

Words of wisdom

Read these notes over before every competition and review them every day. It's surprising and very discouraging when you forget one of these simple things and end up on the ground watching everybody pass overhead. Few things are worse than realising you have just violated one of your own rules that you completely forgot about or neglected on this particular day.

There are people who can do very intelligent things in soaring, but there is another way, there is the art of not making mistakes.

Each day try to think back on all the dumb things you have done in a contest flight, and try to make sure you do not do the same things over again. You simply cannot afford to make many mistakes, especially obvious mistakes. You certainly don't want to repeat them.

Competition

In all of your contest flying, you must be somewhat conservative. Because if you go down on one day, and most everybody else completes the task, you are probably out of the contest.

Just because you don't have someone near you where you can see that he is beating you by a second a mile doesn't mean he's not doing it.

Contests are frequently won and lost on weak days. It takes confidence and practice, as well as the correct mental attitude, to do well in such weather, particularly to make the decisions as when to hold awaiting better conditions that so frequently decide the difference between winner and also-ran.

Consistency when others are being inconsistent wins a lot of contests.

Flashes of brilliance punctuated by periods of inattention never won anything in sport.

There is always time for a pre-flight and hang check.

Get your gear ready quickly so you have time to assess conditions and plan your flight.

Talking on the radio takes concentration, and concentration is what makes you go faster. Don't waste it talking on the radio.

Identify the top pilots – note their glider colours and harness design, and memorise a few. Observing them will teach you an immense amount. Don't copy and follow them, just watch and compare what they did to what you did, how they performed each day.

Form a battle strategy – every task consists of a few critical points connected by stretches of easier flying. At the end of the day, you will find pilots clustered around various points along the course, having fallen prey to those common technical critical points. Sometimes they sneak up on you, sometimes they are obvious and can be planned for – a big valley crossing early in the day, a long glide away from the mountains against a headwind, a predicted weather-change. Decide how you will tackle each issue, get some advice, but most of all, mentally prepare yourself for these “look-out!” points.

There is a big difference between racing and rushing. To fly fast does not mean buy the fastest glider, full-speed ahead, fly in a straight line and hope to God you get some lift. Speed is a product of superior tactics and good thermaling. Use strong thermals to climb very high, then use long glides, bypassing the weaker thermals on the way. Long ridges with abundant thermals can be flown fast by staying low, encountering more thermals. As you thermal upwards, think what your next move will be, stay one step ahead. This allows you to choose the fastest tactical route from the options available.

Ultimately you are alone. Although there are other pilots in the sky, no one will experience exactly the same lift and sink as you will. Maximise your individual performance, within the air that you alone are offered.

Other gliders offer information about conditions but make your own tactical decisions. Even if they are wrong. This way you will learn and remember the correct decision next time.

Following the gaggle is mindless but may be prudent on very marginal days.

In a competition, every metre counts. Keep going until both feet are on the ground, and expect a miracle – low saves are commonplace in competitions. Never, ever give up. BUT an injury caused by flying beyond your safety margin is a waste of good skin and bone. So have heart, believe you can do it, you can achieve incredible feats of distance flying, but keep your shield of safety by your side, don't push yourself into dangerous situations.

You can't have too much information about where the turn points are and what they look like.

After the day is over to the pub, buy yourself a drink and relax! This is where you will learn the most – the stories of the other competitors. Quiz the task winners, debrief yourself, chat to your mates and absorb the tactics that worked, those that failed. Everyone wants to tell you his or her story, it's as easy as saying "So, how was your flight today?"

Psychological strength is the deciding factor in many flights. The winners are those pilots that can regularly pick themselves up after a bad day. Remember that each pilot experiences his or her own individual weather, slightly different from everyone else, so use that fact to your advantage after a bad day. You tried your best. It didn't work. Today you will have completely different circumstances. Just fly your best, always give of your best, and that way you will never have cause to feel depressed about a day when the lift just wasn't there for you.

HAVE FUN! You are on holiday, after all. It is only a competition, one of hundreds held every year.

Preparation

Never arrive at a competition without currency in your chosen glider. This is not the time or place for test flights.

Methodically prepare your equipment – reserve parachute repack, fresh & spare batteries for everything that can "go flat", repair kit for your glider. Research the site – chat to the local

pilots, ask about competition tasks flown there in the past, war stories and where things went wrong, what weather to expect.

Practice days – invaluable if you can afford the time! Getting there early allows you to calm your nervousness of an unfamiliar site. You can scout out recovery routes, learn the lay of the land, source the best flying maps, and absorb information, preventing overload during the comp.

Get some airtime – whether you are at the competition site or still at home, take your glider out, make some time and get airborne! Keep current. Practice your basic take-off and landing skills, as they will come under pressure during competitions.

Practice is obviously the key to improvement; however you should not confuse practicing with just plain flying. Practice for competition must always be channelled towards specific improvement and specific problems.

When practicing cross country flight don't just concentrate on speed, take time to explore options and conditions.

Too many pilots practice only on good days. Anyone can fly on good days. It's the bad days that separate the men from the boys.

Practice circling in both directions, get so you can circle just as well to the left as you can to the right.

Human Psychology

Pilots often show a depressing similarity to sheep.

Don't pay too much attention to thermals chased by other gliders unless you are desperate. I've got trapped too many times by dashing over under a thermal or circling glider, expecting to go back up and I get there and find there is absolutely nothing. And, by that time I am down a lot closer to the ground than I want to be.

Soaring is made up of decisions, and decisions are relatively easy when there is little pressure. Unfortunately, pressure is the essence competition flying, and some people who do well in day to day flying tend to come apart under the stress of competition. No amount of flying skill will enable you to win if you go to pieces under pressure.

Psychological attitude is all-important. Some pilots are finished if they have one bad day, others never give up.

There is a strong tendency to start way ahead of your planned time just because everybody else does.

Anyone can fly when it's easy. Anyone can fly in 100fpm lift, or 500fpm, or even 250fpm. The time that it gets interesting is when the ceiling gets down to 3000ft and you have 100fpm lift. Competitions are often won and lost on such days.

Confidence and currency go hand in hand and are required when conditions get challenging.

Strong thermals generally have steeply banked gliders. Experience shows that the more gliders in a gaggle the weather the thermal tends to be!

Avoid keeping on circling, fat, dumb and happy, when the lift has dropped off.

Stupid is seldom fast.

Emotions often interfere with the ability to perform the task.

Never give up. It's not over till the fat lady ...

Always re-fly.

Down on the ground sitting and watching everybody going over with beautiful cumulus in the sky is a sad place to be.

The characteristics that set some pilots on a level well above the average is the ability to perceive, digest and act on information gathered from our environment that others completely miss. Sometimes this is done at a conscious level and sometimes it is not. All three parts are of equal importance. The three parts all work together to produce the desired outcome.

Flying skill / Technical

Do not leave the start without gaining altitude in the vicinity, if you go pushing off into the boondocks with no altitude and you get out there scraping around, working zero sink for an hour or two, you don't have much choice because you're too far away from home to come back and start again.

Plan each flight carefully. Consider weather, course and distance. Ideally identify lift patterns for the day before starting.

Timing can be everything. If its soarable get airborne. Be ready to take advantage of conditions.

Get in the air at least an hour before the start. Use that time to warm up, get comfortable in the glider, get over pre-flight frustrations and get smoothly into the business of flying the glider without thinking about it. Get on with the business of evaluating the day. This should be a systematic examination of the thermals, and as thorough as time will allow. You should examine the entire height of the thermals and know the strength of the thermal at any altitude for its entire height. Assess whether the lift is bubble or present as long columns. Pinpoint any layers of shear. You should have noted this in the weather briefings earlier, but try to pinpoint them in the air. Evaluate the seriousness of any shear layers. Decide if these shear layers are to be avoided. Get all of this in mind. Establish working altitudes as nearly as you can in this hour before the flight. Check out thermal sources. Check out the clouds, if present, and determine how they are working for that particular day. Know any change in wind velocity and direction at cloud base so that you have an idea of how the lift is going to be working in relation to the cloud-bases. Compare if pre-flight information agrees with what you really experience and modify your flight plan accordingly. Certainly, if you have time, make some practice starts. At least one.

Below ~2000ft slow down to max glider because by then you're up against the probability that if you don't find a thermal fairly soon you're going to go down, and so you've got to search the maximum possible amount of air.

On an open distance day get the earliest possible start. On a speed task it is best to try to bracket what you think will be the strongest conditions of the day. Favour an early time rather than a later time because it gives you a little insurance if you get slow.

When you're down low and having problems staying up do everything you possibly can to help yourself. Fly at best glide to maximise your search range. If there are not apparent thermals and you are desperate, the first thing you want to look for is dark areas and contrasts on the ground. Check out thermal winds on dams. Look for ground fires, dust devils and tractors working fields. Tops of hills tend to kick off the thermals. Ridges which fact into the wind and sun are good. Look for thermals working in high flexible crops. Scan for gliders and circling birds.

Find the core by flying into the thermal until you reach the maximum lift and notice that it's starting to drop off – then start making a turn. Too many pilots thermal out on the edges away from the core.

Concentrate when climbing. This is especially critical when low.

Leaving thermals is also important. Too many people seem hypnotised by lift. With blue thermals the lift often drops off at the top however it may actually increase near cloud base. Tailor your flying to suit the thermals present each day.

When entering each thermal try to consciously pick up the reaction of the glider always turn in the direction that the thermal has tried to pick up a wing.

Work your own air, not the air that gliders above you are flying in. Move in search of better lift with caution – too many moves can be worse than too few if the lift is broken and short lived.

A climbing glider below is more use than a climbing glider above.

Stay with the first lift you find at 100ft or below. When you're down to 1000ft and you find something that will even keep you up, you better stay with it and get some altitude because if you go on you might not find anything. And once on the ground, you're finished.

You must get up off launch. Anything going up will do.

Never leave lift low.

Concentrate when low. Do not lose a bump.

Carry extra speed in the landing patters and on final approach. Leave enough height for an approach!

Slow down when flying in lift. Speed up when in sink.

When following another glider at the same altitude try to put your right wing tip in the spot where you think his left wing tip vortex will be or vice versa.

On downwind leg, get maximum altitude before making a turn point. On upwind leg, go into a turn point low and drift back on course while climbing.

Stay as high as possible late in the day.

Equipment

Use competitive equipment.

Think about the glider/harness/instrument package. What can you do to make it better? Assign priorities to what things come first and what come second. Do the important things first. Have everything sorted before the competition.

Manufacturers, and plied with enough drinks, will eventually admit that there are good gliders and bad gliders of the same model. Get a good one.

Trim your glider for maximum performance and handling. It must fly straight.

Eight miles out on a low approach is no place to start wondering whether your final glide calculator really works.

There just isn't a vario built that's as good as another glider.

A good pickup crew relieves a lot of stress, especially if you get low. Treat them with respect.

Weather

You must condition yourself to make a general assessment of the weather as you're getting near the tops of thermals, or as you begin cruising. Then you will begin to see potential bad situations from some distance off. You might be surprised at the number of times you find that blue holes, cirrus shadows, etc can be avoided with minor deviations from course.

Try to visualise in your mind, particularly on blue days, what the mass of thermals really looks like so as to make the best possible use of them.

Assess conditions and make logical decisions. Only follow other pilots if they have made a good decision but remember if a large gaggle of expert pilots makes a different choice they may know something you don't.

If the weather is doubtful or likely to blow up, start just as early as you can, especially if heavy thunderstorm activity is forecast, because there is nothing that will bring you down like heavy thunderstorms.

The higher the thermal tops, the stronger and fewer the thermals. Conversely, when the thermal tops are low, you are going to find a lot more.

Avoid large wet or green areas. Irrigated areas spell bad news. Avoid rain.

Late in the evening, thermals become better over the woods.

In dry country watch for dust devils. They are the best markers that you can find.

Always look out for soaring birds, but remember they may not be going to goal.

In light conditions it may be worthwhile to wait for a rising thermal if you see it trigger.

When flying in cloud streets always be on the lookout for that really super thermal 50% or even 100% better than the day average.

When flying in streeting conditions beware sink streets. Respond to extend sink with a turn.

Avoid areas shaded by high cirrus or cu-nims. Zig zag around on your course to try to hit the sunlit areas. It is often better to stay on the side where you know the ground has been heated longer.

Favour slopes facing bright sunlight and the prevailing wind.

When you are high stick with the clouds.

Fly under cloud streets whenever possible, stopping occasionally in the best thermals to climb.

The best lift is usually found under the darkest part of the cloud. On certain days you will find the best lift on the downwind side of the cloud and on other days you will find it on the upwind side. After you have flown under several clouds you get a pretty good idea what this pattern is. The up-sun side may be working best.

Beware blue holes. Base out before entering and/or skirt around. Analyse the reason for the hole. Blue holes mean one of two things. Either the thermals have stopped because the ground is wet or you are running into a different drier air mass. In any event, there is something different and you had better be cautious. You can test the blue by going into it. Go in at maximum glide ratio. Don't drive fast into blue areas. See if you turn into lift. Investigate. Once you get out in it, you may find that the thermals are just as strong as they were and you don't have any trouble. Then you can speed up again, but the safe thing to do is to slow down.

If you suddenly realise you have arrived at the edges of a blue hole, you've probably made your mistake twenty minutes before this shocking arrival and didn't realise it. In those sudden confrontations, you've got a hard problem to solve because you've either got to slow down and gamble on getting across the hole or take the long way round. Either is bad.

If a dust devil is associated with the thermal and you are getting a good indication on the ground of the direction that the thermal is turning, then by all means fly against the thermal,

because undoubtedly your circling speed will be lower if you're going against the rotation than if you're going with it.

If you expect to have a front/shear line on course, try to plan your flight to fly parallel to the shear line as much as you can. You can't fly through most fronts.

Consider convergence if widespread weak lift is encountered.

Stay out of thunderstorms. Some of these little innocent looking showers can turn into the most violent thunderstorms you have ever seen or heard of.

Don't get low when it's windy. If you do get low expect rough broken thermals.

Work the lift bands.

Be aware of any shear layers. Try not to repeatedly have to climb through the broken lift you will find in the region of a shear layer. Be prepared to stick with it.

Get high at the end of the day.

Thermals are where you find them, stop to use them if they are good.

If you're coming into an area of bad soaring weather and you're reasonably certain as you look ahead that you're likely to go down if you continue, stop! Examine all other alternates first. There are but few situations (when the bad area is moving toward you and there is no way around it) when you must fly into the area as soon as possible to get maximum distance. In general, you shouldn't go into bad weather areas. Just don't go in. Look for other answers. Fly out around the area. Hold back. Drift with the good weather. Do anything to avoid that final commitment.

Decisions

If bad luck always seems to haunt you under certain circumstances, it's more likely to be bad judgement.

Follow the cloud/lift streets, not the pick-up roads.

Exercise caution and restraint when conditions are weak. Race when conditions are strong. Be aware that thermal strength will change over the day and over different terrain. Always be ready to change gears – both up and down.

You have to balance the penalty that you incur from not flying at the optimum S2F versus the penalties that you receive in a particular contest for being forced to work weak lift occasionally. If you get down below 1000ft you are going to have to take anything you can get. You take extra time to get out of that hole and also increase the probability of having to land.

The danger in flying a McCready curve is that you don't get a very good picture of the penalties for flying at other speeds. The odds are better by flying a little slower, staying up longer and getting there. Most of the time you finish with a better score.

Look for decisions to make. This is, decide where you should go next, where the next lift is, where the next workable thermal is, what the best course is, what problems are anticipated (are there shadows of cirrus, or more sunlight, or cloudless blue holes or better cloud structures, or thunderstorms, or whatever). If you haven't been making or reviewing decisions, really basic decisions, at the rate of several per minute, then you've been asleep.

You must at all times keep in mind that going down is a disaster, but you must also push in order to get there. There's a very fine balance between the two.

You just haven't lived until you have made a long low final glider to a goal that you have never seen before and still don't see now.

It is almost never worthwhile to turn back and retrace your course.

Low loss flying

Maximise height before the start.

When entering thermals fly fast through the surrounding sink and only slow down when you are into the lift.

Slow down gradually after entering the lift to maximise conversion of kinetic to potential energy unless thermal is very small.

Do not circle in weak thermals unless absolutely necessary.

Do not get sucked into weak (often large) gaggles.

Leave the thermal immediately when the lift drops off unless you risk hitting the deck, there is a known shear or the thermals kick towards cloud base.

Exit the thermal by gaining speed cutting across the core so you speed out through the sink.

Fly the correct S2F when high but back off if conditions dictate caution, ie when low, cirrus shadows, blue holes, etc.

Fly the turn points accurately, no closer than required. Overshooting wastes time.

Use accurate final glide plus a margin for safety.

Low loss type flying isn't dramatic, it isn't showy, and it does demand a good deal of discipline. But it works.

The philosophy of winning

First of all, you've got to have the determination to be in first place, not second place. If you want to compete successfully, you've got to think in terms of being in first place. Second place only gets you the opportunity to try harder. Excuses are no good.

There's no way to win without preparation. You can examine any form of competition in the world, in business or sport, and success is not an accidental thing. It is a result of preparation.

Keep a file on your activities, a record of you contests and a record of your mistakes. Convert this into a list of do's and don'ts. Study. Use the records. As you go back to a competition site, review the records. You must have learned something about the terrain and the weather in the area if you've flown there before. If you didn't, you've made a mistake.

Have a list of items to improve your glider. Start with the most important thing. You build a respect, when doing this work, for the amount of effort necessary for success. You build a respect for the seconds that are important. When the contest finally comes, you're better prepared, not only in terms of equipment, but mentally.

Study the maps carefully before you fly, not only in hope that you won't have to use them to navigate, but also in hope that they will give you some clue to the best course. This is not simply for distance tasks or long triangles but for the very short triangles. There is some advantage somewhere to someone. It's your problem to seek it out.

Have plans to win the little bits of each day. You can, for example, try to win the start. You've got to win the thermals too. When you're with other people, they are a good measuring stick. In the absence of other people your measuring stick is your previous performance in thermals that day. You've got to win the cruises. You've got to take advantage of any factor in weather or terrain or whatever which can minimise your sink or increase your speed. If you're not doing as well as another glider you have visual contact with, find out why in a hurry. Don't hesitate to do it like he does.

To sum up. Be determined. Be prepared. In equipment, body and mind. Plan. Plan to win the bits, the components. Focus your energy. Concentrate on the contest. Don't waste your energy on diverting influences. Win.