INFLIGHT
PILOT TRAINING

Cessna 172N Pilot’s Guide
Welcome

Welcome to Inflight Pilot Training! We are so glad to have you with us. We hope you find this document helpful as you operate our Cessna 172 aircraft. Inflight Pilot Training is a high-volume flight school with many people utilizing a limited number of aircraft. We have published this aircraft pilot’s guide in order to help all pilots better care for our aircraft.

This document does not supersede the POH in any way but is merely to inform the pilot of some best practices that will help the airplane last for many years.

The Cessna 172 is built to be strong, yet light. To avoid damaging the aircraft, pilots should never yank or slam movable parts. Use FIRM, CONSISTENT pressure to activate controls and movable parts. Excessive force can damage the aircraft.

If you have questions about any of the material presented in the guide, please ask your CFI for further clarification. If you have suggestions or feedback, we would be glad to hear it. Please send your feedback to fly@inflightpilottraining.
The Cessna aircraft used at Inflight Pilot Training are equipped with an Electronic Flight Bag (EFB), using an iPad Mini and Garmin Pilot. Be sure to mount the iPad securely prior to flight, in a position that give a good view of the instruments. The power cord should be connected prior to starting the engine. Seat position should be adjusted to the same position every time you fly.

Note the position of the control lock when removing it from the airplane in the picture at right. It will be replaced in the same position after flight, blocking access to the key and battery master switch.

The key can be found on a lanyard and carabiner under the instrument panel. The key can be removed from the carabiner easily to gain access to the baggage compartment. The keys are always left in the airplane when parked at Inflight Pilot Training.

**Baggage Door**: be careful when unlocking, opening, and closing the baggage door. The mechanisms are old and must NOT be forced. A firm, consistent pressure between the handle and the door edge until the click is felt will ensure the door is closed.
Cleaning the Windscreen. The plexiglass windscreens of aircraft must be cleaned carefully, or damage may result. If needed, get a ladder from the Line Staff. **DO NOT USE oil rags to clean the windscreen.** It will severely reduce flight visibility. Only use the microfiber towels provided by Inflight/Line Staff. Apply a liberal coating of plexiglass cleaner, allow it to set for a minute, and clean the windscreen with vertical strokes, in line with the airflow. **NEVER CLEAN THE WINDSCREEN WITH A CIRCULAR MOTION.**

Pre-Flight Inspection Items. Below are several examples of common pre-flight questions pilots have about the Cessna 172N. Always talk to your CFI if you have a concern about an aircraft issue prior to flight.

**Tire Inflation.** A properly inflated tire should appear as in the picture to the right.

**Brake Pad Thickness.** Brake pads on training aircraft are used thoroughly. The picture below contains brake pads that are fairly new. Once the pads reach about 1/3 of the thickness of what is pictured below, it is time to replace them. Check connections and fittings for signs of leaking hydraulic fluid. (slippery, red fluid)
Nose Strut. A correctly inflated nose strut should show a minimum of approximately 3 fingers of clean metal. Be alert for nose strut leaking fluid (slippery, red hydraulic fluid) on colder days.

Control Surfaces. When moving control surfaces, be gentle and apply pressure only at certain points. When moving the elevator, **do not use the trim tab** to move the control surface. Only move the elevator with your hand in the position as shown in the leftmost picture. When testing the rudder, **only apply pressure to the lines of rivets**, as shown in the center picture. Always verify the security and presence of jam nuts, cotter pins, and safety wire for all control surfaces!

Measuring/Sumping/Refueling the Aircraft. When refueling the aircraft, whether on your own via self-serve, or by a line staff fuel truck, there are several important cautions to keep in mind.

- Ground the aircraft via the exhaust pipe.
- Be aware of sharp objects on your person that might damage paint. (ex: belt buckles, keys, etc.)
- Use a ladder and rubber mat if available.
- Insert the fuel nozzle pointed inward toward the cabin.
- Support the fuel nozzle with your hands, not by levering it against the opening.
- Be sure the nozzle touches the edges of the opening, to keep any static electricity from potentially sparking and causing a fire.
Once the airplane is fueled as necessary, verify the amount of fuel with the dipstick and visually, sump the tanks, and ensure the fuel caps are fully on.

To accurately measure the fuel, insert the dipstick vertically until it contacts the bottom of the tank and place it against the forward edge of the fuel opening.

The fuel gauges on older Cessna aircraft can be fairly inaccurate, so a good preflight calculation of the fuel is essential!

Clean fuel that has been sumped can be returned to the tank through the screen and pour spout on the sump jar.

The fuel caps should be rotated against the stop and aligned with the airflow over the wing.

Accessing the Aircraft

To avoid damage when closing the doors, the sliding door lock pin must be in the correct position. The door handle is spring-loaded to rest in a position where the door
pin will not contact the fuselage, but on older aircraft, a weak spring can cause the pin to be positioned where it will interfere with normal door operation. Ensure the door handle and locking pin are correctly positioned before closing the door.

Correct Positioning: note the door pin position.

Incorrect Positioning: note the door handle position relative to the door pin interfering with the fuselage.

Closing the Door from Inside. When inside the aircraft, the doors are closed most easily by opening the window and pulling on the door frame to ensure a tight seal.

Seat Belts. It is often easiest to adjust and tighten the aircraft seat belts with the door open. Verify that the seat belts are clear of the doorframe before closing the doors.
Cockpit Management

The cockpit is not large, so a good understanding of cockpit management and control placement is important prior to flight.

Pilot Equipment. Be aware of all equipment in the cockpit. Whatever was brought into the cockpit for flight **MUST** also exit the cockpit after flight. This includes pens, water bottles, headsets, etc. **Even a missing pen has the potential to jam critical flight control systems!**

Glareshield. Be careful not to place objects on top of the glareshield. Objects will slide and scratch the plexiglass windshield!

Sun Visors. The sun visors found in the Cessna aircraft are **EASY** to break! Please move them carefully when repositioning to ensure they are not bent against the aircraft interior.

Parking Brake. The aircraft parking brake should always remain **OFF**, as pictured. The aircraft chocks will provide security to ensure the aircraft remains in its parking spot. If the parking brake is left on and the aircraft is towed, **it will damage the brakes and could cause a fire.**

Environmental Controls. The aircraft is equipped with fresh air vents and cabin heat controls. The upper fresh air vents can be rotated to direct airflow as desired. The Cabin Air and Cabin Heat controls can be pulled **ON** as far as desired to obtain more or less flow as desired.
**Volume and Mic Control.** Setting the volume appropriately can be a confusing process, but a few minutes will make a flight much more enjoyable! In the Cessna 172 there are several places volume can be adjusted.

**Intercom.** The intercom controls the volume and mic sensitivity of the occupants’ headsets. It is important to adjust volume and mic sensitivity (also known as ‘squelch’) prior to flight. Different aviation headsets will require different settings in the same aircraft, due to differences in headset mics and speakers. It can be helpful to change to a separate, non-active frequency while making intercom adjustments, so there is not extra radio chatter in the background.

Adjust the **intercom volume** to a comfortable level. Some intercoms have **individual** volume controls for the pilot and passengers, while others are a **single** volume control for all occupants.

Adjust the **squelch** (mic sensitivity) so that the mic activates when you and your passengers speak at a normal level. A light, continuous background static may indicate that the mic setting is too sensitive and is not turning off between sentences. As with volume controls, there may be separate squelch controls for the pilot and passengers.
Radios. The second volume setting is that of the individual Comm and Nav radios. Each radio’s volume is individually adjustable, for maximum flexibility. Test and set radio volumes before communication begins with ATC! The previous pilot may have needed much more volume than your ears want to hear!

The Nav radios are also volume-adjustable, but must be selected on the audio panel before they can be received in the headset.

Headsets. The final volume control is found on the headset. Not all headsets are equipped with volume control, but if the headset is equipped, it will control the overall volume of all communications (both intercom and radios) coming into the user’s headset. Some headsets, as pictured at left, allow the volume to be controlled individually in either ear.

Ground Handling and Parking

Parking and moving the aircraft can be a challenge on a busy ramp. Always taxi at no more than a walking pace when near other aircraft and objects. If in doubt, STOP THE AIRCRAFT AND GET HELP.

ALWAYS ENSURE THE KEYS ARE NOT IN THE IGNITION AND THE BATTERY MASTER IS OFF BEFORE MOVING THE AIRCRAFT BY HAND.
**Moving Forward.** When moving the aircraft forward, it is acceptable to pull at the base of the propeller or push on the wing struts. If someone is pushing on the wing struts, ensure he/she is pushing as close to the fuselage as possible, to minimize turning tendency.

![Image of moving aircraft forward](image)

**Moving Backward.** When moving the aircraft backward, push on the wing struts or the base of the propeller blades. **DO NOT PUSH ON THE PROPELLER SPINNER.** As necessary, it is possible to reposition the aircraft by pressing down on the structure of the horizontal stabilizer as shown.

![Image of moving aircraft backward](image)

**Winter Operations**

While winter can provide some wonderful flying conditions, it does come with its own set of challenges. One of the primary concerns involves starting a cold engine. To mitigate this, the aircraft should be pre-heated, using the provided engine blanket and engine block heater.
**Engine Blanket.** The engine blankets come in various styles. When installing the engine blanket, drape it over the cowling first. Attach the Velcro from the spinner down, then attach the folds as illustrated to secure the blanket.

![Engine Blanket Image]

**CAUTION:** Be sure the blanket folds behind the nose wheel are secured **ABOVE** the scissor link, as illustrated in the picture at right. If the nosewheel interferes with the blanket, it could rip the blanket!

![CAUTION Image]

**TANIS Heater Plug-In.** Inflight aircraft are equipped with block heaters to pre-heat the engine oil and cylinders. The plug-in is located on the side of the engine cowl, or in the oil door. **Be sure to verify the extension cord LED is illuminated, otherwise there is no power going to the engine heater!**

![TANIS Heater Plug-In Image]

Thank you for taking the time to learn how to better use the Cessna 172! We hope this guide has been helpful as you learn how to better operate this aircraft. If there are any topics you would like to see covered in future revisions of this user guide, please let us know. We are always interested to hear how we can better educate and teach pilots.
# Record of Revisions

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