



Context

As per the **CDC**¹: “**COVID-19** is a respiratory virus and is mainly spread through droplets created when a person who is infected coughs, sneezes, or talks. You can protect yourself by keeping a social distance (at least 6 feet) from others and washing your hands⁴ with soap and water for 20 seconds⁵ (or using a hand sanitizer with at least 60% alcohol) at key times, and practicing everyday preventive actions.”¹

The **AOPA** (Aircraft Owners and Pilots Association) has provided guidance³ in regards to resuming operations following the outbreak of the novel corona virus. Specifically, pointing out that resumption “involves moving from risk ‘avoidance’ to risk management. The decision entails accepting some level of risk and implementing steps to minimize impact to personnel, operations, and to the community at large.

Additionally, the AOPA points out that health risks from Coronavirus aren’t the only considerations. Rusty or lapsed pilots can be, by themselves, problematic. In combination they present an expanded risk to aviation safety, which must also be a factor in making operational decisions to open and sustain operations.³ For this reason, we may apply, at our discretion, additional measures to confirm that there has not been a lapse in proficiency on the part of any student pilots, or pilots renting our aircraft.

Symptoms

Per the CDC^{1,14}, people with COVID-19 have had a wide range of symptoms reported – ranging from mild symptoms to severe illness.

Symptoms^{1,14} may appear **2-14 days after exposure to the virus**. People with these symptoms may have COVID-19:

- Cough
- Shortness of breath or difficulty breathing
- Fever
- Chills
- Muscle pain
- Sore throat
- New loss of taste or smell
- This list is not all possible symptoms. Other less common symptoms have been reported, including gastrointestinal symptoms like nausea, vomiting, or diarrhea.
- Anyone can have mild to severe symptoms.

IMPORTANT: The CDC warns that the virus that causes COVID-19 is new, and, therefore, **anyone who has not already been infected is at risk**.¹



IMPORTANT: All individuals with symptoms or who have been in contact with another person with symptoms or diagnosed with COVID-19 within the last 14 days should not participate in flight training or aircraft rental with our facility.

Please phone your flight instructor or our organization as soon as possible prior to your scheduled event.

IMPORTANT: If any of these situations apply to you, or you are concerned that you may be infected or sick with COVID-19 or any other transmittable condition, please do not make in-person contact with our staff).^{1,3}

Asymptomatic Individuals (without symptoms)

IMPORTANT: We recognize that people infected with the COVID-19 virus are contagious before showing symptoms.³ For this reason we will take measures to mitigate risk even in those not exhibiting any symptoms.

Actionable Mitigation Measures

Pre-Visit Questionnaire

IMPORTANT: Every individual who has a scheduled interaction with our staff or aircraft are asked to complete **a pre-visit questionnaire** (provided separately). If any of the items are responded “YES,” please contact us via telephone and do not proceed.

On-Site Attestation (FULL CHECKLIST)

In accordance with AOPA guidelines,³ and in an effort to protect both student pilots, pilots, flight instructors and the general community, **a signed CHECKLIST (statement /certification)** from personnel entering the flight school, and/or using our aircraft, and/or services, shall be obtained. It will provide acknowledgement that each individual has not experienced symptoms of COVID-19 (including, yet not limited to, having a fever in the prior week).

Additionally, we will ask for confirmation that an individual has not travelled internationally within the last two weeks or knowingly been in contact with anyone who has experienced COVID-19 symptoms.^{3,16}



Temperature Checks

In accordance with AOPA guidelines³, we will be requiring an initial temperature check upon arrival each time. We will be using a no-touch thermometer which we will have available.

IMPORTANT: Given the often hot climate in South Florida, and the fact that general aviation aircraft are not climate-controlled, we ask that those arriving not be outdoors (especially not in direct sunlight), as non-touch temperature measurements may provide elevated results that do not reflect baseline body temperatures. Those arriving with their own aircraft should discuss the situation prior to the temperature check if they have been in a hot aircraft interior prior to arrival.

Furthermore, as per AOPA guidelines³, if at any time throughout the day, while in training or conducting any flight operations, an individual feels feverish or experiences any other symptoms, they must immediately report their status to their flight instructor or management and depart the premises.

Safety of Flight

In line with the guidelines proposed by the AOPA, we highlight **that the safety of flight must not be compromised**. If these procedures conflict with the safety of any flight, encourage personnel to discontinue them, and report the flight and the situation to the flight instructor or management.³

Social Distancing

Following this guidance, our position is that social distancing (at least 6 feet) should be practiced whenever feasible. For example, while waiting between lessons, or once one-on-one instruction has been completed.

Face Masks

[CDC recommends](#)² wearing cloth face coverings in public settings where other social distancing measures are difficult to maintain (e.g., during flight training), especially in areas of known significant community-based transmission, such as in South Florida.

In that context, **all times—unless during an emergency, facial masks must be worn by instructors and students while participating in flight instruction or while renting our aircraft.**



Per the CDC², cloth face coverings should—

- fit snugly but comfortably against the side of the face
- be secured with ties or ear loops
- include multiple layers of fabric
- allow for breathing without restriction
- be able to be laundered and machine dried without damage or change to shape

The CDC does not require or suggest the use of N-95, KN-95, or similar high-performance masks for use by individuals not exhibiting symptoms. These masks do provide a higher level of protection, but guidelines are based on social distancing and all those in close contact wearing some type of (simple) face mask or covering, given the greater availability of these types of masks.²

IMPORTANT: Certain types of masks may degrade transmitted speech or impair VOX-activation of headset microphones. It is suggested that all masks intended for use in our aircraft and during flight training be tested as early as possible part of the preflight procedure, to identify a situation which may identify the mask as non-compatible.

IMPORTANT: Furthermore, wearing a facemask may be uncomfortable and may compound the effects of ambient heat on those confined inside an unconditioned aircraft during a hot day.

IMPORTANT: Concerns have been expressed, and some research has indicated, that the use of masks, specifically surgical type masks, may lead to hypercapnia (increased carbon dioxide levels) and hypoxia (decreased oxygenation).^{6,7,8} Presumably these conditions **could be worsened by an N-95 or KN-95 type mask** as their design provides greater filtration, resulting in decreased air flow.

THEREFORE, it is important to be vigilant for signs of impairment related to mask use, and to take action preemptively, if needed. Overall safety always takes priority.

Specifically, the safety of flight must not be compromised.

Gloves

For the general public, CDC recommends wearing gloves when you are cleaning (or caring for someone who is sick).¹

The guidance states¹ that in most other situations, like running errands, wearing gloves is not necessary. Instead, practice everyday preventive actions like keeping social distance (at least 6 feet) from others, washing your hands^{4,5} with soap and water for 20 seconds⁵ (**or using a hand sanitizer with at least 60% alcohol**), and wearing a cloth face covering when you have to go out in public. The AOPA further reminds us that gloves



can pick up and transmit germs and viruses, and any surface touched by them should be sanitized afterwards.³

Generally, there is a concern that using gloves may lessen an individual's attention to what they touch with their hands. There is no evidence that the virus will pass through the skin, so the concern that one may touch their face, eyes, or mask should be noted. For this reason, **gloves are only required during flight operations and training while cleaning or disinfecting the aircraft, equipment or indoor training area.**

As per the CDC, wearing gloves outside of these instances will not necessarily protect you from getting COVID-19 and may still lead to the spread of germs. The best way to protect yourself from germs (for example, when running errands and after going out) is to regularly **wash your hands with soap and water for 20 seconds^{4,5} or use hand sanitizer with at least 60% alcohol.**^{1,4}

Although not required, **we do not prohibit the use of latex or similar gloves**, if an individual chooses to wear them.

IMPORTANT: please try on and wear any gloves well in advance of flight operations to be sure that there is no allergic reaction to the glove material, or any powder contained in the gloves. This is to prevent having such an episode while airborne.

IMPORTANT: Please take special care to dispose of all used gloves correctly (in a lined trash bin) as they are to be treated as contaminated, infected materials. Do not disinfect or reuse the gloves.¹

IMPORTANT: Always wash your hands after removing and disposing of gloves.^{1,4,5}

Hand Washing

The CDC provides guidance on the need for hand washing:^{1,4,5}

Washing hands can keep you healthy and prevent the spread of respiratory and diarrheal infections from one person to the next. Germs can spread from other people or surfaces when you:

- Touch your eyes, nose, and mouth with unwashed hands
- Prepare or eat food and drinks with unwashed hands
- Touch a contaminated surface or objects (aircraft, headset, other equipment or surfaces)
- Blow your nose, cough, or sneeze into hands and then touch other people's hands or common objects



Washing your hands is easy, and it's one of the most effective ways to prevent the spread of germs.

Clean hands can stop germs from spreading from one person to another and throughout an entire community—even from you or to your home and workplace to childcare facilities and hospitals.

Follow these five steps every time:

1. **Wet** your hands with clean, running water (warm or cold), turn off the tap, and apply soap.
2. **Lather** your hands by rubbing them together with the soap. Lather the backs of your hands, between your fingers, and under your nails.
3. **Scrub** your hands for at least 20 seconds. Need a timer? Hum the “Happy Birthday” song from beginning to end twice.
4. **Rinse** your hands well under clean, running water.
5. **Dry** your hands using a clean towel or air dry them.

Why are these steps recommended? The science behind these hand washing recommendations is provided in the reference section.⁵

Sick Student Pilots, Pilots, Flight Instructors and other Personnel

We are requiring anyone who exhibits COVID-19 symptoms to notify their flight instructor or our management if onsite (or, if off-site, text and email an instructor/manager/supervisor and follow up with a phone call providing: 1. Date/time when symptoms appeared 2. All visits to the flight school (dates and times) 3. Personnel they interacted with 4. Facilities they entered, including exact rooms, chairs, etc. and equipment and items they touched or used (aircraft- tail numbers, keys, aircraft covers, POHs, notebooks, computers, storage cabinets, simulators, etc.) 5. Their plans for regaining health (self-quarantine, hospital, etc.). These procedures are following those proposed by the AOPA.³

Aircraft and Equipment Cleaning

The following is based on published AOPA guidelines³

Aircraft

Prior to resuming flight operations, all of our aircraft have been thoroughly sanitized with area sprays (Lysol® or equivalent), and thoroughly wiped down.



Prior to and after each use, aircraft shall be sanitized by those operating the aircraft.

Aircraft renters, including student solo pilots **are required to perform these procedures and sign off that they have been completed**. For dual instruction, the flight instructor will assist and oversee the student in these procedures.

All area spraying requires being **careful to avoid overspray on avionics screens, which might result in damage**.

We are to use **disinfectant wipes on all areas accessed by hands: door latches, oil dipsticks, switches, levers, avionics buttons, yoke, throttles, door and ignition keys, etc.**

We have established the following procedures for continued operations:

- a. **Hand washing** – All personnel **must wash hands before and after accessing aircraft (as per CDC guidelines)**.^{1,4,5}
- b. **Pre-flight wipes** – **Sanitizing the aircraft is now part of the pre-flight and post-flight checklists**. Remember external items like dipsticks, fuel caps, pitot covers, cowl plugs, keys, and more.
- c. **Headsets, hoods, other items** – **Do not share headsets**, view-limiting devices, kneeboards, or pens and pencils. We are requiring pilots to use their own items or will be assigning such items permanently to specific pilots.
- d. **Sanitized aircraft** – We require the removal of all material not specifically assigned for permanent placement in the aircraft. Specifically, we remind everyone of items such as trash, water bottles, etc.
- e. **Sanitized avionics** – Garmin® offers suitable guidance for sterilizing avionics.¹⁵

IMPORTANT: Solutions with ammonia should NOT BE USED. Damage to expensive avionics screens may result. Those cleaning will be responsible for any resulting damage.

Instead, we are to use solutions with up to 91% isopropyl alcohol. 70% isopropyl alcohol evaporates slower than 91% solutions, giving it more time to work, which might make it more effective in killing viruses and germs.

IMPORTANT: Wipes, or spraying the solution on wipes—not directly onto the avionics/radio equipment is best to prevent saturation of the equipment to the extent moisture could seep behind the exterior surface.

- f. **Cockpit checklists** – We are providing checklists with protective surfaces and shall require that they be sanitized before and after each flight by those operating the aircraft (as previously stated).



g. **Flight bags**—where appropriate we shall endeavor to limit cross-contamination and potential exposure.

h. **Post-flight wipes** – We require after each flight a wipe-down of any interior and exterior surfaces that were likely touched.

Disclaimer

These procedures were drafted by Trajectory Aviation, LLC dba LearnToPilot.COM™, and are intended to lessen the risk of COVID-19 transmission during flight school, aircraft rental, and other aviation-related activities. Recommendations are based primarily on information put forth by the CDC and the AOPA. **Every operator, student pilot, pilot, aircraft renter, and other individual expressly accepts and assumes all risks associated with complying with the measures described in this document, and associated documents, and holds the flight school, flight instructor(s), aircraft owner(s), and associated companies, individuals and organizations, including Trajectory Aviation, LLC, and the AOPA harmless. Each flight school and its flight instructors are charged with the implementation and oversight of their procedures and guidelines which may include variations from those stated herein.**

Assumed Risk

We have based the following on guidance published by the AOPA regarding resumption of these operations post COVID-19 pandemic restricted operations.³

This document provides a good faith attempt at identifying and reducing risks related to COVID-19. We cannot guarantee that following these procedures and guidelines will be adequately effective in all cases, nor can we know for sure if other risks are worsened by following these recommendations, procedures and guidelines.

Each student, aircraft renter, flight instructor, or other individual participating, expressly assumes the personal inherent risk of participating in the flight school, aircraft rental or other operations and business activities being referenced or inferred in this document, when following any or all of these guidelines or procedures.

Solo flight and/or single entity independent aircraft rentals

From a health perspective (not an operational perspective), solo flights or flights involving single entities (families, etc.) **involve the least amount of health risk.**³



Aside from any checking-in and checking out of the aircraft (which are mitigated through social distancing masks, and other modalities described herein), the risk of transmitting or receiving the virus during these operations is limited to physical transfer from surfaces, which the CDC seems to indicate to be low risk.

Dual instruction

Dual instruction **presents the highest risk due to the proximity of instructor and student.** As previously stated, we are mandating masks while in the aircraft in order to reduce the risks.

Masks are being used throughout the country during dual flights without significant interference³.

We will attempt to limit students and instructors to assigned pairs in order to limit the possibility of expanded contagion.

We recognize that flight instructors who fly with multiple students are the highest risk to become potential transmitters, therefore they must be hypervigilant to COVID-19 symptoms and must agree to limit their interactions during non-work activities.

Ground school

Ground schools can increase the health risks due to a grouping of people within a confined area. **We are limiting ground school to online platforms as much as possible.**

Should in-person schooling be necessary, we will limit classes to 10 people or numbers allowed by the state, will maximize seat spacing to at least six feet, and require masks for all attendees, as suggested by the AOPA.³

Ongoing Assessment

The following has been adapted from the guidance proposed by the AOPA.³

Continuous monitoring

We will constantly review the opening criteria provided in this document. As the situation changes, we will reassess the risks and expand or roll back operational mandates as necessary.



We will be particularly vigilant to assure compliance with the processes that we have adopted.

Reported illnesses

In the event any person engaged in our operation reports symptoms¹⁶ of COVID-19, an immediate response is required.

We will evaluate whether a total shutdown is necessary or whether we may be able to isolate the affected people and equipment and continue operations.

We will:

(1) Track the symptomatic person's contact and engagement throughout the operation: facilities, aircraft, equipment, and most importantly, personnel.

We realize people are contagious before showing symptoms.¹⁶

Shutter facilities and aircraft that the infected person may have contacted. Return to the opening steps above to re-sanitize the environment and wait seven days to reopen.

(2) Notify all personnel who came in contact with the facilities, aircraft, equipment, or the symptomatic person. Advise them to be vigilant for symptoms¹ and to report any onset of symptoms¹⁶ to their medical providers and your operations manager. Prohibit anyone who came in contact with the infected person from accessing the facility or from using aircraft or equipment for 14 days.



References

1. When To Wear Gloves, CDC (2020), <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/gloves.html>
2. Use of Face Coverings, CDC (2020), <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/diy-cloth-face-coverings.html>
3. COVID-19 Flight Operations Guide, AOPA (2020), https://image.mail.aopa.org/lib/fe3615707564067d701d78/m/4/023fcbe7-1528-4cd7-b4dd-fd2181d8ee7d.pdf?utm_source=COVID%2019%20Guide&utm
4. Washing Your Hands, CDC (2020), <https://www.cdc.gov/handwashing/when-how-handwashing.html>
5. The Science behind Washing Your Hands, CDC (2020), <https://www.cdc.gov/handwashing/show-me-the-science-handwashing.html>
6. Zhu JH et al. Effects of long-duration wearing of N95 respirator and surgical facemask: a pilot study. *J Lung Pulm Resp Res* 2014;4:97-100.
7. Ong JJY et al. Headaches associated with personal protective equipment- A cross-sectional study among frontline healthcare workers during COVID-19. *Headache* 2020;60(5):864-877.
8. Bader A et al. Preliminary report on surgical mask induced deoxygenation during major surgery. *Neurocirugia* 2008;19:12-126.

Additional Resources (provided courtesy of the AOPA)

9. COVID-19 State-by-State Guidelines, AOPA (2020), <https://pic.aopa.org/blogs/70>
10. State Aviation Offices, FAA, (2020), https://www.faa.gov/airports/resources/state_aviation/



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12. COVID-19 Data Tracker, CDC (2020), <https://www.cdc.gov/covid-data-tracker/index.html>
13. Higher Risk Guidelines, CDC (2020), <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-at-higher-risk.html>
14. Cleaning and Disinfecting Guidelines, CDC (2020), <https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/cleaning-disinfection.html>
15. Garmin Service Advisory 2051: Cleaning/Disinfecting Guidance, Garmin (2020), <https://www.garmin.com/en-US/aviationalerts/service-advisory-2051-cleaning-disinfectingguidance/>
16. Symptoms of Coronavirus, CDC (2020), <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>
