



NATIONAL HEADQUARTERS CIVIL AIR PATROL

CAP MANUAL 60-1G

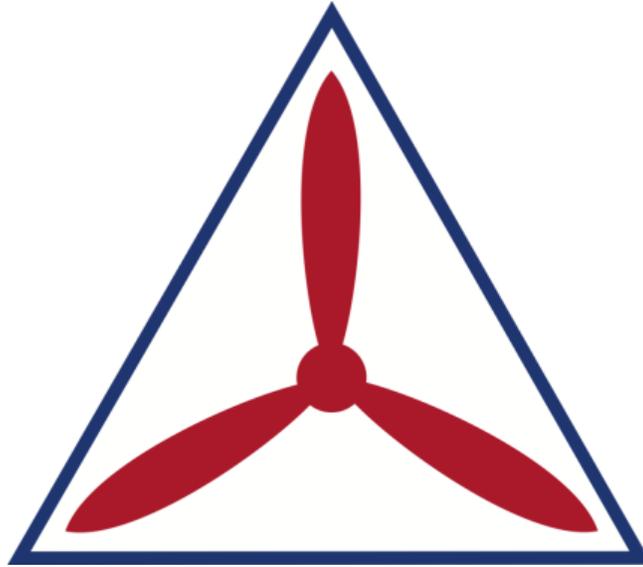
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Operations

CAP GLIDER PROGRAM PROCEDURES MANUAL



Civil Air Patrol

GLIDER PROGRAM PROCEDURES MANUAL



Civil Air Patrol Glider Program

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Civil Air Patrol Glider Program

Purpose

The primary purpose of the Civil Air Patrol Glider Program is to give as many cadets as possible the opportunity to experience gliding and soaring through orientation flights and glider flight training. At the same time, we also want to make the gliders available to our senior members when the cadets are not using the gliders and provide them the opportunity for upgrade and initial flight training, as well.

Goals

To reach as many CAP Cadets as possible with the opportunity to participate in the glider program, both orientation flights and flight training, maintain a strong and effective ground and air safety program, promote current, proficient and professional airmanship, and maintain a high level of custodial care and maintenance.

Glider Program History

Since the 1960s, CAP has had a glider program in place. The early program was mainly focused in the western part of the United States.

In the fall of 1995, the Soaring Society of America (SSA) expressed an interest in partnering with CAP in the promotion of soaring in the United States. SSA had various assets, gliders and personnel, located in their SAA affiliate clubs across the nation while CAP had 25,000 aviation minded young people. SSA realized their membership was aging and the ability to introduce soaring to youth was vital to SSA's future. Initial meetings with SSA leaders and HQ CAP officials determined a relationship would be beneficial to both organizations and a Memorandum of Agreement was signed in February 1996.

In May of 1997, the NEC, HQ CAP/DO and HQ CAP-USAF/LGM purchased a Blanik L-23, a two-place training glider, with corporate funds for the purpose of conducting a test to assure a glider flight activity could be integrated into a normal CAP wing. The Georgia wing was selected due to its close proximity to CAP/HQ and strong SSA support. The test was successful and was briefed to the CAP National Executive Committee in November of 1998.

At that time the CAP glider program, with assistance from existing members and new CAP members from SSA affiliate clubs, experienced explosive growth fulfilling SSA's desire to plant the seed of soaring and CAP's mandated requirement to introduce its cadets to aviation. Over the next few years, with additional purchases and acquisitions of gliders from the United States Air Force Academy, the fleet grew to nearly 60 and glider flight academies became more and more popular.

Over the years, as CAP experienced personnel changes and adverse funding issues, the program waned and utilization decreased. In 2010, the National Executive Committee made the decision to re-energize the program by concentrating gliders in Region Centers of Excellence. The fleet was reduced to 42 gliders and they were concentrated into areas of highest potential, in an effort to maximize both utilization and opportunity for increased cadet participation in both orientation flights and flight training.

The program was a success; significantly increasing the number of flights in FY 11 and reaching an all time record of over 10,000 flights in FY 12.

In early 2013, Civil Air Patrol received 10 Blanik L-23s from the Air Force Academy, giving the program the ability to retire and replace some of the older, high time Schweizers. Currently, all eight regions and 27 wings participate in the program with 46 active gliders. If the momentum continues and funding issues become more favorable, there is a possibility that we can grow even further through a cost-effective, refurbishing program for our older SGS 2-33s. It is, however, predicated on utilization, safety and professionalism.

The SSA has been a long time partner and supporter of the CAP glider program. In late 2012, SSA initiated the CAP Cadet Introductory Membership that not only provides the cadets with a free SSA youth membership, but also a certificate commemorating their first glider flight and an electronic news letter. In 2013, an updated five year Memorandum of Agreement was signed with an automatic renewal. In those areas not served conveniently by a corporate glider, the SSA clubs are excellent venues to allow cadets the opportunity to take their orientation flights.

Demonstrated Need and Glider Allocations

In 2010, Major General Amy S. Courter, CAP's National Commander, established a minimum flight requirement per corporate glider of 200 flights, which she equated to flying 10 orientation flights per day over 20 days or 20 orientation flights per day over 10 days out of an entire 365 day year. Obviously, flying all year long is not practical in many of our wings. But it does illustrate the fact that a lot of orientation flights can be flown in a relatively short period of time, resulting in not only meeting expectations, but also in having plenty of additional time to increase numbers through flight academies, pilot proficiency, and senior member participation when the cadets aren't flying. Major General Charles L. Carr, Jr. chose to continue the policy. Obviously, there are greater expectations for those wings that can run a year long program.

It is important to emphasize the fact that cadet orientation flights and flight academies, along with senior member support, are the reasons we have the program in the first place. It is the obligation of each region commander and custodial wing to ensure every effort is made to meet and exceed the minimal requirements without nationally accredited academies. Very frankly, with only a small fleet of 48 gliders and 27 out of 52 participating wings, there is an obvious need to successfully manage their program. Failing to do so, will likely result in redistribution or reallocation either within or outside of the region.

While reviewing utilization statistics over the last few years in relation to the number of cadets flown versus their five orientation flights, we find the numbers extremely disappointing when compared to the total of potential flights. It is the responsibility of the custodial wings to do everything they can in their planning to manage a program that will reach the greatest number of available cadets and meet the minimum requirements.

This manual is intended to provide guidance and instruction in developing and maintaining a safe and effective glider program.

Fleet Size Goal – Utilization Rate – Requirements for Glider Retention

Fleet Size Goal

As of FY 14 the national fleet consists of 46 two-place Gliders, including

1. 12 Schweizer SGS 2- series,
2. 30 Blanik L-23
3. 4 Schleicher ASK 21

CAP Glider Utilization Rate

Make every effort to manage a minimum of 200 glider flights per aircraft per year, in addition to nationally accredited flight academy flights.

Assumptions and Justification

1. Each cadet under 18 is allowed 5 glider orientation flights as referenced in [CAPP 60-40](#). That should be a substantial part of your numbers.
2. 5 flights a day over 40 days, 10 flights a day over 20 days – 26 weekends (52 days) of glider operations are available in some wings.
3. The majority of flights will occur over a weekend, but can be supplemented in the summer during the week.
4. Custodial wing cadet flight academies and senior member participation when cadets aren't flying can increase numbers.

Requirements to Retain CAP Glider Assets

1. All glider sorties are to be entered in WMIRS. In the case of orientation flights and academies, multiple sorties can be entered at the same time.
2. In order for WMIRS to push sortie data into the, Aircraft Utilization Glider Reports (aka CAPF 18 info) , all completed sorties, or flights, must be closed and validated by the 15th of the month following the month in which the sortie(s) was flown. Validation prevents cancelled flights from being included.
3. Each Region Center of Excellence or custodial wing will make every effort to meet or exceed the minimum requirement of flights with emphasis on cadet orientation flights and local cadet flight training as well as senior member flight support.
4. Major maintenance or repair issues should be addressed during the off-season or traditional down time whenever possible. Maintenance issues will be a consideration for under-utilization, however, in an effort to reduce the impact on flying as much as possible, glider maintenance and repair must be a high priority and every attempt must be made to ensure all work is completed in a timely manner.

CAP Glider Minor Maintenance

The only appropriated funding available to the Civil Air Patrol Glider Program is for approved AFAM cadet orientation flights. All other costs to the program, including maintenance is through corporate funds. The National Headquarters staff and the CAP command staff both fully support the program and make every effort to set aside enough funding to cover minor maintenance and repairs, annuals, and support items. Glider trailer repair is accommodated the same as vehicle repair. With such a tight budget, it is extremely important that all of our gliders are treated with the best of care while in the custody of the RCOE or custodial wing.

Minor charges for senior member flights can be a means of income to supplement support items like tow ropes and rings.

Although, we have the Centralized Aircraft Maintenance System (CAMS) in place, many are neither familiar with nor proficient in glider maintenance and repair. It is best to find a glider specialist to do your work. Local SSA or other local Glider clubs can provide recommendations. As opposed to the \$1M liability insurance requirement for powered aircraft, National Headquarters only requires \$500,000 in liability coverage for glider shops. Copies of a shop's insurance policies or Certificates of Insurance must be on file at NHQ prior to the start of work.

In order to keep the gliders flying during the height of the busy summer season and maximize utilization and opportunity, all gliders must have annual inspections completed before the beginning of the traditional glider season, which would be March or April in many cases. For those with the climate to accommodate all year long activity, annuals should be done at the traditional slow period.

Requests for maintenance must be faxed or emailed to NHQ/LGM on a [CAPF 176](#) with detailed justification for the work requested.

It should be noted that the use of safety wires during the glider rigging process is a vital step in assembly and does not constitute a maintenance action and as such is permitted when used within the parameters of the manufacturer's assembly guidance.



Program Participation

The Civil Air Patrol Glider Program has been designed primarily for cadet participation through orientation flights and flight training, including solo and glider rated private pilot certificate. Flight training can be on a local level, which would include wing and non-nationally accredited region flight academies made available to cadets within that region, or through nationally accredited flight academies that bring cadets in from all over the Country. In an effort to provide as many qualified cadets as possible with the opportunity to experience most or all of their potential orientation flights, yet recognizing the importance of supporting the nationally accredited academies with gliders, it is incumbent upon each region, along with their custodial wings, to develop and manage their program(s) to ensure that their support does not come at the expense of their local cadets; those located within custodial and adjacent wings. Nationally accredited flight academy criteria can be found later in this manual.

Senior member participation in the program is important and comes on two levels. First, in the overall support and implementation of the program, a successful program requires current and proficient orientation, instructor and check pilots; project officers; and support personnel. Second, as senior members in good standing, they also have an opportunity to receive flight instruction towards a rating upgrade or training for a private pilot airman certificate with a glider rating.

Although, pilot and instructor currency and proficiency in support of the program is a priority and can be done at any time, senior member flight training is only available when the gliders are not being used for the cadets. Historically, with proper program management and planning, there has been little or no conflict. The value of the senior member flight training program is in the potential to increase available pilot support and participation as the program grows.

As mentioned earlier, the glider fleet is limited. In many cases, there will not be a CAP corporate glider available for orientation flights. As an alternative, the use of Soaring Society of America (SSA) affiliate clubs and other commercial glider operations are authorized and encouraged. A and B mission Cadet Orientation Flights are AFAMs and require the PIC to be a qualified CAP orientation pilot. At that point, the glider will be considered member-owned/ furnished and a signed Hold Harmless Agreement (HHA) must be on file with the CAP-USAF region. Additionally, not all CAP glider operations will have a CAP tow plane available. The use of commercial tow vendors, including winch and auto, is also authorized. In that case, if the tow pilot or winch operator is a CAP member and is participating as a senior member, a signed HHA is required. HHAs are not required when a club or other commercial vendor aircraft is not being flown by a CAP member on a CAP activity.

This document prescribes the responsibilities of all Civil Air Patrol (CAP) personnel as applicable to the control and management of CAP gliders and tow planes, and their respective aircrews. Federal Aviation Administration (FAA) requirements are minimum standards; however, in some instances CAP has established higher standards than FAA minimums. The practices and procedures prescribed in these instructions are recommended best practices – any standards listed in [CAPR 70-1](#), *CAP Flight Management*, or other regulations are considered mandatory.

Organizational Areas of Responsibility

No matter where a CAP glider operation takes place, we must always be good neighbors and uphold CAP's reputation. As many CAP glider operations are collocated with SSA affiliate clubs or commercial operators, it is important to understand the areas of responsibility for all concerned. SSA affiliate clubs, commercial operations and airfields normally have operational rules that pertain to their locale. Wherever operations are collocated, in addition to complying with CAP regulations, CAP personnel will be knowledgeable and comply with all field operating procedures and applicable rules. Prior to joint operations with a glider club or commercial operator, the CAP member in charge of the CAP activity will discuss and be clear on specific areas of responsibilities.

All glider operations must develop and follow activity specific Risk Management (RM) plans. All phases of every operation should be reviewed for possible risk that must be mitigated, even small operations have risk that must be mitigated. Below are details required prior to conducting glider operations.

Glider Programs: Regions and Wings that operate gliders shall document their performance of a deliberate risk management process for glider operations conducted within their area. The resulting Risk Management Plan (RMP) shall address each step of the risk management process (e.g., identify hazards; assess risks; analyze risk controls and make control decisions; implement risk controls; and supervise). Selected risk controls shall be included in the region or wing regulatory supplements, operations/training plans, and local risk management tools, as applicable. Glider program RMPs shall be reviewed and updated, if required, on an annual basis.

Glider Operations: Planning and conduct of glider operations shall address all known and anticipated risks as well as mitigating controls identified in the region/wing RMP. Operations supervisors shall assist assigned safety officers in performing a risk assessment prior to each day of glider operations. This assessment is aimed at identifying any previously undetected risks and developing effective controls, as well as ensuring RMP required controls are properly implemented. If risk levels exceed that approved by the program RMP, operations shall not be conducted without approval from the CAP member identified in the RMP as having the authority to approve operations at a higher risk level. PICs are responsible for conducting pre-flight risk assessments and obtaining flight releases in accordance with CAPR 70-1. However, operations supervisors shall be proactive in performing risk assessment and control as operational conditions change – seeking approval from the appropriate authority when required.

Regardless of the location of the glider activity, there is almost always the possibility of airspace conflict. If there is a possibility of conflict, it is up to the CAP project officer or designee to make sure the FAA is aware of CAP glider launches and let them know of the times, location and extent of the daily glider activity, so that they may issue the proper Notices to Airmen (NOTAMs), if appropriate.



Knowledge Based Courses

There are a number of courses available on the CAP website that are designed to prepare pilots, student pilots and ground support personnel for an effective, safe and rewarding experience. Most of them are mandatory for the area of the operation in which they will be participating; however, anyone can take any of the courses offered. These following courses can be found on the CAP Pilots/Stan/Eval website and include:

- [The SSF/CAP Wing Runner Course](#)
- [The SSF/CAP Tow Pilot Course](#)
- [The L-23 Cockpit Familiarization Course](#)
- [National Check Pilot School Course](#)
- [Maule Familiarization Course](#)

Ground and Air Operational Support

There is an inherent pressure associated with glider operations in an attempt to accomplish as many of the orientation or instructional flights as possible. At the beginning of each day's activity, everyone involved in the operation must discuss expectations, understand how they relate to conditions and experience, determine if they are realistic, and make every effort to avoid any additional self-induced pressures. The pressure to perform and not disappoint can be very strong. If not controlled, it can have and has had catastrophic results. Expectations should also be reassessed periodically throughout the day.

All glider activities must have at least one person designated to supervise the safety of all operations. Although it is preferable to have a dedicated safety officer, when operations are being conducted with a senior staff of three or less, one of the senior staff may fulfill the duties of the safety officer in addition to their other responsibilities. When more than three staff members are available, there must be an assigned safety officer and, if necessary, an alternate.

Glider Rigging

Most glider rigging is done at the beginning of the traditional glider season following winter storage in trailers. Others may be rigged and derigged at various times during the season for storage, transportation to maintenance facilities, glider academies or other venues. As with checklists for aircraft, following manufacturer's written instructions is extremely important. Since proper assembly is vital to the safe operation of the glider, it is highly recommended that no cadet flight activity is scheduled for the same day a glider is to be test-flown after maintenance or initial rigging, so that there is no additional pressure to rush the assembly and positive control process. Prudent judgment prevails. For accuracy and continuity purposes, all positive control check confirmations must be made verbally between the pilot and those assisting.

CAUTION

When the manufacturer's assembly/disassembly procedures require clarification or have been modified, the organization primarily responsible for operating a CAP glider is responsible for and shall ensure that tail-number specific written instructions are provided for properly rigging and de-rigging the aircraft. Irrespective of any use of supporting equipment, a minimum of four personnel must participate to reduce the possibility of damage and ensure proper rigging

Derigging and Trailer Loading/Unloading

Derigging gliders is a vulnerable time for loose parts as it is a critical point where parts have been misplaced or lost, resulting in unnecessary frustration and anxiety at the next assembly point. Always take the time necessary to ensure accountability for any removable parts by checking and double checking the completion of each stage of derigging.

Once the glider has been taken apart and is ready for loading, it is imperative that great care be taken when loading and properly securing the glider in or on the trailer. Avoid damaging the glider by making sure enough people are on hand to safely maneuver the glider. The Blanik trailer presents the most challenges. It is highly recommended that the manufacturer's instructions be used as a checklist.

Storage and Tie-down

Aircraft should be kept in a hangar whenever possible. Aircraft parked in the open shall be tied down at the three approved tie-down points (wings and tail) and properly secured to prevent wind damage. Control locks shall be placed on control surfaces. Aircraft in extended outside storage shall be tied at four points (nose, wings, and tail) with control locks in place. Ropes should be pulled tight and secured with a Tautline Hitch or similar knot that will not allow the rope to loosen under stress. Our gliders are, for the most part, stored outside for an extended period and must comply with the four point tie-down. Refer to the aircraft manual for information on securing control surfaces.

In our effort to reduce and eliminate wind related damage to our gliders, it is vital to follow manufacturer's recommendations, which includes securing and utilizing proper tie-down ropes or straps. Not all ropes are equal. What may look to be a strong, braided rope in a package could be a superficial braid surrounding paper or fabric. Always determine the tensile strength of the rope. Anything less than the recommended tensile strength could and has failed, resulting in severely damaged or totaled gliders.

Nylon or Dacron tie-down ropes are recommended; however, regardless of whether the tie-down is with a rope or strap, the minimum recommended tensile is 4,000 pounds or more, and an absolute minimum of 3,000 pounds. Chains are not recommended due to regulation requirements that prohibit the chains to be directly attached to the ground.

When using auger anchors for temporary tie-down, make sure they are long enough and set deep enough for a strong hold based on soil type, especially in those areas with sandy soil. See [CAPR 66-1](#), Section 15 for more tie-down information.



This damage was the result of only a 45 mph wind gust when improper ropes were used.

Activity Directors and Operations Supervisors must be fully aware of and comply with all statutory and CAP regulatory requirements (i.e., 14 CFR, CAPR 60 and 70 series), as well as any airport procedures relevant to the operations being conducted.

Project Officer/Operations Supervisor/Tow Pilot

The project officer, operations supervisor or designee and tow pilot have responsibilities that include:

- 1) Tow line examined for scuffing and damage at the beginning of every activity and at any time there is reason to suspect damage
- 2) Tow rings inspected for damage and proper ring is present. Must be familiar with any tow ring or tow hook system limitations
- 3) Tow hooks, weak links and tow hook releases inspected and tested
- 4) Runway distance, conditions, obstructions, abort point and weather conditions, and forecasts are acceptable and confirmed for safe flight operations
- 5) Ensure the glider is equipped with a working radio of some kind
- 6) Procedures for tow plane radio announcement during takeoff, effective communications between glider and tow plane, and glider communications with the ground crew are established and confirmed

Safety Officers

Every activity must have someone designated as a safety officer. Prior to the first launch of the day, the safety officer will complete a risk assessment to ensure a safe mission and complete a safety briefing with all participants. Minimum considerations will include current and expected weather conditions and its effects on tow and glider performance, available runway and runway conditions, runway obstacles, and status of participants as well as operational and airport conditions, including traffic on and in the vicinity of the field. Runway selection and staging areas for glider operations will be in compliance with FAA requirements. Staff and participants will be made aware of the organization's risk tolerance and risk controls relevant to their activities. In addition, everyone will be

empowered to call “knock it off” if they see anything that they believe represents an elevation of risk above the intended level.

Parents and other non-participants must be briefed as to the hazards of the operations being conducted. Due to limitations on liability, parents and non-participants must be briefed on areas accessible during operations. An area will be marked/cordoned off to assist non-participants in knowing where they should be observing operations.

Wing Runners

It is important that cadets have a positive learning experience; this may be accomplished by providing them with the opportunity to learn the intricacies of a glider operation, while becoming a vital part of the operation. Therefore, cadets are encouraged to successfully complete the SSF/CAP Wing Runner Course and exam before participating in glider orientation flights. To enhance overall safety, cadets and senior members involved in the active staging, launch, and recovery of gliders during glider orientation flights, Glider Flight Academies, or glider flight training must successfully complete the SSF/CAP Wing Runner Course and exam prior to their participation in these activities. Following completion of the SSF/CAP Wing Runner Course and exam, members shall practice what they learned under the supervision of an experienced wing runner or Supervisor of Flying (SoF). An annual review of the course prior to returning to glider flight activity is recommended.

As wing runners and support personnel, a safe operation mandates that someone is designated as a supervisor for each flight. The supervisor is to ensure that proper procedure and technique is employed for every launch and recovery.

Wing Runner Team

Wing Runner Teams are essential to the success and safety of the daily operation, whether as an experienced team or as trainees under expert supervision. Wing runner teams must:

- 1) Designate launch and recovery duties and responsibilities for each member of the team for each active glider.
- 2) Review signals with the tow pilot, glider pilot and within the team.
- 3) Ensure the glider is situated properly for conditions and the canopy is protected.
- 4) Assist with crew entry, as necessary.
- 5) Assist the pilot with control checks.
- 6) Confirm radio communication between the glider and tow plane, and operations supervisor.
- 7) Ensure proper positioning of signalers and wing runner.
- 8) Prepare tow rope for launch, check connection and releases. (Tow ropes should never be picked up with the bare hand. Make sure adequate gloves or tools are available.)
- 9) Designate a spotter to announce approaching glider and landing phases.
- 10) Recover the glider, as necessary, and prepare for the next launch.
- 11) Periodically inspect the tow rope for damage.



Ground Support Equipment

When setting up support equipment, it is important that at least one person is designated to:

- 1) Ensure staging areas, shelters, equipment and supplies are deployed at a safe and secure distance from the operations area.
- 2) Include adequate seating arrangements, sun screen and water.
- 3) Monitor participant hydration.
- 4) Set up and maintain radio communications, as required.
- 5) Adhere to ORM for operational and runway conditions when deploying more than one glider.

Launch/Recovery Operations

Launching and recovering gliders can be both a fast paced and demanding operation. All those involved must remain alert at all times.

When launching one or more gliders, it is extremely important, before going forward, for the operations and safety personnel to perform and document a detailed and thorough ORM analysis and assessment of the proposed launch procedure to ensure a safe operational environment for gliders, personnel and support equipment. In order to avoid conflict with landing gliders, the practice of staging them on the same active runway during flight operations, as a means of increasing launch efficiency, is prohibited.

Planning and actions will be taken by event staff members to prevent a situation where an obstruction would be present on the active runway when a cadet is at the controls of a glider on final approach and throughout landing. To provide as much of a sterile environment as possible, the active runway will be kept clear and landings will be suspended during initial solo flights

There are times when local airports will accommodate a glider operation by allowing the use of taxiways or by preparing a grassy area to launch and recover gliders and/or tow planes. Tow planes may land on either paved or grass active runways or on a temporarily designated and properly cared for grass strip. ORM principles apply.

CAUTION

Attempting to expedite recovery and launch by landing at unplanned locations, to include intentionally landing long or off centerline, is prohibited. This prohibition is not intended to restrict pilot flexibility in selecting landing location as necessary to ensure a safe recovery in extreme circumstances.

In an effort to reduce potential damage to the tow rope, it is highly recommended to land on a grass runway or strip, or drop the tow rope in a grassy area at least 50' laterally from the nearest person. When a rope drop is imminent, ground operations staff will ensure all participants remain on the opposite side of the runway adjacent to the drop area. If the landing has to be on a hard surface, the tow rope must be thoroughly examined for damage before further use. Tow planes will not fly directly over an active staging area with the tow rope attached.

CAP Soaring Activity Uniforms

Except in those areas with a climate that can accommodate a yearlong glider activity, most programs not only operate during the spring and fall season, but also during the summer with its long days and the potential for both high temperatures and high humidity. With the heating effect of the glider Plexiglas canopy and the oven-like nature of the tow plane cockpit, common sense and ORM dictates the need to stay as cool as possible and hydrate often.

A soaring activity, to include the tow pilot, demands that comfortable, loose-fitting, nonrestrictive clothing be worn. Personnel will wear clothing that is appropriate for the conditions in which they are operating, identifies them as CAP members, and reflects CAP in a positive manner. A tee-shirt or polo, such as a CAP designed wing, unit or activity shirt with a pair of shorts/long pants and tennis shoes are sufficient. It is recommended that shorts be either khaki-type or dark blue and the long pants either khaki-type or medium gray.

Due to the greenhouse effect of the glider canopy, the use of sun screen and a full-brimmed hat (boony or bucket hat), that will also protect the ears and back of the neck, is highly encouraged; baseball-style caps may be worn, however, styles without buttons on the top are recommended.

CAP Glider Training and Proficiency

CAP has developed a training plan to assist CAP glider orientation pilots, instructors and students in initial and recurring training requirements (See [CAPP 71-2 Aircrew Training, Glider](#)).

Cadet

CAP cadets may participate in the glider program through various methods, including orientation flights and instruction. The Glider Orientation Program specified in [CAPP 60-40](#), however, prohibits flight training and it will not be addressed in this section.

Initial Flight Training

Cadets are authorized, in accordance with [CAPR 70-1, CAP Flight Management](#), to participate in primary and advanced flight training in a glider from authorized CAP Glider Flight Instructors. Flight training may lead to solo and the attainment of an FAA pilot's certificate. Cadets will use the *CAP Glider Training Plan* (See [CAPP 71-2](#)) or a comparable NHQ/DO approved training plan. The *CAP Glider Training Plan* (See [CAPP 71-2](#)) provides an Initial Glider Check Out Program, a Glider Proficiency Program Syllabus, and a Glider Flight Training Course with nine lessons for glider flight training. The Soaring Society of America Flight Training Handbook or commercially produced glider training products will be used during training. All flight training, dual or solo, will be conducted in accordance with FAR Part 61 and all flight training will be directly supervised by a current CAP Glider Flight Instructor.

CAPF 5 Evaluation

Except as noted below, a minimum of one landing is required to complete the evaluation (more landings may be required at the discretion of the check pilot). If the pilot taking the evaluation has not accomplished and logged a rope break in the preceding 12 months, the [CAPF 5](#) evaluation must include a simulated low level rope break (above 200 feet AGL). If a rope break is completed, at least one other landing is required as part of the evaluation.

Recurring Flight Training

CAP cadet pilots are encouraged to use the Glider Proficiency Program Syllabus, when appropriate, to aid in maintaining proficiency (See [CAPP 71-4 AF Approved Proficiency Profiles](#) and [CAPP 71-5 Self-Conducted Proficiency Profiles](#)). Cadets with CAP Glider Pilot ratings are prohibited by [CAPR 70-1](#) from flying other cadets.

Senior Member

The CAP glider program exists primarily for cadets; however, competent senior member glider orientation, instructor and check pilots are essential for continued success, growth and safety of the program. They must have the opportunity to remain current and proficient.

Additionally, in accordance with [CAPR 70-1, CAP Flight Management](#), senior member CAP pilots are encouraged to take flight training towards a glider rating and non-pilot senior members may train for a glider airman's certificate, when cadets are not using the gliders. Senior members are a great resource for the future and more senior member pilots can lead to an increase in support.

Initial Flight Training

Senior Members are authorized, in accordance with [CAPR 70-1](#), to participate in flight training in a glider from authorized CAP Glider Flight Instructors toward solo and the attainment of an FAA pilot's certificate or transitional rating. The CAP Initial Glider Check Out Program provides a safe and effective method for initial checkout in glider aircraft (See [CAPP 71-2](#)). All flight training, dual or solo, will be conducted in accordance with FAR Part 61 and all flight training will be directly supervised by a current CAP Glider Flight Instructor. The *CAP Glider Flight Training Plan* ([CAPP 71-2](#)) provides a syllabus and is available for flight training as are a number of other commercial products, including the Soaring Society of America Flight Training Handbook. For senior members, the CAP Glider Flight Training Course Outline is recommended and provided as a guide for training purposes (See [CAPP 71-2](#)).

Each senior member CAP pilot new to the glider program, whether with an existing glider rating or newly rated, is required to receive familiarization flights with a CAP Glider Instructor Pilot and be recommended for an evaluation. Prior to the familiarization flight, if the pilot is qualified for the orientation pilot endorsement in accordance with CAPR 70-1, the pilot must be familiar with [CAPP 60-40](#), *Cadet Orientation Flight Program Guide*, and practice those maneuvers that must be discussed and demonstrated during the evaluation. An initial CAPF 5 evaluation by a glider check pilot will be required for each make/model of CAP glider to be flown - the exception being equivalent groups of aircraft identified in CAPR 70-1 7.1.6.

CAPF 5 Evaluation

Each senior member CAP pilot new to the glider program, whether with an existing glider rating or newly rated, is required to receive familiarization flights with a CAP Glider Instructor Pilot and be recommended for an evaluation. Prior to the familiarization flight, if the pilot is qualified for the orientation pilot endorsement in accordance with [CAPR 70-1](#), the pilot must be familiar with [CAPP 60-40](#), *Cadet Orientation Flight Syllabus*, and practice those maneuvers that must be discussed and demonstrated during the evaluation. An initial [CAPF 5](#) evaluation by a glider check pilot other than the instructor pilot will be required for each CAP glider to be flown.

Except as noted below, a minimum of one landing is required to complete the evaluation (more landings may be required at the discretion of the check pilot). If the pilot taking the evaluation has not accomplished and logged a rope break in the preceding 12 months, the [CAPF 5](#) evaluation must include a simulated low level rope break (above 200 feet AGL). If a rope break is completed at least one other landing is required as part of the evaluation.

Recurring Flight Training

CAP senior member glider pilots are encouraged to use the Glider Proficiency Program Syllabus, when appropriate, to aid in maintaining proficiency (See [CAPP 71-4](#) and [CAPP 71-5](#)).

CAP Glider Launch Operations

CAP gliders are launched either by aero tow or ground launch. Ground launch can include winch launches and auto tows.

Aero Tows

CAP utilizes CAP corporate tow planes, member-owned/furnished tow planes, or commercial tow plane vendors to provide aero tow launches. The use of member-owned or furnished aircraft must have a signed Hold Harmless Agreement (HHA) on file with the CAP-USAF region.

CAP corporate tow aircraft consist of Cessna 182, Cessna 172 (180 hp), and Maule MT-7-235 (235 hp) aircraft. Due to a number of factors, the use of C182T G1000 model is prohibited from towing.

CAP and the Soaring Safety Foundation (SSF) partnered to develop the world's first and only tow pilot course on the Internet. This course has and continues to provide thorough and standardized instruction for tow pilots worldwide. The course is mandatory for CAP tow pilots and has been adopted as mandatory study by several SSA affiliate glider clubs as well as glider clubs in Japan, Egypt, and Brazil. SSF Tow Pilot Course: <http://www.soaringsafety.org/learning/towpilot/towpilot.html>

When CAP members fly SSA affiliate club or other commercial operation tow aircraft while participating as a CAP member in accordance with [CAPR 70-1](#), *CAP Flight Management*, the aircraft is considered a member/furnished aircraft and requires the HHA. The flight may be a corporate mission, or when towing for a cadet orientation or flight training mission with the proper approval, could be an Air Force authorized mission (AFAM) with FECA and FTCA protection.

Many of our operations are located at or near SSA affiliate clubs or other commercial glider operations. The club or operator may act as a vendor supplying the tow plane. In that case, CAP is responsible for the CAP corporate glider and the tow plane operator is responsible for the tow plane. Again, if the tow plane is being operated by a CAP member participating as a CAP member, it is considered member furnished. Except for those associated with SSA affiliated clubs, the use of commercial tow vendors requires advance approval from NHQ/LG. Keep in mind NHQ/LG may require additional information; for example, minimum insurance coverage and documentation.

Tow Pilots

Towing gliders is an exciting and rewarding, but demanding experience that must be taken very seriously. One must stay alert, on constant guard against potential upset and/or stall, and ready to release in a heartbeat. Towing a glider requires full concentration and attention to detail, as well as the need to feel the forces on the airplane and the need to maintain an acute situational awareness. It is important to recognize that the energy output due to concentration and the physical requirements of flying the airplane within its operating envelope will take its toll as the day wears on. Periodic rest and hydration must be built into the planning and execution of the operation. The project or [operations supervisor](#), safety supervisor, or designee should periodically check on the tow pilot to ensure they are able to maintain a satisfactory level of flight safety.

If more than one pilot is participating, they should alternate duties if possible. If only one pilot, scheduling should adjust the number of flights accordingly. Generally, the flight and duty day should be significantly shorter due to the mental and physical effects of towing.



FAA Tow Pilot Requirements (CFR, part 61, section 61.69)

You must:

- 1) Hold at least a private pilot certificate with the appropriate category rating;
- 2) Have logged a minimum of 100 hours as pilot in command in the same category aircraft used for towing;
- 3) Have a logbook endorsement from an authorized instructor certifying you have received ground and flight training in gliders or unpowered ultralight vehicles, and is proficient in the areas listed in part 61.69(a)(3)(i)(ii)(iii) and (iv);
- 4) Have a logbook endorsement from a pilot that already meets the requirements of part 61.69 (c) and (d), who has accompanied the pilot on three flights which has certified them to have accomplished at least three flights in an aircraft while towing a glider or unpowered ultralight vehicle, or while simulating towing flight procedures; and
- 5) In the preceding 24 months: have performed three actual or simulated tows accompanied by a qualified pilot; or have been towed for three flights, as pilot in command in a glider or in an unpowered ultralight vehicle.

CAP Tow Pilot Requirements ([CAPR 70-1](#))

CAP Tow Pilot must:

- 1) Be a qualified CAP VFR pilot at least 21 years of age.
- 2) Be qualified and documented in accordance with 14 CFR Part 61.69 to tow gliders.
- 3) Have a minimum 500 hours PIC time, 250 hours of which is in single-engine airplanes.
- 4) Satisfactorily completed the SSF/CAP online Tow Pilot Course prior to initial appointment and every four years thereafter.
- 5) Have completed a minimum of 10 tows of gliders within the preceding 12 calendar months (no simulated tows will be included in the 10 tow requirement) and three glider flights, prior to the initial rating, if not a glider pilot.
- 6) Be appointed in OPS Quals as a CAP tow pilot by the wing or region commander, National Commander, or their designee.

Tow Pilot Trainer Guidelines

For initial qualification or later re-currency, pilots may complete the minimum tows in CAP aircraft under the instruction of another current CAP tow pilot. Once the trainee tow pilot has satisfactorily completed the tow required, the tow pilot trainer will sign-off the trainee and enter the information into Ops Quals. Ops Quals documentation will include logbook endorsements by both the tow pilot trainer and a glider instructor.

Instructional tows must include a minimum of:

- 1) Tow plane and glider signals
- 2) Tow speed limitations
- 3) Radio procedures
- 4) Simulated rope-break
- 5) Climb to a minimum of 2,000' under tow
- 6) Tow plane handling during box-the-wake maneuvers
- 7) Simulated landing with glider in tow
- 8) Proper altitude and engine management for avoiding overheating and shock cooling during climb and following release

Discussion items must include a minimum of:

- 1) Tow pilot and glider pilot pre-flight coordination
- 2) Aborted take-off under tow
- 3) Partial and full power loss on take-off and climb
- 4) Situations that would require immediate release

The tow pilot trainer does not have to be a CFI, CAP instructor pilot or CAP check pilot/examiner and a [CAPF 5](#) is not required. Tow pilot trainers will have a minimum of 50 tows of experience, be FAA tow current within the past 12 months, and be designated by the wing or higher commander in Ops Quals.

Ground Launches

CAP utilizes two methods of ground launch. Auto tows and winch launches have both been successfully utilized in several wings and regions. In addition to some commercial and member-owned winches, CAP now has two corporate owned Roman winches in PCR and NER. In several years of operation neither operation has had an incident related to a glider ground launch.

The use of commercially provided and CAP member operated commercial winch or auto tow equipment is authorized. When a CAP member is operating a commercial winch while participating as a CAP member, however, it is considered member-owned or furnished and requires a signed HHA on file with the CAP-USAF region. In most cases, CAP liability insurance will cover liability claims arising out of the ground and flight activity. It will not provide damage or replacement coverage for the aircraft, vehicles, or winches. For more details see [CAPR 900-5](#), *Civil Air Patrol Insurance Benefits Program*.



Winch and Auto Tow Operator Requirements

Minimum training requirements must be met by CAP members in order to perform the glider launch duties of CAP Winch Operator and CAP Auto Tow Operator ([see CAPP 71-2](#)).

Orientation and Instructional Flights

The primary purpose of our glider program is to give our cadets the opportunity to experience yet another form of flying. Gliders develop a high degree of skill and confidence, and have been the foundation and impetus for past cadets that have participated and excelled in both military and civilian aviation careers.

Glider Orientation Flights

Up to five orientation flights are available to qualified cadets using the syllabus found in [CAPP 60-40](#), *Cadet Orientation Flight Syllabus*. Statistically, most cadets have not completed even one glider orientation flight. It is the responsibility of those managing the programs to make available and promote these orientation flights.

There are times when a flight fails to reach 80% of the requirements listed in the syllabus. It may be the result of flight conditions or the use of winch launches. When using winches, the duration of the flight will probably require multiple launches. Multiple launches are authorized in an effort to meet the 80% completion rule. In this case as well as any flight that does not complete 80% of the syllabus, enter the number "50" in each sortie that was not completed rather than the Syllabus number.

All glider flights will be released via WMIRS in accordance with [CAPR 70-1](#), *CAP Flight Management*. For multiple operations at the same airfield, multiple flights may be released on a single flight release as long as each participating pilot-in-command is identified on the [CAPF 99](#).

Nationally Accredited Glider Flight Academies

A nationally accredited glider academy is a flight academy hosted by a Region that is open to qualified cadets nationally and adheres to the following criteria:

- 1) Experience in successfully operating at least two local flight academies
- 2) Designed to accommodate a minimum of 12 cadets
- 3) A minimum of 18 hours of ground school, 2 hours per day
- 4) The use of age appropriate commercially available course material, for example, FAA, Knauff, etc.
- 5) The intent to provide 30 instructional flights

The CAP Glider Training Plan provides a syllabus and is available on the CAP website.

Local Glider Academies

Not all cadets are in a position to attend nationally accredited glider academies. Local glider programs are encouraged to develop and hold their own academies for their cadets on a wing or region level. Those academies should follow the national criteria as much as possible. Note: as stated in [CAPR 52-16](#), *Cadet Program Management*, NHQ offers national accreditation for cadet special activities hosted by wings and regions. For more information on attaining national accreditation for wing or region run glider flight academies, contact the NHQ Cadet Programs office.

Cadet Solo Flights

Prior to a cadet operating any glider as a solo pilot, the cadet will be in compliance with all applicable CAPR 70-1 requirements and must have a current student pilot certificate with solo endorsements in accordance with 14 CFR Part 61 from a CAP instructor pilot in the make and model aircraft flown.

Pre-Solo Cadets

Primarily due to the restriction on cadet solo during academies, those who have successfully completed the ground and flight instruction requirements may submit for Pre-Solo Wings. A "CAP Cadet Pre-solo Award" is not an aeronautical rating, it is an award earned by a CAP student pilot at a CAP wing level or higher flight academy, who has successfully performed a flight that demonstrates to an onboard CAP Instructor Pilot (CFI) that he/she has the ability to fly the glider without assistance.

SSA/CAP Partnership

In 2013, the SSA and CAP renewed their partnership with an updated agreement that automatically renews every five years. As part of their youth outreach program, SSA developed an electronic membership for our cadets.

Upon completion of their first glider orientation flight, cadets are to receive a SSA/CAP Certificate of Achievement and an invitation to apply for CAP Cadet introductory membership in SSA. These certificates are signed by the orientation pilot and can be given to the cadet on the same day as the flight or sent to their Squadron Commander to be presented at a later date. Cadets are also qualified for the SSA CAP Cadet Introductory Membership. Certificates can be ordered from the SSA Merchandise Manager by phone at (575) 392-1177; by Fax at (575) 392-8154; or online at www.ssa.org

Cadets can go to the SSA at cadet.ssa.org and enter their name to begin the enrollment process. After following the simple instructions, their membership will be processed and they can expect their membership card in a week or so. It is highly suggested that the cadets' commanders or DCPs review the enrollment process and follow-up to see if they need any further assistance. Other SSA websites include Benefits of Membership (SSA) <http://www.ssa.org/Default.asp?content=3104>; Cadet Youth Flying Scholarships (SSA) <http://www.ssa.org/Youth>. For additional Information the main website is located at www.ssa.org.

Additional information on how to implement the SSA-CAP program can be found in the GLIDER section of the CAP Pilots Web page.