Miltech Simulations MH60

Force Trim System

Force Trim is a flight control system used in helicopters to reduce pilot workload by maintaining the cyclic position without constant pressure on the controls. In the MH60 in Microsoft Flight Simulator, four different implementations of the Force Trim System are available.

Tip
Familiarize yourself with the Automatic Flight Control System (AFCS) and Stability Augmentation System (SAS) panel before configuring Force Trim. Memorize the location of SAS1, SAS2 and TRIM pushbuttons.

Automatic Force Trim System (Default)

Recommended for casual simmers or users with self-centering controls (e.g., Xbox controllers, spring-loaded joysticks).

This mode continuously applies trim inputs behind the scenes to maintain the current **longitudinal** (pitch) and **lateral** (roll) attitude of the aircraft. As you release the stick, the system "locks in" the current attitude and trims the controls accordingly.

- **Behavior:**\ When you return the stick to center, the aircraft will maintain its last commanded attitude, rather than snapping back to level flight. You can continue to fly hands-off, and minor inputs will smoothly adjust the trim reference without needing to manage it manually.
- **Ideal For:**
- Plug-and-play setups
- Xbox controllers
- Spring-loaded joysticks
- Users who want stable, forgiving handling without trim micromanagement
- **Required Configuration:**
- STABILITY AUGMENTATION SYSTEM (SAS 1 / SAS 2) must be ON
- TRIM Switch must be ON
- TOGGLE MARKER SOUND Keybind must be removed from your controls, and not pressed on the current simulator session.
- SET HELICOPTER FORCE TRIM RELEASE BUTTON Keybind must be removed from your controls, and not pressed on the current simulator session.

This mode is enabled by default on Runway Starts and functions automatically in the background.

Manual Force Trim System (FS20 Only)

Recommended for advanced users with self-centering controls, seeking a more realistic cyclic trim experience.

This mode simulates a realistic trim release system used in actual military helicopters like the MH-60. It is attitude-based and trim-enabled, meaning it does not physically move the centerpoint of your joystick or collective, but instead applies hidden trim inputs to maintain the aircraft’s current pitch and roll attitude at

the moment you release the switch.

- **Behavior:**\ In this mode, the pilot uses a designated trim release switch to temporarily disconnect automatic trimming. While the button is held, the cyclic can be moved freely. Upon release, the new position is saved as the center point, and trim is applied to maintain that control input, just like in real-world helicopters with a mechanical force trim release.
- **Required Configuration:**
- Set a keybind for TOGGLE MARKER SOUND
- This keybind must be set to Press + Hold.
- STABILITY AUGMENTATION SYSTEM (SAS 1 / SAS 2) must be ON
- TRIM Switch must be ON
- **To Enable**: Configure the keybind and press it once.
- **To Disable**: Remove the keybind and cycle the TRIM switch OFF and ON
- Alternatively, disable TRIM entirely to deactivate all Force Trim modes

FS24 Stock Force Trim System (FS24 Only)

Recommended for advanced users with noncentering and self-centering controls, seeking a more realistic cyclic trim experience, but lack a mechanical trim release switch on their hardware.

This mode leverages the new built-in Force Trim behavior introduced in Microsoft Flight Simulator 2024. It is only available when flying in FS24 and functions independently from the MH60's custom trim systems.

- **Behavior:**\ While holding the assigned keybind, moving the cyclic has no effect on aircraft control surfaces - it allows the pilot to reposition the stick freely. When the button is released, the current position of the stick becomes the new center point, and all future inputs are interpreted relative to this new center.
- **Required Configuration:**
- Set a keybind for SET HELICOPTER FORCE TRIM RELEASE BUTTON
- This keybind must be set to Press + Hold. Input Repetition must be enabled in MSFS control settings (FS24)
- STABILITY AUGMENTATION SYSTEM (SAS 1 / SAS 2) must be ON
- TRIM Switch must be OFF
- **To Enable**: Configure the keybind and press it once.
- **To Disable**: Remove the keybind and cycle the TRIM switch OFF and ON

Force Trim System OFF

Recommended for advanced users with noncentering controls only, that feature a mechanical trim release switch, and are looking for a realistic cyclic experience.

Not recommended unless using hardware with mechanical trim release capability.

This mode disables all force trim behavior - no assistance is provided by the aircraft or MSFS. It is the most raw and direct control mode, intended only for users with advanced hardware capable of maintaining stick position without software input.

- **Behavior:**\ With Force Trim OFF, the helicopter will respond purely to live hardware input at all times. There is no attitude holding, no trim logic, and no recentring. To maintain level flight, your controls must remain physically positioned with constant pressure or held mechanically by your hardware.
- **Required Configuration:**
- STABILITY AUGMENTATION SYSTEM (SAS 1 / SAS 2) must be ON
- TRIM Switch must be OFF
- TOGGLE MARKER SOUND Keybind must be removed from your controls, and not pressed on the current simulator session.
- SET HELICOPTER FORCE TRIM RELEASE BUTTON Keybind must be removed from your controls, and not pressed on the current simulator session.
- **To Enable**: TRIM Switch to OFF, remove keybinds.
- **To Disable**: TRIM Switch to ON