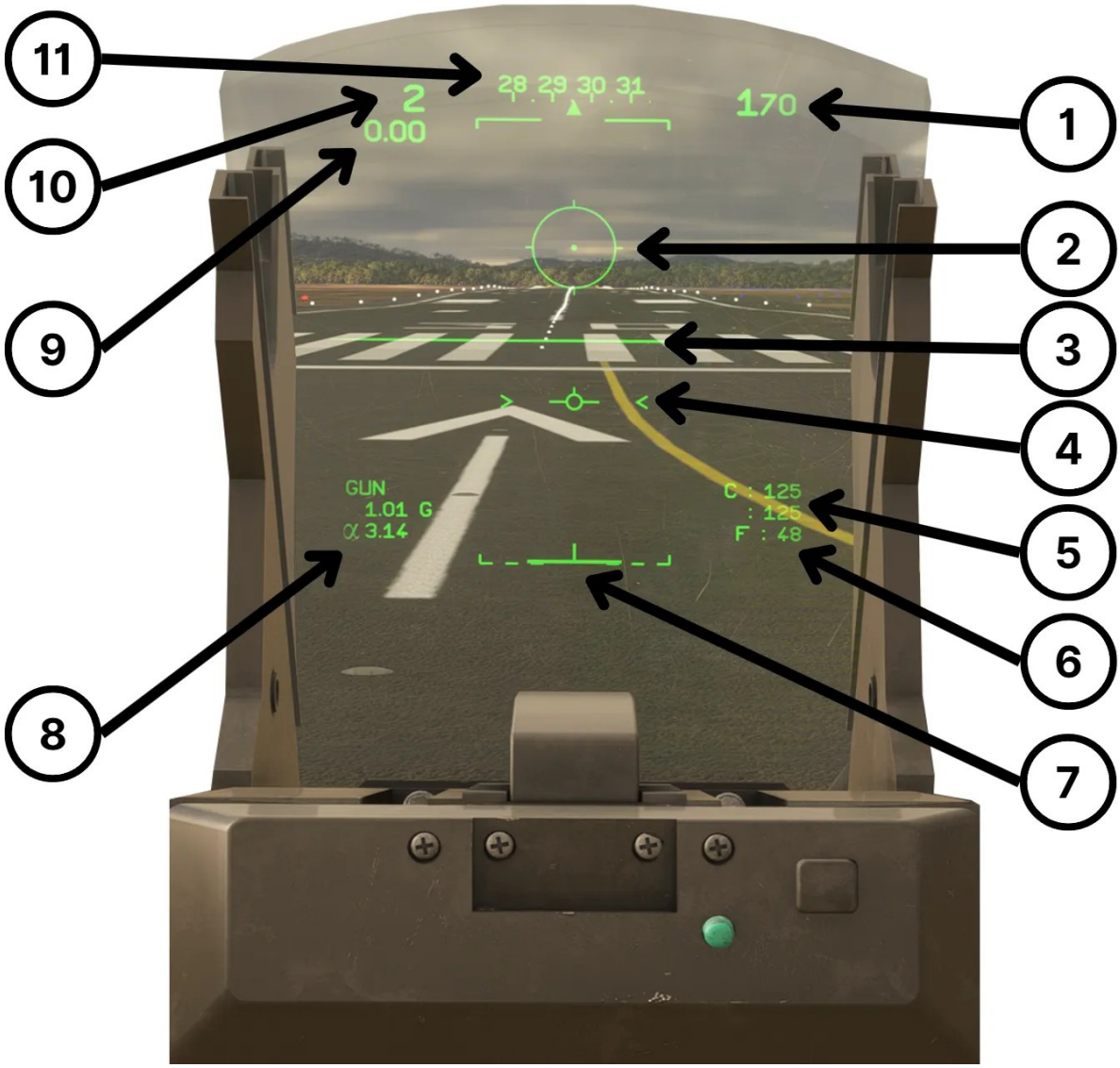
Miltech Fighters: M2K-C

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.

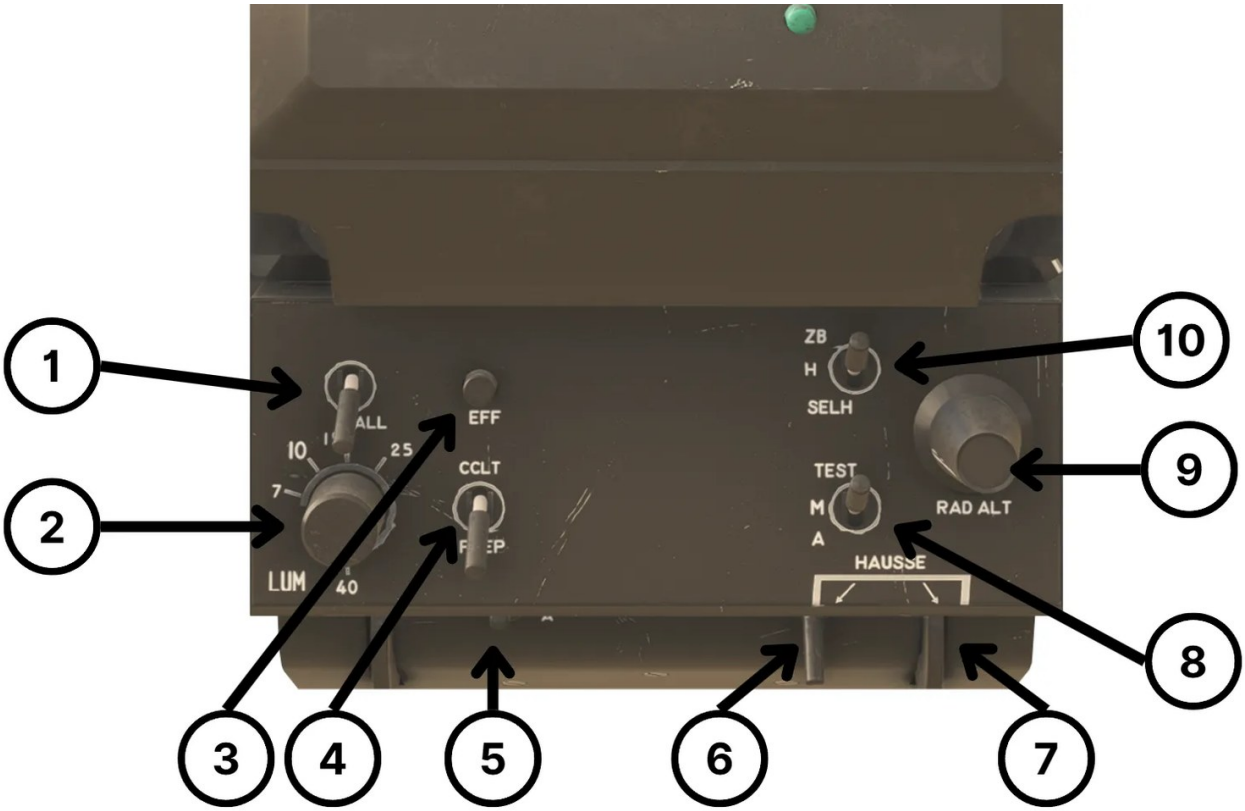
3. **Horizon Line:** Displays the relative position of the horizon.
4. **Flight Path Vector Marker/Acceleration Vector:** Indicates the flight path vector of the aircraft with respect to earth. Chevrons located on both sides indicate the longitudinal acceleration - displays aircraft energy state visually. 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

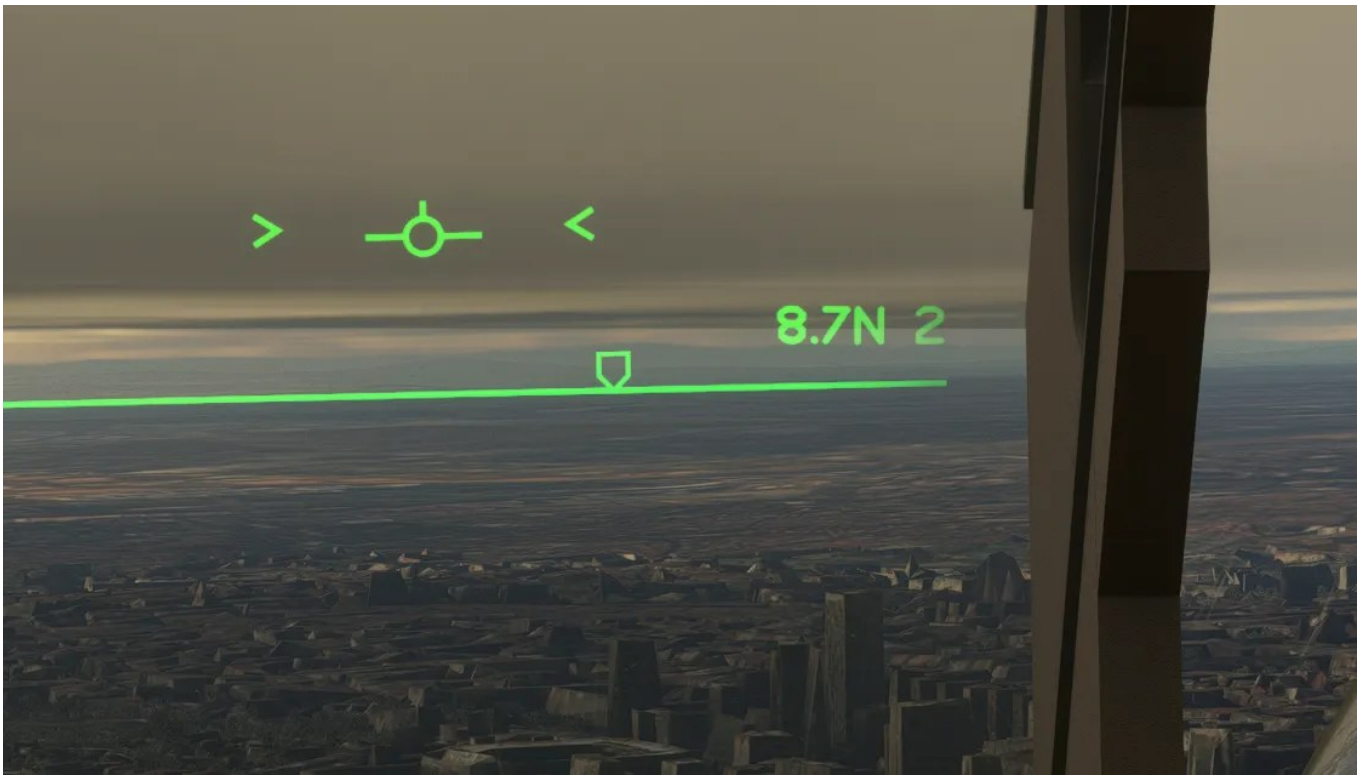
- **Approach Brackets:** Due to peculiarities and difficulties associated with landing a delta-wing aircraft, the M2K-C features HUD Symbology to assist in landing. The square brackets ("] " and " [") indicate approximately a 4-degree glideslope, that should be aligned with the runway touchdown zone.
- 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.



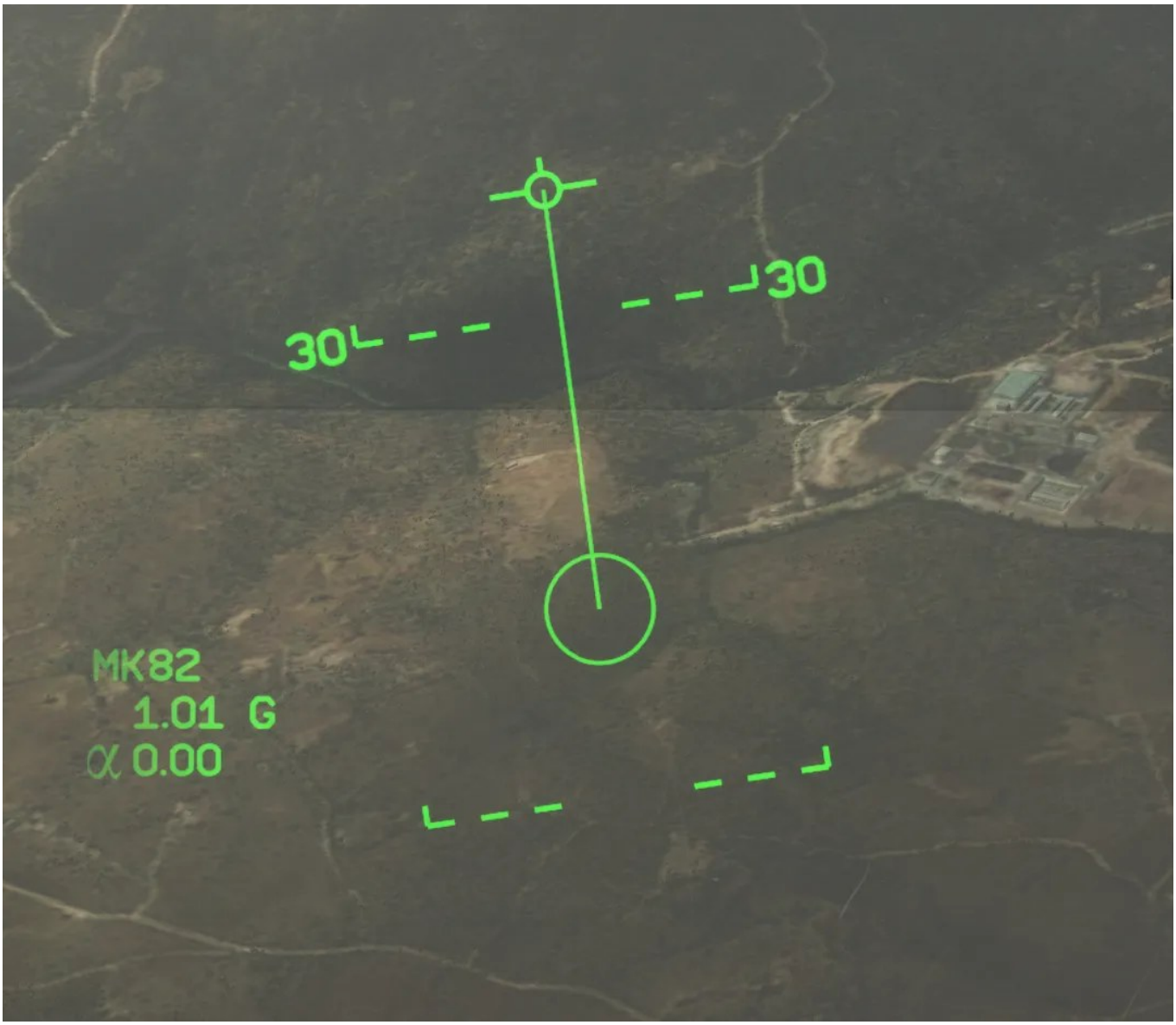
Approach Brackets

- **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



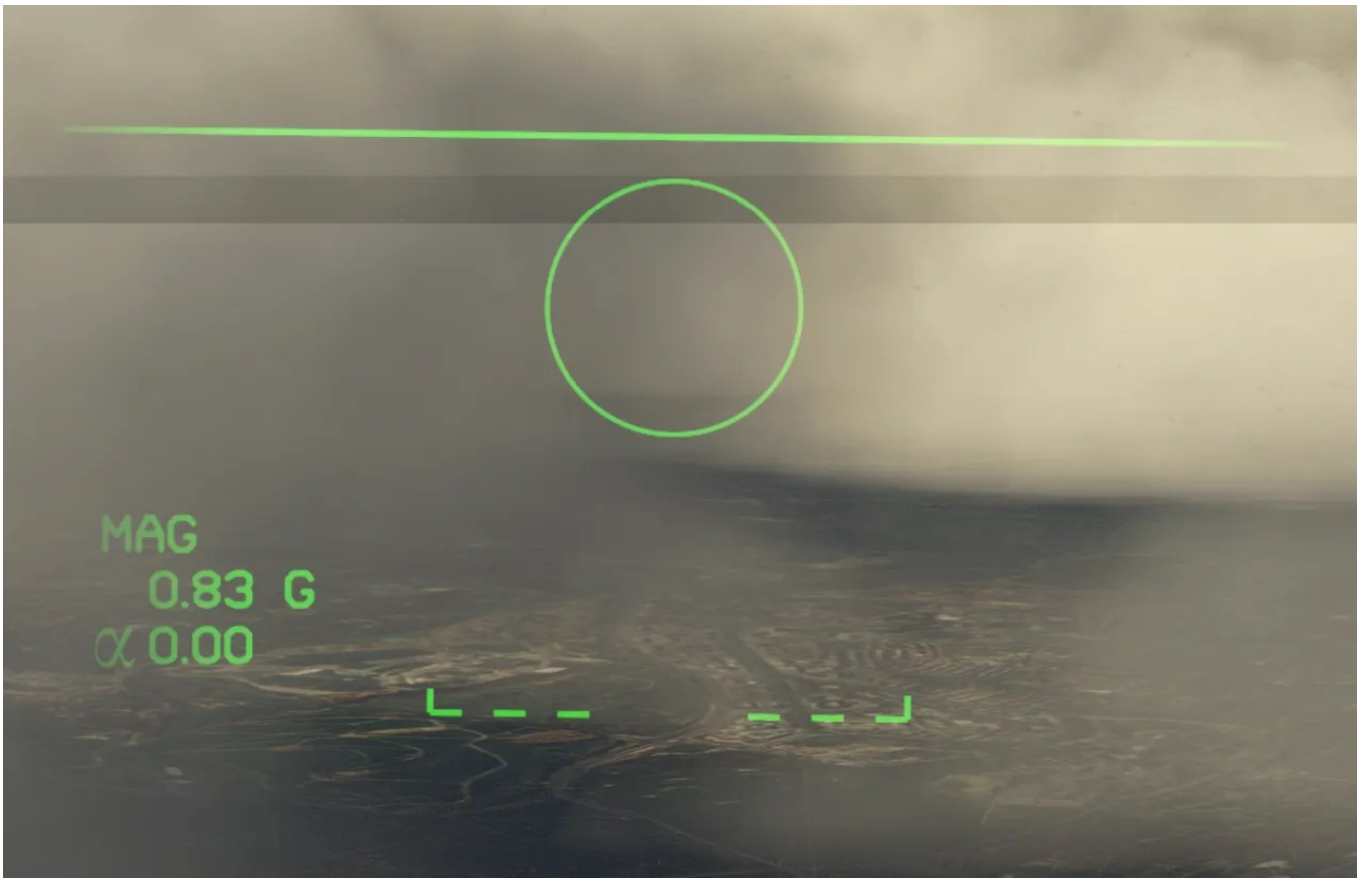
INS Navigation Symbology

- **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