Parachutist

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6TH WORLD SPORT PARACHUTING CHAMPIONSHIP

Orange, Massachusetts

AUG. 11 to SEPT. 3, 1962

DEAR MEMBER:

As of this date in 1961, one sport parachuting death had occurred. The first sport parachuting death of 1962 occurred at 4:00 PM, 4 March, Municipal Airport, Las Cruces, New Mexico. Cause: Accidental unhooking of a static line snap fastener and failure to activate the reserve parachute.

FATALITY

Deceased: Raymond Ormsbee
Aircraft: DeHavilland L-20 (Civilian)
Previous jump: 1 S/L jump
Type jump: 2d S/L jump and 1st Dummy Rip Cord Pull(Previous jump made 14 days prior)
Altitude: 3000' Wind: 3 MPH
PCA Member: No
Club Affiliation: Southwestern Skydivers

DESCRIPTION

Mr. Ormsbee was the last of four static line students, exiting individually under jumpmaster control, and making the 38th club jump of the day. Mr. Ormsbee's static line was checked for proper attachment and securing in the aircraft by the jumpmaster, himself, and the pilot witnessed the check. It was properly secured prior to the jump run.

On command of the jumpmaster, Mr. Ormsbee exited on his second static line jump. The Jumpmaster was holding the static line, but upon feeling a slight tug, released it thinking the pins were pulling. He then caught sight of the static line trailing above the jumper.

Jumper was stable initially, and made a satisfactory dummy rip cord pull. Following the DRCP the jumper held onto the dummy rip cord, appeared to put his legs together, made no effort to pull the reserve handle, and kept both arms in on the reserve. He was in a flat, stomach to earth, slow turning spin from the time of pulling the dummy rip cord until impact with the ground, still holding the dummy rip cord.

ASO's COMMENTS

Pre-Jump Student Orientation: It is the policy of SWS to instruct students to count 3000, look at the dummy ripcord, pull, then count 4000-5000. If opening shock is not felt by 5000, the student is to automatically pull his reserve. Since two of the four jumpers in this load were on their first jumps and the other two (both static) had never jumped the L-20, the jumpmaster went through dry-run exits, stable positions, dummy ripcord pulls, and emergency pulls prior to enplaning. In addition, each jumper made several practice exits and witnessed the instruction of the two new students before boarding the aircraft. The three students preceding Mr. Ormsbee were stable and made proper dummy rip cord pulls. (*see PCA note on this).

Equipment: Equipment used by Mr. Ormsbee was properly packed, serviceable, and in date as verified by FAA Inspectors.

Static Line and Procedure: The Jumpmaster is capable, serious in his business, and has done an exacting job. Just prior to beginning the jump run, the Jumpmaster and the student tested the static line attachment to the cargo ring located slightly to the rear of the left door in the floor. The pilot, who has flown over 200 jumpers in the L-20, observed both jumpers test the line. The snap fastener was in full view of the jumpers and was in the position which allowed the movable part of the snap to be facing up. The only length of static line removed at this time was that which is normally removed to permit attachment and seating. The static line had not unstowed past this point when the jumper hit. We can only speculate that the jumper or jumpmaster may have stepped on or brushed this snap causing it to release in the short period when the jumper moves out on

the step and exits. As to holding onto the line, it is not uncommon for jumpmasters to release the line as occasionally a hand has been smashed against the door frame if the jumping student is in a head-down position.

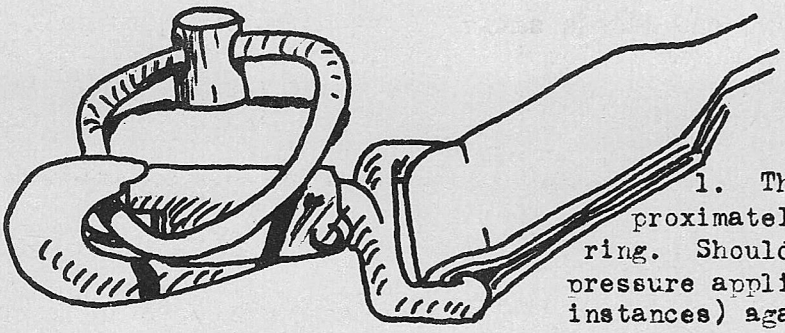
Corrections: We are modifying our static lines to include provisions for inserting a cotter key and will change the ring in the aircraft. Enclosed are drawings of the probable cause of the accidental release of the static line snap fastener. The hole in the snap for a very small cotter key is not sufficient to prevent the movable part of the snap from moving just a little. On Air Force test drops, we were using these same snaps to attach test weights. We have had all snaps become open, causing the weight to leave the chute, whether or not they were made safe with the small cotter keys.

STATIC LINE SNAP MALFUNCTION, DEHAVILLAND L-20 AIRCRAFT

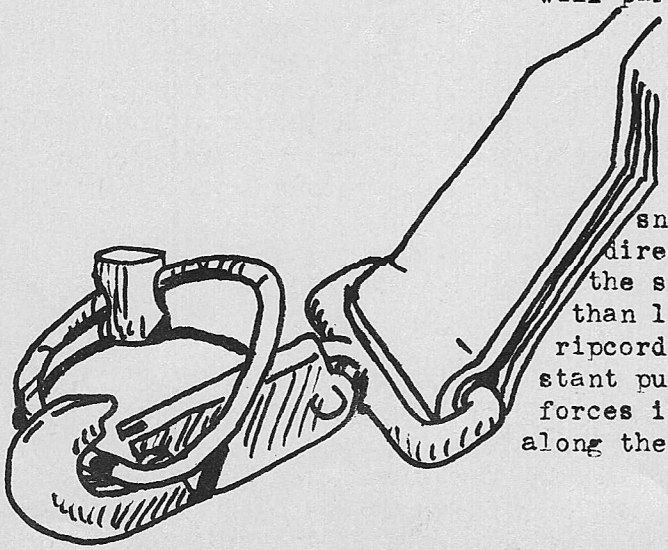
DeHavilland L-20 cargo rings, located in the floor of the aircraft near the rear of the jump doors, appear to be the perfect arrangement for attachment of static lines. However, experience has proven that the safe appearance is quite deceptive. The diameter of the ring, the oval shape, and small outside diameter of the steel forming the ring all contribute to an unsafe condition.

Location of the rings place them in a position to be stepped upon by the Jumpmaster or Student, and snaps might be disconnected by a Student sitting upon them awaiting command to get on the step.

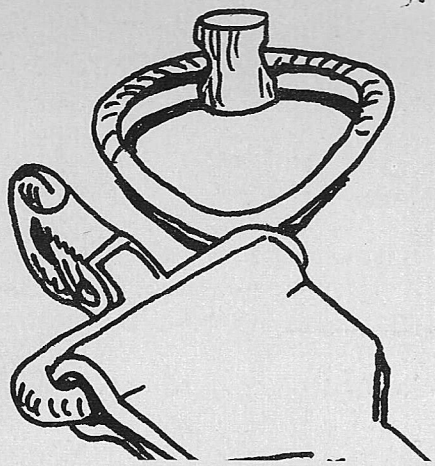
Below is a diagram of accidental snap removal. It can be accomplished 100% of the time under the illustrated conditions.



1. The snap is free to move approximately 330 degrees around the ring. Should it cross the ring, and have pressure applied (less than 2 lbs in some instances) againste the movable part, it will partially open.



2. Due to the small diameter of the wire making up the ring, the snap need open less than $\frac{1}{4}$ inch for removal. Pressure on the snap need be applied in only <u>one</u> direction to accomplish release of the snap. This pressure has been less than 1/3 of that required to remove the ripcord pins from the backpack. A constant pull on the static line not only forces it open, but causes it to move along the cargo ring toward the outer edge.



3. The snap is now free to slide off the ring either laterally or longitudinally. The fact that the ring has play in it compounds the possibility of snap removal. The oval cargo ring is at no point, no matter how it is oriented in relation to the floor post, too wide to prevent snap removal.
When snap is hooked to ring, from top down it is still subject to this phenomena, especially if other snaps are attached and the ring is supported off the floor by them.

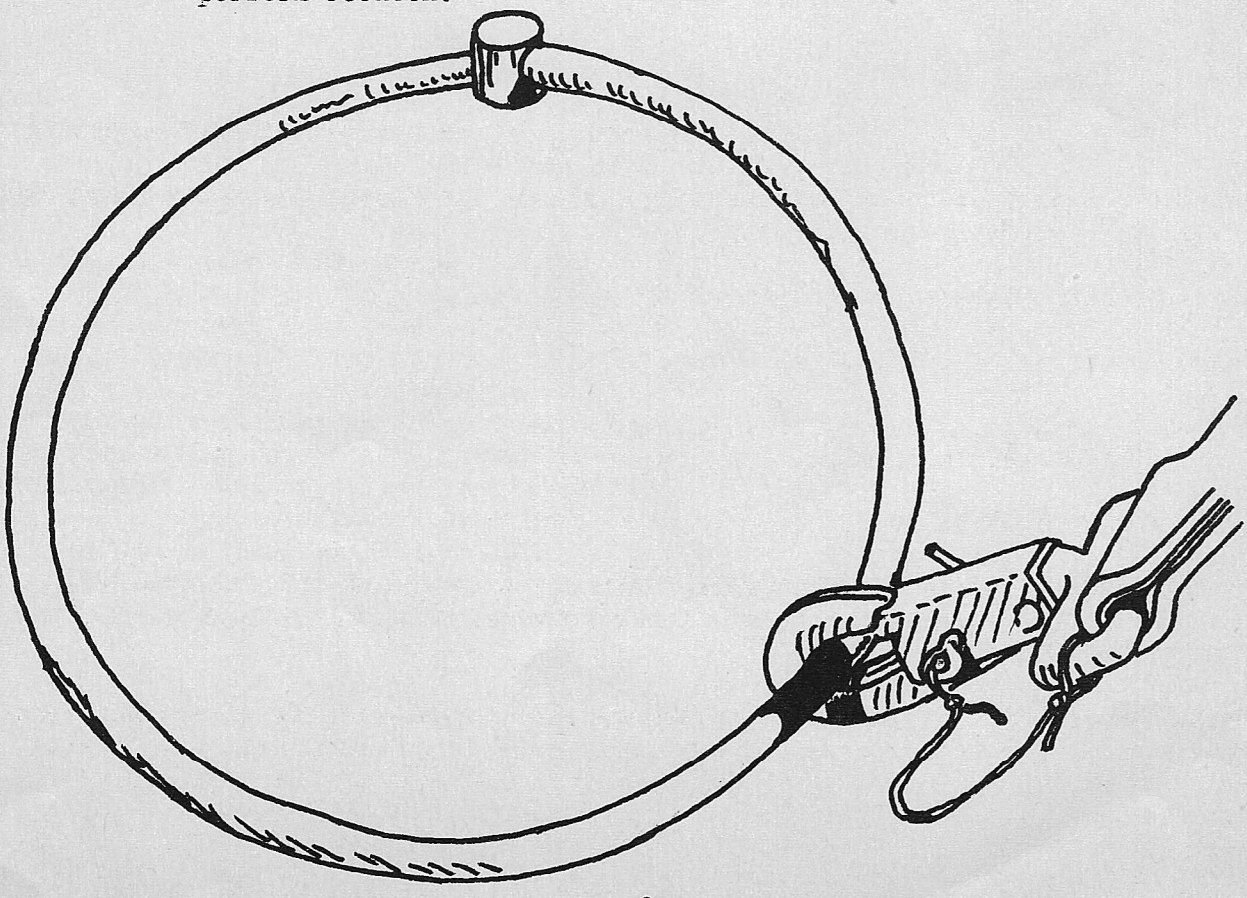
STATIC LINE SNAP MALFUNCTION, DEHAVILLAND L-20 AIRCRAFT
RECOMMENDED CORRECTIONS AND PREVENTION OF ACCIDENTAL SNAP REMOVAL

Hardware Modifications

1. Cargo Ring-Replace with circular ring of no less than 6 inches inside diameter. Ring to be fabricated of steel wire of 5/16 inch diameter.
2. Static Line Snap-Drill 1/8 inch holes through both sides of movable snap part so that a cotter pin of 3/32 inch diameter may be inserted an prevent accidental movement of the movable snap part. Attach 3/32 cotter key of no less that 1½ inch length to snap wing with 6 inch length of 100 pound shock cord.

Improving Static Line Hookup Procedures

1. Hook and safety static lines prior to starting of aircraft engine. Have static line attachment and security checked both visually and with test pulls by Jumpmaster and Student.
2. Refuse to allow aircraft to leave the ground until static line snaps are secured and safetied.
3. Recheck static line for proper attachment and safety prior to getting jumper in the door. Have both Jumpmaster and Student perform recheck.



PCA COMMENTS:

1. It appears that the practice of this group was to require 1st and 2nd jump static line students to pull a dummy rip cord. Experience has now borne out the fact that DRCPs, or any other activity, should NOT be required from a first or second jump student until after the parachute has opened ..... and then keep it simple. The same procedure applies to the first few free falls. The reasoning being that the average student has not adjusted, either physically or mentally, to his new element to a degree which will enable him to reason clearly and quickly under the initial stress of parachuting. There is stress ..... respect this fact! Don't rush the student through the training requirements because there is no possible reason to hurry!

2. PCA disagrees with the SWS' snap fastener solution and feels that the best solution to the snap fastener problem is to use the type that has been designed specifically for personnel parachutes. The same type of snap fastener involved in this death was used in the early days of the parachute troops and was found inadequate and malfunctioned frequently. Therefore, the military threw them out and perfected the reliable sleeve and button fastener that is still in use today. If sport parachuting is to progress, so must the equipment used. Makeshift modifications may be necessary initially, but why not use the tools that have been designed and proven for the job. In terms of lives, how cheap is cheap equipment?!

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WATCH OUT ARMY! Quietly, but thoroughly, the Navy has reorganized its sport parachuting demonstration team, the "Chuting Stars", transferred some of PCAs best Navy members into it, and moved it into a permanent home in Pensacola, Florida. Prior to moving down to Florida from El Centro, California, the new team "worked out" from the 19th of January to the 14th of March. (Don't read any further unless you want to eat your heart out!)

During this two month period this 15-man team:

Made	585	60-Sec Delays
	120	45-Sec "
	277	35-Sec "
	33	30-Sec "
	66	20-Sec "
	14	10-Sec "
	5	5-Sec "
	70	Free Falls

for a total of 1171 jumps.

Got their team liaison officer to make 5 static line jumps and their plane captain to make 6 free falls.

Made 162 baton passes (didn't mention their "misses").

Logged 15 hours of delayed fall time.

Had only three injuries (2 sprained ankles and 1 bruised heel), none of which required hospitalization.

Had one line over malfunction.

We'd like to add that this team has worked closely with the Army Parachute Team, and they are both outstanding representatives of their service, sportsmanship, ability, and sport parachuting.

Both groups endeavor to assist local parachute clubs whenever they go out on tours and exhibitions and, should they come to your area, come on out and visit with them.

Good luck, Navy. We're glad to have you aboard!

PARACHUTIST REFERENCE MATERIAL: On the center pages of this issue you will find a complete, removable section on the procedures for making official record attempts in the US. It is placed for easy removal from this issue and marked for hole punching so that those interested may remove this portion and place it in a reference notebook for future use. It is planned to include other reference items in future issues in the same manner so that at the end of a few years you will have an excellent parachuting handbook. (Tell yournon-PCA friends!)

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RESULTS OF THE ARMY TEAM WORLD RECORD ATTEMPTS: The US Army Parachute Team has been at El Centro, California and Yuma, Arizona for the past two months for the single purpose of attempting to establish as many new world parachuting records as possible. After analyzing the 82 records, most of them held by the USSR and other Iron Curtain countries, Captain James Perry decided to concentrate on the group accuracy events and leave the altitude records for a later date. (Exceeding old altitude records is only a matter of going 2% higher, whereas exceeding old precision records requires time, effort, and a high degree of skill, and consequently is looked upon by the FAI as vastly more important.)

The records made by the Army Team are shown in chart form herein. Study them over, particularly the precision landing measurements, and we know that you will agree with us that this team has done an outstanding job in bringing nineteen new world records to the credit of the United States.

Also, in their enthusiastic zeal to bomb the center of the target, four men suffered broken bone injuries. It isn't hard to visualize, when these highly trained, physically well-conditioned men break bones on landing, that there's some hellacious competitive jumping going on! (Man, that Kansas City Meet is gonna be somethin'!)

We know every PCA member joins us in saying, "Well done" to the Army Team and wish them well in their future assaults on the world records.

The US now has registered 21 new records with the FAI: 2 made by Parachutes, Inc., last November, and the Army's 19.

BUT

Just so that all them there men jumpers wouldn't get the big head, Mrs. Susan Pol of the California Parachute Club at Livermore, Calif., went out of a Cessna 182, 10 PM, Sunday Night, 19 March, from 19,800 feet, jump and pull (!) and established a new world record, without delay, for women (formerly 13,000 for women). We have registered this record with the FAI but it may not stand due to a barograph malfunction. However, Suzie sez that if it isn't acceptable, she'll do it again ..... from even higher, yet! Go, Gerl, Go!

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SKYDIVERS USED IN AIR CRASH RESCUE: While a ground rescue party of the Sheriff's Reserve waited anxiously at the airport in Banning, Calif. recently, a trio of sport parachutists jumped into the rugged mountains five miles away on the off-chance that there might be survivors of a light plane crash which occurred nearly 18 hours before, but their rescue effort was made in vain. After the wreck was spotted from the air, a plane and jumpers from the Desert Pass Sky Divers of Banning was hastily pressed into service. Three jumpers -- Dave Scott, Jerry Lovell, and Dick Pedley -- volunteered to jump into the crash site to determine if there were any survivors, administer first aid, and assist in bringing out the injured. Carrying first aid and radio equipment, the trio jumped into the rugged mountain area, but all was quiet when they reached their goal. All four men in the aircraft were dead.

We wish to congratulate this group for their courage and effort and hope that other clubs will seek out local rescue organizations to make parachutists available for rescue operations such as the Banning (and other) groups are doing. This is an excellent manner in which to establish favorable relations with the community, the law enforcement agencies, CAP, and the public in general.

Nice work, Desert Pass Sky Divers!

RECORD ATTEMPTS TO DATE SUBMITTED BY THE U. S. ARMY PARACHUTE TEAM AT Yuma Test Station, Yuma, Arizona

Date of this Report: 7 March 1962 No. of Records This Report 19 Submitted By: James M. Perry JAMES M. PERRY
Commanding Officer Capt., Infantry

DATE OF RECORD	CLASS	ALTITUDE OF JUMP	WITH OR W/O DELAY	DAY OR NIGHT	GROUP OR INDIVIDUAL	NAME(S) OF PARACHUTIST(S)	DISTANCE FROM "X"	FORMER HOLDER
NOTE: This is a consolidation of all international parachuting records submitted by this team to the FAI, Paris, France (conveyed through the Parachute Club of America) to date. Where new records appear since last report, they are preceeded by an asterick.								
18Feb62 16:39 GMT	**G-II-c**	**600m (1968')**	Without delay	Day	Group of 7	**Fortenberry, Brydon, Bourquin McDonald, Lewis, Byard and Norman**	**4.698m (15' 6")**	**Rumania 18Oct61 8.23m**
18Feb62 17:40 GMT	**G-II-c**	**600m (1968')**	Without delay	Day	Group of 8	**Martin, Howard, Barker, Edge Charette, Williford, Duffy and Byard**	**3.468m (11' 5")**	**New**
***22Feb62 16:15 GMT**	**G-II-c**	**600m (1968')**	Without delay	Day	Group of 9	**Byard, Charette, Lewis, Duffy Bourquin, McDonald, Martin, Howard and Fortenberry**	**5.425m (19')**	**New**
17Feb62 19:44 GMT	**G-II-c**	**1000m (3280')**	Without delay	Day	Group of 6	**Byard, Bourquin, Duffy, Lewis Fortenberry, and Edge**	**3.878m (12' 9")**	**New**
17Feb62 20:50 GMT	**G-II-c**	**1000m (3280')**	Without delay	Day	Group of 7	**Edge, Lewis, Bourquin, Duffy, Fortenberry, Perry and Byard**	**3.800m (12' 5")**	USSR 27Jun61 8.11m
17Feb62 16:34 GMT	**G-II-c**	**1000m (3280')**	Without delay	Day	Group of 8	**Martin, Duffy, Fortenberry, Brydon, Lewis, McDonald, Byard and Charette**	**5.592m (18' 3")**	USSR 16Oct61 7.39m
17Feb62 18:13 GMT	G-II-c	1000m (3280')	Without delay	Day	Group of 9	Martin, Duffy, Fortenberry, Brydon, Lewis, McDonald, Byard, Charette, and Bourquin	**5.563m (18' 7")**	**Rumania 17Oct61 7.13m**
* 2Mar62 15:40 GMT	G-II-c	1500m (4921')	Without delay	Day	Group of 5	Fortenberry, Byard, Duffy, McDonald and Charette	**1.770m (5' 10")**	**USSR 26Mar60 2.51m**
*28Feb62 15:46 GMT	G-II-d	1500m (4921')	With delay	Day	Group of 5	Fortenberry, Bourquin, Byard McDonald and Duffy	**4.718m (15' 6")**	**USSR 24May61 6.28m**
20Feb62 17:37 GMT	G-II-c	1500m (4921')	Without delay	Day	Group of 9	Fortenberry, Bourquin, Lewis Williford, McDonald, Martin, Duffy, Byard and Charette	**3.867m (12' 8")**	**USSR 25Jul61 7.42m**
31Jan62 18:50 GMT 20:04 GMT	G-I-d	2000m (6560')	Without delay	Day	Individual	McDonald, Coy O. 1st jump: 0.195m (6 1/2") 2nd jump: 1.510m (3' 9")	0.852m (2' 9")	**New**
NOTE: The individual jumps are the resultant of two consecutive jumps in a 12-hour period								
* 4Mar62 18:11 GMT	G-II-d	2000m (6560')	With delay	Day	Group of 3	Fortenberry, Byard and Bourquin	0.976m (3' 1")	**USSR 7Jun61 4.17m**
2Feb62 17:11 GMT	G-II-c	2000m (6560')	Without delay	Day	Group of 3	Brydon, Norman and McDonald	1.480m (4' 10")	**Czech. 20Mar61 4.62m**
27Jan62 23:21 GMT	**G-II-c**	2000m (6560')	Without delay	Day	Group of 4	Williford, McDonald, Lewis and Charette	2.329m (7' 8")	New
* 5Mar62 17:50 GMT	G-II-d	2000m (6560')	With delay	Day	Group of 5	Williford, Fortenberry, Bourquin, Lewis and Byard	3.996m (13' 1")	USSR 19Jul61 6.41m
3Feb62 18:10 GMT	**G-II-c**	2000m (6560')	Without delay	Day	Group of 6	McDonald, Brydon, Byard, Fortenberry, Lewis and Duffy	1.808m (5' 11")	USSR 20Jul61 8.26m
3Feb62 19:31 GMT	**G-II-c**	2000m (6560')	Without delay	Day	Group of 7	McDonald, Brydon, Byard, Fortenberry, Lewis, Duffy and Martin	3.208m (10' 4")	USSR 4Aug61 6.66m
3Feb62 20:50 GMT	**G-II-c**	2000m (6560')	Without delay	Day	Group of 8	McDonald, Brydon, Byard, Fortenberry, Lewis, Duffy, Martin and Edge	3.450m (11' 4")	New
31Jan62 22:04 GMT	**G-II-c**	2000m (6560')	Without delay	Day	Group of 9	Williford, Fortenberry, Bourquin, Martin, Duffy, Lewis, Howard, Edge and Charette	4.946m (16' 2")	USSR 15Aug61 6.56m

BALANCE SHEET

PARACHUTE CLUB OF AMERICA

December 31, 1961

ASSETS

Cash	$ 17,094.09
Inventory	390.00
Office Equipment	1,129.17
Total Assets	$ 18,613.26

LIABILITIES

Provision for Estimated Income Taxes		5,120.21
Due to Insurance Company of North America		1,809.50
Due to National Aeronautical Association		492.50
Accrued Payroll Taxes		310.09
Refunds Due to Members		14.18
Accounts Payable		2.50
Fund Balance:		
Balance at 1/1/61	$ 2,861.64	
Net Income for 1961	12,407.20	
Total	15,268.84	
Less Income Taxes for 1961	4,404.56	10,864.28
Total Liabilities		$ 18,613.26

Note - As the result of a recent ruling by the Internal Revenue Service of the United States Treasury Department, the organization has been denied exemption from federal income tax and therefore is liable for a tax on net income for the current year. However, the organization may qualify for exemption under some other section of the Internal Revenue Code, and under certain conditions, may be entitled to a refund of taxes paid.

WALLACE F. GETZ, C. P. A.
FIRST NATIONAL BANK BUILDING
PACIFIC GROVE, CALIFORNIA

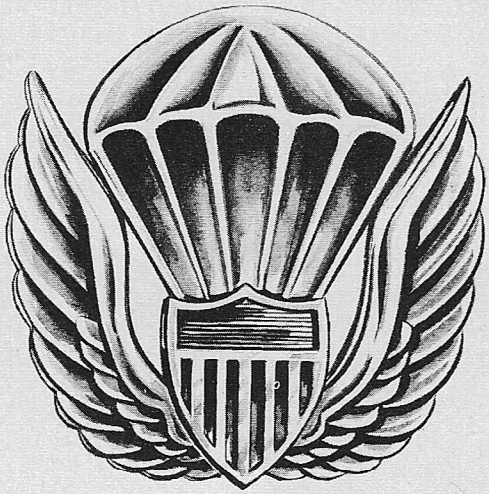
PROCEDURES FOR

OFFICIAL

NATIONAL AND INTERNATIONAL

PARACHUTE RECORD ATTEMPTS

(Effective 1 June 1962)



by

THE PARACHUTE CLUB OF AMERICA
PO Box 409, Monterey, Calif.

a

Division of the National Aeronautic Association

NAA

OFFICIAL NATIONAL AND INTERNATIONAL PARACHUTING RECORD ATTEMPTS

I. ORGANIZATION:

a. The world organization for the certification of international parachute records is the Federation Aeronautique Internationale (FAI) located in Paris, France. The FAI, in turn, delegates its authority to one Aero Club in each member country to officiate and authenticate competitions and record attempts. In America this is the National Aeronautic Association (NAA), Washington, D.C. The NAA, in turn, has delegated its authority to the Parachute Club of America (PCA) to sanction, administrate, officiate, compile, and submit all data pertaining to record attempts in the United States. Thus the PCA has organized the system for making U.S. record attempts based on the rules and regulations of the FAI. No other organization in the U.S. is authorized to sanction, control, or submit national or international records. Records submitted by any other group will not be recognized by either the NAA or the FAI.

b. Actually there are two record groups:

1. National Records: Those records of excellence established in this country which have not been officially exceeded by any other individual or group in America and which have been officially accepted and recorded with the NAA.

2. International Records: Those records of excellence established by the FAI member countries which have not been officially exceeded by any other individual or group in any of those countries and which have been officially recorded and accepted by the FAI.

c. The regulations and procedures for making and recording both types of records are the same.

II. WHO MAY MAKE RECORD ATTEMPTS:

Official record attempts are limited to qualified parachutists possessing valid US-FAI Class C or D Parachuting Licenses who are physically qualified. All provisions of PCAs Basic Safety Regulations will apply during a record attempt except those tha t have been waived in writing by PCA.

III. AWARDS:

All individuals or groups who establish either national or international records will be awarded an appropriate certificate and the US Parachute Record Medal upon confirmation from NAA or FAI of the establishment of a national or international record. The FAI also issues an appropriate World Record Certificate to those individuals or groups who establish such records.

IV. TYPES OF RECORDS:

a. Both national and international record events are the same with the exception of Class G-I-c, and G-II-e, a combined altitude and accuracy event which is recognized only in the U.S.

b. Classes of Records and FAI Code:

I - INDIVIDUAL JUMPS:

G-I-a Altitude jumps with automatic or controlled opening, without delay.

G-I-b Altitude jumps with delayed opening.

G-I-c (U.S. Only) Combined altitude and precision jumps without delay or with delay as specified by contestant.

G-I-d Precision jumps with automatic opening or controlled opening without delay from 600, 1000, 1500, and 2000 meters.

G-I-e Precision jumps with controlled delayed opening from 600, 1000, 1500, and 2000 meters.

II - GROUP JUMPS:

G-II-a Altitude jumps with automatic or controlled opening, without delay.

G-II-b Altitude jumps with delayed opening.

G-II-c Precision jumps with automatic opening or controlled opening, without delay from 600, 1000, 1500, and 2000 meters.

G-II-d Precision jumps with controlled delayed opening from 600, 1000, 1500, and 2000 meters.

G-II-e (U.S. Only) Combined altitude and precision jumps without or with delay as specified by contestant.

c. In addition to the above groupings, record attempt jumps are further subdivided into the following categories: Male, Female, Night, and Day. Further, Group Jumps range from a group not less than three to groups of not more than nine.

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V. TYPES OF AIRCRAFT AND EQUIPMENT:

a. Aircraft: Record jumps may be made from any kind of aircraft or aerodyne, heavier or lighter than air. In the case of group jumps for landing precision, they shall be made from an aerodyne heavier than air.

b. Equipment: Paragraph 7 and the appropriate sub-paragraph of Paragraph 8 of PCAs Basic Safety Regulations will apply.

VI. DIRECTING OFFICIALS AND OFFICIAL OBSERVERS:

a. No official record attempt may be made without PCA appointed Directing Official being present. Directing Officials have been designated throughout the U.S., however, PCA must approve and appoint a specific Directing Official for each attempt.

b. The Directing Official is in complete charge of officiating and recording the record attempt. He insures that all record attempt rules prescribed by FAI are complied with, that the proper recording devices are present and properly utilized, that the necessary timings and recordings are made and authenticated by the proper persons, and that an adequate amount of Official Observers are designated by him to honestly and accurately witness and certify the validity of the attempt. Directing Officials and Official Observers are forbidden from taking part in the organization or participation of the record attempt that they are officiating.

c. Official Observers are appointed by the Directing Official from among the best qualified neutral personnel available in the immediate area to assist him in accurately observing and recording the attempt. Duties of these individuals generally involve observing, timing, marking, and certifying individual aspects of the attempt. Should capable observers not be available in the area, it is the responsibility of the contestant to procure such personnel prior to the attempt.

d. Contestants are responsible for the travel and living expenses incurred by imported officials for the period of record attempts.

e. A list of qualified Directing Officials will be forwarded to each applicant upon applying for sanction.

VII. RECORD ATTEMPT COST:

a. Contestants are responsible for all costs incurred in making record attempts. PCA has no objections to contestants obtaining sponsorship from commercial sources provided that such sponsorship is not degrading to sport parachuting. Such commercial sponsorship is subject to PCA approval prior to sanctioning record attempts.

b. Fees:

1) PCA, NAA, FAI Sanctioning, Recording, and homolagation fee: $25.00, payable on application for sanction. If more than one record attempt is made, an additional charge of $5.00 will be made for each additional record submitted to cover the cost of cables to FAI. The contestant has 90 days from the date of sanction to complete the proposed record attempt.

2) (Recommended) Fees for payment of imported Directing Officials:

Travel expenses to and from record attempt area and $15.00 per day for expenses.

3) Barographs:

For use in Class G-I-d and Class G-II-c events: Purchase from various dealers at approximately $125 each or rental from PCA for $1.00 per day plus shipping charges. A deposit of $100.00 will be made to PCA for barograph rental. This will be refunded, less rental charge, when the barograph is returned. Should repair of barograph be necessary, the cost will be deducted from the deposit.

For use in all other events: The only adequate barographs presently available are at Edwards Air Force Base and property of the USAF. Special arrangements may be made for limited use of these barographs by contacting the Instrument Section, Edwards AFB, Edwards, California.

NOTE: The PCA is aware of the limited sources of barographs and is constantly locating and testing various types. Thus far the few commercial barographs tested have not proven accurate under the stress of free fall, openings, and landings. When an adequate barograph has proven reliable, the PCA will purchase such barographs in quantity for use by members in record attempts.

VIII. GENERAL RULES: (Extracted from Section 5 of the FAI Sporting Code, 1961 Edition)

A. GENERAL REGULATIONS.

1. Feminine records shall be classified separately from masculine records for the same classes.

2. In the event of a woman setting up a parachute performance better than the existing masculine record, she shall be deemed to have set up two records: a masculine and a feminine one.

3. A parachute jump may be made at any time of the year and at any time during the day or night.

4. For records, jumps made at night shall be classed separately from jumps made during the day.

"Day" shall be defined as the period between one hour before official sunrise and one hour after official sunset.

"Night" shall be defined as the period between one hour after official sunset and one hour before official sunrise.

5. The height computation of a parachute jump made for an Altitude record, with or without delayed opening, shall be measured from sea level.

The height of Precision jumps shall always be computed in relation to the altitude of the dropping zone.

The altitude of each record must not be less than one of the altitudes specified in these rules.

6. To control the results of the landings during group Precision jumps, the number of Official Observers must equal the number of parachutists in the group.

7. Official Observer must be on board the aircraft from which the jumps are made. The National Aero-Club may permit one of the members of the crew of the aircraft to act as Observer.

8. Except for classes II-c and II-d all attempts on records of classes I and II may be made only after prior medical control.

9. In all jumps with delayed opening the parachute must be fully open at an altitude of not less than 400 meters.

10. For a performance which could be a record, established during a World Championship Jump, barograph evidence of the height of opening of the parachute may be replaced by a certificate signed by the Chief Judge at the Championship, giving the height at which the parachute was opened.

11. In all cases jumps shall be forbidden if the wind at ground level is stronger than 8 m./second for men and 6 m./second for women.

The speed of the wind shall be measured at a minimum altitude of 2 m. above the landing ground by means of two fixed anemometers. If the maximum wind speed of 8 m.p.s. (men) and 6 m.p.s. (women) is exceeded five times over a period of 10 minutes, the jumps shall be stopped until excessive speeds have dropped to or below 8 m.p.s. (men) and 6 m.p.s. (women).

B. ALTITUDE JUMPS.

1. The Altitude jump record shall be measured in metres. The accuracy of the barographs employed for the record must be within 2 °/o.

2. For Altitude computations, barographs which are officially approved by the National Aero-Club and the F.A.I. shall be used.

3. a) Except in the case of Precision jumps with non-delayed opening a barograph communicating with the atmosphere shall be fixed to the parachutist's equipment, whilst another barograph for recording speed and height shall be installed in the cockpit of the aircraft from which the jump is made, or:

3. b) Except in the case of Precision jumps with non-delayed opening a barograph adjusted for temperature, fitted with clockwork mechanism, shall be fixed to the parachutist's equipment, whilst another barograph shall be installed in the cockpit of the aircraft from which the jump is made.

4. Jump records shall be beaten only if:

a) there is a difference of at least 10 °/o greater altitude, for altitudes up to 5000 metres;

b) there is a difference of at least 5 °/o greater altitude, for altitudes of 5000 to 8000 metres;

c) there is a difference of at least 3 °/o greater altitude, for altitudes of 8000 to 10,000 metres;

d) there is a difference of at least 2 °/o greater altitude, for altitudes above 10,000 metres.

5. The delayed-opening jump record shall be computed in metres. To measure the distance covered by a free drop, the margin of error of the barograph employed for the record must not exceed 2 °/o.

6. To measure the distance covered by a free drop, barographs with clockwork mechanisms, officially recognised by the National Aero-Club and the F.A.I. shall be used.

7. The cylinder of the barograph fixed to the parachutist's equipment shall make one revolution in not more than two hours.

8. The barograph carried by the parachutist shall be set in motion at least 5 minutes before the aircraft takes off. It shall be stopped not less than 5 minutes after the parachutist has landed.

9. For jumps made from a high altitude the barograph carried by the parachutist shall be set in motion 5 minutes before and stopped 5 minutes after, the aircraft has taken off. The barograph shall again be started at least 20 minutes before the time fixed for the jump and stopped at least 5 minutes after the parachutist has landed.

10. One revolution of the cylinder of the barograph placed in the aircraft may last from 2 to 6 hours, according to the duration of the flight made for the record jump.

11. The distance covered by a free drop shall be determined from the barograph curve.

12. In an Altitude jump with controlled opening the time of free drop must not exceed 10 seconds.

13. For a group Altitude jump with delayed opening the distance covered during the free drop is the average of the distances of free drop of all the members of the group.

14. The altitude at which the parachutist jumps shall be determined by the barograph installed in the aircraft. This barograph shall be set in motion before take off.

C. PRECISION JUMPS, GENERAL RULES.

1. The target shall be marked by a cross. Each of the four arms of the cross shall be 2 metres wide and 7.5 metres in length, measured from the center of the cross to the end of the arm.

In summer time the colour of the cross shall be orange.

A circle around the cross is not obligatory.

The arms of the cross and the circle are only aiming marks; the dimensions of the cross and the diameter of the circle are in no way taken into account in arriving at results for a record.

2. The point of landing of the parachutist shall be the point of first contact between his feet and the ground; this point shall be marked by a small flag. The

decision of the Directing Official concerning this point shall be final.

3. Only the distance between the point of first contact and the center of the circle shall be the measure for scoring purposes.

4. The measurement of the distance shall be to the nearest centimetre, from the flag to the center of the circle.

5. At the center of the circle there shall be a metal disc 15 cm. in diameter. A parachutist who makes first contact with the ground anywhere on the disc shall be considered as having reached the center of the circle.

6. For measurements to within 1 m. of the center of the circle a record shall be beaten only by a performance that is better by 10 % than the previous one.

7. Once a record has been established which is for a distance of 1 m. or less to the center of the circle, this record distance and subsequent record distances can be beaten by a distance of at least 1 cm. less than the previous existing distance.

8. The height of a Precision jump is computed by a barograph installed in the aircraft; the margin of error of the barograph must not exceed 2 %.

9. In the case of Precision jumps with delayed opening the rule 3 a or 3 b (see Altitude jumps) shall be applied.

10. The free drop during Precision jumps with controlled opening without delay (I d and II c) must not exceed 2 seconds.

11. The free drop during Precision jumps with delayed opening (I e, II d) must be through at least 100 m.

12. The altitudes adopted for records for Precision jumps are the following: 600, 1000, 15000 and 2000 metres.

C-1. INDIVIDUAL PRECISION JUMPS. PARTICULAR RULES.

1. For individual Precision jumps (I d, I e) the parachutist may make 3 jumps in a lapse of time of 12 hours and the average of the distances, measured for 2 consecutive jumps out of the 3, shall be the result retained for a record attempt.

2. The performance for a record shall be determined by taking the arithmetical average of the measures in metres between the points of first contact and the center of the circle, of two jumps.

This rule makes it possible to establish records during competitions.

3. Records for individual Precision jumps shall be classed according to:

a) the height of the jump;
b) the average of the distances from the point of first contact to the center of the circle;
c) whether the opening was immediate or delayed.

C-2. GROUP PRECISION JUMPS, PARTICULAR RULES.

1. For group jumps, the number of parachutists shall be not less than 3 (men or women) nor more than 9.

2. The group must jump from the same aircraft and during the same passage over the target.

3. Records in group Precision jumps shall be classed according to:

a) the height of the jump;
b) the arithmetical average of the distances of points of first contact to the center of the circle;
c) the number of persons in the group;
d) whether the opening was immediate or delayed.

4. Group jumps: only one jump will be required.

5. The value of the group jump is measured as follows:

a) the distance from the point of first contact to the center of the circle for each member of the group shall be measured to within the nearest centimetre;

b) the total of the distances in metres of the members of the group shall be divided by the number of persons in the group;

c) the group which is most closely bunched together and nearest to the center of the circle, thus achieving the shortest mean distance to the center of the circle, shall be the record winner;

d) a group of a larger number of persons achieving the same jump for Precision of landing as that previously achieved by a smaller group, shall win the record from the smaller group.

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IX. PROCEDURE FOR APPLYING:

a. Write to PCA for application form and instructions. Specify the exact categories of records you wish to attempt; for example: Class G-I-e, 1000, 1500, and 2000 meters, day, male.

b. On receipt, complete all of the instructions, communicate with the desired Directing Official, complete the Application for Sanction Form, and return to PCA with the required fees.

c. On approval, PCA will issue sanction and confirm the Directing Official.

d. After attempts have been made, the Directing Official forwards all reports to PCA, insures that the barographs are forwarded to the proper calibration laboratory, and the barogram forwarded to PCA. PCA will analyze the records and forward to NAA who, if applicable, will register the record as a national record and forward it on to the FAI for international registration and homologation. All concerned will be notified and awards issued when the record is accepted by NAA and FAI.

END

On the opposite page is the first in a series of pictures which will be published from time to time for framing purposes. Anyone who has an outstanding sport parachuting photograph which they wish to share with other parachutists may forward an 8 x 10 glossy print to PCA for publication in the newsletter.

This month's excellent photo was submitted by Jim Pol, California Parachute Club, and shows Ken Hirshberg, a San Jose TV cameraman and student, falling over the Livermore Area Drop Zone.

Next month's photo: The Law Brothers of Florida.

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