



2022 Standard Operating Procedures

Southern California Soaring Academy, Inc.

As a pilot or student pilot operating from the Southern California Soaring Academy, at Crystal Airport, you will be expected to read, understand and follow the Soaring Academy's standard operating procedures. Before taking a tow, you will sign the SOP book in the office, agreeing to abide by these procedures, before operating from the Soaring Academy.

WELCOME

The Southern California Soaring Academy, Inc. (SCSA) is a 501 c (3) non-profit, offering rehabilitative flights and flight instruction to wounded veterans, and educational training in aviation based concepts for STEM educators, and discovery flights for their STEM students.

In addition to its non-profit activities, the Soaring Academy is a full service commercial glider operation, operating out of the Crystallaire Airport (46CN). We provide all levels of instruction, give commercial sightseeing glider rides, tow pilot training and provide glider aero-towing and storage.

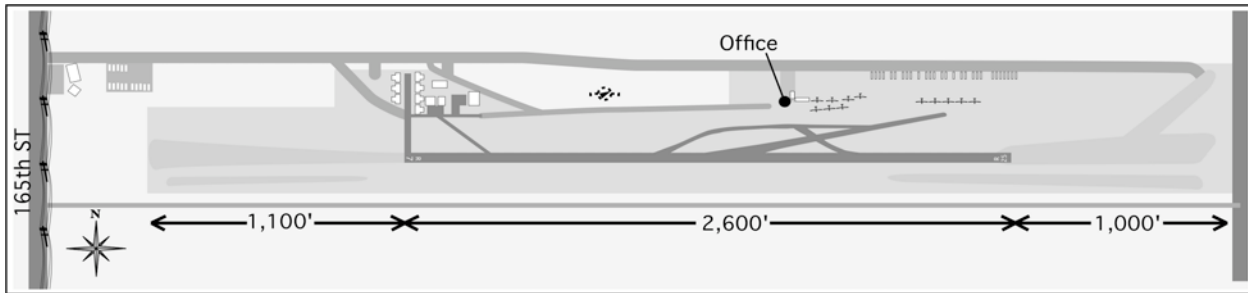
SCSA has a variety of gliders for rent from basic trainers to advanced state of the art high performance sailplanes.

These SOPs have been developed to help provide a safe, efficient, and friendly environment for everyone participating in the operation. Please let us know if you have any suggestions about how we may improve on these procedures.

All pilots are expected to abide by these SOPs, airport rules, and the FARs. The Southern California Soaring Academy will refuse to provide tows and services to pilots who do not follow these procedures.

About the Airport

Crystal Airport (46CN) is a private airport that has a 2,600'x 30' paved runway with approximately 1,000' of usable dirt runway at each end.



The runway is oriented approximately East-West (7 and 25) and is at an elevation of 3420' above sea level.

There is an 800' crosswind strip oriented SW-NE on the northeast corner of the airport. This strip is available for landing only in the event strong south crosswinds in excess of 15-18 kts.

FLIGHT OPERATIONS

Glider Staging

Gliders will form a line to the North of the “hold short” line, marked by the orange cones. You should not get in line until you are ready to launch. Gliders will be launched from the front of the line. If you are first in line, you should be ready for launch. If you are not ready to launch when the tow plane is available, you will be moved to the side and the next person in line will be launched.

NOTE - Scheduled Soaring Academy rides and instructional flights will be given launch priority, in front of private gliders, if needed, to keep the Soaring Academy on schedule.

Launching

You will be pulled on to the runway only when a tow plane is on the ground and ready to tow. The Soaring Academy's line crew will tow you using a golf cart to the runway, remove your tail dolly (if so equipped) and connect the glider to the towrope.

When the slack is taken out of the towrope, and you are ready for take off, the glider pilot shall signal the line crew, he is ready for take off, by wagging his rudder. The line crew will then signal the tow pilot, using hand signals, to take off. The tow pilot will initiate the take off based on the line crew's hand signal.

This procedure ensures the line crew's safety by making sure they are not in front of the moving wing.

Do not call over the radio to the tow pilot “take out slack” or “ready for take off” or any radio calls of that nature.

Only the Soaring Academy line crew is permitted near the runway, south of the hold short cones. The line crew will assist privately owned gliders to the runway.

The pilot in command is responsible to ensure their canopy is locked and spoilers are closed. If the line crew observes the canopy or spoiler is unsecured, they will notify the pilot. The tow pilot will initiate a radio check with the glider pilot, to establish radio contact, ask the glider pilot where they would like to be towed. At that time inform the tow pilot if you are carrying water ballast, or intend to begin the launch with your airbrakes open

Launch from Runway 25

If the towplane is not airborne and climbing as it approaches the first hangar, the glider should release and land straight ahead.

Launch from Runway 7

If the towplane is not airborne and climbing as it approaches the end of the pavement, the glider should release and land straight ahead.

On Tow

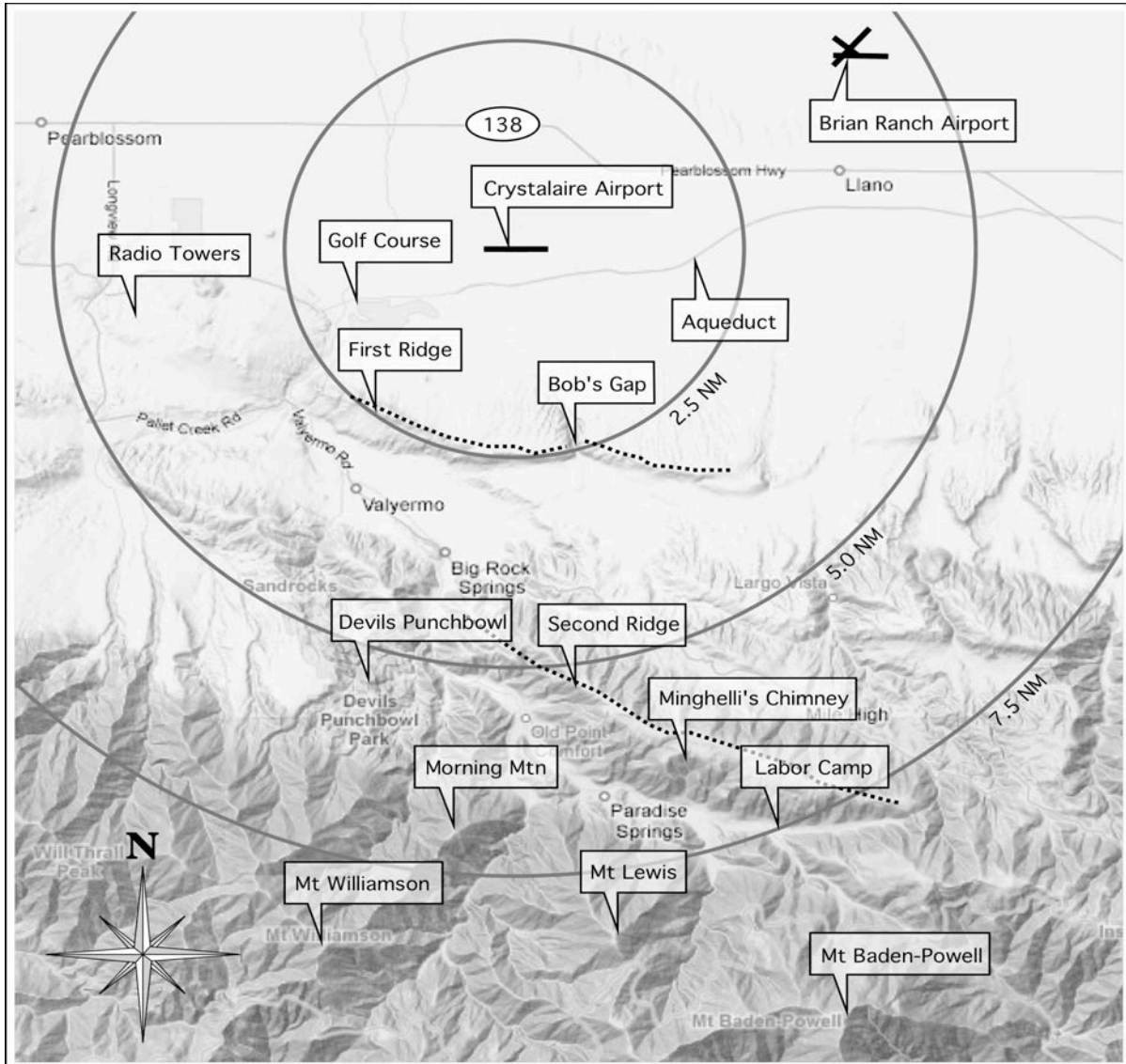
The tow plane will climb at its best climb rate towards the landmark requested by the glider pilot; and will not arrive at the requested landmark at an altitude lower than the best climb rate will yield, or at an altitude that is unsafe for the tow plane. The Soaring Academy will not tow any glider east of the work camp or south of any of the large mountains.

In the event of a rope break, the Soaring Academy requests the glider return with the tow ring still attached to the glider.

Landmarks

The following landmarks can be used for reporting your position on the radio and for requesting where you would like to be towed.

One of the easiest ways to locate the Crystallaire Airport while airborne is to follow the aqueduct until it goes under ground near the golf course.



Standard Glider Landing Pattern Landmarks for Glider Tow

Standard Glider Pattern Runway 25 at Crystal Airport

A right pattern is flown for runway 25. The IP (initial point) for runway 25 is in the vicinity of the white bridge on HWY 138, west of the intersection. You should plan to be at the IP at 5000' msl and make the radio call; "Crystal Traffic Academy Six, five thousand feet over the bridge". The downwind leg is flown at 1000' AGL, or 4400' MSL. A radio call on downwind is required; "Crystal Traffic Academy Six right downwind, runway 25, Crystal". The radio call at the IP notifies the line crew that a glider will be inbound for landing so they can either expedite or clear the runway and hold the launch.

Standard Glider Pattern Runway 7 at Crystal Airport

A left pattern is flown for runway 7. The IP (initial point) for runway 7 is in the vicinity of the dogleg bend on HWY 138, east of the intersection. You should plan to be at the IP at 5000' msl and make the radio call; "Crystal Traffic Academy Six five thousand feet over the east IP for runway 7". The downwind leg is flown at 1000' AGL, or 4400' MSL. A radio call on downwind is required; "Crystal Traffic Academy six left downwind, runway 7, Crystal". The radio call at the IP notifies the line crew that a glider will be inbound for landing so they can either expedite or clear the runway and hold the launch.



Standard Glider Pattern IP and Downwind

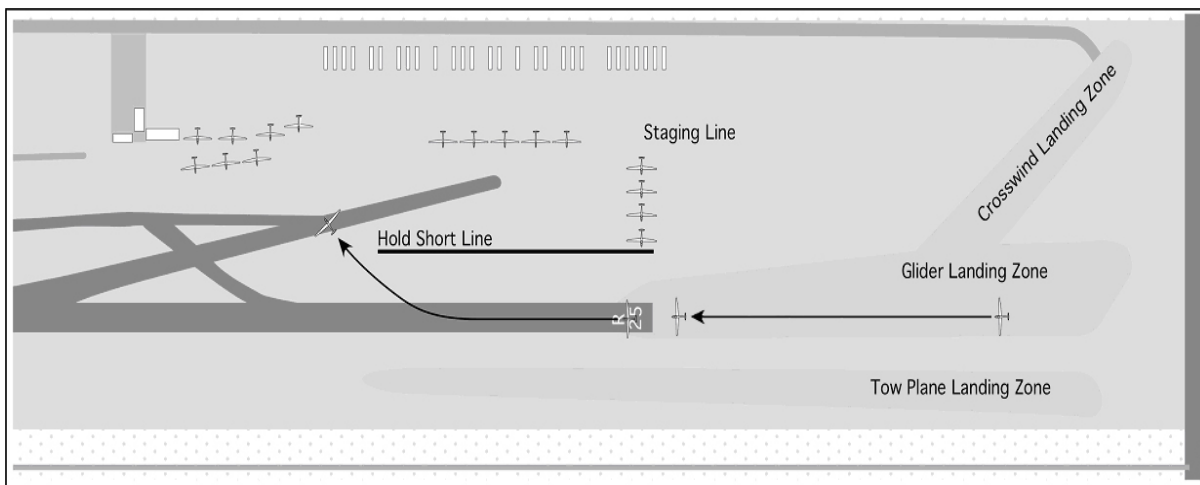
Landing

Glider landings may be made either on the paved runway (preferred), or on the dirt extensions. Rocks and other rough dirt may be present on the dirt extensions.

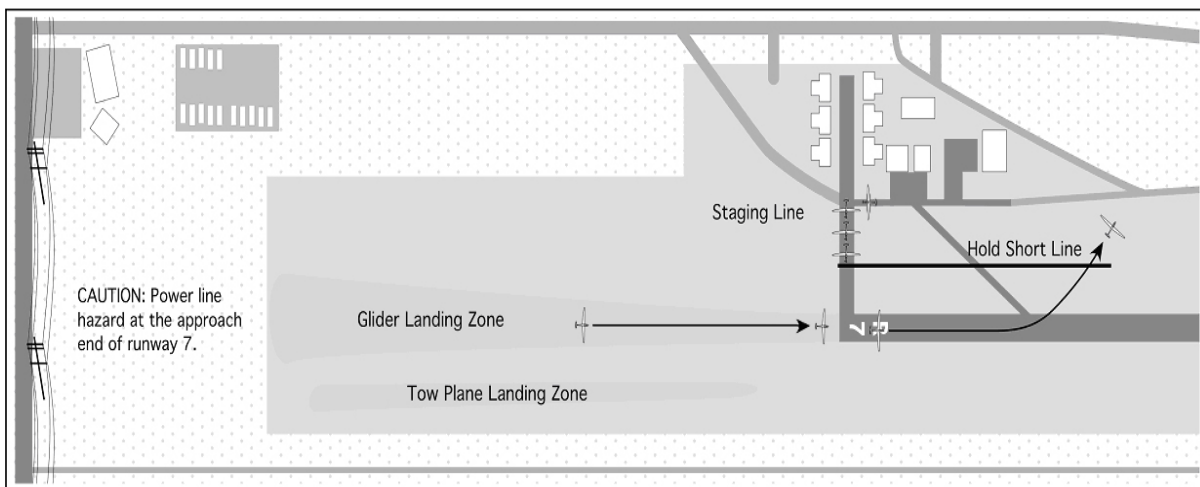
THE SOARING ACADEMY RENTAL GLIDERS MUST BE LANDED ON THE PAVED RUNWAY DURING NORMAL OPERATIONS.

All landing gliders are required to roll out to the “hold short” line marked by the line of orange cones. If you are unable to adequately clear the runway (to the cones), get out and quickly move your glider past the cones after landing to allow other aircraft to use the runway. Not clearing the runway adequately well is not acceptable.

Plan your rollout/taxi so that you do not pass near other aircraft, vehicles or people in case of brake failure or loss of directional control due to the wind, a gust or dust devil. The area in front of the office usually has parked tow planes and other obstructions. Exercise extreme care when taxiing near the office area.



Staging/Landing Areas - Runway 25

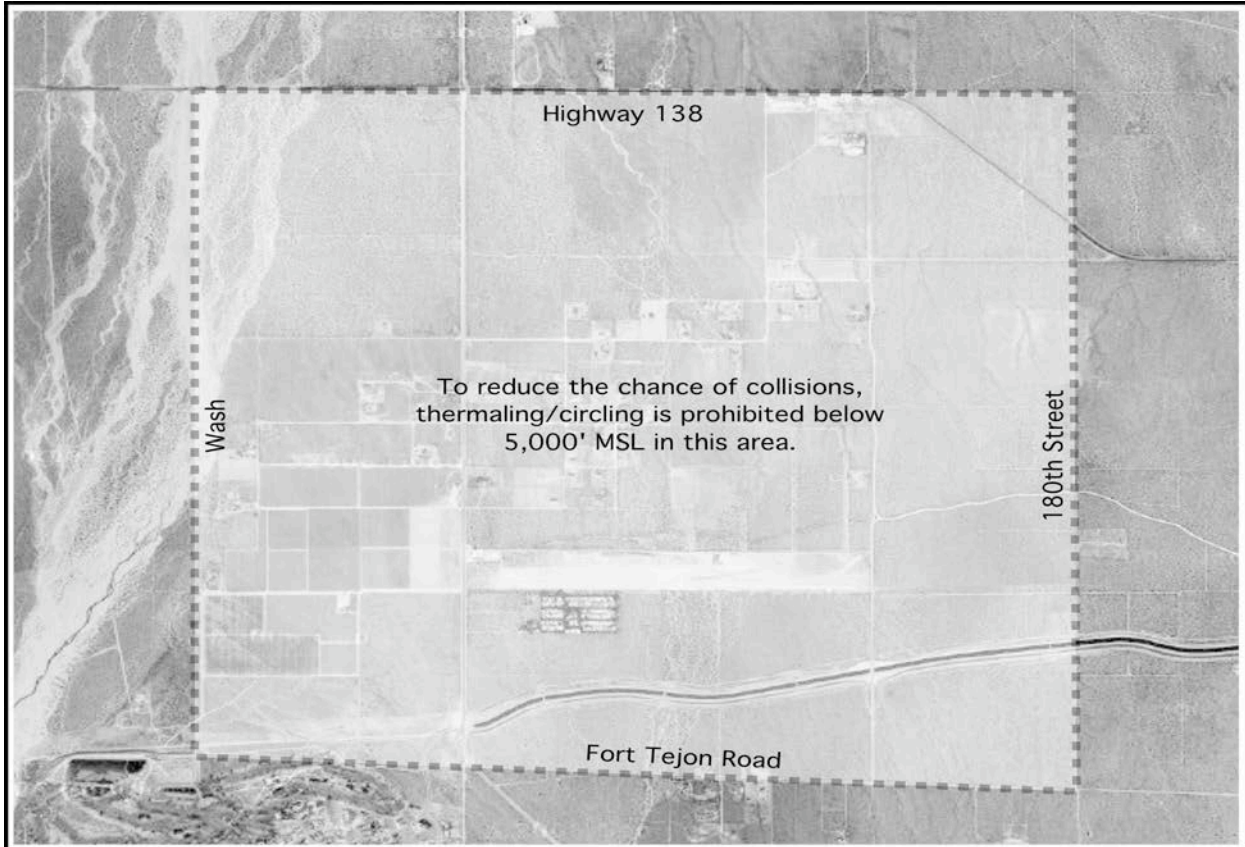


Staging/Landing Areas - Runway 7

If another aircraft is on the runway when you are on final, you may divert to the south parallel dirt runway used by the tow planes or land short. DO NOT directly over-fly aircraft on the ground. If you must fly by an aircraft on the ground, fly to the side of it over the south runway, so that you can keep it in sight. The dirt runway is 150' wide.

No Thermaling Zone

To increase safety, reduce congestion and increase launch efficiency, thermaling and circling are prohibited near the airport. To alert other traffic of your presence please announce when and where you descend below 5,000' MSL above the airport. See radio procedures section.



The no thermaling zone is bounded by the “wash”, Highway 138, 180th Street (the first road East of the airport), and Fort Tejon Road (the first road South of the airport).

Airplane Pattern

Power traffic including, the tow planes fly the downwind on the South side of the airport. Inbound powered traffic is required to announce their position on 123.00, when arriving within five miles of the airport, when entering the pattern, on downwind and base. All airplane traffic must give right of way to gliders and gliders on tow. No straight in approaches. Temporary airplane parking is on the west end of the airport.

Use caution when landing on runway 7. Power-lines run along the West edge of the airport, along 165th Street

RADIO PROCEDURES

All Soaring Academy Gliders are assigned a specific call sign starting with "Academy". For example Academy Six for N600SA, and Academy Eight for N468SA. Students flying solo shall add the suffix Sierra. For example "Academy Seven Sierra".

The Soaring Academy line crew and office are equipped with a radio tuned to 123.00. The Soaring Academy's line crew and office monitors 123.00 for all inbound glider and airplane traffic.

A WORKING RADIO IS REQUIRED TO FLY FROM CRYSTAL AIRPORT. When making calls on the radio please use the correct phraseology described in the Aeronautical Information Manual (AIM). First say whom you are talking to, then who you are, where you are, and what you want. You should always close your radio call with "CRYSTAL".

The line crew should be addressed as "Crystal Line". The Soaring Academy office should be addressed as "Crystal Office". The tow planes are referred to by the color of their wing tips and rudder: Red Tow, White Tow, and Blue Tow.

Please keep non-operations chatter off 123.0. Many airports in the region use the frequency 123.00. We do not want to interfere with communications of other aircraft. ALL Soaring Academy gliders must have the radio tuned to 123.00 and keep the radio volume high enough so you hear all radio calls.

Privately owned gliders that wish to have continued communication, can switch to frequency 123.30 or 123.50 for glider to glider, or glider to crew communications, after releasing from tow.

Please do not respond to a request if the request was not addressed to you. For example if someone requests a radio check from "Crystal Office" do not respond or you may step on the reply by "Crystal Office".

Radio Check

Before pulling your glider into the line for launch perform a radio check:

Crystal ground, ACADEMY SIX, radio check

The office person should reply. If you hear this call from another glider please do not respond as you may step on the reply from "Crystal Office". If the pilot requesting the radio check repeats the request, then feel free to let them know how their transmission is being received.

Ready for tow to the runway

When you are ready to be towed to the runway, make the following radio call:

Crystal Office, ACADEMY FOUR is ready for a tow to the runway.

The office will reply to let you know the line crew is either on the way, or how long it will be before they can assist you.

ACADEMY FOUR, THE LINE CREW WILL BE WITH YOU IN FIVE MINUTES

Taking the Runway

Tow plane: Crystal traffic, BLUE TOW, is back taxiing on runway two five for hookup and launch, Crystal

This will alert any gliders approaching the pattern that the runway is occupied, allowing them to plan their approach appropriately. If you hear the tow plane taxiing for a launch when you are approaching the airport, please make every effort to allow them to takeoff before you land. If that is not possible let "Crystal Line" know that they do not have enough time to launch and they will clear the runway.

Crystal line on two five, ACADEMY EIGHT is about to enter downwind, please clear the runway.

Takeoff

Upon receiving the takeoff signal from the line crew, the tow pilot will announce the takeoff. Crystal traffic, BLUE TOW departing runway two five, glider in tow, Crystal
This will alert other traffic in the area to keep an extra lookout for the tow plane and glider.

Wind Check

You may call the office for a wind report.
Crystal office, ACADEMY ONE-ONE, wind check

Approaching Initial Point (IP)

To alert other traffic and the ground crew of your location and imminent landing, announce when and where you descend through 5,000' MSL, on 123.00. This will alert the line crew that you will soon be landing and will allow the line crew to take appropriate action; either expedite a glider launch or clear the runway.

Crystal traffic ACADEMY FIVE, descending through five thousand feet northwest of the field, inbound for landing, runway two five, Crystal

Landing Pattern

The only two required radio calls for a landing glider are the IP call at 5000', and entering the downwind call. You can always call your base and final if you want.

Crystal traffic ACADEMY THREE, right downwind two five, crystal

If other aircraft are in the pattern, let them know what position you will be landing. For example if there were a tow plane on final and a glider on base you would say:

Crystal traffic, ACADEMY SEVEN, right downwind runway two five, number three behind the towplane and glider, Crystal

If there is a glider behind you while you are on final:

Crystal traffic ACADEMY SEVEN on final runway two five, will land long for following traffic, Crystal

Then make sure you land far enough down the runway, and clear the runway, to allow the other glider to land behind you.

EMERGENCY PROCEDURES

If a tow is aborted during the take-off roll due to a problem with the towplane, while both planes are on or near the ground, the glider will release and veer to the north and the tow plane will veer to the south, in order to providing maximum separation, regardless of which runway is used.

The terrain around Crystalair Airport is unforgiving. Dangers include deep washes, rocks, Joshua trees, fruit orchards and power lines. This surrounding terrain makes it very important to have a predetermined plan in case of a rope break or other premature termination of tow.

Standard Emergency Rope Breaks

There are three emergency responses to low altitude rope breaks, or premature termination of tow (PTT), taught during primary glider training. These emergency maneuvers are:

A rope break or towplane engine issue close to the runway, land straight ahead on the runway or airport property.

At an altitude 200' to 400', perform a 180° turn back to the runway, and land downwind.

Or at an altitude above 400' fly an abbreviated pattern.

Before takeoff you should decide what is the minimum altitude that you would attempt each of these maneuvers, and what direction you would turn. Wind direction, wind speed, density altitude and traffic should all be taken into account while making these decisions.

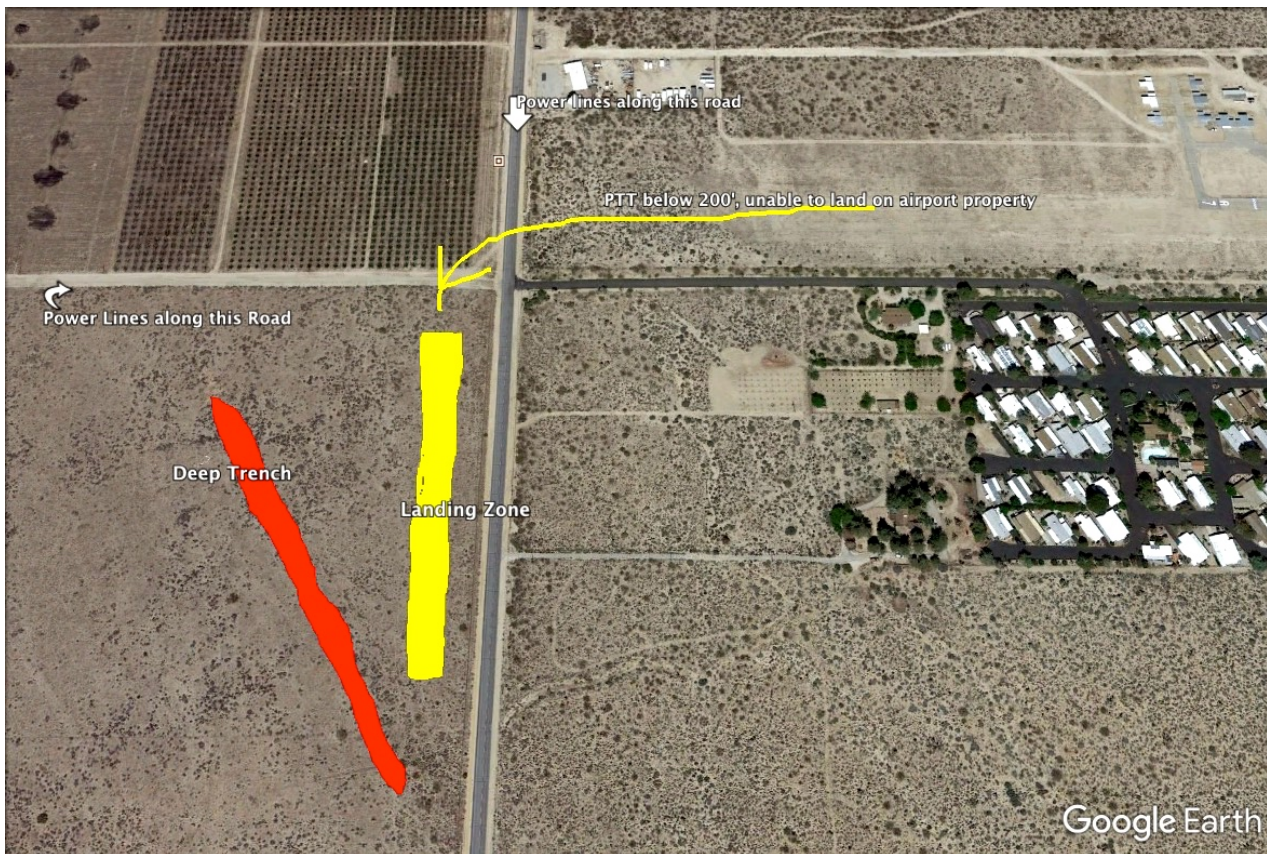
If you do not think you are proficient in these standard emergency procedures, ask the office to schedule you for refresher rope break training.

Emergency launching from Runway 25

When launching from runway 25, be aware of the fence and power lines at the end of the runway. If the rope breaks early in the tow before you can clear the wires, you will have to quickly get your glider on the ground and stopped before the property fence.

Rope Break 100' – 200'

After you clear the wires, the fields 45° to the left is the safest option. Keep in mind that there are ditches, large rocks, and vegetation in this area. An uphill landing, parallel to, and west side of 165 Street is an option. Note the power lines and deep trench in that field. If you must land there, try to touch down with as little energy as possible.



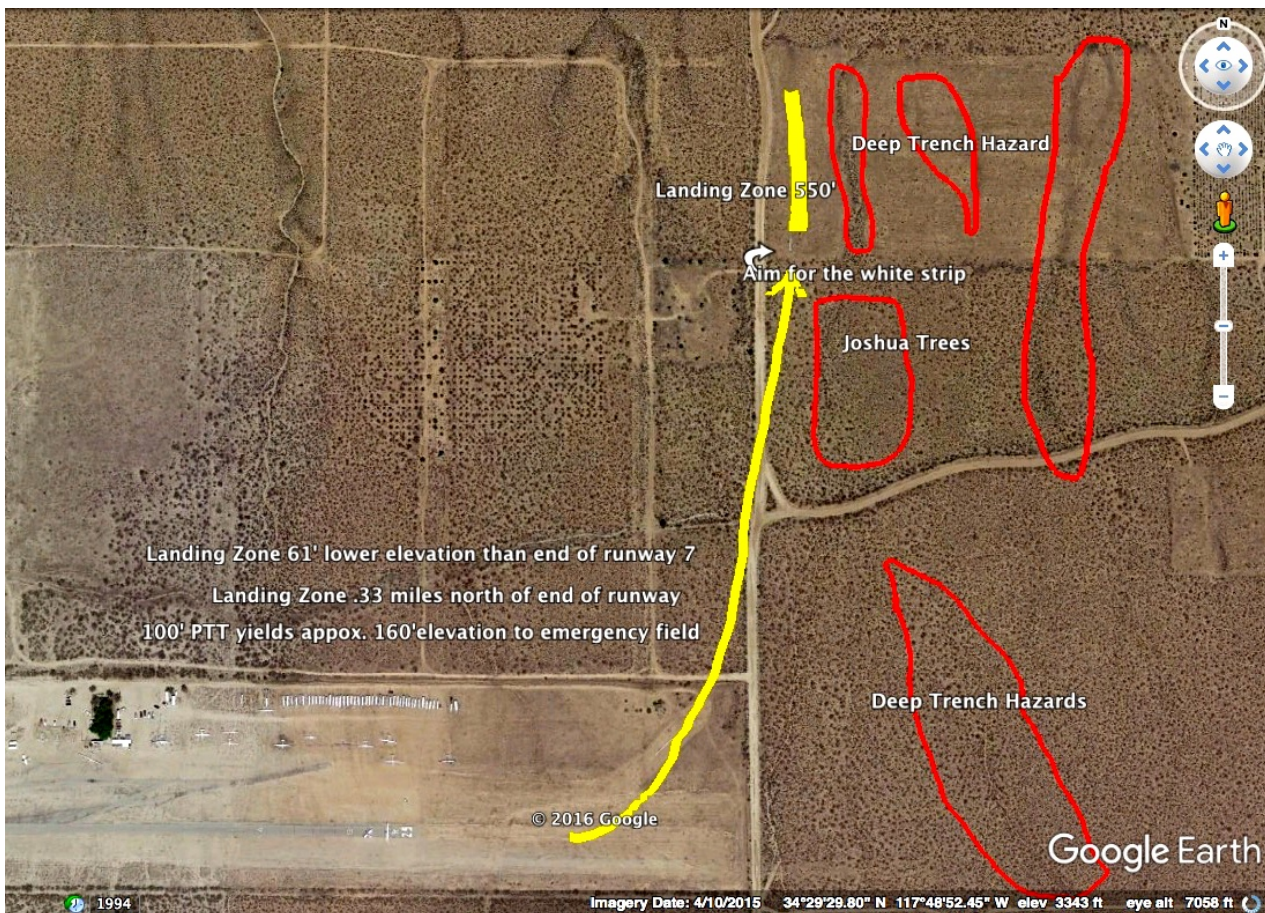
Emergency landing option launching from runway 25 below 200'

Emergency launching from Runway 7

When launching from runway 7, be aware of the fence at the end of the runway. If the rope breaks early in the tow before you can clear the fence, you will have to quickly get your glider on the ground and stopped before the property fence.

Rope Break 100' – 200'

The fields off of the end of runway 7 are rougher and denser with vegetation, rather than the cleared fields off of runway 25. There are no good options east of runway 7, except; if you have enough altitude, the field 90° to the left is an option. This would be the one option if the rope were to break below 200' AGL. This field is 60' in elevation lower than the end of runway 7, and .33 miles to the north (downhill). For example, if the rope breaks at 100', the elevation of the emergency field is 160' below the end of the airport property. Wherever you land try to touch down with as little energy as possible.



Emergency landing option launching from runway 7 below 200'

If you have questions, or would like more detail regarding the east and west emergency field options, ask in the office for a verbal briefing or field inspection of these fields

All Operating Gliders Owned by the Soaring Academy Shall:

Remain north of the side Baden Powell, Blue Ridge, Ski Slopes, Mt Williamson and any of the high large peaks.

Obtain a current weather briefing before flight.

Check for active TFR's and NOTAMS before flight.

Must keep the radio tuned to 123.00, with the radio volume at a level that can be heard by you the pilot, in any noise conditions. Crystal Office must be able to contact you at any time.

Tune the transponder to the correct VFR glider frequency, 1202, and set to altitude reporting.

Make all required radio calls.

Return the glider at the scheduled time unless prior arrangements have been made.

Solo Student Pilot Requirements

Student pilots who have been endorsed for solo flight must check in with an instructor on duty before each flight. Be prepared to show the instructor the most recent solo sign-off in your logbook, and your student license.

Solo students must remain safely within glide range of the airport at all times. When the winds are calm a solo student should never be below 7,500' MSL on the second ridge. Winds may require a higher minimum altitude.

Remain north of the side Baden Powell, Blue Ridge, Ski Slopes, Mt Williamson and any of the high large peaks. ALWAYS.

At the first sign of deteriorating weather conditions solo students should return to the airport and land. This includes towering cumulus clouds, rain, high winds, crosswinds, etc.

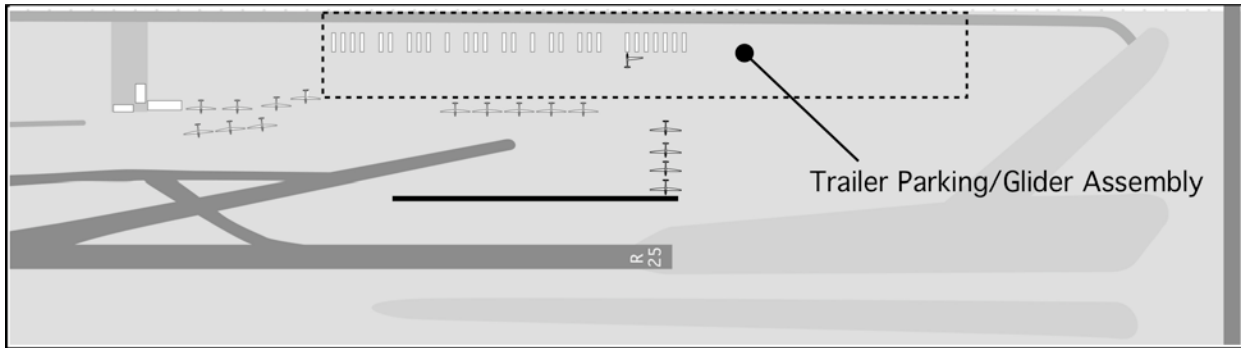
Privately Owned Gliders

It is highly encouraged to squawk the VFR glider transponder code, 1202, set to altitude reporting if so equipped. Several glider pilots have avoided prosecution, after entering Presidential TFR's, because they were squawking 1202. The manager at SoCal TRACON stated this was the primary reason Homeland Security declined to prosecute.

Aerobatics

Aerobatics, including high-speed low passes are prohibited in SCSA gliders except when accompanied by a Soaring Academy instructor. Pilots flying private gliders must obtain permission on the radio from Crystal Office before executing a low pass.

TRAILER PARKING AND GLIDER ASSEMBLY



Private glider trailers must be kept in the “Trailer Parking/Glider Assembly” area shown in the following figure. Make sure your glider and trailer is securely tied down as strong gusty winds and dust devils occur regularly.

All glider assembly/disassembly must be done in this area. Keep a lane clear between the assembly area and the glider tie-downs to facilitate the movement of gliders to the staging area.

Please follow any instructions given to you by the line crew about where to park, assemble, tie down, and disassemble your glider.

Line Crew

The line crew will try to assist you whenever possible in assembling and disassembling your glider. However, please understand that the first priority of the line crew is to move, launch, clear and secure Soaring Academy gliders.

QUESTIONS

Ask in the office for a verbal briefing if you have questions, or if any part of these procedures is unclear.