



# Parachutist

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DEAR MEMBER:

Many requests have been received for information which can be used to counter the refusals of pilots not wishing to fly sport parachutists. Based on these requests the following article was written and forwarded to all of the major flying publications, pilot associations, each state aeronautic commission, and is hereby published for the information and use of all concerned. The answers are still not as all inclusive as we will some day have them and as new problems are solved we will so publish.

## ARE PILOTS RESPONSIBLE?

By R. A. Gunby

Much has been recently said about sport parachuting .... pro and con. After four active years of sport parachuting under our belts, the Parachute Club of America (PCA) feels it necessary, and is in a position, to make some positive recommendations to pilots and airport owners and managers based on our experience. Why? Mainly because there are still many pilots who, for doubtful reasons, refuse to fly sport parachutists and this curtails jumping activity and stifles the growth of the sport. Obviously, a parachute club without access to an airplane and pilot will soon become a toastmasters club. Conversely, there are pilots who will allow anyone to jump from their aircraft regardless of qualification or equipment and contribute to an excessive injury and fatality rate.

The major reason given by pilots for not allowing sport parachutists to jump from their aircraft is that the pilots believe they will be held responsible for anything and everything evil that may happen to the jumper, the crowds (if any), and the aircraft, and for any jumper-caused property damage.

Right here we'd like to say that during the past four years not one law suit or settlement has been brought to our attention in which a pilot has been held liable for injury or damage resulting from a sport parachute jump! And, if all pilots followed a few simple safety rules there would be little cause for anyone to ever bring suit against him. If such a suit were filed, it is highly improbable that the pilot would be held fully responsible after all the true facts were known.

Civil Air Regulations (CAR) state that pilots are responsible for objects dropped from their aircraft. This rule was written years before the advent of sport parachuting as we know it today and is totally inadequate for current application to the new sport. However, let's assume that the pilot is responsible and the jumper lands on and damages an automobile. Is it the pilot's fault or the sport jumper's? In actual jump operations the ground reference for the jumpers exit point disappears under the aircraft nose somewhere from 2 to 6 miles out, depending on altitude. From here on in, the jumper or jumpmaster, looking out the open side door, guides the pilot by voice or signals and aligns the plane to bring himself over the correct exit point. When the jumper believes himself to be over the exit point, he jumps and does so on his own volition. Until the parachutist has left the plane and the plane is tilted, the pilot has no exact knowledge or control over where the jumper departed the aircraft. Furthermore, during the jumpers delayed fall, he has the capability to move horizontally in any direction as well as vertically; thus, even if a pilot required that a jumper leave over a given point, the jumper could "track" away from this point at will and at speeds almost up to a 1 to 1 vertical-horizontal ratio! After the jumper opens his parachute between 2500 and 2200 feet, the new type steerable parachutes have a built-in forward speed ranging from 6 to 15 miles per hour, depending on the type canopy modification

used. Here again, the parachutist has the self-contained capability to travel in directions other than down at speeds from 9 to 20 feet per second as compared to his downward speeds of from 16 to 20 fps! Add to this a wind speed of 15 mph and the jumper's maneuverability range is extended even further.

Knowing these factors then, it is unjust and unreasonable to conclude that the pilot is solely responsible. The question is: Is a sport parachutist a "dropped object"? He has the volition. He (or she) powers himself out of the aircraft, has the power to vary his horizontal and vertical speed, and the power to move horizontally in any direction either before or after his 'chute opens. He can do loops, dives, barrel-rolls, figure eights, etc., and can even maneuver so as to catch another man and pass him a baton! Is this not the same parallel situation as compared to the pilot of the bomber which drops the X-15? Is the bomber pilot held responsible for what the X-15 pilot does after he has released the black bird?

We feel that the pilot for a group of parachutists should not be held responsible for their activities. And so do most of the FAA officials in Washington, but thus far we have failed to get anyone to put their signature to such a ruling. However, FAA recognizes this problem and indications are favorable that the currently-being-written proposed rules to govern sport parachuting will hold both the pilot and the jumper responsible for their respective actions and should relieve the pilot from responsibility for the jumper's actions. Let's hope so.

Pilots also say, "OK, but how about the case when the guy's 'chute doesn't open?" "His family will sue me for my shirt!" We'll concede here that the chance of both 'chutes (PCA requires two) not opening are plus a million to one ..... which are better odds than general aviation's crash statistics! The chances are better that you will crack up with your passengers than our 'chutes failing to open. Using this reasoning then for not flying jumpers implies that pilots also will not fly passengers for the same reason. And we all know better. To date, no suit or complaint has been filed against a pilot in the case of a parachuting death. However, we don't say that it cannot happen, anymore than we can say your postman won't sue when he falls down your front steps. Further, we're certain that some lawyers would be willing to take a case against a pilot and PCA is waiting for that day because we are prepared to defend the pilot PROVIDED THAT HE AND THE JUMPER WERE IN COMPLIANCE WITH PCA'S BASIC SAFETY REGULATIONS AT THE TIME! (We had one case lined up in the midwest where the FAA charged a pilot for allowing jumpers to exit over a populated area (they didn't) ..... and we feel that we could have successfully defended the pilot and established a precedent ..... but the pilot withdrew and paid an unnecessary \$100 fine. So now we're looking for another case.)

The point here is that when proper safety measures are applied, and our 19 points of safety do not detract from the fun of either flying or jumping, it is virtually impossible for anyone to have a basis for legal suit! And therein lies the pilot's protection!

The CAR plainly states that pilots will not drop objects over populated areas or open air assemblies. First of all relative to this, does the FAA mean that it's OK to drop objects or parachutists before, beyond, or to the sides of the public assembly/populated area but not directly over it? If yes, then there is no pilot problem, because sport parachutists cannot come straight down anyway due to inherent canopy speeds and winds. All jumps are made upwind of the target.

Regarding the dropping of objects or parachutists over populated areas, just what is a populated area? Since FAA definitions vary from district to district and among administrators ..... who's to know! However, the only safe guide to be used here is the interpretation made by the local FAA official as regards the actual jump site. If you're outside his defined area, you're legally correct. FAA requires that aircraft modified for use in sport parachuting be appropriately certificated for removing doors, seats, etc. This is easily done either by requesting your own or getting a copy from someone who has already taken the trouble to obtain one. However, if the pilot carries parachutists without such

an STC, he is in violation and subject to fine as should be.

All PCA members carry (automatically included in membership) \$5000 Property Damage and \$5/10,000 Public Liability INA insurance mainly to protect the pilot and the jumper from damage or liability legal action. The interesting part of this insurance is that it is valid ONLY when adherence to PCA's Basic Safety Regulations is observed. And this means that the PCA jumper follows the experience-proven procedures for safe sport parachuting. Assuming then that the PCA jumper rips up your seat, breaks a doorpost, or is the direct cause of banging up your plane, he's good for up to \$5000 damage ..... which isn't bad at this stage of parachuting!

Further, if he goes through Farmer Jones's roof or lands on top of some sunbather, he's covered for \$5000 each person and \$10,000 each accident. But the important thing is that with these coverages, the damaged or injured don't come looking for the pilot! Some critics say that this coverage is not enough, yet, the highest P/D - P/L claims received by PCA in 1961 did not exceed 500 dollars! Experience has shown that parachutists do not do much damage either property or liability-wise.

The following summary of sport parachuting fatalities for 1961 are extracted from PCA's monthly newsletter, PARACHUTIST, to show you the causes and the subsequent supervision necessary in our sport. Note in all cases but one that the jumpers were in the student category. All of them could have been prevented through proper safety and training measures! And this is the problem we're up against. We desperately need the help and cooperation of the pilots. Pilots will not allow an unlicensed person to fly their plane, yet they will take up some kid they have never seen before and allow him to jump without regard for his experience or capability, equipment, or previous training. Informal investigation has revealed that pilots do this for one of two reasons: either to make a few dollars from the fee charged, or because the pilot enjoys flying and dropping parachutists to the point that he could care less about the safety aspects, or both. Some pilots, who have never made a jump in their life, "teach the kids" how to put on their 'chutes (shrouds?) and "give them a few pointers" prior to allowing them the privilege of risking their lives in the unforgiving air! How many pilots would want their children to be taught to fly on the same basis? Anyway here's what can happen .....

#### SUMMARY OF SPORT PARACHUTING DEATHS - 1961

##### Total Deaths: 14 Men

- 3 PCA Members: 1 Drowning
  - 1 Improper opening position, main and reserve entanglement
  - 1 Failure to pull either ripcord
  
- 11 Non-PCA Jumpers: 2 Drowning
  - 1 Electrocution (Power lines)
  - 3 Uncontrolled falls
  - 2 Failure to pull either ripcord
  - 1 Mid-air collision
  - 1 Faulty static line
  - 1 Accidental reserve opening in aircraft

Notes: Drownings: All were avoidable through better preparation. In all three cases there was a lack of adequate life saving gear and boats at the landing sites. Only one man wore a Mae West and he failed to inflate same. One was an intentional water landing, the other two unintentional. Two could have been avoided by proper canopy manipulation.

Electrocution: Could have been avoided by proper canopy manipulation.

Uncontrolled Falls: These were set up first by the uncontrolled fall and improper opening position which fouled the main chute. Following this, 3 were further complicated with improper opening of the reserve which also fouled in the main. I remained out of control too long, became disoriented, and pulled the main too late.

Failure to Pull Either Ripcord: 1 was out of control all the way. The other two were stable throughout the fall.

Mid-Air Collision: Caused by inability of student to maneuver. Following the collision during opening, improper reserve procedure compounded the entanglement.

Faulty Static Line: Compounded by student failing to deploy reserve properly and too late.

Accidental Opening of Reserve in Aircraft: Avoidable by protecting ripcord handle during movement in aircraft.

<u>Fatality</u>	<u>Type Jump</u>	<u>Prev. Sport Jumps</u>	<u>Age</u>	<u>State</u>
Drowning	5' Del-Water	175	28	Europe
Unc/Fall	10' Delay	2	22	Tenn.
Res/Open	10' Delay	10	30	N.Y.
Faulty S/L	S/L	1	21	Ore.
Unc/Fall	J&P, 1st FF	6	19	S.C.
Unc/Fall	25' Delay	7	23	Utah
No Pull	20' Delay	15	21	Calif.
Unc/Fall	30' Delay	17	24	Calif.
Electro.	20' Delay	30	26	Ill.
Collision	30' Delay	Student	?	Va.
Drowning	S/L	3	23	P.R.
Drowning				Va.
Pull Fail	30' Delay	15	33	Calif.
Pull Fail	30' Delay	25	20	Okla.

Monthly Summary

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0	0	5	1	0	1	1	3	1	1	0	(ALL)
			(1)	(1)					(1)			(PCA)

PCA COMMENTS: Looking over the above report of deaths will engender, we know, your prompt and positive efforts in eliminating sport parachuting problems that are obvious. All sports and occupations have inherent hazards and accidents do occur. Ours is no different. The objective is simply to reduce accidents to a minimum. As Mr. Crane stated in the last PARACHUTIST, "Safety is no accident." The antidote to accidents is to be careful. In almost every fatality, at some time during the training preparations and jump, there was an element or moment of carelessness, or oversight, or indifference either on the part of the jumper or the supervisors.

A dangerous trend has started to thread its way into our sport. We are growing in numbers every day. More clubs are being formed weekly. The public is beginning to accept us! BUT ..... sport parachuting at this stage of the game IS NOT AN AVERAGE MAN'S SPORT! But we who are accustomed to its thrills and rigors are beginning to THINK it is and to expect the same performance from an AVERAGE newcomer that you expect from yourselves. This is fatal. Recognize the fact that everyone does not have the capability to become a safe sport parachutist, even tho they may wish to, anymore than everyone has the capability to be a boxer, or racedriver, pilot, or bullfighter. Be alert for the average man in skydiving! Sport parachuting is not YET the average man's sport!

All good, organized sport parachute clubs require their members to sign waivers and hold-harmless agreements which protect the club and the pilots. These documents are valid in court UNLESS carelessness or negligence can be proven ..... then they are worthless. The important point here is for pilots to insure that the jump training and jump activity is conducted in a safe manner. And how can you do this? We recommend the following procedures:

1) Ask to see the jumper's FAI parachute license. These are issued through PCA on the basis of proven attained proficiency. Class A (red) is a STUDENT license and the jumper must be supervised by a Class B, C, or D license holder. The B license (orange) is gained after 25 free falls and the bearer is still somewhat new, but safe to jump on his own. The C license (green) is issued after 75 free falls and the bearer is capable Jumpmaster and supervisor. The Class D (blue) license holder, gained after 200 free falls, is a Master Parachutist and is fully capable for all jumping, jump supervision, and instruction. BE CAUTIOUS OF THE UNORGANIZED GROUP AND THE UNLICENSED GROUP!

2) Ask to see the jumper's current PCA membership card. This proves that he is covered by P/L and P/D insurance. If he doesn't have insurance, you could, under current FAA rules, become legally entangled.

3) Be sure that your aircraft, if modified, has the proper Supplemental Type Certificate (STC) for the modifications made.

4) Ask for a briefing by the jumper prior to leaving the ground on the exact jump location or drop zone, signals to be used, altitudes, speeds, emergency procedures, etc. On the climb to altitude, fly over the intended drop zone and insure that it is large and safe enough, and that it does not fall in the populated area category as defined by your local FAA officials. If you are flying a demonstration, endeavor to determine from the jumper what his exit point will be and look it over. Every good parachutist will drop a wind drift indicator from 2200 to 2500 feet prior to the jump and you can judge fairly well from this where he should leave.

5) Every jumper should maintain a log book of his jumps. If he doesn't have a license, ask to see his log book and look it over carefully. Unfortunately, a few jumpers have been known to falsify their logs so this is not a foolproof check.

6) Look the prospective jumpers over. Does their equipment look good? Is it neat or shoddy? Are they neat and clean or crummy? Do they appear to have a leader, or is it every man for himself? Are they business-like? Do you think you'll enjoy associating with this group?

7) The major cause of death in sport parachuting is being in the wrong position for opening the parachute. The corrective measure for this is good training, proper progression from student to expert, and close supervision. Look for these indications in your dealings with jumpers.

Like flying, sport parachuting is a safe, wonderful, self-satisfying sport that is a hell-of-a-lot of fun when done under the proper safety measures which eliminate the dangerous aspects. It is the self-imposed adoption of these common sense rules that is the backbone of PCA, and the excellent jumping ability and safety record established by the members is their source of pride. Any nut can fling himself out of an airplane! But the man who can discipline himself through proper training, know himself, his equipment, and the theories, learn and use the athletic portions with skill, precision, and sportsmanlike dignity, and, by example, teach those who follow, is indeed a credit to himself, his sport, and aviation. This man among men has no need to flaunt the rule or violate his own or other's safety to achieve cheap self satisfaction!

Three years ago, aviation officials and pilots were prone to say, "Maybe if we ignore these nuts, they'll go away!" But in those three years the number of sport parachutists has jumped from 1,000 to 10,000! These men and women have established themselves as a part

of sport aviation and their phenomenal growth indicates that they definitely will not go away.

PCA's Sport Parachutist has already proven that he is neither a hangover from the days of barnstorming nor a death-defying crackpot. Our current membership includes many doctors, lawyers, engineers, and scientists, as well as college students, stenographers, pilots, and others from all walks of life. Local, National, and International competition requirements are tough and exacting and require training, precision, and skill. And it's new! A truly new sport ..... a Sport of Space for the Age of Space ..! And, like you, they want to fly. How 'bout it, you pilots, let them fly. Your game was young once too!

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WASHINGTON STATE AERONAUTICS COMMISSION WRITES PARACHUTING RULES: The Aeronautics Commission of Washington recently placed the following rules governing parachuting into effect:

Washington State Aeronautics Commission Regulation No. 8:

Voluntarily Parachuting from Aircraft: WHEREAS, voluntarily parachuting from aircraft over congested areas or airports constitutes a hazard and indicates the need of regulations commensurate with and for the purpose of protecting and insuring the general public interest and safety of persons operating, using or traveling in aircraft and the safety of persons and property on land or water, THEREFORE, under the authority and jurisdiction vested in the Washington State Aeronautics Commission for and on behalf of the citizens of the State of Washington, it is deemed necessary to issue the following regulation:

No person shall voluntarily parachute jump from any aircraft into the congested areas of cities, towns and/or settlements, or an open air assembly of persons without prior approval of the executive authority of the political subdivision involved and written notice to the Washington State Aeronautics Commission.

In no event shall a person voluntarily parachute into the traffic pattern of an airport unless with prior approval of the airport owner or manager and prior written notice to the Washington State Aeronautics Commission. The owner or operator of the airport shall mark the runway of the airport so as to indicate closure.

Authority for this order is derived from RCW 14.04.010, 14.04.070 and 14.04.210.

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VERMONT'S NEW RULES TO SUPERVISE SPORT PARACHUTING: The State Aeronautics Board has issued its ruling pertaining to sport parachute jumping which is not to be encouraged or discouraged by air officials. Permits to jump will be issued only to members of the Parachute Club of America and who have a satisfactory record of experience. All jumping must be conducted in keeping with rules of the Parachute Club of America and no program will be approved which utilizes the airport as a permanent drop zone.

Sport jumping will be permitted only from aircraft which have been approved for such operations by FAA which specifies as to the removal of door and the installation of a step on the landing gear strut. Because of the hazards which do exist, sport jumping programs will be closely monitored by Vermont aviation officials.

PCA Note: This control parallels the Massachuttes control and we feel that this is the best approach to the problem. Further, the burden of adequate safety regulations is placed on PCA and not on an uninitiated state aviation or safety group.

While we're on the subject of State laws, New Jersey is still finalizing theirs and California has proposed some eighteen new state rules which will be brought before the

public at the Aeronautic Divisions Open Meeting at Bakersfield Airport on 14 May. Slowly but surely the hazardous outlaw is being squeezed out and it shouldn't be too long before they either join the extenct DoDo Bird or become a safe jumper.

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FIRST WOMEN'S DOUBLE BATON PASS: PCA does not normally delve into all the "firsts" that have been claimed over the past few years but we do feel that the following is significant and of interest to the rest of the country.

"Dear PCA: We have a first for you and your Parachutist.



Helen Lord with 68 jumps  
Carlyn Olson with 89 jumps  
Muriel Simbro with 368 jumps

Sunday, March 25, at 4:40 at Piru, Calif. drop zone with 200 spectators watching completed the FIRST WOMEN DOUBLE BATON PLASS in the UNITED STATES. (I assume that is)

We went up to 10,000 with Helen going out with the Baton and I following close on her heels. Grasping the baton as we faced each other, we made a beautiful clean pass, then turning and tracking off for Carlyn who came down and when I was about an arms length below her, we made the pass. With me holding the baton high, Carlyn reaching down grabbed it as I passed under her. Like making a pass in the nite I hoped she had a hold of it and turning fast I saw her holding tight and waving and smiling. It was a wonderful sensation. (Pass was completed by 4500 ft.)

Carlyn, who is doing so well will have her "C" license when this letter reaches you P.C.A. members. She has recently attained her "B" license and has been going great guns ever since.

Relative work is fun and should be planned before leaving the ground. This we did, and it proved to be rewarding.

There can't be three happier girls, than Helen, Carlyn and myself.

With Kim Emmons here in California now, we hope to try a four way Baton Pass in April sometime."

PCA Note: Congratulations girls, and we sincerely hope to see all three of you at the National Championships.

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PCA TAX EXEMPT STATUS: We are pleased, after two years, to publish the following letter which was received from the US Treasury Department April 6th:

"Gentlemen: Based upon the evidence submitted, it is held that you are exempt

from Federal income tax under the provisions of the Internal Revenue Code section indicated above. Any questions concerning taxes levied under other subtitles of the Code should be submitted to us.

You are not required to file Federal income tax returns so long as you retain an exempt status, unless you are subject to the tax on unrelated business income imposed by section 511 of the Code and are required to file Form 990-T for the purpose of reporting unrelated business taxable income. Any changes in your character, purposes or method of operation should be reported immediately to this office. You should also report any change in your name or address. You are required to file an information return, Form 990, annually, after the close of your annual accounting period, indicated above.

This is a determination letter.

Very truly yours,

Signed Fred C. Gerdes  
Acting Chief, Audit Division"

PCA NOTE: Our accountant is now working on a reimbursement of some \$4000 previously paid in taxes. Another happy ending of another phase of our growth!

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SAD STATE OF AFFAIRS IN PUERTO RICO: PCA's Area Safety Officer for Puerto Rico worked quite hard for the past few years in an effort to swing the jumpers from unsafe to safe jumping methods. Since our man is leaving that area, and there doesn't seem to be anyone with the determination, skill, or desire to promote safe jumping at the present time, PCA is forced to drop Puerto Rico as an area of PCA activity. Current memberships and licenses will be valid until the end of the year; however, since we have no way of verify any data received from PR, we are suspending issuing of both licenses and memberships indefinitely. A sad situation but one over which we have no control.

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US SPORT PARACHUTIST BADGE: A distinctive United States Sport Parachutist Badge was selected by the PCA Board of Directors in September, 1961, from among many designs submitted from the membership over a two year period.

The design is symbolic of a national aero sport with the wings of flight, the US national shield, and the open parachute.

Parachutists competing in the US National Parachute Championships at Kansas City in May of 1962 will be the first to be presented with the silver and gold wings. Subsequently, wings will be distributed to each holder of a current national sport parachutist license and thereafter will automatically be issued by the Parachute Club of America to each qualified license applicant on approval of the license.

QUALIFICATIONS: Identical with license qualifications.

- a) Silver Badge: One badge is issued free to qualified persons with the initial class A, B, C, or D license applied for. Subsequent applications for a higher license will not receive the badge.
- b) Gold Badge: Issued for 1000 or more free or delayed fall jumps.
- c) Bars: (Only the badge is issued with an A License.) The license qualification bar is issued at no cost with each Class B, C, or D license.



The number bar, showing the number of free or delayed falls, is initially issued with each B, C, or D license, provided the B License applicant has 50 or more free or delayed falls. The bars are numbered in increments of 50 up to 500, then 750, and finally, 1000. New bars may be ordered at no cost whenever the applicant has made 50 more jumps.

PROOF: Identical for licensing. For each additional number bar the form shown herein must be completed and sent to PCA.

AVAILABILITY: Badges and bars are trademarked by PCA and are not available except through licensing procedures. Sales through any other sources should be reported immediately to PCA for legal action.

Replacement of lost badges will be made at a cost of \$2.00 each, including bars, from PCA.

MINIATURES: A miniature wing, less bars, which can be used either as a lapel pin or a tie tack is available to license holders at a cost of \$2.00. No group orders will be accepted in order to restrict the wearing to only qualified license holders. Orders will be screened to insure that the applicant possesses or is being issued a license.

SAMPLE APPLICATION

PARACHUTE CLUB OF AMERICA  
PARACHUTIST BADGE AND BAR FORM

Please forward as shown: Replacement Badge: \_\_\_\_\_ (\$2.00 enclosed)  
License Bar: \_\_\_\_\_  
Jump Number Bar: \_\_\_\_\_  
Lapel Pin: \_\_\_\_\_ (\$2.00 enclosed)

I certify that I have made the number of sport jumps shown below and possess a Class US FAI License, Number \_\_\_\_\_.

Military Static Line jumps: \_\_\_\_\_ Sport Static Line Jumps: \_\_\_\_\_  
Military Free Falls: \_\_\_\_\_ Sport Free or Delay Falls: \_\_\_\_\_

The above information as of: \_\_\_\_\_  
(date)

I have checked and verify the above information:

\_\_\_\_\_  
Full Signature

\_\_\_\_\_  
Full Signature

\_\_\_\_\_  
Full Name Printed

\_\_\_\_\_  
Full Name Printed

\_\_\_\_\_  
B, C, or D US FAI License No.

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ARMED FORCES DAY - MAY 19th: Saturday, May 19th is Armed Forces Day for 1962 and the week of May 12 through 20 will see many appropriate observances honoring our military services.

NAA and PCA is well aware of the vital role our Armed Forces play in maintaining our

freedom, and both aviation and sport parachuting plays an important role in the mission of all of our services. Therefore, every member of PCA should, in some way, participate in the observance of this annual national event. At the least, visit the nearest military installation on Armed Forces Day and reacquaint yourself with the newest things in the military.

Many of our members will be putting on exhibitions of sport parachuting during Armed Forces Week and we wish every group good luck and good jumping. We know they will do a good job as they have over the past two years and their excellent demonstrations have done a great deal in providing the general public and service members with a better understanding of our sport.

To our fellow jumpers serving in the Armed Forces today may we say that we are happy to honor you during Armed Forces Week and recognize the loyalty and patriotism you symbolize.

We sincerely believe Mr. John F. Kennedy as he says, "Guard zealously your right to serve in the Armed Forces, for without them, there will be no other rights to guard".

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HANDBOOK SECTION: As started last month, we are including in this issue a removal center section of the PARACHUTIST, devoted to parachutes, which should be removed and placed into an alphabetized notebook.

What we have this month may appear to be basic to our older members, however, many new clubs are forming as a result of PCAs new club assistance program and they are in great need of basic information on parachutes and equipment. The article from Sky Diver Magazine, by Curt Hughes, is one of the best so far on the subject of canopy modifications. Granted, it needs some updating and perhaps Mr. Hughes will favor us with some of the later information for a future issue.

The packing sequence has been graciously loaned to us by the Pioneer Parachute Company and can be well utilized by both old and new clubs alike.

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SPORT PARACHUTING BOOK REVIEWS: By Darrell Sonnichsen, C-35, Vice-President, PCA; member of the 1957 US Parachute Team, and founder of the California Parachute Club.

The Sky Divers, Lou Cameron, Gold Medal, Fawcett Publications, Greenwich, 1962; 0.35 cents

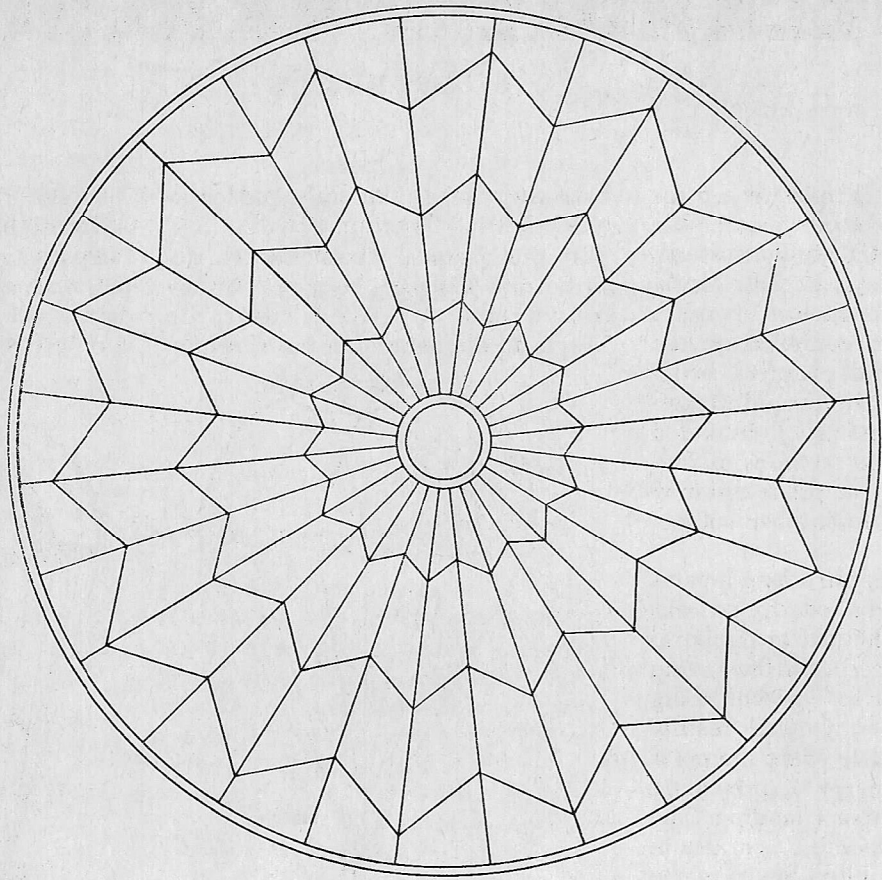
In the novel "Sky Divers" Lou Cameron (not to be confused with the esteemed editor of Sky Diver Magazine) attempts to use the "guaranteed equation" of sex-plus-blood and thunder-equals-successful-novel.

We will not discuss all the aspects of the novel. However, we are compelled to comment on that portion of the "blood and thunder" which involves what is purported to be sport parachuting.

Cameron is obviously not a parachutist, but from reading the book, it is apparent that he has received advice, counsel, and some folk lore from jumpers, even though no credits are given. He seems to make an attempt to put sport parachuting and the Parachute Club of America in their proper perspective, but he is not completely successful. The sport parachutists and their clubs appear as a colorless mass of barnstorming daredevils, while the "big daddy" PCA takes on a cast which threatens to eclipse even the role of the "CAA" (FAA). The author's information on sport jumping and aviation in general seems to be about 3 years behind the times, (e.g., CAA, early baton pass, etc.)

The treatment of the fatal accident of low-pulling "Frenchy" plus the general

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P A R A C H U T E S

# STEERABLE PARACHUTES

by CURT HUGHES

It is not my intent to cover thoroughly the subject of steerable parachutes in this article, but instead, to pass on to the layman some working knowledge of the factors involved. A volume could be compiled on the subject with several chapters being devoted to aerodynamics and mathematics. Neither is the article intended to teach or advocate methods of precision parachuting on predetermined targets, since this is another subject matter altogether.

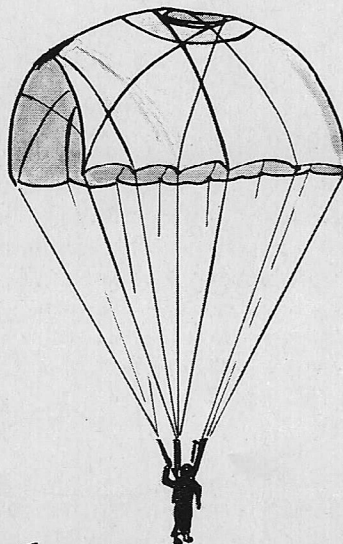
The thought of constructing a parachute that could be controlled was conceived not too long after the parachute was introduced as a life saving device. The need for a controlling factor in the canopy was readily recognized in order to spare the parachutist from the mercy of prevailing winds and obstacles on landing. The first and true steerable parachute originated in the United States in the mid-twenties. This was the Hoffman triangle design. We shall discuss the triangle somewhat in detail later.

First, let us approach the question of steerability from a standpoint of reasoning. The accepted result of a blossomed parachute canopy and load descending in the earth's atmosphere can well be used to illustrate the factors of steerability. With this illustration reproduced mentally, we may deduct that we have an **element** and an **implement** to work with in obtaining horizontal and directional control. The element being the inherent airfoil in and around the canopy created by the drag of the canopy, and the implement being the sail or a portion of the parachute canopy.

Referring to our descending flat circular canopy, we agree that the airfoil pressure, induced by drag, is equal on all sides within the canopy. By removing a section in the rear half of the canopy, relief or thrust is created, thus driving the parachute in a forward motion incorporated with the vertical descent. Having arrived at the horizontal speed factor, we find a method to turn the chute in the age old principle of the rudder. In connecting a line to either side of the relief ports, it becomes convenient to distort the openings creating a deflection or un-

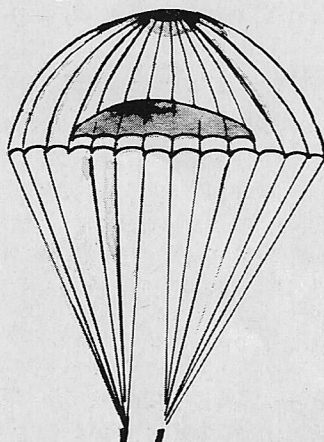
balancing thus spinning the parachute in the desired direction at will.

At this point I would like to describe and discuss the more widely known and approved steerable designs in the general order of origin.

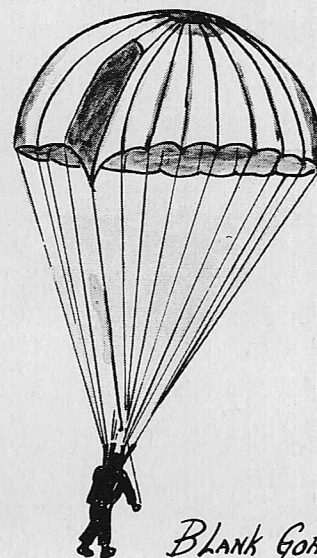


*TRIANGLE*

**TRIANGLE:** Designed by Major Hoffman in the mid-twenties in the United States. The canopy is basically flat circular with a triangle shaped relief in the rear half. It is extremely stable, but unusually slow in turning. The American triangle was constructed with a maze of tapes resulting in difficult manufacturing and packing. A German model of simpler construction was fashioned which retained the general shape and performance characteristics of the American design.



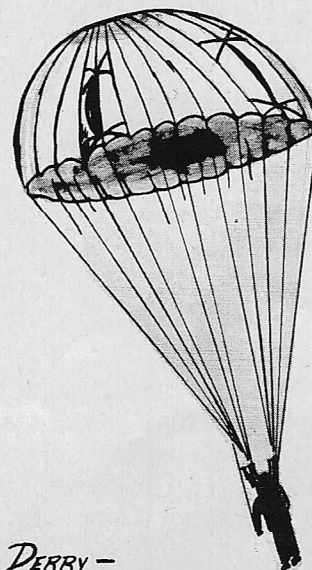
*Tojo*



*BLANK GORE -  
Right Turn Attitude*

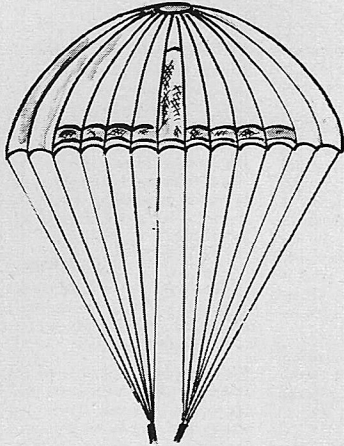
**TOJO:** Designed by Dave Gold, of Irvin Airchutes. The relief port shape resembles a half moon positioned in the rear center. Exact performance data is not available at present, but it is reported to be slow in turning.

**BLANK GORE:** Originated in Great Britain in the early thirties. The blank gore has a forward speed of 4-6 mph with a medium turning speed of 360 degrees in 6-7 seconds. It is reasonably stable on turns and has been regarded widely as the standard steerable until recently.



*DERRY -  
Left Turn Attitude*

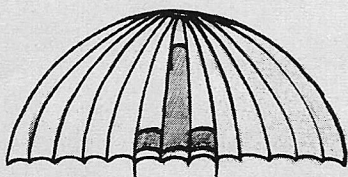
**DERRY SLOTS:** Designed by Frank Derry in the late thirties and utilized quite extensively by the Forestry Service and Air Force. The Derry has a forward speed of 3-4 mph with a slow and unstable turn factor. They have been used in combined design with the blank gore, adding a further degree of stability to this design.



*HART - Recent Model With Netting in Open Areas*

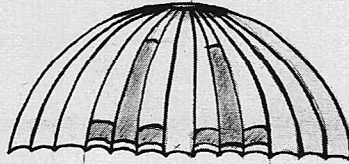
**HART:** Designed by Richard Hart in 1941. The more recent design of 1954 includes four small lateral slots extending along the skirt on each side of a blank gore. The Hart is reasonably stable with a forward speed in the vicinity of 6 mph. The Hart is turned by pulling the respective rear riser in the desired direction of turn, and is consequently, slow in turning.

All of the following are recent models utilizing the Brydon & Hughes Deflect-O-Spill principle. This principle is the fastest known canopy turning factor in existence. Basically, this is the unique combination of two known principles working simultaneously from one steering line. The Derry slot is a good example of the spilling effect in turning a parachute canopy and the Blank gore an example of the straight deflection principle. By combining the two principles we have obtained a sensitive and high accelerable turn ratio.



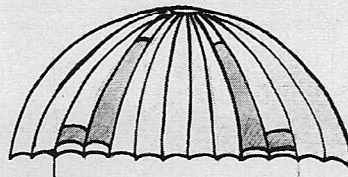
*SINGLE T - "CHARGER"*

**SINGLE T:** The "Charger" is fairly stable on turns with a speed of 360 degrees in 6 seconds or less. The forward speed borders 6 mph.



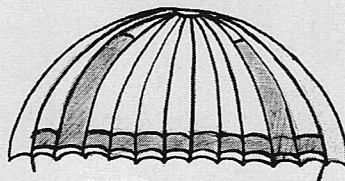
*DOUBLE T*

**DOUBLE T:** This model has a forward speed in the vicinity of 8 mph. The double T gained international fame in the 1959 Adriatic Cup with the remarkable turning speed of 5 seconds, and Loy Brydon at the helm; however, it does possess one undesirable trait in that the double T becomes quite unstable on turns. This unstable tendency has been corrected in recent Capital prototypes "Cavalier" and "Cavalier" S-5.



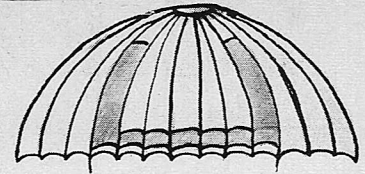
*DOUBLE L - "Cavalier"*

**DOUBLE L:** The "Cavalier" also has a forward speed in the vicinity of 8 mph. It has fair stability on turns, and turns 360 degrees in 5 seconds or less.



*TU - "CONQUISTADOR"*

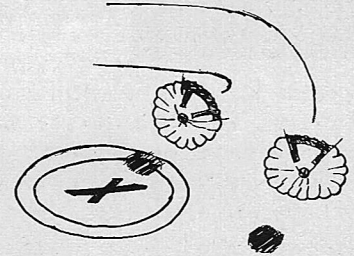
**TU:** The "Conquistador" is internationally renowned, from proven performance, as the ultimate parachute for competition. It has a forward speed range of 8-11 mph with a turning speed of 360 degrees in 5 seconds or less. In addition, the Conquistador incorporates good stability on turns. This is a "hot competition design" and should not be jumped by the inexperienced parachutist.



*U GORE*

An off standard design of the Conquistador has evolved in the form of a U gore. This particular model has a forward speed of 8-10 mph and turns MUCH slower resulting in a sweeping turn. The reason for this slow turn factor can be traced to the single deflection surface which is not sufficient to break up the high residual forward thrust. Let us look at the forward speed vs. turn radius from a different angle. The maneuvering ability of a high forward speed, slow turn ratio canopy would be comparable to driving a supersonic racing machine in a winding course such as Le Mans when the car won't corner worth a darn.

*TURNING RADII of TU & U-GORE*

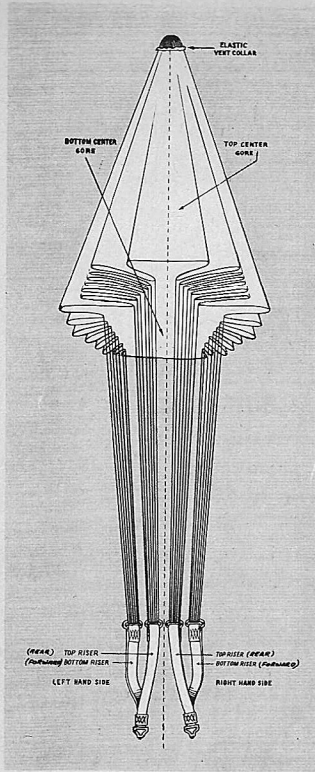


Another less popular "off the wall" design is the triple blank gore. This could also be classed in the same category as the U gore. We tested the triple gore over a year ago, and came up with the following:

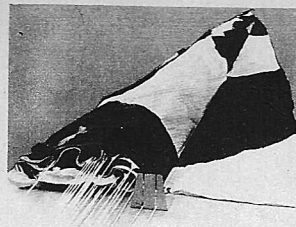
**First:** The triple gore turns very slow and drops like a rock. (Over the 21 ft. per second FAA TSO rate of descent limits.)

**Second:** True, you can reduce the rate of descent by not extending the open gores into the pressure area. **RESULT**—a very woefully slow turning parachute.

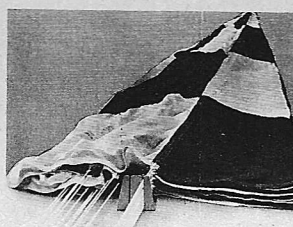
In my opinion, prejudiced, I foresee no advancement in turning principle over the Brydon & Hughes "Deflect-O-Spill" until we transit from the flat circular to a revolutionary canopy design. This change, however, may include some undesirable performance characteristics. But who is to say: "This is the ultimate End." Perhaps Wilbur Wright might have remarked some similar phrase to Orville on their momentous first fifty-odd feet of powered flight.



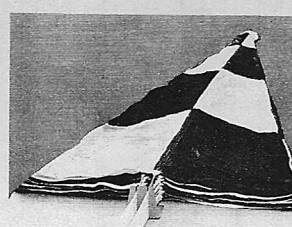
**FIGURE 1**  
CORRECT CANOPY, LINE,  
RISER LAYOUT



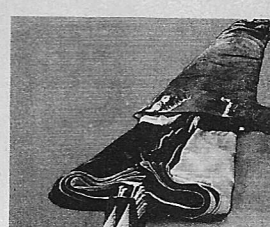
**FIGURE 2**  
PLEATING THE CANOPY



**FIGURE 3**  
RIGHT SIDE PLEATED



**FIGURE 4**  
ALL GORES PLEATED



**FIGURE 5**  
PLACING THE LAUNCHING  
SLEEVE ON TO FOLDED CANOPY

The Pioneer Sport Parachute packing instructions are intended for personnel who are thoroughly familiar with parachuting. Inexperienced personnel should be guided by a competent Parachute Technician prior to, and during the packing of this or any parachute. Lay the complete parachute assembly on the packing table as if a jumper were wearing it face down with his head toward the canopy. All directions (right, left, top bottom,) are taken from this position. Reference Figure #1.

Anchor the vent of the canopy and the two risers. Apply nominal tension to keep the canopy and lines taut.

Thoroughly inspect all the component parts of the parachute for damage and wear.

Refer to Figure #1; check the suspension line canopy/link attachment for entanglements and cross-overs. Extreme care and thorough checking of the line sequence must be accomplished at every re-pack, since the risers could have been removed from the harness and improperly replaced, thus causing crossed lines and severe entanglement.

#### PLEATING THE CANOPY

Pull the elastic vent collar down past the vent hem and equalize the vent lines so that the vent band is parallel with the skirt band. Pull the vent collar back into position over the vent lines.

Refer to Figure #2 for the correct starting procedure.

The lines connecting to the bottom center gore are placed in their respective line holder slots, (#14 in the left, #15 in the right.) The bottom center gore is then pulled out and pleated to the right.

Continue pleating the right hand gores until the top center gore is reached. All the lines leading from the right hand riser will then be in the right hand slot of the line holder as shown in Figure #3. Place the unpleated gores from the left hand riser on top of the gores just pleated. Repeat the pleating operation starting with the line previously placed in the left side of the line holder slot (#14) until the top center panel is reached as shown in Figure #4. A total of fourteen pleated gores and lines will then be on both sides. No lines should cross to the opposite riser.

It is a good practice to check visually the pleating operation by lifting the top center gore and checking the full length of the canopy for panels or gores that did not lay out to their full width.

#### FOLDING THE CANOPY

Fold the outside edges of the pleated gores over to the center. Do not over-fold onto the line channel (main seams). In order to reduce the folded skirt band packed thickness, it is spread-stacked toward the vent as shown in Figure #5. By folding the gores in this manner, the approximate width of the launching sleeve will be obtained.

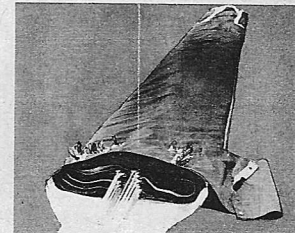
#### INSTALLING THE LAUNCHING SLEEVE

Lay the launching sleeve out flat with the line stowage panel facing up. Thread the sleeve, vent end first, onto the forearm. Release the canopy vent from the anchor or tension device and grasp the vent lines with the threaded sleeve hand. Pull the sleeve onto the canopy and re-anchor the canopy vent. Pull the sleeve down the full length of the canopy as shown in Figures #5 and #6. Attach the pilot chute bridle to the center of the sleeve bridle and to the pilot chute loop.

#### CAUTION

Under no condition should the pilot chute bridle be attached directly to the canopy vent lines. Always double check to make sure the pilot chute is attached to the sleeve bridle only!

**NOTE:** A sleeve retention line can be used in cases where the sleeve/pilot chute may drift to inaccessible terrain. This may be accomplished by using a sixteen foot length of line which is secured from the canopy vent lines to the centering loop on the sleeve bridle. Form a 3" diameter loop around all vent lines and secure with a bowline knot. The other end is tied off around and through the pilot bridle loop and sleeve bridle. The excess line is then neatly stowed in a loose fold and secured with a rubber band and then placed well down inside the sleeve on either outboard side.



**FIGURE 6**  
LAUNCHING SLEEVE ON THE  
CANOPY

#### STOWING THE LINES

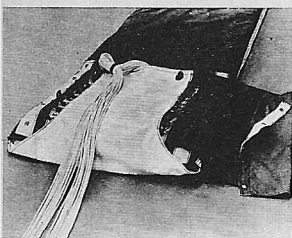
Release the anchor or tension device at the vent and pull the sleeve/canopy down toward the line holder approximately 2'. Keep the line holder approximately 3' from the sleeve during the line stowage operation. Lay the two groups of lines up the center of the sleeve and past the two flap locking retainers. Turn the locking flap up in position with the two locking line retainers and through the flap guard. Place the lines through the left hand locking retainer as shown in Figure #7.

#### CAUTION

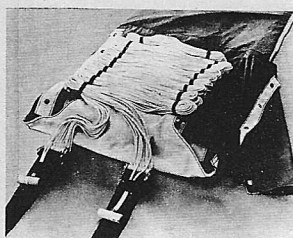
All line stowage bights (or loops) should be approximately 1" to 1 1/2" in length. Under no condition could a line deployment malfunction. Do not twist or entangle the two groups of suspension lines as they lead from the line holder. Line stows should be neat and 'S' turned in sequence at every bight or loop.

Stow the line through the right hand flap line retainer as shown in Figure #8. Continue stowing the lines until approximately 18" of line is to the links. Refer to Figure #8. Secure the line cover in place and position the two risers as shown in Figure #9.

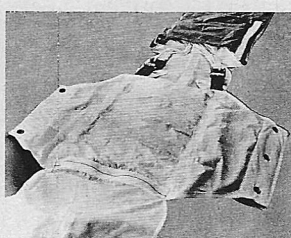
**PLACING THE LAUNCHING SLEEVE ON THE CANOPY**  
Carefully lift the sleeve/canopy up and down



**FIGURE 7**  
STOWING THE LINES ON THE  
LOCKING FLAP



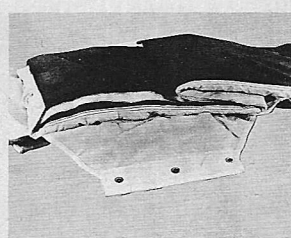
**FIGURE 8**  
LINE STOWAGE COMPLETE



**FIGURE 9**  
PACK AND RISER LAYOUT



**FIGURE 10**  
LAUNCHING SLEEVE PLACED  
ON PACK



**FIGURE 11**  
FIRST LAUNCHING SLEEVE FOLD  
ON PACK

bottom edge of the pack as shown in Figure #10. Both sets of riser links are spread on the top pack bow stiffener. (Forward risers toward the center of the pack). The lines should lead directly from the links down to the bottom center of the pack and up to the last line stow on the sleeve.

Fold the sleeve on the pack as shown in Figures #11 and #12. The top or last sleeve fold (Refer to Figure #12) will vary in length depending on the length of the previous folds. However, the sleeve pockets and bridles should always be neatly folded under the last fold to protect same from entanglement with the pilot chute. The pilot bridle should lead directly out from under this last fold and toward the top center of the pack. Refer to Figure #12.

**CLOSING THE PACK**

Pull the pack left side flap up on top of the last sleeve fold. The right side flap is then placed over the left side with the center pack cone temporarily locked in place as shown in Figure #13.

The pilot chute can be compressed and centered under the center cone during the above side flap closure or after the two side flaps are closed, whichever is more convenient. However, the pilot canopy must always be neatly and evenly tucked under the large spring diameter (pilot cap) during the spring compression. Place the pilot bridle next to the compressed pilot chute toward the top of the pack. In-

sert the ripcord cable in the housing and close the pack top end flap using the top (closest to the handle) ripcord pin.

**NOTE:** When using the static line (in lieu of the manual ripcord), the cable must be inserted through the static line guide ring first and then through the pack cones.

Remove the center cone temporary packing pin and insert the center pin in the center pack cone. Close and lock the bottom end flap with the bottom (last) ripcord pin.

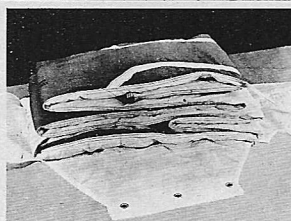
Attach the pack opening bands by pulling both ends of each spring simultaneously, to equalize the tension on both side flaps.

Safety tie and seal the bottom ripcord pin with a thread of no greater than 6 pounds tensile strength. Figure #14 illustrates the complete parachute ready for use.

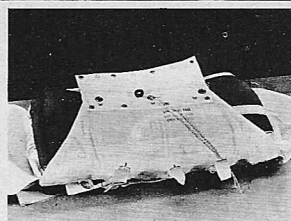
Close the ripcord protector flap. Fill out the packing card correctly and insert it in the inspection pocket of the pack.

**REMINDER:**

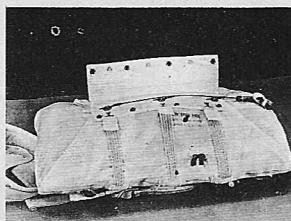
A thin (evenly distributed) neat looking pack is a sign of careful conscientious packing. The Pioneer Sport Pack is designed for simplicity and comparative ease of closure. The packed appearance is therefore governed by the individual's packing ability, which can be a credit to his craftsmanship.



**FIGURE 12**  
LAUNCHING SLEEVE FOLDED  
ON PACK



**FIGURE 13**  
PACK SIDE FLAPS CLOSED



**FIGURE 14**  
RIPCORD INSTALLED. READY TO  
SAFETY TIE AND CLOSE THE  
PROTECTOR FLAP

character of most of the jumpers gives the reader the impression that the parachuting crowd is but another version of a black-leather-jacket gang.

As a novel, the book lacks any real content. In fact, it appears to be two stories; one on barnstorming sport jumpers, and another on the travail of a group of neo beat characters who go floating about the San Francisco area. The two sets of characters never seem to merge.

In summary, this story probably will not do anything to advance the sport of parachuting. If anything, the book will make our job of selling the sport a little more difficult.

Skydiving, the Art and Science of Sport Parachuting, Bud Sellick, Prentice-Hall, N.J., 1961; \$5.95

Generally speaking, author Sellick has done a very acceptable job of presenting the sport of sky diving in his book. Much of the photo coverage is excellent for that period during which the book was assembled. Today, however, airborne photo techniques have advanced to a point where clear and sharp free-fall close ups are the rule.

Sellick has done a good job in accumulating a large amount of factual information on general parachuting. However, the organization of the material leaves something to be desired.

The use of relatively unknown material on such figures as Jack Clapp, Spud Manning, and Tiny Broadwick is certainly very interesting. On the other hand, it seems a little hard to justify such topics as space capsule recovery and high altitude military experiments in a book on sport parachuting.

It is always disappointing to see material used without acknowledgement or proper credit. For example, the diagram on page 136 on spotting and the use of the Wind Drift Indicator is just a reversal of an illustration from Russ Gunby's Book "Sport Parachuting" (page 34). In fact, neither Gunby nor his book are either credited or acknowledged.

Another use of material without credit is the series of diagrams and terms on pages 159 and 172. These, in a slightly different manner, appeared first in the book "Chute Libre" by Andre Suire, and no credit or acknowledgement is given in this case either.

For a book that is billed as the "Art and Science of Sky Diving" the volume falls short of dealing adequately with the topic. It is a blend of a technical document for use by the practitioners of the sport, and a popular historical and narrative treatment of a new and interesting subject.

In summary, while the book is by no means bad, it does fall short in its stated purpose. Its strongest areas are photo coverage of exits, and exploration of early jumps and jumpers.

The book is weak in that it does not point out the role of the clubs in developing the sport. As one 13-year old afficiando said, "Anyone reading this book might think he could just go out and rent a chute and jump if he followed the instructions here."

\* \* \* \* \*



DESTRUCTION OF MILITARY SURPLUS PARACHUTES: Destruction of military surplus parachutes continues.

It appears that the Defense Department has no intention of reanalyzing it's current procedure, therefore it is most important that you continue to write to your congressman for intervention on your behalf.

Mr. Bill Schulpius in Wisconsin has been writing and here are some of the favorable replies he received:

"Dear Mr. Schulpius:

March 12, 1962

Thank you for your letter of March 8 concerning the treatment now given to Government surplus parachutes.

This certainly seems ridiculous to me, and I shall be glad to look into the possibility of changing it. I shall get in touch with you again shortly.

Sincerely,

(Signed) Henry S. Reuss  
Member of Congress"

"Dear Mr. Schulpius:

March 13, 1962

Thank you for your letter of March 8 concerning the federal government's policy of demilitarizing surplus parachutes before releasing them for sale, thus rendering them useless for sport parachuting.

Since this matter is subject to federal regulation, I have taken the liberty of referring your letter to Senator William Proxmire and have asked him to contact the federal officials to see whether a change in policy is possible. I have asked Senator Proxmire to inform you directly of the result of his investigation.

Sincerely yours,

(Signed) GAYLORD A. NELSON  
GOVERNOR"

"Dear Bill:

March 13, 1962

I very much appreciate your calling my attention to your interest in obtaining surplus parachutes while they are in a useable condition.

You will be interested in knowing that in your behalf I am writing the Department of Defense and General Services Administration to ask for a report on this. Just as soon as I hear from the agencies I will write you again.

Your interest in parachuting as a national sport is commendable!

Sincerely,

(Signed) William Proxmire, U.S.S."

The only bad feature of this is that each congressman receives the same form letter from the Department of Defense, forwards this same letter back to you, and there the issue stands ..... unless you write again expressing dissatisfaction with the Defense Department solution and requesting further investigation. Causes for further investigation are:

- 1) Surplus parachutes have not proven to be dangerous.
- 2) You, the taxpayer, pay for the chutes initially, and when they are declared surplus, you are not allowed to purchase them through the normal surplus sales outlets. Worse yet, the Defense Department has them destroyed and then sells them for scrap at a much lower rate than the government could get for a complete surplus parachute..... and thereby loses, and wastes, your tax money.
- 3) The Defense Department allows the chutes to be donated free to any military sport parachute club and allow them to be used in sport parachuting on or off post, yet civilians are not even permitted to buy them ..... and they, being a majority, paid for them in the first place!
- 4) The Defense Departments major reason for destroying orange and white canopies is that pilots see these canopies in the air or on the ground, report an emergency bailout, and the resultant cost of sending out search crews and aircraft to look for the "downed pilot" is so great that they must destroy these parachutes to prevent the high cost of search activity. BUT, SO FAR THEY HAVE NOT PRODUCED ANY FIGURES TO BACK UP THIS GREAT EXPENDITURE! AND, FURTHER, HALVES AND  $\frac{1}{4}$  SECTIONS OF ORANGE AND WHITE CANOPIES ARE STILL BEING RELEASED FOR SURPLUS SALES AND BEING USED TO COVER BOATS, PICNICS, ETC., SO THAT IT IS STILL POSSIBLE FOR PILOTS TO SEE THEM AND REPORT "DOWNED PILOTS"!

In other words, their solution to their problem is still not being solved by a method which is working a great hardship and financial handicap on all sport parachutists, losing revenue for the government, while keeping the same costs in "false alarm, downed pilot" investigations!

- 5) The whole program just doesn't make sense. Unless of course we can prove that the initial reasons for the destruction of economical surplus parachutes has been caused by the large manufacturers of new sport parachute equipment in order to sell their own products. We don't feel that this is the case, actually, because there just isn't that much money to be made from such action at this stage of the game. However, we have not discounted this totally, and will continue to look for such reasons (or stockholders) in our dealings on this matter.

Meanwhile, keep up the flow of protest to your congressmen and feel free to use any of the material herein to make a strong pitch.

\* \* \* \* \*

CORRECTION TO NATIONAL PARACHUTE MEET REGULATIONS FOR MAY, 1962: Based on the most recent change made to competition regulations by the Federation Aeronautique Internationale in Paris, Event III (Style Event) scoring has been changed. The old method contained a 35 point penalty if maneuvers started prior to the 5th second. This has been changed so that the jumper can start his maneuvers at any time and will be timed from the beginning of the maneuvers until their completion.

\* \* \* \* \*

INTERNATIONAL PARACHUTE RECORDS: Sky Diver Magazine, using its normally poor editorial taste, was recently critical of us for not publishing the fact that the two world records made last November by the US were not made official in print as yet. The reason for this being that they were not final until we received the homologation from the FAI on 6 April 1962. The records, as previously reported herein, now stand as an official world record.

While we are discussing world records we thought that maybe you'd like to see some pictures of Mrs. Susan Pol getting ready to make her attempt on the women's night jump and pull record from 20,000 feet.



Mr. Darrell Sonnichsen, PMA's VP and Directing Official for the Record, wishes Mrs. Pol good luck.



Descending, this is also the way Susan backed off the plane at slightly over 20,000 feet, immediately opened her chute, and started the long, lonely descent to the new women's night altitude jump and pull record. Husband Jim watched her go out, then came around and made a free fall down to 2500 so he could be there when she landed. Both were blown far off course by high winds but both landed safely and consider the effort well worth all the hard work that went into the project.



Suiting up seemed to take quite a bit of help from Jim Pol, Tommy Boyd, and Perry Stevens who are, at this point, affixing the barograph below her reserve. To ward off the 45 below zero cold, Susan wore a wet suit over net suit topped by jacket and cold weather suit, electric mittens and boots.

PARASLAUGHTER: In all new fields of endeavor new words are created which are peculiar to that activity. We have coined a new word in sport parachuting: PARASLAUGHTER! We will use Paraslaughter, meaning the killing of a human being unlawfully but without malice aforethought and utilizing a parachute. Paraslaughter is accomplished with a parachute in the same manner that manslaughter is done with an automobile: flagrantly disregarding safety rule, carelessness, recklessness, and negligence, by people who are motivated by selfishness, egoism, and, like the careless driver, with utter disregard for the lives of others.

Experience has now shown that people are killed in sport parachuting either by the true accident or by paraslaughter. Paraslaughter must be stopped! We have pressed the individual parachutists to keep their own sport clean. This is still not working. Perhaps bringing formal charges of manslaughter against those persons responsible when evidence of carelessness or neglect is involved in a death is the solution. This action would certainly curtail sport parachuting, (and also prevent useless deaths) but something must be done! The line is drawn.....

\* \* \* \* \*

SPORT PARACHUTING DEATHS - APRIL, 1962

FATALITY

(incomplete report)

Name: Stanley Lum Ho

Date: 14 Apr 1962

Place: Maui, Hawaiian Islands

PCA Member: No

Club: None

Previous Jumps: Military static line jumps, no sport static line jumps, no free falls.

Aircraft: Piper Tri-Pacer, left rear door.

Type of Jump: Jump and pull from 2500 feet.

Cause of death: Failure to pull either ripcord.

DESCRIPTION (Heresay and unconfirmed)

Mr. Stanley Lum Ho sought help to start a sky diving club on the Island of Maui. An officer of one of the clubs on Oahu--an ex-Army rigger with 39 static line and 76 delayed fall jumps--went to Maui to train Mr. Lum Ho. A club safety officer also was present to assist in checking out the deceased. From all indications the subject was an eager student and passed a check out by both men. This was to be his first jump since serving with the 11th Airborne Division roughly nine years ago.

With the club officer from Honolulu as his jumpmaster, Mr. Lum Ho was scheduled to make a jump and pull from 2500 feet. Mr. Lum Ho exited with his hand on the ripcord and immediately fumbled it and came out in a stable position without pulling the ripcord. He attempted to pull the ripcord several times but to no avail. He then went back out to a stable position and held it all the way into the into the ground.

An FAA investigator immediately checked both parachutes and found them to be in operating condition and clearing the possibility of any malfunctions. In conclusion it was the opinion of those on the scene that the jumper had frozen or had a "target fixation".

PCA Note: If the above facts are true, then this is paraslaughter! The deceased jumper was not trained for sport parachuting. The report said that the visiting "safety officer" checked the man out and the deceased "passed the check out with flying colors". Students don't get "checked out" they get "TRAINED".....or they shouldn't jump. MILITARY STATIC LINE JUMPS CANNOT BE CONSIDERED AS TRAINING FOR SPORT PARACHUTE JUMPS. If anything,

military jumpers should be watched more closely because military positions used with sport parachuting equipment can become dangerous. Also, there had been a jumping gap of nine years. No sport static line jumps were indicated is another mistake. The reason we have preached the static line training jumps was to eliminate this type of fatality!

PCA is endeavoring to get a more complete report on this fatality. If what was initially reported here is even half true, then we can expect more fatalities from our newest 50th state.....particularly if their "safety officers" perform in the manner indicated. A new Area Safety Officer has just been appointed. We hope that he will not allow paraslaughter to continue in his area.

\* \* \* \* \*

FATALITY

Name: Howard Gatrell                      Age: 41                      Weight: 205  
Date: April 22, 1962  
Place: Middlefield, Ohio  
PCA Member: Yes  
Club: Cleveland Parachute Club  
Previous Jumps: 130, Class B License  
Aircraft: Cessna 170B  
Type of Jump: Free Fall, 30 Second Delay, Altitude: 7200 feet.  
Cause of death: Accidental Opening of Reserve in Aircraft.

DESCRIPTION (ASO and Pilot)

Mr. Gatrell was to be the third man to leave the aircraft in a group jump, his second jump of the day. All men were licensed and qualified for the jump being made. Equipment was properly packed and in date.

Exactly what happened will never be known. The pilot was watching forward, holding heading, talking to ground control on radio, and watching for other aircraft in the air. He heard the first two jumpers leave and then approximately three seconds later heard a thump and a ripping sound. He lost momentary control of the aircraft and looked back over his right shoulder and saw only a flash of white. The doorpost was damaged and the aircraft was landed without further damage.

The second jumper did not see or feel anything unusual on leaving the aircraft. He had told Mr. Gatrell to watch his reserve ripcord handle when he moved forward into the jump position. As he moved forward he saw that the deceased had his hand over the reserve handle. It is possible that either the reserve popped and caught on the second jumper and was carried out of the plane or Mr. Gatrell popped the reserve in the door and might have tried to sit back down in the aircraft. Also, he may have possibly tripped and activated his reserve. It is evident that the inflating reserve pulled him from the aircraft through the doorpost and simultaneously broke his neck. The reserve deployed properly except that several suspension lines were broken. Mr. Gatrell floated to the ground, landing about one mile from the DZ, and was dead prior to landing.

PCA Note: There is no doubt that the unplanned action of opening the reserve in the aircraft is, in the true sense of the word, an ACCIDENT. The question is: Can this action be prevented? The answer is yes, as you know.

- How?      1) Take your time in moving in the aircraft and protect the ripcord at all times, preferably with the left hand.

- 2) Have a qualified master rigger switch the reserve handle to a center pull handle. Even if this is done, protect the handle at all times.
- 33) Make all jumpers conscious of this hazard by proper orientation and training. Drill them in protecting the ripcord.

\* \* \* \* \*

FATALITY

Name: Ronald H. Lorenzen           AGE: 28  
Date: 29 April 1962  
Place: Clear Springs Airport, near New Brunswick, Texas.  
PCA Member: No  
Club: Guest with Lone Star Skydivers;  
Previous Jumps: 11 (3-S/L in Wisc., 2-S/L (Tex.), 1-J&P, 3-5' Delays, 2-10' Delays.)  
Type Jump: First 15' Delay, 4500 feet, alone, under female jumpmaster supervision.  
          Exited left rear door of Tri-Pacer.  
Cause of Death: Failure to pull either ripcord.

DESCRIPTION (B & D Licensed Witnesses thru ASO)

Mr. Lorenzen, a continual guest jumper from Randolph AFB, had made eight previous progressive jumps with this club. He was calm and cool and not a nervous type. His previous stability was good.

The deceased was briefed prior to the jump by the jumpmaster and his altimeter checked during the flight to altitude. Mr. Lorenzen exited with his hand on his stopwatch, tumbled out, made three or four slow spirals and gained stability by eight seconds which he held. At about 2500 feet he went in for the ripcord but didn't pull and flared. At about 1200 feet he put his hand on the main ripcord and held it until impact. His smashed stopwatch read zero time.

An FAA investigator was on the scene in 40 minutes, inspected the equipment (deployment bag main), and cleared the equipment. No further FAA investigation is apparent.

PCA Note: PCA has had several reports on the inadequate training and safety of this group. Investigation continuing.

\* \* \* \* \*

FATALITY

Name: Thomas H. Nobbs           AGE: 20  
Date: 25 April 1962  
Place: Warren Airport, Warren, Penna.  
PCA Member: No  
Club: ChChautauqua Sky Divers  
Previous Jumps: 18 Jumps. (5-Static Line, 13-delayed falls)  
Type Jump: 15 Second delay, 4300 feet, first on 3 man mass exit, Cessna 170.  
Cause of death: Drowning.

DESCRIPTION (ASO)

A planned three (3) man mass exit from 4,300 feet for a delay of 15 seconds. Nobbs was first to leave followed directly by the other two jumpers. All jumpers appeared to pull high, in winds that had not affected the wind streamer. Stuart faced into the wind and made his landing on the airport. Second jumper landed in the river, surrounding the airport on three (3) sides. He was seen floating in the rapid current by witnesses for approximately 90 seconds, sinking as his equipment became water-logged. As of this writing the body has still not been recovered. The third jumper ran downwind landing near a highway south of the river.

PCA Note: The drop zone was not suitable for student jumping. Flootation gear was available but was not worn by the deceased while jumping within one mile of an open body of water. No rescue equipment for water landing was apparent from the report. The safety officers involved must bear full responsibility for this fatality.

\* \* \* \* \*

FATALITY

Name: Donald L. Peterka  
Date: 29 April 1962  
Place: Ft. Bragg, N.C., Sicily DZ  
PCA Member: Yes  
Club: XVIII Corp Sport Parachute Club  
Previous Jumps: 57 Delayed Falls, Jumpmaster  
Type Jump: 10 Second Delay, 3600 Feet, alone, last man.  
Cause of Death: Released capewell 150' above Ground.

DESCRIPTION (ASO, unofficially)

Donald Peterka was jumpmaster of the planeload, dropped the jumpers correctly, and, on the last pass, exited himself, made a correct delay, normal canopy opening and maneuvering. At about 150 feet above the ground it appeared that one capewell was released and the main collapsed. Peterka immediately and properly activated and threw his reserve, however, he impacted with the ground prior to reserve inflation and died of multiple fractures and contusions. No equipment failure was evident.

Peterka's club record was excellent. He was level headed, competent, a good jumper, and jumpmaster, and a graduate of the military sport parachuting jumpmaster course.

Unofficial inquiry revealed that Peterka was curious about, and had previously discussed with other club members, the possibility of releasing a capewell while in the air and then hang onto the risers until the feet touched and then immediately let go. He did not indicate to anyone on the date of the occurrence that he would or did intend to try this procedure. However, in view of witness reports and the fact that his equipment was servicable, it appears that this was the cause of his death.

PCA Note: It is regrettable that Ft. Bragg has received it's first true sport parachuting fatality in 3½ years and over 50,000 sport jumps. Again the cause was jumper error--deviation from common sense safety, undertaking an experiment for which he was not qualified and lacked the necessary experience.

\* \* \* \* \*

" DEATH IS, TO A CERTAIN EXTENT, AN IMPOSSIBILITY WHICH SUDDENLY BECOMES A REALITY."

...Johann Wolfgang Von Goethe

\* \* \* \* \*

FATALITY

Name: Bobby W. Blaydes            Age: 26  
Date: 23 April 1962  
Place: Superior, Wisconsin  
PCA Member: No  
Club: Superior Sport Parachute Club  
Previous Jumps: None  
Type Jump: First Static Line Jump  
Cause of death: Lack of pre-jump equipment check and failure to activate reserve.

DESCRIPTION            (ASO)

"On April 23, 1962, Bobby Wayne Blaydes, 26, of Beaver Bay, Minnesota, and a member of the Superior (Wisconsin) Sport Parachute Club, was killed while making his first jump. Death was caused by backpack malfunction and failure to pull reserve. The backpack malfunction was caused by leaving a temporary packing pin in the pack. They were using the string tie type of static line. The backpack was a 32' type with a cone and grommet on the pilot chute. The pin was left in the pilot chute cone. Blaydes made no attempt to pull his reserve. He was not a P.C.A. member.

Blaydes was in an overweight condition and one doctor had refused to sign his medical certificate, but another doctor had. At this time, I don't know the reason for the first doctor's refusal. It has been established that Blaydes did not have a heart attack.

The jump was made out of a tri-pacer. The jumpmaster states that Blaydes had trouble remembering how to exit the plane and appeared very nervous. The jumpmaster had 20 jumps and was on 10 second delays. The president of the club had 79 jumps of which 30 some were military static line type. This club does not teach poised exits because they had never known or had been shown how. Blaydes had been told to put his feet out the door and push out head first. This was standard procedure. The club had part time use of a 180 Cessna but thought it was unsuitable for students. When they used it they didn't remove the door. The students and all other jumpers are taught to expect a front loop as natural on each jump.

I was only in Superior for 3 hours on Tuesday, so I am going back this week-end to straighten out this group and get more of the facts. I am particularly interested in the reason he was turned down by the first doctor. I will have more of the facts and a report on what is being done to help this club get the right ideas and training. You will get a further report the first part of next week."

PCA Note: We hope that this report will have the impact on you that it has on us! This utterly useless and sickening death from one small pin! And this one small pin involved poor packing, inadequate training, questionable physical condition, and a lack of safety in all directions. We also hope that this death will bring home to everyone the fact that in the next five years there will be hundreds of incidents like this unless we stop living in our own little worlds and get out and help the new forming groups. The ASO's have done extremely well but they can't, as yet, cover everything.

This death proves what we have known all along: that people are going to jump whether they're qualified or not and with or without the proper instruction or equipment. The solution is not to stop them, but TRAIN THEM! And if we don't train them, the authorities will stop everyone.....and you better believe it!

\* \* \* \* \*



INCIDENT OR ACCIDENT REPORTS: There is a great need to compile the correct statistics pertaining to the accident, injury, and malfunctions occurring in sport parachuting. Through compilation and analysis of statistics is the only way that we can prove to all that the sport is as safe as we now believe it to be. But outsiders want facts, not our beliefs. Therefore, we have reproduced herein a form on which to report all accidents or incidents. We urge every member to submit a report on each incident or accident for the betterment of statistics and their use in promoting and improving the sport.

INCIDENT OR ACCIDENT REPORT

This report should be filled out for any accident or incident. A reportable injury is one which requires the examination or treatment by a Doctor or professional nurse. All malfunctions, even minor ones, should be reported for statistical purposes.

Date of incident: \_\_\_\_\_  
Place: \_\_\_\_\_  
Time: \_\_\_\_\_  
Brief Description of Injury or Malfunction: \_\_\_\_\_

Personnel Involved:  
Name: \_\_\_\_\_  
(First) (MI) (Last) (Age)  
Address: \_\_\_\_\_  
(Street) (City) (Zone) (State)  
Club: \_\_\_\_\_  
(Name) (City) (State)

PCA Member: yes \_\_\_ no \_\_\_ FAI License # \_\_\_\_\_  
Previous Experience: No. of sport jumps: \_\_\_\_\_ No. of Military Jumps \_\_\_\_\_  
\* \* \* \* \*

Jump Altitude: \_\_\_\_\_ ft. Planned Delay: \_\_\_\_\_ sec.  
Actual delay: \_\_\_\_\_ sec. Planned relative work: \_\_\_\_\_

No. of previous jumps of this type: \_\_\_\_\_  
Planned opening altitude: \_\_\_\_\_ ft. Actual: \_\_\_\_\_ ft.  
Type canopy modification used: \_\_\_\_\_. Previous jumps on this type modification: \_\_\_\_\_  
Type Aircraft: \_\_\_\_\_  
Jumpmaster: \_\_\_\_\_  
(Full Name) (License #)

Weather: (Ceiling, temperature, ground wind (MPH) ect.) \_\_\_\_\_  
Injuries: \_\_\_\_\_

Hospitals or Doctors: \_\_\_\_\_

Full description of accident or incident: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Individual submitting report: \_\_\_\_\_  
(Full Name)  
\_\_\_\_\_  
(Address)  
\_\_\_\_\_  
(Title or Position)

Remarks, Recommendations, or Conclusions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Copy sent to Area Safety Officer: \_\_\_yes\_\_\_ \_\_\_no\_\_\_

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