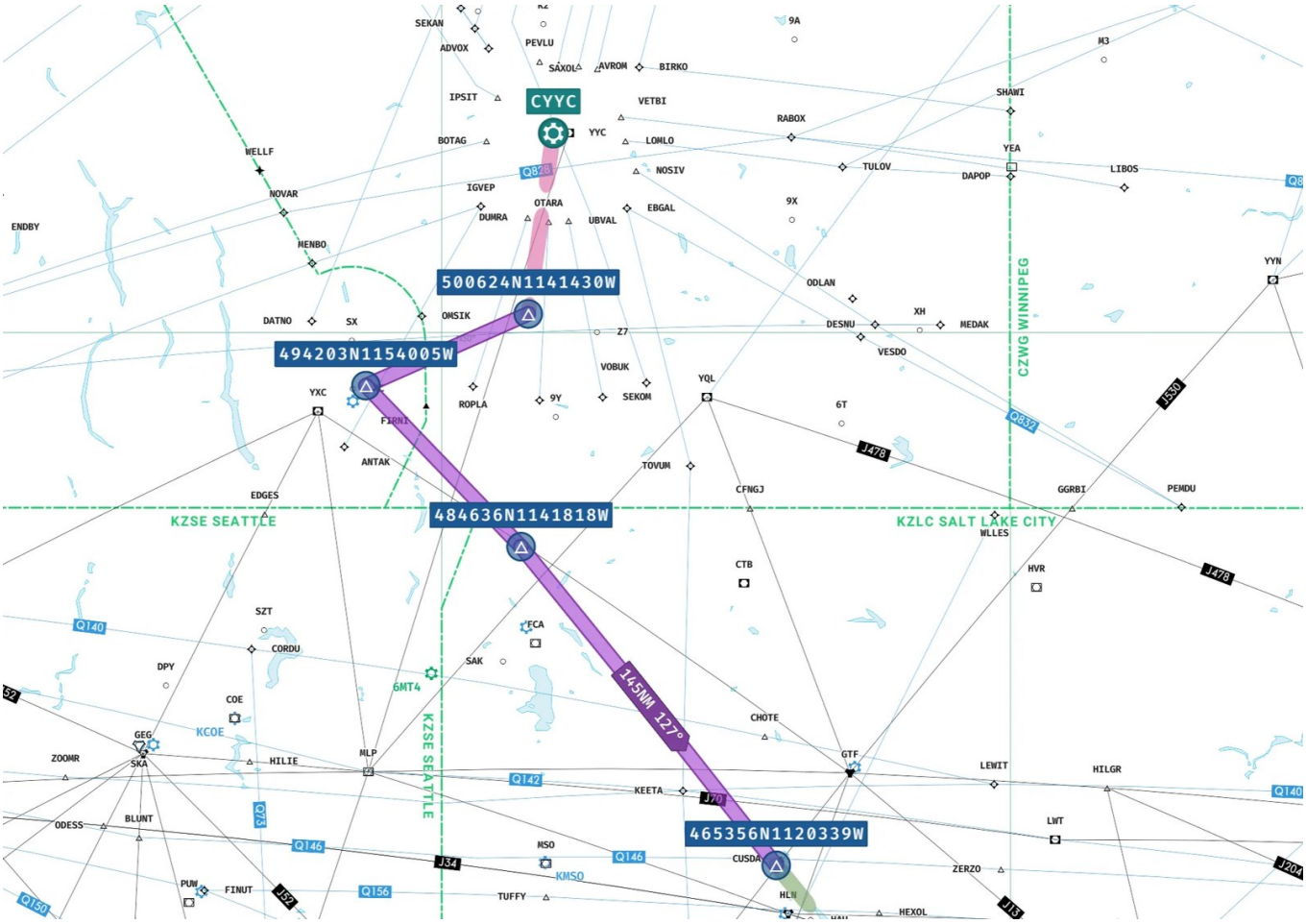
OM/OS Panel, Right Side Console

1. ◇ **PCN Selector:** Selects INS Panel mode:
2. **VEI:** Standby Mode. Allows for input of waypoints, but not suitable for alignment or navigation.

3. **CAL:** Not Modeled.
4. **TST:** Not Modeled.
5. **ALN:** Alignment Mode. Prepares system of realistic alignment, taking 2-3 minutes to complete. Not suitable for entering waypoint data.
6. **ALCM:** Quick Alignment Mode. Prepares system for instantaneous alignment. Not suitable for entering waypoint data.
7. **NAV:** Navigation Mode. User for navigation. This is the only mode that will return data to the pilot and instruments. Allows for entering waypoint data.
8. **SEC:** Not Modeled.
9. **Operational Mode:** Selects operational mode of the INS System:
10. **N:** Normal operation mode. Used for STBY and Navigation.
11. **STS:** Status mode. Used to verify alignment status in ALN/ALCM modes.
12. **DCI:** Not Modeled.
13. **CRV:** Not Modeled.
14. **MAIN:** Not Modeled.

Flight Planning

1. **Access insplanner.miltechsimulations.com.** This is our new portal for Flight Planning, designed for INS Systems. This will be used across all future INS-based aircraft. The website is quite basic at the time, but will get you the necessary info to enter manually into INS System. Sync to Aircraft may be an option available in the future.
2. **Click on the map to add Waypoints.** Start with Waypoint 01, which must be your Departure Airport. Continue adding route waypoints up to waypoint 10, which must be your target location. Use the map search bar and mouse buttons to navigate, and add waypoints based off your mission purpose.
3. Unfortunately at this time we do not have a good provider of Aviation Charts, so Map Layers are limited to satellite and street maps.
4. Users of Navigraph may use Navigraph's Flight Planner instead, creating "User Waypoints" along the route and copying the coordinates. Make sure that total number of waypoints, including departure airport and arrival airport is less or equal to 10.



Navigraph Flight Planning with "User Waypoints"

3. **You may move waypoints by clicking and dragging.** Once your flightplan is complete, take a look at the table on the bottom right hand side - your waypoint coordinates will be displayed in the format expected by the aircraft INS System. You may rename your flightplan, and download as CSV from here. This website will not store flight plans.
4. **Copy and manually enter your Waypoints on the aircraft's INS System,** or use the 6-digit number to load flight plan from the cloud: Cloud Sync of Flight Plans (INS Planner)

Alignment Procedure

Aligning the INS is always required, regardless if aircraft has started C\&D or Ready for Takeoff. The system requires the pilot to enter an initial alignment waypoint manually - otherwise, alignment will not be executed.

Aircraft will require realignment if battery power is set to OFF at any time, as this action will erase the memory and restart the system.

Instant alignment is available, however, it still requires the user to enter an initial waypoint 01.

1. **Turn your battery switch ON.** INS System will automatically initialize, which takes approx 5 seconds.
2. **Verify ◇ PCN Selector** is set to VEI (STBY), **◉ Operational Mode Knob** is set to N (Normal) and set **INS Parameter** to L/G
3. **By default, PREP Point 00 is selected.** This is the aircraft current Latitude and Longitude. Generally, an INS System would be unable to provide this info without alignment, however, for simplicity this is provided as "Last Position Registered".

4. **Press PREP and enter Waypoint Number 01.** Page switches automatically.
5. **Enter Current Aircraft Position, starting with Latitude**. You may copy the position on PREP Waypoint 00.
6. To enter current Latitude, press #2 (NORTH) or #8 (SOUTH) on the numberpad to define the direction. Use keypad to enter the coordinates in degree-minute-second format.
7. Seconds are limited to one digit. Subsequent digits entered are registered, even when not displayed.
8. ERR Button will erase entered coordinate and return to Direction Selection.
9. INS Button will insert the coordinates entered.
10. **After inserting the Latitude, proceed with Longitude.**
11. Press #4 (WEST) or #6 (EAST) on the numpad to define the direction. Use keypads to enter coordinate in degree-minute-second format.
12. Errase and Cancel with ERR Button, insert with INS Button.

Note
Alignment is absolutely required for the system to function. A system that isn't aligned is unable to provide Bearing, Distance and ETA calculations, even if the entire flightplan is inserted correctly.

7. **Switch INS Parameter Knob to ALT.** Enter current Barometric altitude, in feet or meter. Press #1 on Keypad to enter in Feet, #3 on Keypad to enter in Meter. Then press INS to insert or ERR to Erase.
8. **Set System for INS Alignment.**
9. Set PCN Selector to ALN (for realistic alignment, 2-3 minutes) OR ALCM (for instant alignment)
10. Set Operational Mode Knob to STS
11. If the initial waypoint is correctly inserted, and the system is correctly setup for INS Alignment, the VAL Button will light up, and ALN will flash orange on the INS Display.
12. Press VAL Button to initialize alignment.
13. Monitor STS Page, Right side LCD.

1. 00 indicates system is currently aligned. If you wish to re-align, cycle BATT on-off-on. Beware this will erase the INS memory, deleting all your waypoints.
2. 100 indicates system is not aligned
3. Any other value indicates an active, ongoing alignment process.

14. Monitor STS Page, Left side LCD:

1. When system is <60 seconds from completing alignment, an ETA indicator will count down to 00:00.

15. Orange ALN indicator disappears, and PRET indicator lights up, to indicate alignment is completed.
16. **System is fully aligned now.** Switch ◇ **PCN Selector** is set to NAV (Navigation), ◉ **Operational Mode Knob** set to N (Normal)
17. **Proceed with entering other waypoints in flightplan.** D/RLT and TR/VR will now be fully enabled, provided that the DEST waypoint selected is valid and >00

Requirements for a Successful Alignment

If one (or more) of these are not correctly entered, the INS will not align.

- Initial Waypoint must have been entered correctly (Latitude, Longitude and Altitude). Generally you'd want to use PREP 01 to store this initial waypoint.
- Initial Waypoint must be correctly selected in PREP screen. If initial waypoint was entered as PREP 01, you'd want to have PREP01 currently selected.
- PCN Selector Knob must be on the "ALN" Position, or "ALCM" for Instant Alignment.
- Operational Mode Knob must be on the "STS" Position.
- On Status (STS) Page, the displayed value must be equal to 100.
- Press VALIDATE (VAL) Button on INS to start alignment.

VAL button will not light up if the system is not correctly configured for alignment.

Navigating Procedures

Inertial Navigation is executed from waypoint-to-waypoint, coordinate to coordinate.

1. System must be correctly aligned. **Refer to Aligning Procedure** above.
2. ◇ **PCN Selector** must be on the **"NAV"** (Navigation) Position. * VEI Poisition is "STBY" - entering waypoints is possible, but not suitable for navigation. ALN and ALCM Positions are only used for alignment. Other pages are not supported on this product.
3. ◉ **Operational Mode Knob** must be on the **"N"** (Normal) Position. * STS Page is only used for Alignment Status. Other pages are not supported on this product.
4. DEST waypoint must be from 00-99. This is the waypoint selected for navigation.
5. Assume that the DEST waypoint selected is a valid waypoint, otherwise the aircraft will be unable to calculate bearing and distance.
6. INS System will now provide bearing and distance from current position to the selected DEST Waypoint.
7. This bearing and distance will display on HUD. See Head-Up Display (HUD) for more information.
8. You may also select NAV mode as source on BDHI to see bearind and distance. See Navigation & Communication Systems for more information.
9. You may also use the ↔ **INS Parameter Switch** to change selected parameter to D/RLT or TR/VS to get bearing, distance and ETA information.
10. To change DEST waypoint, you may use the DEST button on INS panel, or use the PLUS and MINUS buttons on the bottom left side of the glareshield.

Importing Flight Plans from the MSFS 2024 Tablet (EFB)

Create a flight plan using the built-in MSFS 2024 tablet (EFB) and use the "Send to Avionics" button. The INS will automatically detect the route and load all waypoints - no additional steps are required.

If you modify the flight plan on the tablet, the INS will update automatically with the new route after the "Send to Avionics" function is used.

Once loaded, PREP and DEST are set to waypoint 01. You can navigate through loaded waypoints using the DEST +/- buttons as usual.

Caution
Note: Up to 99 waypoints can be loaded. Altitude data is not included from the EFB - waypoint altitudes must

be entered manually if needed.
INS Unit must be aligned prior to importing. Follow the guide above: Alignment Procedure

Cloud Sync of Flight Plans (INS Planner)

Flight plans created in the INS Planner web tool (**insplanner.miltechsimulations.com)** can be loaded directly into the INS using their 6-digit flight plan number.

Steps

1. Create a flight plan using **insplanner.miltechsimulations.com.** Click on "Send to Aircraft" to get a 6-digit Flight Plan number.
2. Turn the ◇ **PCN Selector** to the **CAL** position.
3. Type the **6-digit flight plan number** on the INS keyboard (e.g., 294017). The digits appear on the display as you type.
4. Press **INS** to load.
5. Once loaded, PREP and DEST are set to waypoint 01 and all waypoints are ready for navigation.

Display Messages

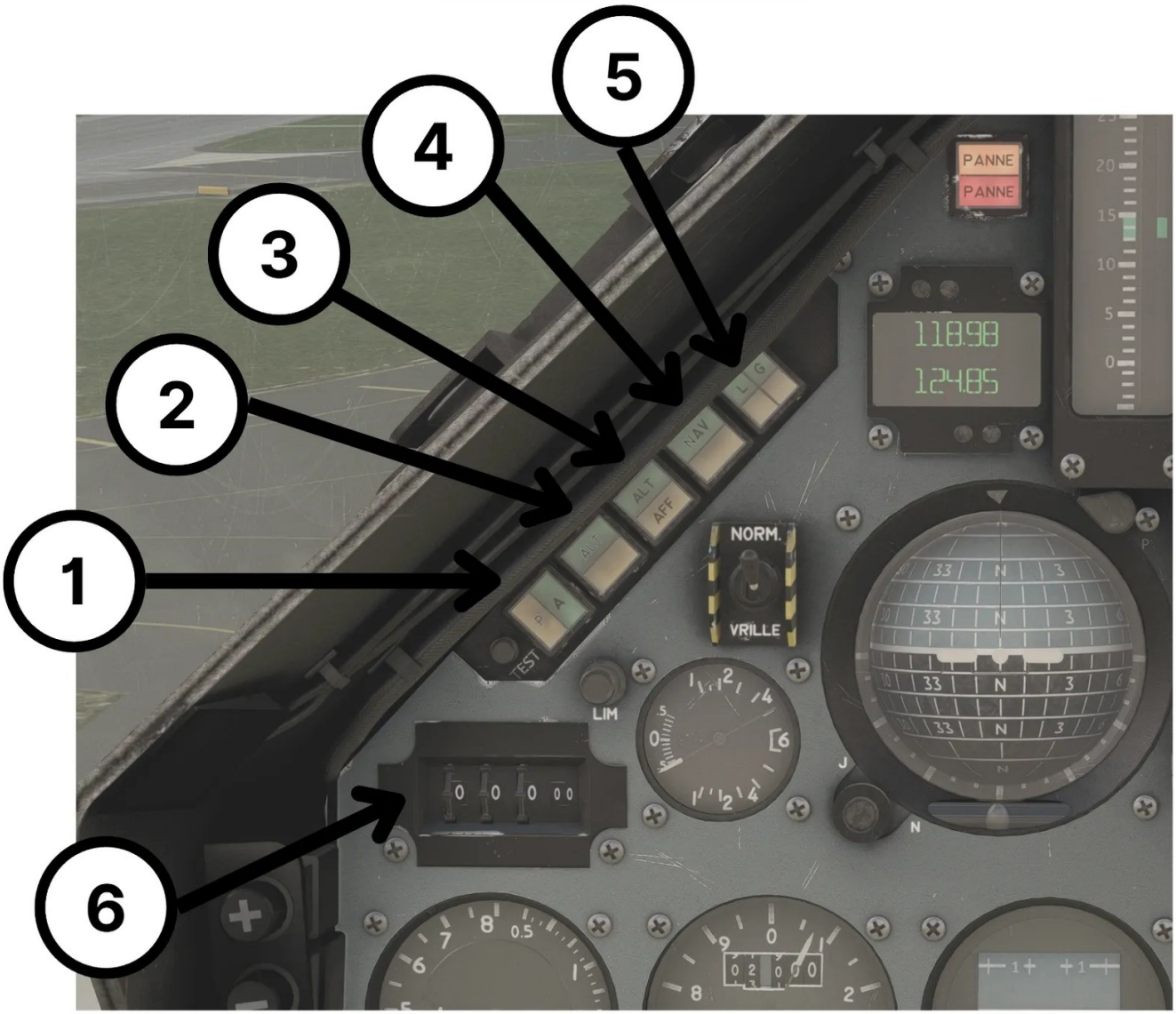
Message	Meaning
123___	Entry in progress (underscores show remaining digits)
LOADING	Fetching the flight plan from the cloud
LOADED	Flight plan successfully loaded into the INS
FAIL	The number is invalid, or no flight plan was found

The status message clears after a few seconds. Press **EFF** at any time to cancel the entry.

Caution
Note: The flight plan number must be exactly 6 digits. Pressing INS with fewer digits will show FAIL.
INS Unit must be aligned prior to importing. Follow the guide above: Alignment Procedure

Miltech Fighters: M2K-C

Autopilot System



Autopilot Panel

1. ↔ **Autopilot Master Switch (PA):** Engage Autopilot Master. Required to engage any other autopilot modes.
2. ↔ **Autopilot Altitude Hold Switch (ALT):** Upon selection, autopilot system will automatically sample the current altitude and will take over the altitude controls to hold this altitude. Will also automatically engage when performing flight level changes using ALT AFF.
3. ↔ **Autopilot Altitude Select Switch (AFF):** Upon selection, the autopilot system will automatically increase or decrease the altitude, at an initial rate of +/- 1500fpm, until it reaches the target altitude as selected on the altitude selection drums. Use the Trim Up/Trim Down switches on the left console to adjust vertical speed. Note that trim up/down keybinds will not work for this, must use switch in the cockpit
4. ↔ **Autopilot Heading Select Switch (NAV):** Upon engagement of this mode, the aircraft will follow the selected heading as selected by the heading bug on the BDHI. Please note that other NAV AFCS modes

(LNAV, VOR) are unavailable on this aircraft. INS point-to-point navigation requires the pilot to adjust the heading bug constantly to follow the flight plan.

5. ↔ **Autopilot Glideslope Switch (GS):** Temporarily unsupported.
6. **Altitude Selection Drums:** Use these drums to select the desired target altitude used by the autopilot system.



Trim Switch

7. ↔ **Trim Up/Down switches:** Use this rocker switch to increase/decrease the vertical speed at which the autopilot will intercept the selected altitude.

Speed management modes are not available on this aircraft.

Miltech Fighters: M2K-C

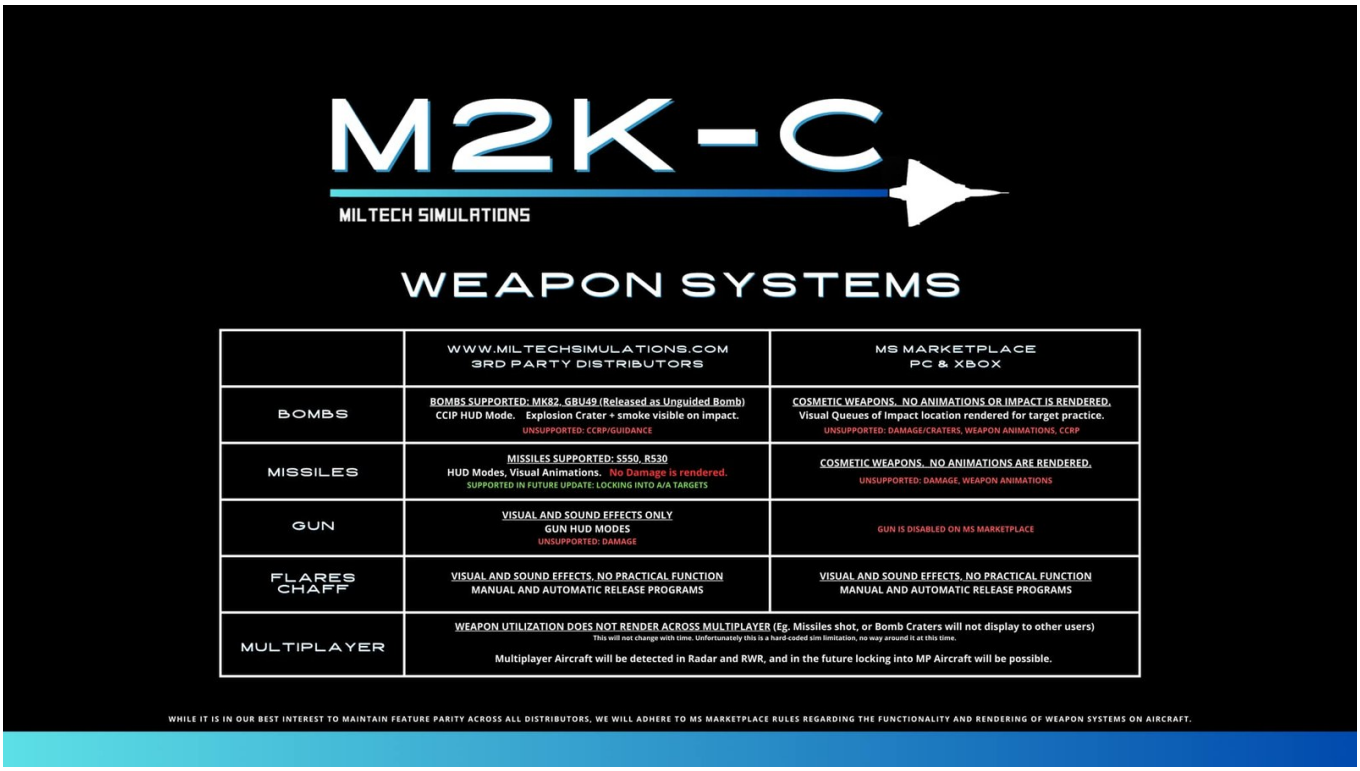
Weapon and Defensive Systems

Note
Familiarize yourself with the limitations and capabilities of the Weapons System.

Miltech Simulations M2K-C features the very first semi-functional Weapons system on any 4th-Gen Fighter in MSFS. The weapons system is designed to support Air-to-Air and Air-to-Ground operations, with some degree of interactability with other aircraft.

The system is limited in various ways due to current MSFS hard-to-bypass limitations. This is just the first stepping stone in a long road of continuous innovation with the final objective of fully fledged combat training simulation in MSFS.

Due to MSFS Marketplace rules, weapons systems only fully available on product sold from our Store and 3rd Party distributors. MS Marketplace gets a more limited rendition of these systems, as per the table below.



Design Considerations and Objectives

The objective of M2K-C Weapons System is to provide the user with a comprehensive, yet simplified experience in aerial combat and weapons training.

- Allows the user familiarization with the weapons system aboard a 4th Generation Fighter jet. Weapons can be loaded on the ground, and used throughout the flight.
- Allows the user to engage in **unguided** Air to Ground operations, by releasing ordinances and observing visual queues on the ground for target accuracy training.
- Visual, persistent queues will display where the bombs have impacted the ground, in the form of craters. No explosions are rendered. In MS Marketplace, impact locations are instead tagged with an orange

smoke flare.

- Guided A/G is not currently supported. GBU Bombs will act as unguided ordnance.
- Allows the user to shoot missiles. Currently, tracking and locking into targets is not supported, however this may be supported in the near future. Instead, missiles are simply following random trajectories.
- Damage by air-to-air attacks is not simulated. Multiplayer aircraft do not get notifications or visual queues of missile impact.
- Allows user to engage in dogfights using the aircraft gun, limited to visual effects only. Hits are not monitored, nor are visual queues sent over multiplayer.
- Inert Tracer Rounds are used to evaluate the accuracy of shots during dogfights
- Allows the user to deploy flares and countermeasures, for cosmetic purposes only. Flares do not prevent impact by weapons, nor it has any practical function.

Current Limitations

- Due to MSFS Policy, no explosions or damage to any other aircraft is displayed in any of the weapon modes.
- Other aircraft across multiplayer will not be able to see the missiles or bombs as they are shot. This addon relies on SimConnect, which is executed locally on the user machine, with no built-in synchronization over the network. This is the area where we are investing the most amount of resources in R\&D.
- Guided Air-to-Ground attacks are not supported.
- The gun serves no practical function, only cosmetic. Gun impact or damage is not simulated.
- Flares, Chaff or Countermeasures serve no practical function, nor prevent other users from registering impacts against your aircraft, only cosmetic.

Procedures

Procedures to use the different weapon systems are outlined here:

PCA and PPA Panels

Loading Weapons

Air to Ground Operations (Bombs)

Air to Air Operations (Missiles)

Gun

Countermeasures

Miltech Fighters: M2K-C

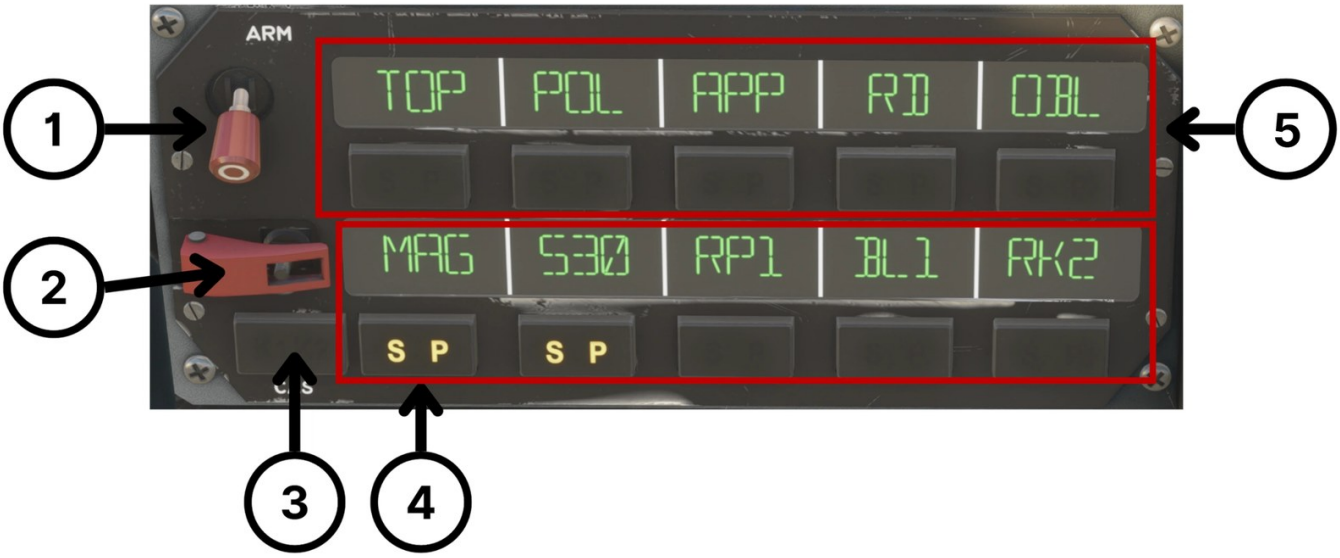
PCA and PPA Panels

Weapons are primarily controlled from the PCA: Poste de Commande Armement - Weapons Control Panel and the PPA: Poste de Préparation Armement - Weapons Configuration Panel.

This page features a general description of each panel. You must be familiar with these terms in order to use the system correctly.

PCA: Poste de Commande Armement

Located to the LEFT of the VTB Display, this panel is used to select and arm weapons.



PCA Panel

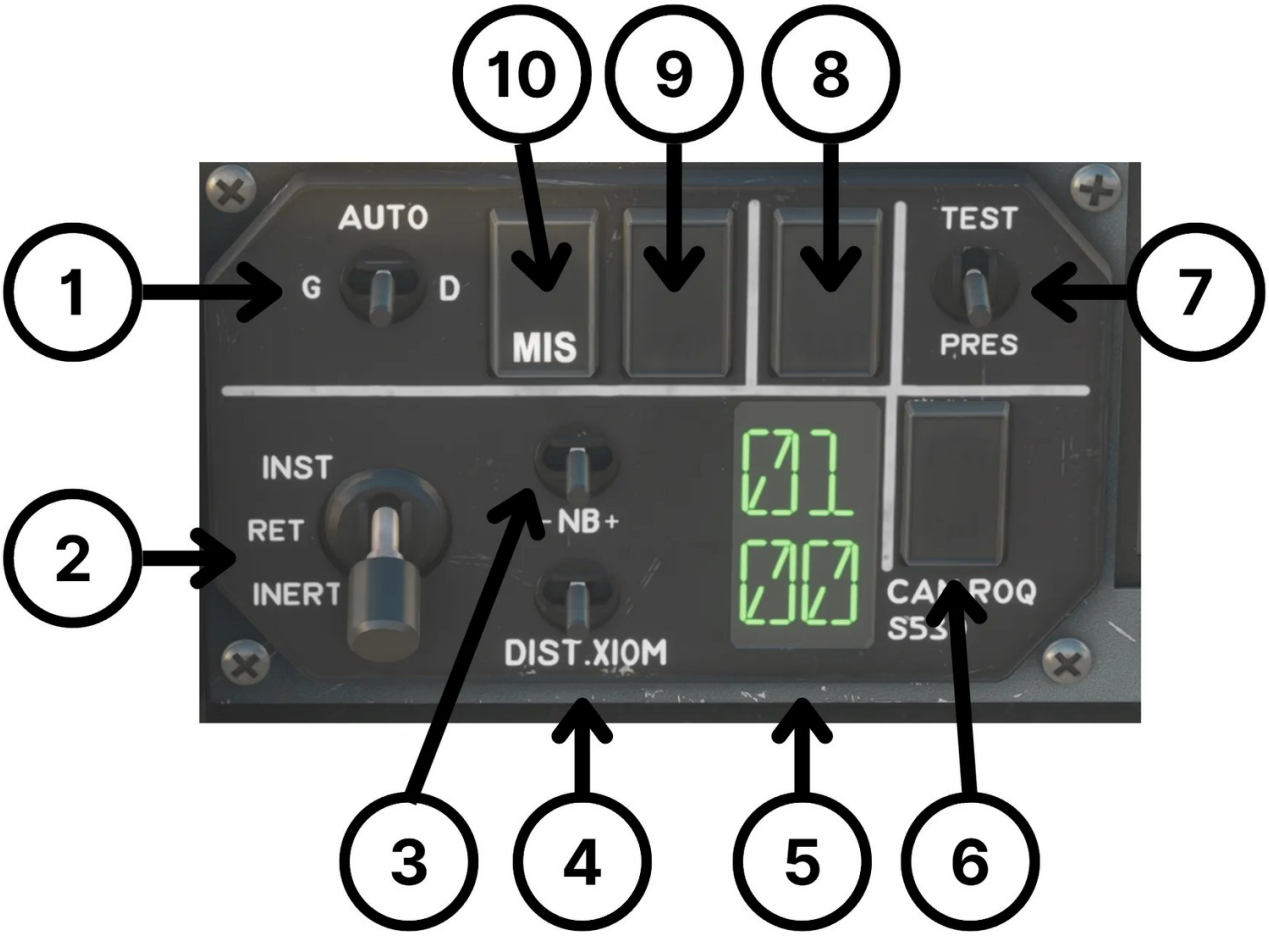
1. ↔ **Master Arm Switch:** Arms the weapons System
2. ↔ **Weapon Jettison Switch:** INOP
3. ◇ **Gun Selector Switch:** Two modes - K1 (only left gun operational) and K1K2 (both guns operational)
4. **Weapon Selector Panel and Pushbuttons:** Use these pushbuttons to select which weapon to load. These are grouped by weapon type.
5. By default, all displays are in the OFF position. Pressing on any of the buttons will begin cycling through the weapon options.
6. From left to right:

1. Heat Seeking Missiles (eg. MAG)
2. Radar Tracking Missiles (eg. 530)
3. RPs (INOP)
4. Bombs (eg. BL1 and LGB)
5. RKs (INOP).

7. The selection buttons have two lights - S for SELECTED and P for PRET (ready). When the selected weapon is loaded onto the aircraft, S light will display. When selected weapon is ready to armed and ready to shoot, P will display.
8. You may deselect/turn off any specific weapon group by cycling through the options until the display turns off.
9. You may have more than one weapon selected at a time. In general, the aircraft will follow a "Shooting priority" depending on which options are selected. However, it is highly recommended that only one weapon type is selected and armed **(SP)** at a time. Weapons that are not planned to be used immediately should be deselected.
10. **Aircraft/HUD System Configuration:** Similar to the Weapon Selector, these buttons can be used to configure different system and HUD modes.
11. Currently, the only modeled mode is APP, which displays the target AOA and glideslope on the HUD to assist with landing.For more information, Head-Up Display (HUD) under Special HUD Symbology. Upon selection, P (Prep) will light up on the pushbutton.
12. No other mode is supported or planned to support, and therefore INOP.

PPA: Poste de Préparation Armement

Located to the RIGHT of the VTB Display, this panel is used to configure weapons, and select how the weapon will be used.



PPA Panel

1. ◇ **Missile Pylon Priority Selector:** Selects the launch order priority when using weapons. G will prioritize weapons on LEFT pylons, AUTO (Default) will shoot missiles from both sides of the aircraft to maintain the weight balanced, D will prioritize weapons in the RIGHT pylons.
2. ◇ **Bomb Fusing Selector:** INOP
3. ◇ **Increase/Decrease Bomb Quantity Selector:** Use this switch to select the number of bombs released on a single trigger. By default "01" (a single bomb is released with the trigger). Up to 6 bombs can be released at a time.
4. ◇ **Bomb Release Distance Interval Selector:** Use this switch to select the interval between bomb releases, in distance x10 meters. A value of 00 means that all bombs are released at the same time. A value of 01 indicates that the aircraft will automatically time the releases so the distance between both bombs is approximately 10 meters.
5. **LCD Display:** Displays Bomb Quantity and Distance, as selected with 3 and 4.
6. ◇ **Salvo Firing Selector:** INOP
7. ↔ **TEST Switch:** INOP
8. ↔ **R550 Preparation Switch:** If R550 missile is loaded AND selected AND armed (**SP** displayed on PCA), this switch with light up with a white "MAG" adivisory to indicate the weapon is available for selection. Pressing on it with highlight "P" (PRET), indicating the weapon is armed and ready to be shot. More information in Air to Air Operations (Missiles)
9. ◇ **Missile Fire Selector:** INOP
10. ↔ **S530 Preparation Switch:** If S530 missile is loaded AND selected AND armed (**SP** displayed on PCA), this switch with light up with a white "MIS" adivisory to indicate the weapon is available for selection. Pressing on it with highlight "P" (PRET), indicating the weapon is armed and ready to be shot. More information in Air to Air Operations (Missiles)

Miltech Fighters: M2K-C

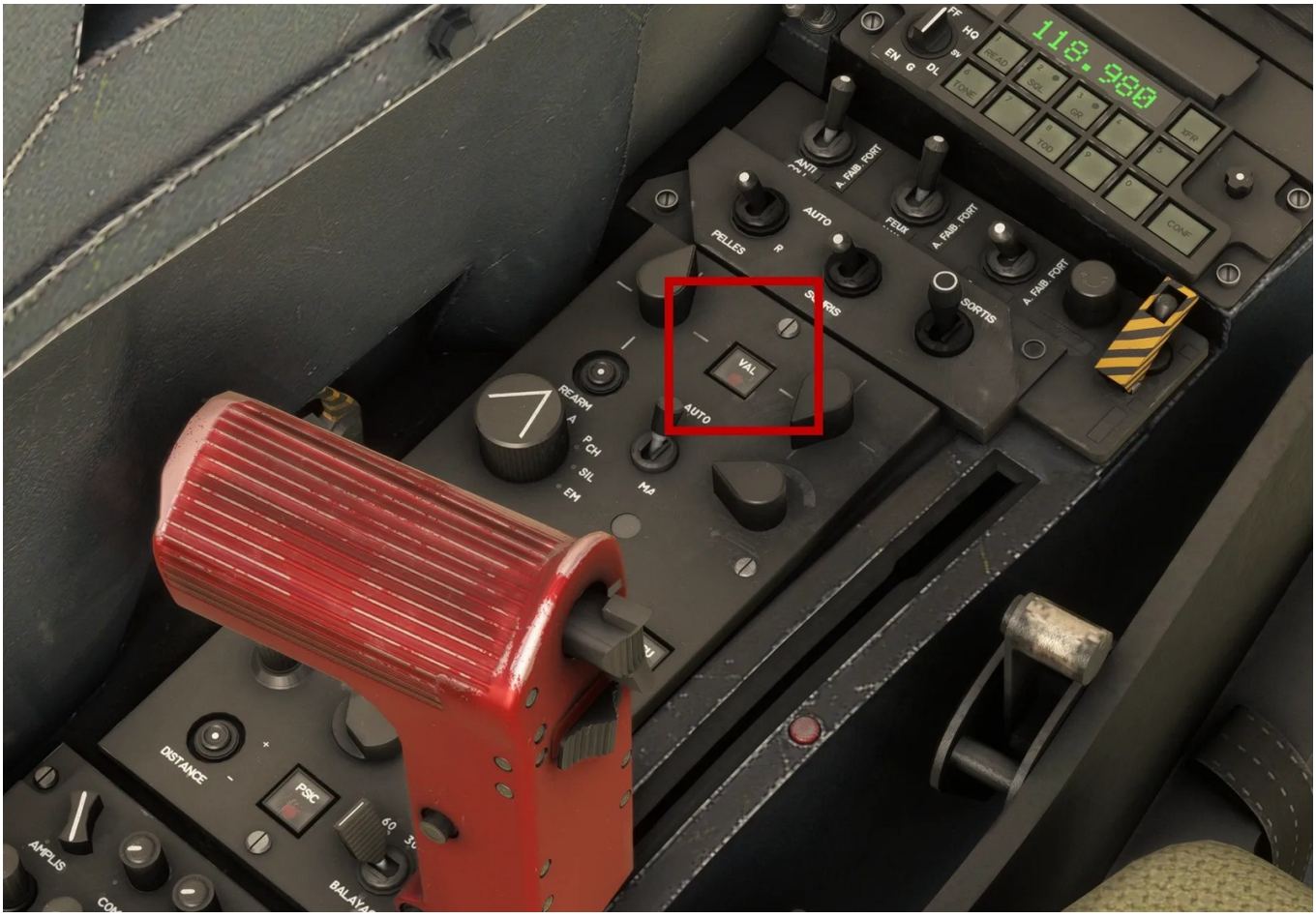
Loading Weapons

Caution
NOTE - in the (rare) occasion that this display freezes during its use (after switching modes to Weapons Loadout, for example), we recommend deactivating Traffic and restarting the flight. After a flight restart, you may reenable traffic again. We are investigating this problem.

Loading of Weapons can only occur while the aircraft is on the ground and with the parking brake on. The system is designed in a "realistic manner" - there is no such thing as infinite ammo, or any way to reload while in the air. You must return to the ground and manually reload weapons on the aircraft.

Loading Procedure

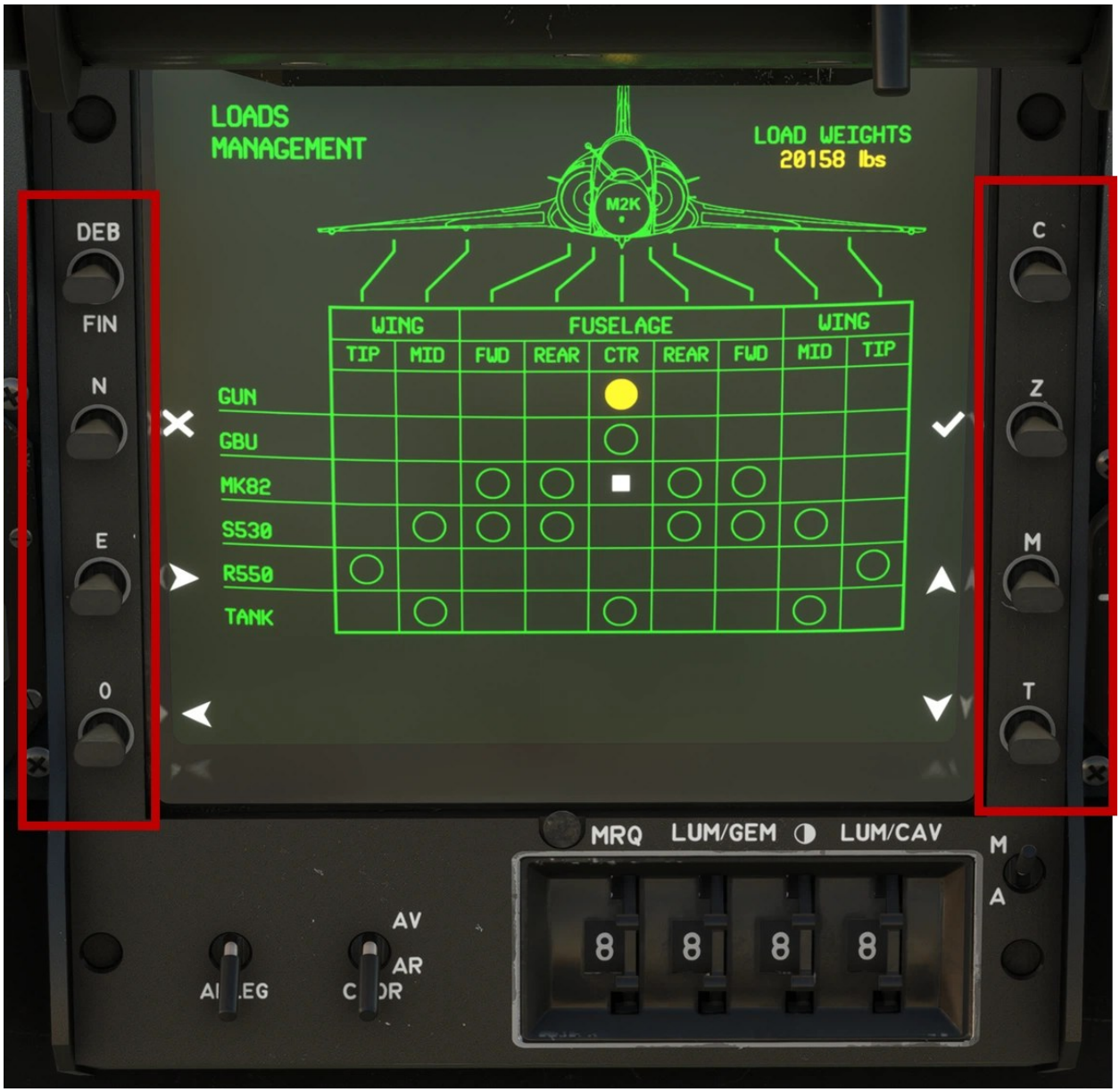
1. While stationary and on the ground, press the "VAL" Button located on the top of the Radar console, on the left side panel.



VAL Button

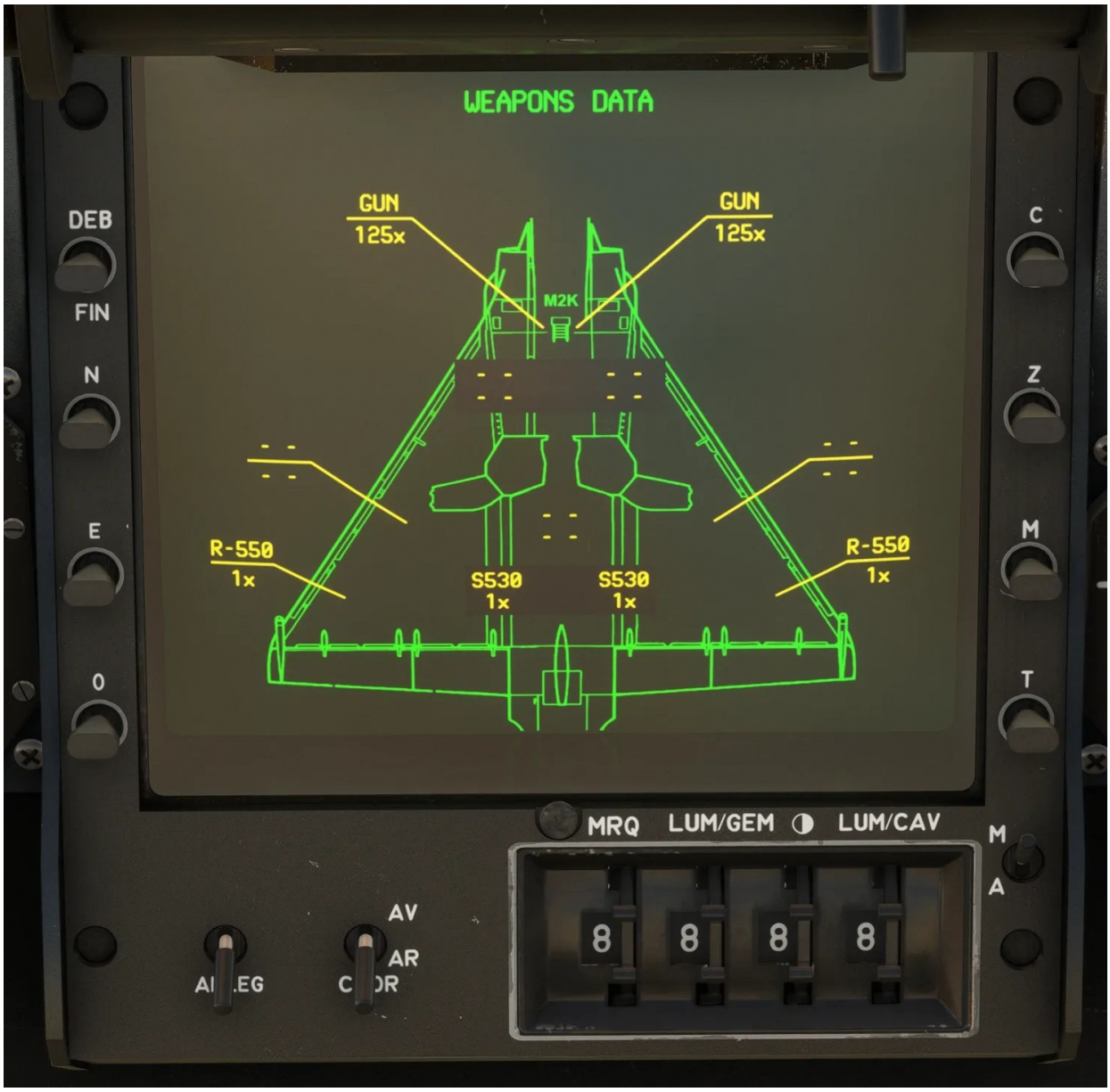
2. Use the switches around the VTB Display to navigate through the menu and load the weapons. By default, GUN is always loaded, indicating a full load of bullets.
3. Navigate using the flashing white square cursor (use the left and right multifunction switches to navigate/click/unclick) and highlight the "circles" (representing valid hardpoints) to load a weapon or fuel tank onto a hardpoint. Beware of the weight, as a fully loaded aircraft may result in a load weight higher

than MTOW.



VTB Display - Loads Management

4. Once weapons have been loaded, press VAL again to return to the radar screen. You may also press "DEC" on the radar panel to access the Weapons Data page, at any time during the flight.



VTB Display - Weapons Data

Miltech Fighters: M2K-C

Air to Ground Operations (Bombs)

Note
UNSUPPORTED: Bomb animations and effects, as well as impact craters, are not rendered across multiplayer.

Caution
Bomb impact predictions as displayed on the HUD are subject to calculation uncertainty, which increases with speed and varies with attitude. Do not take these as a precise indication of where a bomb may impact the ground, but rather an approximate impact location. We will do continuous work to improve the accuracy of these predictions over time.
Ideal airspeed for best target accuracy: 200-300 Kts, neutral pitch/roll attitude OR dive bombing.

Caution
Bomb Drop is disabled under high-g, high speed or attitude-beyond-limit maneuvers. An "X" is displayed on the HUD if the bomb is unable to drop for this reason. \ Bomb drops are currently limited to +/- 30-degree pitch/roll attitude, 380 KIAS maximum airspeed and altitude greater than 40ft above ground.

In order to use Bombs, you must first load them. Refer to Loading Weapons to familiarize yourself with the loading procedures. Please also familiarize yourself with the PCA and PPA panels here PCA and PPA Panels

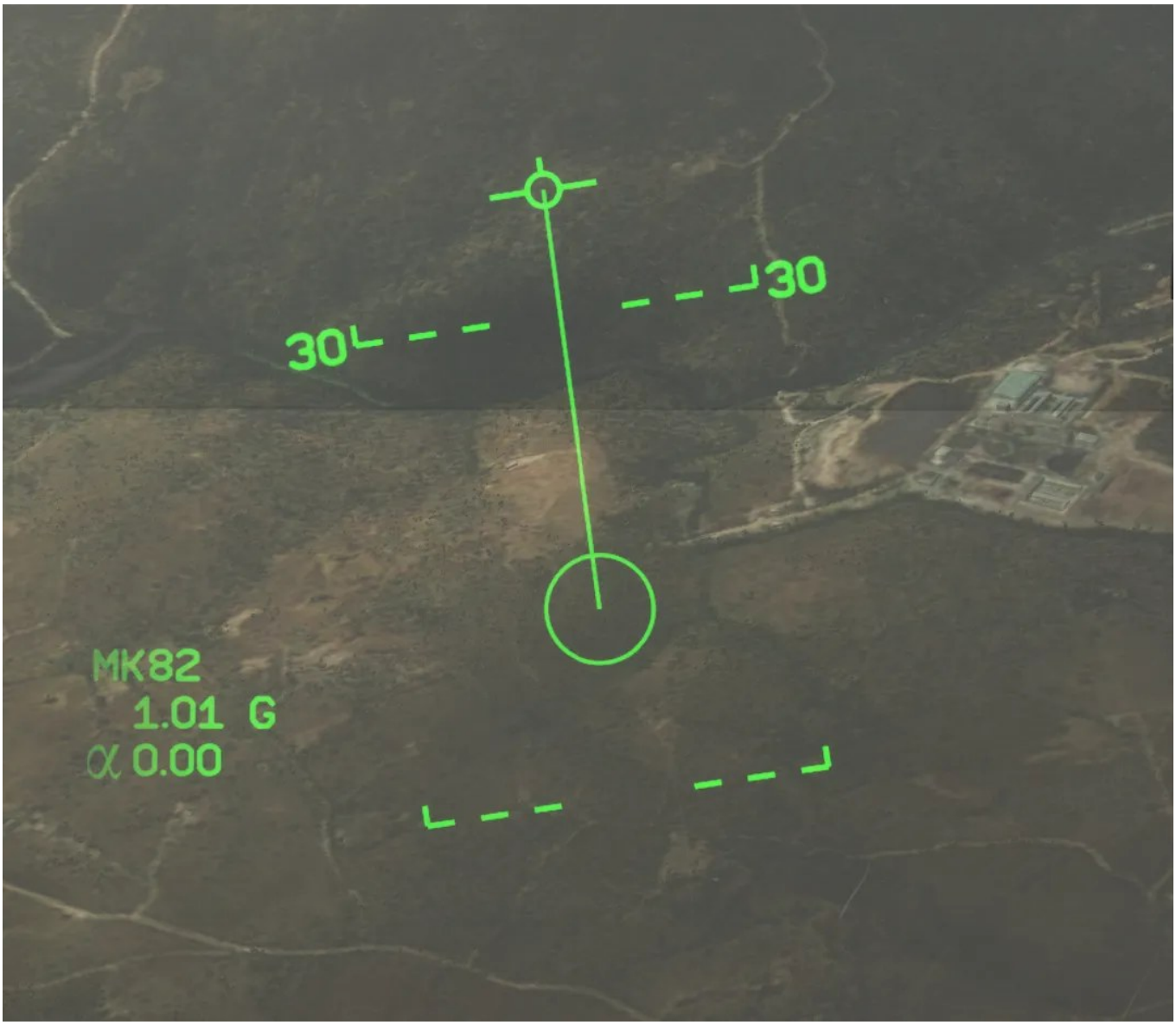
Assuming your bombs are now loaded (MK82 or GBUs) and you are in the air, follow these procedures to prepare for and release bombs. Please be aware that both bomb types are treated as UNGUIDED weapons. Guided bombing is UNSUPPORTED, with no plans to support.

1. ↔ **Switch on** the Red master arm switch in PCA.
2. **Use the PCA** (lower row of buttons) to select the weapon type to use.
3. BL1 represents MK82, LGB represents GBU bombs.
4. If the weapon selected is loaded, S (SELECTED) will light up on the button. After a few seconds, P (PRET) displays to indicate weapon is armed.
5. **HUD will automatically display the CCIP Impact Prediction Indicator.** If a flashing X displays instead, speed, roll or pitch is unsafe for bombing, and system is temporarily disabled. CCIP stands for Constantly Computed Impact Point.
6. This will render a possible impact location as calculated based on aircraft speed, altitude and attitude, and a launch vector that connects this target area with the aircraft´s FPV.
7. On the bottom left corner, selected weapon type, as well as G-load and aircraft AoA is displayed.
8. Beware that CCIP only provides a real-time estimate of the impact location. Bomb impact predictions as displayed on the HUD are subject to calculation uncertainty, which increases with speed and varies with attitude. Do not take these as a precise indication of where a bomb may impact the ground, but rather an approximate impact location. We will do continuous work to improve the accuracy of these predictions over time. Ideal airspeed for best target accuracy: 200-300 Kts, neutral pitch/roll attitude OR dive bombing.
9. **You may also use** the PPA NB and DIST selectors to change the number/distance between bomb drops. This step is not necessary, as you may just use the default values of 01 and 00 respectively, to release one single bomb on command.
10. Use keybind **TOGGLE WATER RUDDER** to drop bombs.

11. **Upon impact,** bombs will persistently and indefinitely display an impact crater and white smoke. Instead of the crater and smoke, MS Marketplace users will see an orange smoke flare to indicate the impact location instead.



A correctly configured PPA and PCA for Air-to-Ground Operations. Note how PCA has BL1 (MK82) selected and ready (SP). Also note in PPA that it has been configured so two bombs are released with the trigger, with a spacing of 20 meters between them.



CCIP HUD Symbology.
The circle indicates an approximate impact location, subject to calculation uncertainty, speed and altitude.

Miltech Fighters: M2K-C

Air to Air Operations (Missiles)

> Note
> UNSUPPORTED: Missile animations and effects are not rendered across multiplayer.

In order to use Missiles, you must first load them. Refer to Loading Weapons to familiarize yourself with the loading procedures. Please also familiarize yourself with the PCA and PPA panels here PCA and PPA Panels

Assuming your missiles are now loaded (S530 or R550s) and you are in the air, follow these procedures to prepare for and shoot missiles. Please be aware that target tracking and locking is currently unavailable, though planned for a future update. After shooting, missile trajectories are random, only to provide the illusion of tracking targets.

1. ↔ **Switch on** the Red master arm switch in PCA.
2. **Use the PCA** (lower row of buttons) to select the weapon type to use.
3. MAG represents R550, 530 represents S530 missiles.
4. If the weapon selected is loaded, S (SELECTED) will light up on the button. After a few seconds, P (PRET) displays to indicate weapon is armed.
5. **HUD will automatically display the Missile HUD Mode.** This mode provides extra information, such as angle of attack and G load. At this time, this mode is rather basic, but we have plans to expand the symbology in the future to display tracked and locked targets.
6. **On the PPA**, Select MIS (Radar Tracking Missile) for S530, select MAG (IR Tracked Missile) for R550. P lights up to indicate that the weapon is Ready (“Pret”).
7. Use keybind **TOGGLE WATER RUDDER** to shoot missiles.
8. Beware that no explosion or damage is simulated.



A correctly configured PPA and PCA for Air-to-Air Operations. Note how PCA has 530 (S530) selected and ready (SP). Also note in PPA that it has been configured for MIS (P), which indicates Radar Tracking Missiles are armed.

Miltech Fighters: M2K-C

Gun

> Note
> Guns are for visual effects only. No Damage is rendered, and impacts are not tracked.
> UNSUPPORTED: Gun effects are not rendered across multiplayer.

The gun has ammunition loaded by default, on initial spawn of the aircraft. Ammo is limited to 125 rounds per cannon, and can only be reloaded on the ground through the Loads Management Menu.

Refer to Loading Weapons to familiarize yourself with the loading procedures. Please also familiarize yourself with the PCA and PPA panels here PCA and PPA Panels

1. ↔ **Switch on** the Red Master Arm switch in PCA.
2. ↔ **Switch on** the Red Gun Arm switch, located in the gear panel, just next to the landing gear handle.
3. **Use the PCA** (leftmost button on the lower row of pushbuttons) to select the cannon configuration. K1 indicates only left cannon is used, K1K2 indicates both cannons are used.
4. Now Use keybind **TOGGLE WATER RUDDER** to use the gun. Gun sight will be automatically visible on the HUD, and you will be able to see the shots and tracers.
5. For FS24 Users, make sure the keybind has INPUT REPETITION enabled, in order to press+hold for continuous rounds.
6. **An alternative gun sight ("HAUSSE") is available.** Refer to Head-Up Display (HUD) for more information.
7. **The HUD provides plenty of useful information,** such as rounds left, gunsight, AoA, etc. Refer to Head-Up Display (HUD) for more information.

Miltech Fighters: M2K-C

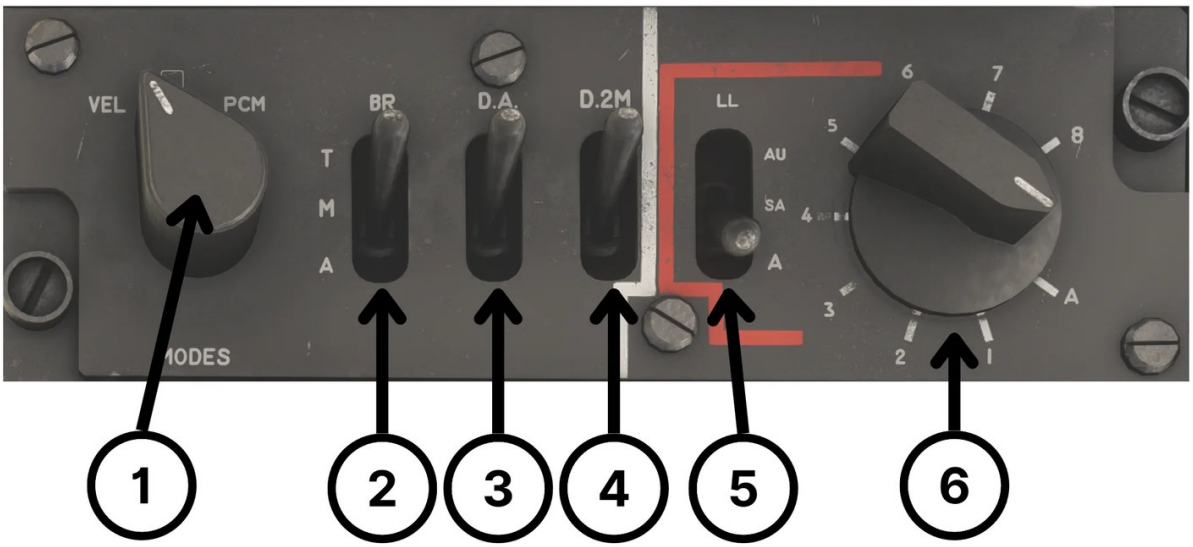
Countermeasures

> Note
> Flares and Chaff are for visual effect only. These serve no practical function.
> UNSUPPORTED: Flares are not rendered across multiplayer.

Countermeasures (Flares) are automatically loaded onto the aircraft upon first spawn. There are a limited number of flare pods loaded onto the aircraft, and as such these will run out after extended use. Flares will be automatically reloaded onto the aircraft as soon as the aircraft is stationary on the ground - no manual action is required. Flares are modeled for cosmetic purposes only. Single manual flare drops, as well as flare programs are supported.

Current Flare Count is displayed on the HUD, for more information see Head-Up Display (HUD)

Flares and Countermeasures are controlled from the Countermeasures Panel, just under the INS Panel, on the right side of the aircraft cockpit.



Countermeasures Panel

1. ◇ **Jammer Operational Mode Selector:** INOP
2. ↔ **Jammer master Switch:** INOP
3. ↔ **Radar Warning Receiver master switch:** INOP
4. ↔ **D2M IR launch detector master switch:** INOP
5. ↔ **Flare Dispenser master switch:** Three positions are available
6. A is ARRET (Off)
7. SA for Semiautomatic (manual release)
8. AU for Automatic (program release)
9. ◇ **Flare program selector knob:** Flare programs are dictated by the following table:

PROGRAM #	FLARES	INTERVAL	CYCLE	TIME BETWEEN CYCLES
A	0	0	0	0
1	6	0.5	1	0
2	6	0.5	2	2
3	6	0.5	3	2
4	12	0.5	1	0
5	12	0.5	2	2
6	20	0.5	1	0
7	20	0.5	2	2
8	JETTISON	0.5	1	0

Flare Program Table

Flare Release Operations

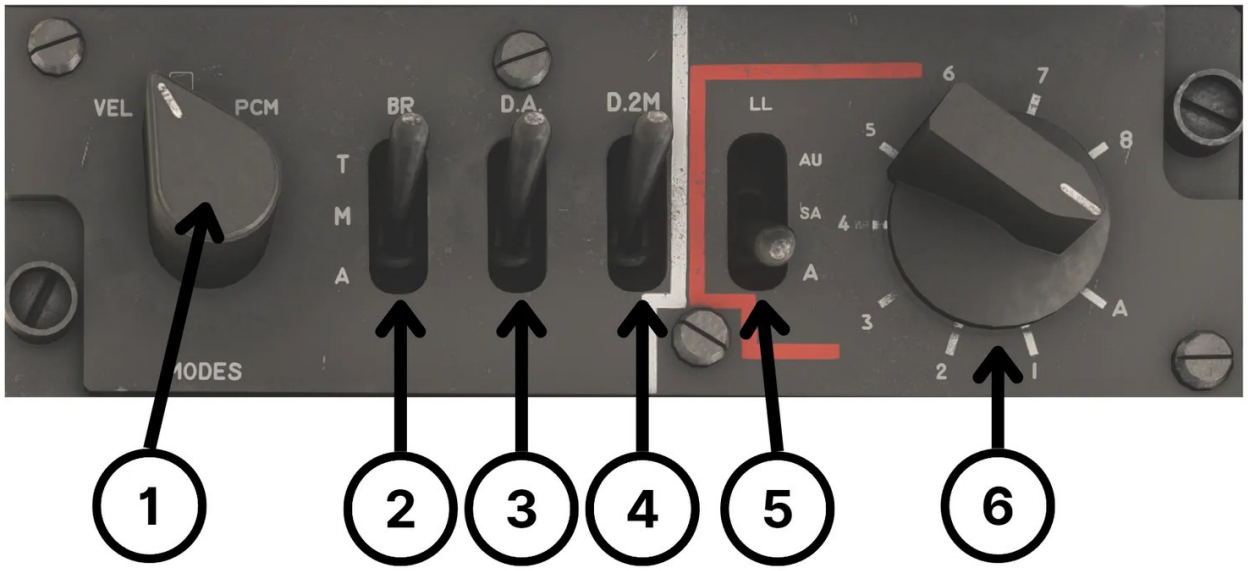
1. **Locate the Countermeasures Panel on your aircraft**.
2. **↔ Switch the Flare Dispenser Master Switch** to the SA or AU Position.
3. **Use SA to release flares individually.** A limited amount of flares are loaded onto the aircraft, HUD symbology will automatically display flare count. Single keybind toggle will deploy a single flare.
4. **If on AU, use knob in the right to select program.** A means ARRET, program is off. Any other number indicates a different program to use.
5. Use Keybind **Toggle Alternator 3** to trigger a program. Single keybind toggle will deploy a single flare (SA Mode), or a single Flare Program round (AU).

Miltech Fighters: M2K-C

Radar Warning Receiver (RWR) System

Self-defense and Countermeasures Equipment

The countermeasures and self-defense panel is located on the right-side panel of the cockpit, near the INS System panel. Beware that self-defense and countermeasure systems are limited on this product.



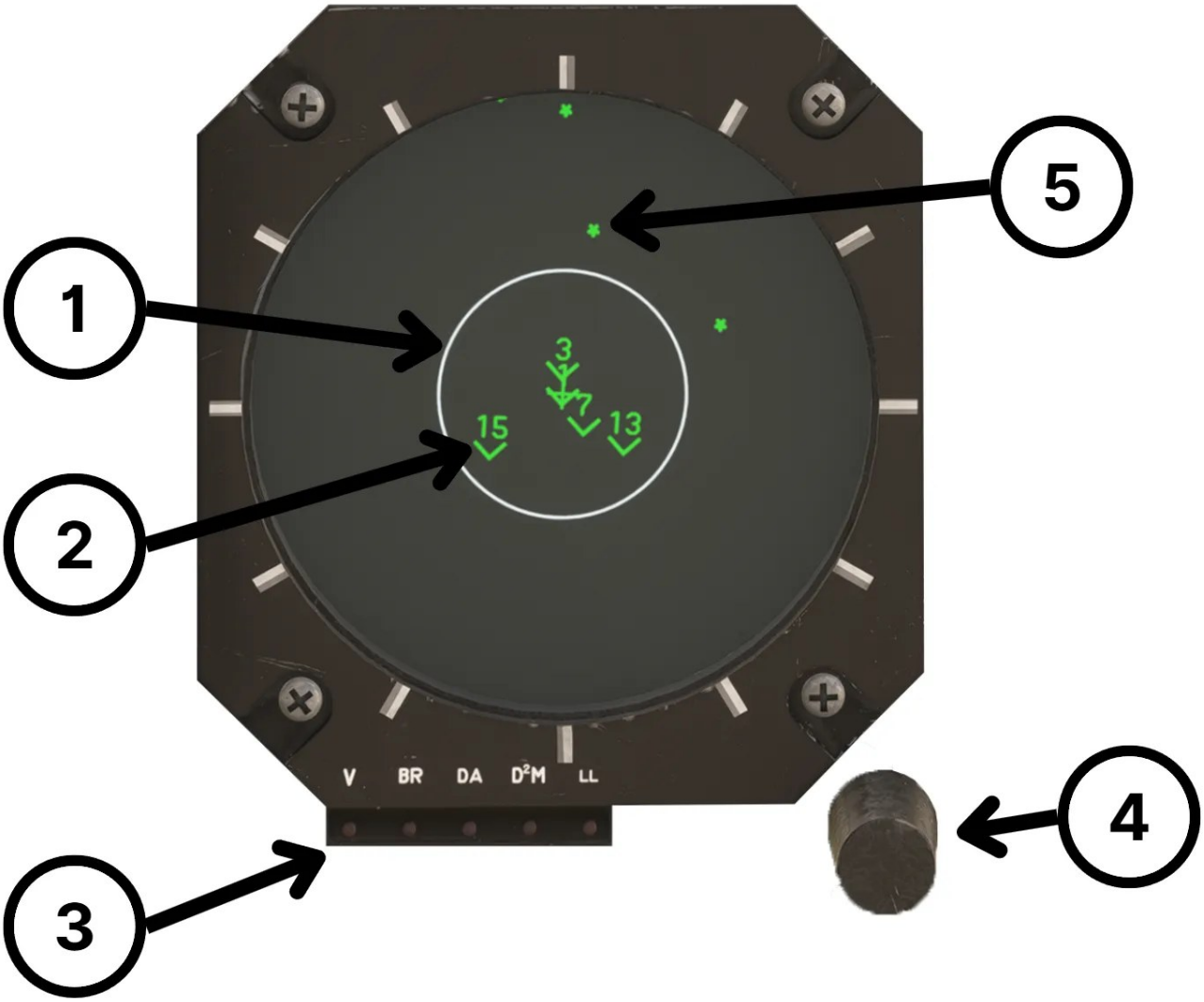
Countermeasures Panel

1. **Jammer Operational Mode:** INOP
2. **↔ Jammer Master Switch:** INOP
3. **Radar Warning Receiver:** INOP
4. **D2M Detector:** INOP
5. **↔ Flare Dispenser Master Switch:** Refer to the section in Countermeasures
6. **◇ Flare Dispenser Program Selector:** Refer to the section in Countermeasures

RWR Display

The RWR detects radio emissions from other aircraft (AI and Multiplayer) passively. All traffic sources will be detected and displayed here, with no distinction of aircraft type. Using four sensors around the aircraft, the RWR System provides 360° Coverage. RWR in MSFS is unable to detect ground radars, missile radars, vessels or other sources.

Aircraft will only be displayed if traffic radar is set to ON in the Radar Control Unit. More information VTB/HDD Display, under the Radar Control Unit section.



RWR Display

1. **Critical Threat Zone:** Displays aircraft that may represent imminent danger to the aircraft due to proximity (20nm from the user aircraft). Aircraft on this area are displayed with "v" icons, with distances to detected aircraft, in Nautical Miles.
2. **Detected Aircraft within the Threat Zone:** For example, this aircraft was detected at 8 o'clock, approximately 15 nautical miles from its current location. RWR is unable to determine altitude of detected traffic.
3. **Self-Defense Status Lights:** INOP
4. ◉ **RWR Display Brightness Knob:** INOP
5. **Detected Aircraft outside Threat Zone:** Aircraft at a distance greater than 20nm are displayed as asterisks on the RWR.

Flares and Chaff

Refer to the section on Weapon Systems: Countermeasures