

EMERGENCY BAILOUT PROCEDURES FOR PILOTS

By: Allen Silver

THINK SURVIVAL!

I. Mental Attitude

- A. Attitude plays a major role in your survival
 - 1. Keep a confident and positive attitude
 - 2. Know that you **can and will** bail out if necessary
- B. Believe that your parachute will save your life regardless of what others say
 - 1. Make the bailout decision early and quickly
 - 2. Don't ever give up!
 - a) What may not work the first time may work the second or third try.
 - 3. With a couple exceptions your chute will open in 3 seconds or less
 - 4. Altitude is your friend
 - a) Your parachute has low altitude capabilities, but you don't need to prove it
- C. **Practice – Practice – Practice**
 - 1. Practice egress procedures before and after each flight
 - 2. Remember: canopy/door (if you have one), belts and butt – **in that order**

II. Plan Ahead (before you have an emergency)

- A. Keep your parachute in good condition
 - 1. Have your parachute serviced regularly by a qualified rigger
 - a) They should be familiar with your type of parachute
 - b) Check their FAA license for the proper ratings, if unsure
 - c) Make sure they have current factory packing manuals
 - d) Always pull your ripcord and take your chute out of the container
 - 2. Store your parachute properly.
 - a) Keep in a cool, dry, dark place
 - b) Keep off of floor
- B. Pre-Flight your parachute
 - 1. Inspect carrying bag before removing chute for stains etc.
 - 2. Check that ripcord pins are seated properly and not bent
 - 3. Make sure the ripcord is secured properly in its pocket
 - 4. Make sure nothing is obstructing the ripcord cable housing
 - 5. Check harness, container, snaps and Velcro for damage, wear, and dirt
- C. Practice your emergency procedures **each time** you fly
 - 1. Practice prior to and after each flight
 - 2. Don't just get in and out of your aircraft...**Practice – Practice – Practice**
 - a) By doing this you'll cut your egress time by 50% or more
 - b) Reaction time is faster then thinking about what to do and then Figuring out how to do it.

III. **What Makes Similar Parachutes Different**

- A. Line size and tensile strengths of 400lbs., 550lbs. and 600lbs. are in common use
- B. Line length determines inflated dimension of canopy. The longer the lines the better.
 - 1. Generally speaking the wider the inflated dimension the slower your descent
- C. Types of material used in construction
 - 1. 1.1oz. – approx. 60-90 (cfm) cubic feet per minute of airflow through material
 - 2. Lo-Po (Low Porosity) – 30-40 cfm
 - 3. F-111 – approx. 0-5 cfm
- D. Canopy diameters of 22', 24' 26' and 28' are in common use today
- E. Manufacturer's speed and weight limitations
 - 1. I recommend a minimum rating of 150 KIAS
 - 2. Rated to carry a minimum of 220 lbs.
 - 3. Rate of descent of 16 fps (feet per second) or slower
 - a) This includes your weight and all equipment worn
- F. All parachutes are not created equal
 - 1. This is why a smaller parachute may come down slower than a bigger one
 - 2. Choose wisely and ask question when buying a parachute
 - a) How fast is my rate of descent with my weight and equipment?
 - b) What speed and weight is it placarded at?
 - c) Do not buy used parachutes without a rigger inspecting it first
 - d) Do I want a round parachute or a ram-air?

IV. **Proper Fit and Adjustment of Your Parachute**

- A. Don your parachute properly
 - 1. Chest strap is always **first**
 - 2. Leg straps
 - 3. Other adjustments
 - 4. You can fall out of an improperly adjusted harness
- B. To get out of your harness always remove the chest strap **first** (If you have one)
 - 1. In high winds, if you remove your leg straps first your harness may be stripped off of you and the chest strap may choke you.

V. **Major Reasons to Leave Your Aircraft.**

- A. Structural failure
- B. Severe control problems
- C. Fire
- D. Mid-Air collision
- E. Insurance Claim! (Just making sure you're paying attention)

VI. When You Make the Decision to Bailout - Canopy/Door, Belts & Butt

- A. Canopy/Door
 - 1. Jettison the canopy or door (If you have one)
 - 2. **Never** unfasten your safety belts first
- B. Belts (Unfasten them)
 - 1. What about communication cords?
- C. Butt (Get out of aircraft)
 - 1. Claw, crawl or do whatever it takes to get out
 - a) **Use both hands.** Do not take hold of ripcord before leaving aircraft
 - 2. Expect your exit to be very difficult
 - 3. Get clear of your aircraft before pulling the ripcord
- D. Look, find, reach and pull your ripcord
 - 1. Look directly at the ripcord handle when pulling
 - a) Never take your eyes off of it
 - b) This is the most important thing in your life right now
 - 2. Pull in the direction of the cable housing as if your life depended on it
 - 3. Use both hands to pull the ripcord
 - 4. Color coding ripcord handle will help you locate it quickly

VII. Parachute Deployment Time

- A. Canopy must open in less than 3 seconds to be FAA certified
- B. Average opening time is 2 seconds
- C. Once it's open that's as slow as you're ever going to go.
 - 1. If you're only 6 inches off the ground consider yourself lucky
- D. Loss of altitude will vary according to aircraft attitude and trajectory
 - 1. The opening time will remain constant
 - 2. The altitude loss will vary

VIII. Under an Open Canopy

- A. Thank God
- B. Avoiding life threatening obstacles is your **number one** priority
 - 1. Turn your canopy with the steering handles or rear risers only
 - 2. Make minor turns below 200 ft. (unless to miss a life threatening obstacle)
- C. Face into the wind for landing
- D. Forward speed of your canopy
 - 1. Average speed is 5 mph
 - 2. Determine approximate landing site
 - a) Expect to land between 45 and 60 degrees, in direction your drifting

IX. Prepare for Landing

- A. Keep your eyes on the horizon
- B. Feet and knees tight together
 - 1. Absorb most of the landing on the balls of your feet
 - 2. Don't raise your legs before landing
- C. When your feet touch, tuck in your chin and elbows
- D. Collapse your parachute, if inflated.
 - 1. Quickly get out of harness to prevent being dragged in high winds **OR**
 - 2. Climb hand over hand up 1 or 2 lines (side by side) towards the skirt & Remember to remove your chest strap **first** (if you have one)

X. Problem Landing Areas

- A. Powerlines – avoid at all costs!
- B. Tree landing
 - 1. Feet and knees together, protect head and neck with arms
 - 2. Do not grab branches until stopped
- C. Water landing – flotation gear must be worn
 - 1. Make sure flotation gear is not under harness
 - 2. Inflate prior to entry into water
 - 3. **Do not ever** get out of harness until your feet touch the water
 - a) Swim away from parachute to prevent entanglement

XI. Other Elements of a Successful Bailout

- A. Wear a helmet for protection during bailout and landing
 - 1. Quick release on helmet to leave communication cord in aircraft
 - a) Cord could entangle with deploying parachute
- B. Wear Nomex clothing and gloves
 - 1. Replace when worn out
- C. Carry a signal mirror and a flat whistle
 - 1. Carry in flightsuit or a waistpack
- D. Canopy breaker?
- E. Slide back or jettison canopy during an out landing
- F. Make sure all emergency escape handles work properly
- G. All survival items **must** be carried on you
- H. Name a couple of other high tech. items that are available?
 - 1. ?
 - 2. ?

XII. Safely Back on Earth

- A. Spread out your parachute to help rescuers locate you
- B. Use your survival equipment to summon help
- C. Congratulate yourself on a job well done
- D. **Most Important!**
 - 1. Your rigger deserves a bottle of wine, a case of beer, or something
 - 2. I prefer wine - **No** screw lids, please

IF YOU HAVE ANY FURTHER QUESTIONS PLEASE FEEL FREE TO CALL OR E-MAIL ME. MY BUSINESS HOURS ARE MON. - THUR. 8:30AM TO 5:30PM.

THANK YOU!

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**ASK ABOUT S.M.A.K. PAK? WHAT IS IT? GO TO MY WEBSITE AND
CLICK ON SURVIVAL KITS.**

**FOR ADDITIONAL ARTICLES GO TO MY WEBSITE OR
CALL
TO SCHEDULE A SAFETY SEMINAR FOR YOUR GROUP**

SAFETY SEMINARS

Has your group or organization thought of hosting a parachute safety seminar? Over the years I've given numerous presentations all over the United States to groups just like yours. I've been invited several times to give seminars at yearly ICAS conventions Oshkosh, Sun-N-Fun in Lakeland, Florida and to Soaring Society of America conventions.

Many of my articles dealing with parachute safety have been published in *Sport Aerobatics* and *Soaring* magazines. My one to three hour seminars expand on the topics covered in these articles. The most popular seminar that I offer is "Emergency Bailout Procedures for the Pilots", however, other topics on parachute care and safety, such as survival equipment for pilots, are available upon request. I tailor my seminars to meet your needs.

My parachute safety seminars are rarely cost prohibitive. All I require is that my travel expenses and time away from my business be covered. Often times, different flying groups plan a joint seminar and share the expenses.

Please call and book early for the best dates. I look forward to hearing from you soon. Thank you and blue skies.

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