

PART 1.

EMERGENCY BAILOUT PROCEDURES IT ALL BEGINS WITH ATTITUDE AND PRE-PLANNING As Published In: SOARING and SPORT AEROBATICS MAGAZINES (June, July & August 1992) Updated 5 May 2003

By: Allen Silver

Your parachute system will save your life in an emergency bailout situation, but you have to give it every opportunity to do so. Due to a very tragic accident in which a nationally known aerobatic pilot fell out of his apparently improperly adjusted parachute harness after a successful exit from his disabled aircraft, I decided it was time to head back to my word processor.

This will be the first in a series of comprehensive articles on your safety and survival. I hope this three-part series will shed some light on some of the myths and stigmas about wearing and having to use your emergency parachute. While these articles address almost every aspect of safety and basic procedures, they are not intended as a substitute for survival or parachute jump training. At the very least, have your rigger go over these procedures with you until you are familiar with them.

This first installment will cover your **attitude and pre-planning** toward bailing out, proper storage of your parachute and preflight inspection in order to insure that you have complete confidence the parachute you strap on your back will function properly. This is the same reason you preflight your aircraft.

Your **attitude** plays a major role in your survival. To paraphrase Yogi Berra, “Ninety percent of a successful parachute jump is half mental.” Preflighting your thinking about emergencies could save your life. I strongly urge you to prepare now in the unlikely event you’ll have to use your “expensive cushion”. During an emergency is not the time to brush up on your emergency procedures. You should plan in advance what will work best for you and your aircraft configuration.

The **primary cause** of most unsuccessful emergency bailouts is waiting too long to make the decision to bailout and not being prepared. This is your last option, but always make sure you keep it open as an option. Become familiar with your particular aircraft’s escape procedures

and practice them often until they are second nature. You must be able to react instantly to save valuable time, altitude and your life.

MOST IMPORTANTLY DO NOT GIVE UP. Your life is much too important to you and your loved ones. So don't throw in the towel. What didn't work the first time may work well the next time. A confident, positive attitude will be a recurrent theme throughout this series of articles so begin to develop the mind set that, "**I can and will** bailout of my disabled aircraft should the need arise."

This positive attitude and confidence in your equipment begins with proper storage at all times and a thorough preflight inspection prior to every use. Unless you have personally and positively checked its condition each time you put on your parachute how can you totally trust that it will save your life? Keep your parachute in a cool, dry, dark place off the floor. Your parachute should be kept in a carrying bag, when not in use. You may also consider keeping it in a Rubbermaid type plastic storage container with a sealed lid. You can also put moisture absorbing desiccants in the container.

Lockers are generally all right, but if there's a way for mice or insects to enter I would look for a different location. Mice like to chew up the parachute for nesting material and can do severe damage in minutes.

Avoid storing it for a prolonged time in areas that could be extremely hot, such as your cockpit, the trunk of your car or even the back seat on a hot, sunny day. Your garage where the hot water heater, washer or dryer may be located is also not a good storage area. **Heat** and **humidity** play a very important role in how long your parachute will last. Excessive heat can cause the rubber bands to deteriorate (melt) over time and permanently damage the canopy material and/or lines. I've seen several canopies over the years turned into car covers because of this problem.

Avoid greasy areas or areas that may have sharp surfaces. Keep it away from liquid or dirt. Your car trunk may be convenient, but an exceptionally bad area to keep your parachute. Not only can it be very hot but batteries or jumper cables with battery acid residue may have been or still are kept there. Battery acid can mean instant death to your parachute.

If you are going to store your parachute for an extended period of time (six months or more) you should pull the ripcord and remove the lines from the rubber bands used to hold them

in place and discard the rubber bands. Put everything in the carrying bag or other suitable container to protect it, such as a heavy duty plastic bag or plastic container as mentioned above. **Maybe your parachute deserves a special storage place inside your home or office.**

Most manufacturers' manuals for parachutes in use today discuss how to perform a preflight inspection and I urge you to become familiar with them. If you do not have a manual, get one from the manufacturer or copy a friend's, if they have the same type and model of parachute. Many manufacturers have their manuals online.

Let's begin by visually checking the carrying bag (if your parachute is in one) for obvious signs of damage or contamination before you remove your parachute. This could be an indication of damage to your parachute inside.

Now, remove your parachute from the bag. Always check the ripcord pins first. It does you no good to check the rest of the parachute first, if the pins fall out prematurely opening your parachute. Open the ripcord pin protector flap and make sure the pins are properly seated. Generally they should extend about 1/2 to 3/4 inches beyond the cloth loops or metal cones they go through. Now carefully check the container for damage that may have been caused by such things as fuel, oil or sharp objects in your aircraft that may have punctured or be abrading the parachute container. **If you have sharp surfaces, including the hook portion of velcro tape, in your aircraft, particularly on seats with the cushions removed, you must smooth these areas by padding, taping or filing them.** Be careful using tape because the adhesive will damage the material on your parachute harness or container if it comes in contact with it. If the hook portion of the velcro tape is on the seat back remove it or put a piece of the velcro pile on it.

Inspect all the snaps (leg & chest) for proper function and appearance. They should be free from corrosion and dirt. A very small amount of lubricant such as WD-40 or silicone spray can be used on snaps to keep them working freely, but be careful to prevent any from getting on the surrounding webbing or fabric. It may be best to let your rigger know of problems in this area. Check all the other metal fittings for corrosion, broken or missing parts. Locate the ripcord pocket and make sure the spring, elastic or velcro holds the ripcord securely in place. Check that the ripcord cable moves freely in the cable housing it runs through by gently pulling back and forth on it. This is done by taking a hold of the cable where it attaches to the ripcord handle and gently pull them back and forth. This will insure there is freedom of movement and

nothing has become lodged in the ripcord cable protective housing. Don't pull too hard or you may dislodge the ripcord pins. It might be a good idea to recheck them at this time.

Make sure the velcro or snaps (not leg and chest snaps) that maybe used to keep the various container flaps closed are properly fastened. If they are undone you can refasten them, but be careful not to catch any parachute material.

Check the harness to make sure it's not damaged and that the webbing is routed properly with no twists. There should be elastic keepers or other means to stow the free ends of the webbing to keep them from snagging on anything, especially during an emergency bailout. If you are in doubt about anything consult your manual, the manufacturer or your rigger. That's what they 're for.

If at any time your ripcord is accidentally pulled or the parachute canopy is partially out of the container **do not** attempt to close it on your own. Contact your rigger for their advice.

Now that the groundwork has been laid to get you in the right frame of mind to believe your parachute will save your life I'll leave you. In the next issue I'll take you up to the point of being suspended under an open canopy. This will include properly donning and adjusting your parachute, exiting your disable aircraft and deploying your parachute system. The final installment will cover steering the canopy, avoiding obstacles and proper landing procedures.

Until then, Blue Skies and safe flying. Please don't hesitate to call or write, if you have any questions or parachute needs. Ask me about a safety seminar for your flying group. I'm here to make sure that you survive. I can be reached at (510) 785-7070, Monday-Thursday 8:30am – 5:30pm (PST). I can also be reached online. My website address is: www.SilverParachutes.com and my email address is: Allen@SilverParachutes.com.

PART 2.

EMERGENCY BAILOUT PROCEDURES PROPER FIT, ESCAPE AND DEPLOYMENT

As Published In: SOARING and SPORT AEROBATICS MAGAZINES

(June, July & August 1992)

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By: Allen Silver

As you recall in Part 1 we covered all aspects of preflighting your parachute system as well as preflighting your mind. The positive, confident attitude we began to develop will become extremely important, in this part, as I take you through properly donning your parachute, bailing out of your disabled aircraft and deploying your emergency parachute system. For myself, an experienced skydiver, this is the fun part. But for most of you who can't understand why I would jump out of a perfectly good airplane, this will probably be the **most challenging aspect** both **physically** and **mentally** of executing your emergency bailout procedures.

Now, we're ready to put on your parachute. First, I want you to loosen (if necessary) and unhook the chest and leg straps. Put on your parachute like a vest being careful not to pick it up by the shiny, metal handle (the ripcord) or by grabbing just the risers where they come out of the container. Unless the risers are tacked in place you could pull the lines out of the container.

I suggest you fasten the chest strap first. Do not over tighten it. Over tightening the chest strap can cause a portion of this load to transfer to the chest strap and it may cause damage or failure during opening. The vertical portion of the harness (the main lift webs) must run in an approximate straight line from each shoulder to your waist so they can properly take up the opening shock. If your parachute has a 3-bar slide adjuster it should be adjusted so it rests in the small of your shoulder below the collarbone.

Next fasten the leg straps. How tight should they be? Adjust them while bent forward at the waist. A simple guideline to use is when you straighten up you will feel a considerable amount of pressure in the small of your shoulders. Men, this is a good time to make sure certain parts of your anatomy are situated comfortably and are not being pinched by the leg straps. The leg straps will feel looser when you sit in your aircraft, but does not mean they are too loose. You can tighten them again if you desire, but they do not have to be so tight they're painful, just

snug. When adjusting your harness special care must be taken **not** to allow the free ends of any adjustable straps (such as leg & chest) to be against the adjustable friction adapters. During opening shock, where everything stretches, they could accidentally unthread. To be safe I recommend leaving at least 2-3 inches beyond the end of the adapters. Tuck in all the loose webbing ends in elastic keepers or wherever the manufacturer tells you. This will prevent them from snagging on anything, particularly on exit. Once in your aircraft **NEVER** loosen or remove your parachute. If you cannot adjust your harness properly have your rigger assist you.

Become familiar with all the adjustments your parachute has. If your parachute is worn by different size people **it must be** properly adjusted for each person to prevent you from possibly falling out of the harness. You will not fall out of a properly adjusted harness. Some parachutes, particularly the older military pieces of equipment, may have as many as seven adjustments you must be familiar with. Consult your individual manual for instructions or better yet, a qualified rigger, if you have any doubts.

If quick ejector snaps are used **make sure you feel the lever snap over the detent balls. Unless seated all the way, the lever can easily be snagged and opened.** I want to emphasize the importance of this because it takes very little force to release a partially locked quick ejector snap causing you to be totally without a leg or chest strap.

I suggest that you get your parachute on and off outside your aircraft. Why? We are creatures of habit and in case of an emergency when the adrenaline is flowing and have to bailout, you may do what you are accustomed to doing. For example, after a normal flight you may be accustomed to opening the door or canopy, releasing your safety belts, **taking off** your parachute and exiting your aircraft. By putting your parachute on and taking it off outside your aircraft you eliminate the possibility of leaving it in your aircraft when you may need it the most. If your aircraft is built (or you are) in such a manner that donning your parachute inside your aircraft is easier at least be very aware of the potential problem and I strongly urge you to take your parachute off outside your aircraft.

Don't just get out of your aircraft after your through flying. I strongly recommend that you practice your emergency bailout procedures prior to your first flight of the day. Why? Because your first flight could be your last. Now, don't stop here. At the completion of each flight when **everything is shut down** is a perfect, stress free, time to practice your emergency bailout procedures. This allows you to simulate jettisoning your door or canopy, undoing your safety belt(s) and exiting your aircraft. There have been several incidents where pilots had

difficulty releasing their door or canopy. Make sure the release mechanism is properly lubricated and operates smoothly, especially if you fly in a dusty environment.

I strongly urge you to **Practice, Practice, Practice** before and after each flight. This will reduce your bailout time by over 50%. If you have no escape plan and have an emergency who must think, "I have an emergency. What do I do? How do I do it?" Then you must implement your escape plan. By practicing you will eliminate the first three steps saving valuable time and possibly your life. Now I'll discuss emergency bailout procedures in greater detail.

Every pilot and type of aircraft will require a unique set of procedures. If your aircraft has escape procedures become familiar with them and **commit them to memory** so you can do them **in the dark** and **in any attitude**. If your aircraft has no escape procedures make up your own checklist and practice them.

I'm sure there are many others, but I can think of four major reasons to leave an aircraft: a midair collision, a structural failure, a severe control problem or a fire. In a situation warranting a bailout you must react quickly. This is where your **practicing** will pay off. **This is not the time** to start thinking of the proper procedures. Having formulated an escape ahead of time could save your life.

Two things that might help you **if and only if** you have the time and still have some control are to gain as much altitude (AGL) as possible and to slow your aircraft down to make bailing out easier. But you may not have this luxury. Others say close your throttle and mixture just prior to exit to lessen the slipstream during bailout. This is fine if you have time, but when in doubt bailout immediately. The parachute works fast, but you still need time and altitude for it to work properly. You will need 2-3 seconds for your parachute to completely open.

First jettison the door or canopy if necessary, then unfasten your safety belt(s). Note: **NEVER** unfasten your safety belt(s) first. You may be slammed into the canopy or other portion of your aircraft and be injured or rendered unconscious. You may find yourself upside down and jammed into some corner you never thought possible. The safety belt(s) are designed to hold you in place until you're ready to exit.

After unfastening your safety belt(s) be prepared for one of four things to happen: 1) you may be pulling 1 (g) just like sitting in your aircraft on the ground, but not likely, 2) you may be pulling positive g's making egress very difficult, particularly if you have on an older, heavier

military style parachute, 3) you may be pulling negative g's making you into a human cannonball, or 4) a combination of 2 and 3.

In any event be prepared for a difficult exit where you will need both hands to crawl and claw your way free of your disabled aircraft. You must be free and clear of your aircraft before pulling the ripcord to prevent the aircraft and parachute from entangling.

If you are unsure of your altitude (AGL) you must find and pull your ripcord as soon as you're clear of your aircraft (about one second or approximately 20 feet). The key is to get clear of your aircraft and **LOOK** for the ripcord in case it came free from its pocket. Looking also prevents fumbling and pulling on other parts of the parachute system and wasting valuable time, which happens more often than people think. Don't worry about which way the aircraft is spinning as to which side you exit. Just get clear and pull the ripcord.

If you wear glasses the wind will probably blow them off during exit, so you will want to practice finding your ripcord without them on. Another suggestion would be a snug fitting strap and/or other method, such as a flying helmet on over them. There are also goggles you can wear over your glasses such as skydivers use. Another option is to carry (**on you**) a spare pair of glasses in a secure place, such as a small waist pack. If you wear a waist pack put a signaling mirror and flat whistle in it to aid in your recovery. Survival equipment in your aircraft is fine, but you may not be able to recover it.

Generally, an accepted method of pulling the ripcord is to firmly grasp it in your right hand with your left thumb hooked in the handle. Pull the handle as if you're trying to punch both fists through a wall. In other words pull as if your life depended on it. Consult your manual for their procedures or ask your rigger. Remember to pull hard, fast and **fully extend your arms**. If any ripcord cable remains in the protective cable housing, pull it out and toss the ripcord away. One, this will make sure you actually pulled the ripcord and two this will prevent it from tangling with the deploying parachute if your tumbling. If you injure yourself on exit you may have to pull the ripcord with one hand only. Don't give up. Remember to **LOOK, FIND, REACH & PULL** the ripcord. This is a procedure you can perfect with the help of a qualified rigger. Many riggers color code your ripcord handle with a bright, contrasting tape to aid you in locating the ripcord handle, on the first try. Remember, you may have only one try at finding and pulling the ripcord. If they haven't done this you can easily do it yourself or have them do it at the next repack.

As the parachute deploys keep your legs firmly together to help prevent the parachute from going between them and possibly entangling or causing severe injury to various parts of your anatomy (especially you men).

If you are **absolutely sure** you have plenty of altitude (AGL) it is all right to fall for a few seconds. I recommend about 3-5 seconds before pulling. This will tend to distance you from your disabled aircraft and will help prevent the possibility of it coming around and hitting you or entangling with your chute. **BUT**, if you are unsure of your altitude **LOOK, FIND, REACH & PULL** the ripcord as soon as you are clear of your aircraft (about 1 second). Be careful not to accidentally pull your ripcord in the aircraft. It may cause the parachute to entangle on the tail or other aircraft surfaces. Some people say to take a hold of the ripcord before you exit, but I strongly recommend waiting until after you are clear of the aircraft. Because, you may need both hands to assist you in escaping your disabled aircraft.

Now that you're free and pulled the ripcord how long will it take for your parachute to be fully deployed? Your parachute should be fully open in about 2-3 seconds. That means if you're 6 inches or 6,000 feet above the ground once your parachute is open, **it's open** and in its slowest descent mode. Your parachute will not need an additional loss of altitude to slow down. So, the only real difference between 6 inches and 6,00 feet is that at 6 inches you don't have as long to enjoy the scenery and you were very lucky. What may vary in the 2-3 seconds it takes for your parachute to open is your loss of altitude. If you exited your aircraft in a horizontal plane you may only lose approximately 150 feet of altitude in 2-3 seconds. If your aircraft is diving straight towards the ground you may lose approximately 700-800 feet in the 2-3 seconds it takes for your chute to open. **The time is consistent, not the loss of altitude.** If I had to give you an average distance for your chute to open in 2-3 seconds I would say about 300-350 feet is probably average.

It would be nice to say everything is done and you can just hang around enjoying the ride and the view, but you're a survivor and survivors do not give up. There is still a lot of work to be done.

The final installment will discuss steering, avoiding obstacles and proper landing procedures. You've come this far and I don't want you to blow your landing and recovery. You are not going to have the luxury of a missed landing approach and be able to go around.

Literally, let me leaving you hanging until next time. Take care and blue skies. As always, if you have any questions or parachute needs, please feel free to call or write. I can be reached Monday through Thursday 8:30am - 5pm (PST) at (510) 785-7070. I also be reached online.

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PART 3.
EMERGENCY BAILOUT PROCEDURES
YOUR SAFE RETURN TO EARTH
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By: Allen Silver

In Part 2 I left you hanging, literally, above the ground under a fully opened parachute. Take just a moment to thank God, breathe deeply and absorb the situation before getting back to work. There is still much to be done before your ultimate goal of a successful emergency bailout is completed.

Become familiar with the steering system your parachute has. If your parachute does not have a steering system you are basically at the mercy of the wind as to where you will drift and how you will land. I strongly suggest having your non-steerable parachute modified to make it steerable or upgrading to a steerable parachute. Then have your rigger thoroughly explain it to you.

This is like the stick in your aircraft or your car steering wheel. Not having prior knowledge of its function or use may cause you to hit an obstacle, such as power lines or trees. Whatever steering you have, activate and take a hold of it after opening and do not turn it loose until you have landed. This would be like letting go of your steering wheel or stick. The newer parachutes have some form of ready-to-use-upon opening steering handles. Others require you to steer with the rear risers and some have a 4-line release. Whatever system you have become familiar now. During an emergency is not the time to wonder if you can steer your parachute.

Whatever steering system you have, only pull down one rear riser or steering handle at a time. When you are through turning in that direction return it to its neutral position, but do not turn it loose. Round parachutes cannot be flared for landing like your aircraft or a rectangular skydiver's parachute. Pulling both rear risers or steering handles down at the same time can cause your parachute to lose altitude very rapidly. **Remember, only one at a time.** Do not pull the front risers down on any parachute that has four risers. This can greatly increase your rate of descent.

To operate the steering system used on most modern parachutes grasp the two steering handles (usually 1" wide webbing) located above your shoulders. Some parachutes use metal rings. The handles should be a contrasting color. Your left hand grasps the left handle and the right hand grasps the right one. If you want to turn left pull on the left steering handle until you've reached the desired heading then return the handle back to its neutral position. **Do not let it go.** Again, remember only pull down one steering handle at a time. You could cause your rate of descent to increase dramatically by pulling down both handles at the same time. Usually pulling down on the riser or steering handle 6-12 inches, on the side you want to turn, is all that is needed to turn your parachute. It's really quite simple and straight forward. However, lets say you injured your left shoulder on exit or opening shock and want to make a 90 degree left turn. What do you do? Simply, make a 270 degree right turn.

The primary purpose of your steering system is to allow you to maneuver your chute away from life threatening obstacles. This should be away from roads where power lines maybe located. Then try and steer to an open area and face into the wind. This will set you up for the slowest possible descent and landing. Also, a steerable parachute will significantly dampen your oscillating, further reducing your landing speed and chance of serious injury. If you recognize a life threatening obstacle at the last second you need to do whatever to try and avoid it. It will do you no good to face into the wind and land softly in the powerlines. Try and recognize obstacles as soon as you open and maneuver away from them.

Do not initiate any major turns low to the ground unless it is to avoid a life threatening obstacle such as power lines. Below 200 feet make only slight corrections to keep you facing into the wind. This will help dampen oscillation also, and prevent you from landing harder.

To better understand how your parachute works let's assume your parachute has a forward speed of 5 mph. This speed can **never** be shut off, just like on your chute. This is the forward speed most steerable round emergency parachutes average today. If the wind is 0 mph you will go 5 mph in any direction you face. If the wind is 5 mph and you face into the wind your ground speed will be reduced to 0 mph. You will see the same landscape under you. This is the slowest possible way you can land. If you turn and run with the 5 mph wind you are now landing downwind at 10 mph. Obviously, to achieve the slowest possible landing you must face into the wind on all landings. This is the same principle used when you land your aircraft. Now, if the wind is 10 mph and you face into the 10 mph wind you will be backing up at 5 mph, which is the best you can do. You will see the ground moving out from between your feet and away from you. If you turned and ran with the wind you would be traveling at 15 mph and anytime

you are **running** with the wind or the wind is **less** than the forward speed of your parachute the ground will be moving between your feet and out the back behind you. In other words, from front to rear. I would also like to reinforce the need for people with poor vision to try and secure their glasses or they may not be able to see details on the ground such as power lines.

As a general rule of thumb. Which ever way you are drifting (other than straight down) you will land somewhere between a 45° and 60° glideslope. So, if the obstacle you are trying to avoid is in this area I'm not saying you will hit it, but I would be concerned. If you're up very high (say two thousand feet AGL) the distance between the 45° and 60° glideslope would be a lot more than if you were at two hundred feet giving you more time to maneuver.

Okay, hopefully, you have maneuvered your canopy to a clear landing area, have slowed your speed across the ground to the minimum and are facing into the wind. You are now ready to land whether you want to or not.

Press your **feet and knees** tightly together for better support. Your toes should be slightly pointed to prevent landing on your heels. Your knees should be **slightly** bent and your legs **tensed**. Keep about the same tension as needed to bounce up and down on the balls of your feet a couple of inches off of the ground. **Do not lock your knees.** Keep your hands on the steering system. If you do not have one, grasp the risers above your head. Keep your elbows in and try to look at the horizon, not down at the ground. This will allow you to better judge your drift and to make minor steering corrections to keep you facing into the wind or quartering no more than about 10 degrees.

Just prior to landing, the ground will probably look as if it's coming up fast. To minimize the possibility of injury make sure your feet and knees are tight together and your legs tensed, **not locked**. Try to absorb most or all of the landing on the balls of your feet. You just survived an emergency bailout and now is not the time to panic. A common mistake at this critical moment is to raise your legs or keep them apart at the moment you need their support the most. Again, remember to **press your feet and knees tightly together**. At touchdown tuck in your chin, pull your elbows in front of you to protect them and your face and roll whichever way the chute pulls you. This will help spread the landing forces throughout the balls of your feet, your legs, thighs and upper arms (shoulder area).

If you land in high winds and are being dragged on your face you must first roll onto your back. If you have no canopy releases release your chest first (if you have one) and then your leg straps and slip out of your harness. You can also grab one or two lines next to each other, on any one of the risers, and reel them in (hand over hand) until the canopy collapses. Remember, if you use the first method release the chest strap first. If you release the leg straps first the harness and chest strap may slip up under your chin and choke you. When you reel your canopy in hand over hand you must hold onto the lines tightly to prevent friction burns to your hands. Keeping a tight hold of these lines, quickly get out of the harness in case a gust of wind reinflates it. Grabbing more than two lines next to each other is not necessary and it makes it very difficult to reel them in, because of the pressure. If you are able to get up on your feet after landing and are still in the harness you can collapse your parachute by running around it, if that's necessary. Once it's collapsed gather your chute tightly together to prevent it from reinflating. Then get out of your harness.

Once you are on the ground and out of your parachute, the canopy can help you be located. Spread it out in such a manner as to attract attention from the air.

In the event of a tree or power line landing you must throw your ripcord away prior to landing, if you haven't done so. It can snag in a branch and will conduct electricity if it contacts a power line. Keep your feet tight together to prevent you from straddling a limb or wire. Just before you land in a tree or wires fold your arms over your face to protect it and your neck. Try to make yourself as thin as possible. Once you stop, if not on the ground, do not move quickly so you can evaluate how well you're hung up. If you're high above the ground any quick movement may cause you to fall. Be prepared, after you come to a **complete stop** (and not before) to grab hold of a branch. You could seriously injure your arms trying to grab branches before you stop. You must first protect your face and neck. In my opinion a power line landing should be avoided at all costs even it means making a low turn and landing downwind. Hitting the ground hard and risking serious injury is still preferable to electrocution as far as I'm concerned.

In the event of a water landing prepare for a regular landing because the water may not be very deep. I suggest you **do not** undo any straps until your feet touch the water. Some manufacturers say undoing the chest strap is all right. Check with the manual or the manufacturer of your parachute for their recommendations. Over the water your depth perception is off and releasing the chest strap may cause you to fall out of your harness prematurely. If you undo your chest strap (**never leg straps**) you must cross your arms in front

of the harness to prevent falling forward. This prevents you from steering properly, which is another reason I don't recommend it.

When you enter the water hold your breath. You may go under the water. Quickly undo your chest and leg straps and swim away from your parachute to avoid entanglements. Don't panic, this will cause fatigue. If you are under the canopy, carefully follow a seam to the edge and swim free. If you are being dragged in the water collapse your canopy as you would for a land jump. Once you are out of the harness immediately swim away from the canopy and lines.

Become totally familiar with getting your harness off without looking. You might want to practice while lying on your back, as if being dragged. Parachutes differ, so you must understand thoroughly how the snaps or friction adapters work on each parachute you may wear.

If you fly over water often, flotation gear should be worn. Generally it is best if it is worn under the parachute harness so you can remove the harness and not remove the flotation gear in the process. Become **very familiar** with any flotation equipment you wear because if it's the inflatable type it probably cannot be safely inflated under the parachute harness without damaging the flotation device or crushing you.

I suggest carrying a small unbreakable signaling mirror. This can be seen for miles. A whistle is also handy when someone is trying to find you. The noise carries further than your voice. Like the Boy Scouts, "Be Prepared". Some parachutes systems have a spot for some emergency equipment, but if you lose your harness/container (as in a water landing) it will do you no good. I recommend that you carry them on you in a flight suit pocket or in one of those small waist packs.

Even though it may seem as if I've given you everything you may ever need to know about emergency bailout procedures over this three part series that is not at all true. This has been a very basic guideline and is in no way intended as a substitute for jump training, survival training or even in depth instruction from a qualified rigger. You may even want to make a parachute jump to see what it's like. I highly recommend a tandem jump. Remember this will not be a round parachute, but it will certainly help prepare you to better understand what a jump is all about. This could save you valuable time, if you ever have an emergency.

Unless you have proper jump training and actual jumps on the rectangular parachutes a skydiver uses a round parachute is much more **docile** and **forgiving** for your requirements. Remember you **do not** flare a round parachute. This means do not pull down both steering

handles at the same time. You more than likely have a round parachute not a ram-air flying wing that must be flared. Do not confuse apples and oranges. Have your rigger explain this to you if you do not understand this.

My goal has been to get your attitude geared toward looking at your parachute as a real option in the event of a major failure. I'm amazed at how many pilots tell me they have no intention of ever using their parachute. My reply, "I'll bet your attitude will change real quick if your spinning towards earth with only one wing or are on fire." And that is not the time to decide how to bailout. **It's now** when you are in total control.

I hope none of you will ever need to use this information, but if you do, there is one last important fact you must be aware of. After a successful bailout, it is customary to buy your rigger a bottle of the alcoholic beverage of his or her choice. Personally, I prefer a good bottle of wine.

Please feel free to call or write me with any questions or parachute needs. Ask me about a safety seminar for your flying group. I'm here to serve and help you. I look forward to hearing from you. I can be reached at (510) 785-7070, Monday-Thursday 8:30am - 5pm (PST). You can write me at Silver Parachute Sales & Service, P.O. Box 6092, Hayward, CA. 94540-6092. I can also be reached online.

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Blue Skies,
Allen Silver