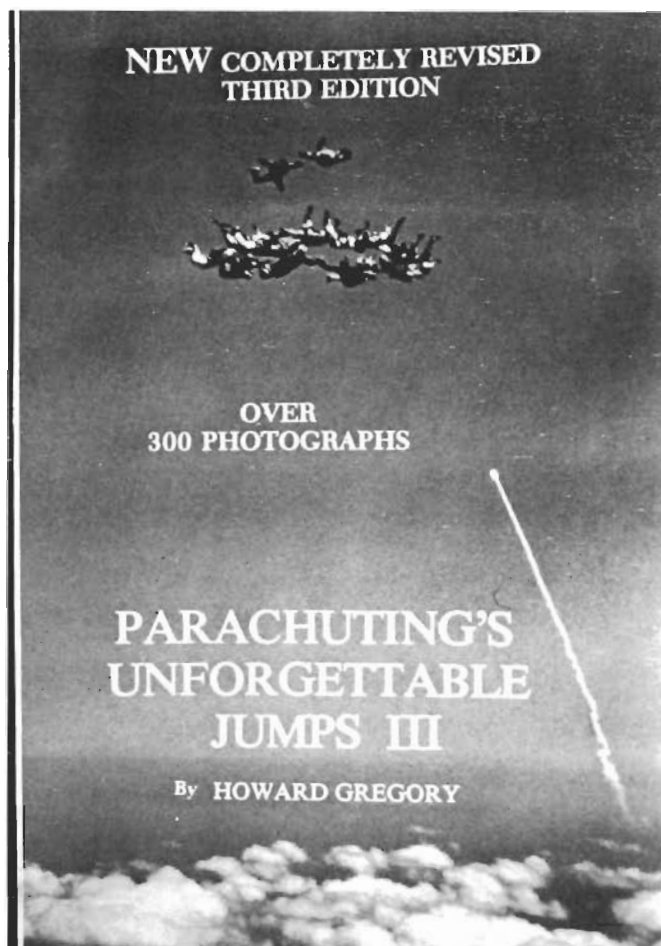


BASELINE





"... A MONUMENTAL EXPLORATION OF THE HISTORY OF PARACHUTING... HIGHLY RECOMMENDED."
ARMY TIMES

"... EXTREMELY ENGROSSING AND INFORMATIVE... RECOMMENDED FOR THE LIBRARY OF EVERYONE INTERESTED IN AVIATION — WHETHER OR NOT THEY INTEND TO EVER DIVE OUT THE DOOR OF AN AIRPLANE."
FLYING MAGAZINE

"UNDOUBTEDLY THE MOST FASCINATING BOOK EVER COMPILED ON STUNT, SPORT AND MILITARY PARACHUTING... SUPERB PHOTOGRAPHY."
LOS ANGELES HERALD EXAMINER

"HIGHLY RECOMMENDED TO ALL AVIATION ENTHUSIASTS WHO WISH TO VIEW THE ENTIRE SPECTRUM OF THIS EXCITING ACTIVITY OF PARACHUTING."
U.S. PARACHUTE ASSOCIATION

"THE MOST COMPREHENSIVE AND ENTERTAINING BOOK EVER WRITTEN ON THE HISTORY OF STUNT, SPORT AND MILITARY PARACHUTING."
SKY DIVER MAGAZINE

"... BOOK-OF-THE-CENTURY, SHOULD BE REQUIRED READING FOR ANYONE WHO PUTS A RIG ON HIS BACK."
PARA-PRINT MAGAZINE

HOWARD GREGORY
640 THE VILLAGE #209 V
REDONDO BEACH, CA 90277



- 9 X 6 HARDCOVER
- OVER 300 PHOTOGRAPHS
- FREE COLORED POSTER

PLEASE SEND ME "PARACHUTING'S UNFORGETTABLE JUMPS III" AND THE FREE POSTER "STARBURST". ENCLOSED IS MY CHECK FOR \$23.95 WHICH INCLUDES TAX, HANDLING AND SHIPPING COSTS.

NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

PARACHUTING'S UNFORGETTABLE JUMPS

Jumping off of the top of El Capitan, a 3,000 foot cliff in the Yosemite Valley in California was legal—for a short time in 1980. Then they banned it.

The following was reported in a front page article in (would you believe) "The Wall Street Journal" (Friday, June 27, 1986):

Sometimes the frustrated rangers stake out a jump site. One morning they caught Robin Heid, the Denver BASE jumper, atop El Capitan. "Out from behind the rocks pop 10 rangers," Mr. Heid recalls. "One of them said, 'All right boys, the game is over. You're coming with us.'"

Mr. Heid says, "I bowed to them, said, 'Gentlemen, have a nice day' and I jumped off." He was arrested by the rangers in a meadow at the base of the cliff.

* * *

The above is only one of the legion of jump stories in the NEW "Parachuting's Unforgettable Jumps III" (A New Completely Revised Third Edition) A regular Who's Who of the celebrities of the parachuting world; professionals and sport champions are interviewed for their funniest, most unusual and most memorable jump stories.

FREE COLORED POSTER



A FREE COLORED POSTER titled "Starburst" (Above) by professional sky-diving photographer Mike McGowan is given free with each purchased copy of "PARACHUTING'S UNFORGETTABLE JUMPS III."

Mike McGowan photographed the World Record 120-way formation over Quincy, Illinois on August 11, 1986. The 120-way is only one of over 300 spectacular photographs by the world's best parachuting photographers that dominate this definitive, monumental book.

552 Pages; Over 300 Photographs;

HARDCOVER (9x6)

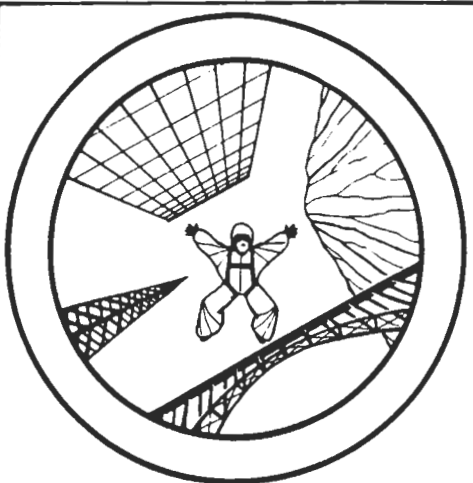
ISBN 0-9607086-4-2 \$23.95



HOWARD GREGORY

640 THE VILLAGE, #209
REDONDO BEACH, CALIFORNIA

90277 USA



BASELINE Magazine

Correspondents

Australia & New Zealand

Nick Feteris
Damien Hansen

Canada

Rob Price

England

Nigel Slee
Martin Lyster

France

Le Cleach Laurent

Saudia Arabia

Steve Morrell

Venezuela

Rodolpho Gerstl

Appalachian Region

LeRoy Gallenstein

Eastern Region

Paul Rockefeller
Adam Filippino

Gulf Region

Bill Legg

Mideastern Region

Gabby Gaskill

North-Central Region

Mark Kruse

Northeast Region

Ingrid Svenson

Northern California

Rick Payne

Southeast Region

Bryan Scott

Southern California

John Hoover

Southwestern Region

J.D. Walker

BASELINE Magazine

VOLUME 3, ISSUE 2, NUMBER 10

FALL 1988

Features

- Bridge Day Safety Tips 11
by John Hoover, BASE 95
Zero-Drag BASE Sliders for Short Freefalls 19
by Nigel Slee, BASE 28
They Don't Make 'em Like They Used To! 22
by Nick Di Giovanni, BASE 194

Departments

- Accident Reports 29
Back to Basics: *Folding & Holding a BASE Pilot Chute* 12
BASE Abroad: *Frenchman's "Cap"* 16
BASE Bits 4
BASELINE Update 18
Baselines 32
Book, Video & Equipment Review 9
Letters 7
Photo Finish 31
Profiles: *Meet J.D. Walker, Part II* 24
USBA Update 14
Viewpoints 13/17

Cover Photo: Alan Hetherington, wearing a velcro-closed BASE rig and chest-mounted tertiary reserve, jumps from a 1,750-foot Texas antenna tower.

Editors

Phil Smith
Andy Callstrat

Phil Smith

1014 Shady Trail Lane
Houston, Texas 77038-1833
(713) 931-7709

Andy Callstrat

3202 La Quinta Drive
Missouri City, Texas 77459-3145
(713) 437-0323

The Ground's The Limit!

BASELINE Magazine is an independent periodical published quarterly by OPC of Houston, Texas. Subscription rates are \$11/year domestic, \$15/year surface mail to all foreign addresses. BASELINE is sold by the volume only; readers subscribing in the middle of the year will receive all current back issues bringing them up to date.

BASELINE is looking for articles, jump stories, news reports, pictures, cartoons, anecdotes, letters, incident reports, editorials and opinions/commentaries. All due credit will be given, and all requests for anonymity will be honored. BASELINE reserves the right to edit material submitted.

While BASELINE does not knowingly accept advertising for products or services of inferior quality, neither does it accept the responsibility for the quality of such products and services. Advertising information is available upon request.

BASELINE occasionally makes its mailing list available for rent, but without releasing any names or addresses. Rather, selected advertisers send their prestuffed, presealed envelopes, and BASELINE affixes the labels. Any readers who do not wish to receive such mail should notify BASELINE in writing.

BASELINE is published quarterly. Any inquiries regarding issues lost in the mail should be directed to the address shown above. Change-of-address information should be sent (or phoned in) to the numbers shown above. The entire contents of this publication are Copyright © 1988 by BASELINE Magazine, all rights reserved.

DISCLAIMER: Any time a person leaves the ground, he is risking the threat of injury and even death. BASE jumping, like skydiving, brings along a set of inherent dangers. BASELINE is interested in accurately reporting all news and information pertaining to BASE jumping, controversial or not, in as free and unlimited a manner as possible.

BASELINE Magazine, its editors and staff do not advocate that anyone should BASE jump, nor that anyone should break the law in an attempt to make a BASE jump. Furthermore, we do not endorse or approve any BASE site or specific BASE jump. Any ideas, information or concepts gleaned from this magazine should not be attempted by any reader, except at his own risk and sole responsibility.

Base in the News

Double-O Jinx?

Arizona jumper J.D. Walker, BASE 37, received widespread media coverage early last August when he sustained multiple injuries upon spiralling into the ground while parachuting from a 375-foot Los Angeles building. The leap was Walker's 200th BASE jump.

Apparently some hospital officials, suspecting that Walker's injuries had stemmed from a parachute jump, notified the Los Angeles Police Department. The police confiscated parachute gear from Walker and several other jumpers on the load, after first threatening to impound the group's getaway vehicle.

As of presstime, however, no charges had been filed, and the jumpers were still consulting with lawyers to get their gear returned.

Independence Day "Demo"

California jumper and stunt man Ron Broyles received widespread TV and newspaper coverage July 4 when he parachuted off the roof of a chauffeured limousine traveling across San Diego's Coronado Bay Bridge.

According to local-area jumper Ron Marino, who heads a California marketing firm specializing in parachuting promotions, local television stations covered the Independence Day "demo" with full-color video of Broyles, dressed in a tuxedo, performing the leap. "I guess it must have been prearranged with the press, because they had beautiful shots of him jumping, deploying and escaping in a waiting getaway boat," said Marino. "The limousine must have been moving about 50 mph when he leaped."

Broyles, who received brief coverage in several local newspapers, told reporters that the jump was his way of celebrating Independence Day.

Gummi Bear BASE

Walt Disney's popular cartoon strip *the Gummi Bears*, which features a different theme each week, covered parachuting in their Jan. 10 edition. And the layout contained several subtle references

to BASE jumping: one illustration depicted four birds BASE jumping from a tall tree, while a second frame showed a Gummi Bear BASE jumping off a chair. The caption with that photograph read: "the Bear Facts: The first successful jump with a parachute was made in 1797, more than 100 years before the invention of the airplane!"

Up In Smoke

US Sprint celebrated the completion of their fiber optic network Feb. 4 by blowing up a 300-foot microwave communications tower. Hundreds of such towers exist around the country, with some being BASE jumped regularly by local jumpers. The company did not make it clear what they intended to do with the remaining (and supposedly now non-operational) towers.

People

Held's Hide Hung High

A six-man Colorado jury on July 11 convicted Robin Heid of reckless endangerment charges after Heid parachuted from 1999 Broadway, a 530-foot Denver skyscraper, on Sept. 19, 1987. The jury sentenced Heid to a \$350 fine and 30 days in the county jail. The jail time will be probated for one year, during which Heid must successfully serve probation.

Heid performed the jump as part of a publicity stunt to push sales of his new book. Apparently he will not abide by the court's ruling. "I won't pay my fine," Heid told BASELINE in a previous telephone interview. "They'll just have to throw me in jail with all the scum bags who are at least honest and have their heads on straight." Whether or not Heid follows through remains to be seen.

New Centurlans

Last July, Californian Mark Hewitt, BASE 46, and Arizona jumper J.D. Walker, BASE 37, both qualified for century awards: Walker became the fifth person ever to join the "double century" club, for making 200 BASE jumps, while Hewitt became the

first person ever to qualify for "triple century," a total of 300 BASE jumps.

At least ten people so far have qualified for the various century clubs, and BASELINE will compile and print these lists in future issues.

Girl Injured

An unidentified Florida woman apparently suffered back injuries last February when her slider-down ram-air parachute failed to completely deploy after she performed a low-altitude cutaway from a parasailing canopy.

According to Southeast Region Correspondent Bryan Scott, a group of experienced skydivers were simulating BASE jumps by towing themselves to 160 feet AGL using a speed boat, tow rope and parasailing canopy, and then performing intentional cutaways. The jumpers would then take one- to two-second delays, throw out a 52-inch pilot chute which would deploy a slider-down square packed in a BASE rig, and land in the water below.

According to Scott, one of the jumpers experienced a slow deployment of her parachute due to a wet pilot chute which snivelled for several moments. The jumper had just received line stretch at impact, and landed with what Scott called "a gigantic splash." (An unbroken fall from 160 feet results in a landing velocity of approximately 65 mph.)

The woman apparently suffered a compressed vertebrae and other minor back injuries, and is expected to recover fully.

Although this incident did not involve an actual BASE jump worthy of a formal accident report, it carries an important lesson nonetheless: wet pilot chutes, including over-size BASE drogues, are subject to slow inflations when they are wet (and thus weighted down). Jumpers performing intentional water landings, or any jumper who manages to get his pilot chute wet, should thoroughly dry it before his next jump!

Bungee Club

California bungee jumper John Kockelman has announced to BASELINE the formation of the Palo Alto Bungee Club, which specializes in the sale

of bungee jumping-related equipment, and also offers a \$50 bungee "first-jump course."

According to Kockelman, a "bungee-clinic" lasts all day, and includes one or two jumps (weather and time permitting) from California's 130-foot Tuolumne Bridge. "You attach one end of the bungee cord to your body with something similar to a parachute harness, and the other end of the bungee cord to the underside of the bridge," said literature received from the club. "Last but certainly not least, you jump!" The brochure went on to stress the safety factors involved in this form of fixed-object jumping.

Kockelman has never made a parachute jump (of any kind), but says he is interested in hearing from BASE jumpers who would like to try a bungee jump (possibly at this year's Bridge Day in West Virginia). Kockelman can be reached at (415) 326-5201.

Several California BASE jumpers have successfully parachuted from the Tuolumne bridge.

Places

Monkey Business

Rick Payne and Kevin Foust last July first climbed, then parachuted from, the 500-foot sheer wall of "Monkey's Face," a cliff in Smith Rock, Ore. The feat is believed to represent the first-know BASE jumps in that state.

According to Payne, who also serves as BASELINE's Northern California correspondent, the pair used ropes, slings and carabiners to perform a technical climb, relying on advice from an experienced rock climber. Payne and Foust then performed flawless jumps without attracting the attention of any authorities.

The two are the seventh and eighth persons ever to climb and then jump the same cliff, and activity known as "cliffing." The term was first coined by rock climber and jumper Randy Leavitt, who wrote an article by the same title for *Mountain* magazine. Leavitt has agreed to let BASELINE reprint the article, which will appear in an upcoming issue.

An "Inclination" to BASE

British jumper Mike McCarthy, BASE 24, made international headlines Aug. 5 when he parachuted from the Leaning Tower of Pisa in Pisa, Italy. McCarthy

told the Associated Press that the 179-foot leap qualified as a "world record for a low-level parachute jump."

According to sources in England, the British Parachute Association has revoked all of McCarthy's licenses and ratings, as well as sentenced him to a lifetime ban from parachuting in England, as a result of his leap.

Rock Around the Clock

Kentucky jumper Mark Bailey last August became the first American to complete the BASE cycle in one day. Bailey, who earned BASE 172 last year, began with an early-morning El Capitan leap, followed by a jump from the nearby 180-foot Stevens Bar Bridge. After a short drive to Sacramento, he jumped a 400-foot antenna, and a 280-foot building. In 22 hours, he requalified for BASE, as well as earned his California BASE.

Bailey's feat was not the first time someone had made BASE in a day: Australians Nick Feteris and Doug Knowles last April did the "Down Under" circuit in a mere eight hours.

Events

Thor Conquered

Will Oxx, BASE 41, became the first person Aug. 6 to jump from the 3,250-foot Mount Thor located several miles north of the Arctic Circle in Baffin Island, Canada. Oxx, a Navy pilot stationed in California, was part of an unsponsored expedition which included Southeastern correspondent Bryan Scott and Californians Jean Boenish and Curt Roy.

According to Scott, the jump required a climb through a glacier, followed by a technical climb on the back side of Thor, which is located in Auyuittuq National Park. Oxx, the only accomplished rock climber in the group, teamed up with Roy for the ascent. The pair were part-way to the top



Up in Smoke? MCI blows up a 300-foot microwave tower Feb. 4

when Roy's clothing got wet, leaving him hypothermic, and forcing him to retreat the next morning after suffering severe chills throughout the night. Oxx finished the climb by himself, found a suitable exit point, and successfully parachuted from the top, taking a 12-second delay and landing uneventfully near the Owl River.

Unfortunately the group had no radios, and the ground crew cameramen were subsequently unaware that Oxx was jumping until they saw him in free fall. Several seconds of footage were shot of Oxx flying and landing his canopy, although the photographers reported to BASELINE they were not sure how well the film would turn out.

Several Auyuittuq park rangers confronted the group as they left the park, but no charges were filed. As is the case in the United States, BASE jumping in Canadian national parks is prohibited. A detailed story on the Thor expedition should appear in an upcoming issue.

BASE Boy

Casey Hoover, son of Southern California correspondent John Hoover, made history Aug. 11 when he executed a dual

jump with his father from northern California's 180-foot-high Stevens Bar Bridge. Casey direct-bagged his father's Swift, while Hoover free fell a friend's slider-down Maverick. The pair landed without incident in the Tuolumne River. Casey is only nine years old.

Hoover reports that Casey's direct bag was held by his grandmother, Claudine "Rusty" Hoover, while Mike Allen videoed from below. The jump established several precedents, including youngest person ever to BASE jump, first father/son BASE jump, and the first BASE load involving three generations.

The event inspired the Hoovers to parrot for the camera several lines from an Ozzy Osbourne song: *"Momma's gonna worry, I've been a bad, bad boy. No use saying 'sorry,' it's something I enjoy!"*

Shorter Free Falls?

Studies by scientists at the University of Washington in Seattle have uncovered "a new fundamental force that adds a tiny boost to gravity's attraction," according to a recent Associated Press report. The researchers measured small changes in the gravitational field by hauling sensitive instrumentation up a 2,000-foot antenna tower near Garner, N.C.

Presumably they could have also let a BASE jumper skydive from the tower, making careful measurements of his freefall time?

Didn't Spoil It!

A recent issue of BASELINE contained J.D. Walker's article "Don't Burn Your Bridges," detailing how not to spoil BASE sites. Soon thereafter, Australian correspondent Nick Feteris reported to BASELINE that local jumper Robbert Largent went to great pains to keep from spoiling a site, even after he sustained injuries on his jump.

"Largent made his first BASE jump from a 160-foot bridge over land in Sydney," reported Feteris. "He bagged off, had a 90-degree right opening, landed in a hole and broke his pelvis. He then hobbled out of the area with the help of his jump mates, conscientiously ensuring that the incident went with no hype or press," stated Feteris. Sure enough, the complete lack of adverse publicity preserved the site for future jumps.

"Basically a hero's build-up!" concluded Feteris.

BASE at the Movies

Cops BASE Jump, Too

The action thriller *To Live and Die in L.A.* opens with a scene of U.S. Secret Service agent Chance jumping off a tall bridge. After falling about halfway down, a bungee cord, attached to his foot, breaks his fall.

Later in the movie, agents Boogovich and Chance keep observation on a suspected counterfeiter from a deserted church across the street. As it begins to rain and boredom sets in on the cops, the following conversation transpires:

Chance: I'd love to make a jump in the rain.

Boogovich: Huh?

Chance: Did you ever do any BASE jumping?

Boogovich: No.

Chance: It's great. I used to jump off garages when I was a kid. So why don't you make a jump with me sometime?

Boogovich: Yeah?

Chance: Yeah, you'd love it. It's fabulous. Once you get over the first fear, it's a piece of cake. It's the greatest feeling you'll ever have, too. You float out, and then your balls go right up into your throat.

Boogovich: I think I'll pass, partner.

Later in the movie, Chance gets into an argument with his girlfriend. With a tall bridge visible through the window of the couple's apartment, Chance's girlfriend yells at him: "Yeah, well if you had any real balls, you'd go BASE jump off that bridge right there!"

The closing credits list Dar Robinson as a stunt man for the movie.

Close Encounters of the Unkind

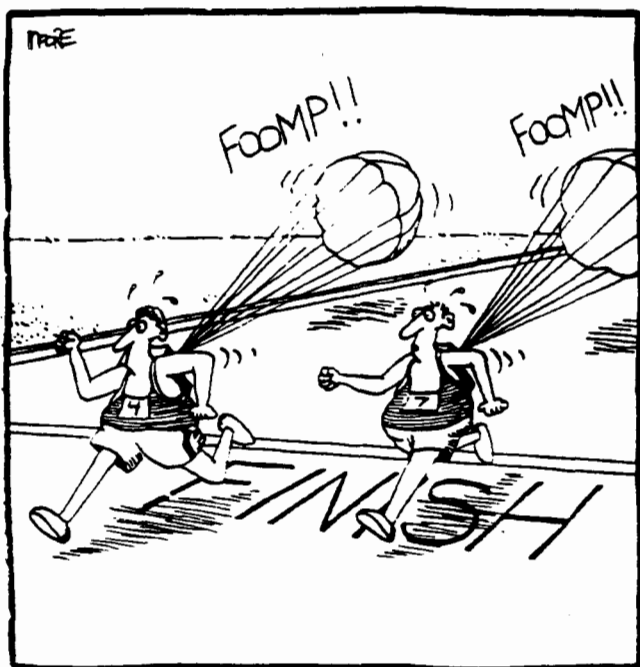
Up Ship Creek

Texas jumper Kevin Venell and an unidentified companion experienced two close calls recently on a jump from Houston's Jesse Jones bridge. As the pair jumped, opened and landed in the choppy ship channel water, they were dismayed to find their getaway boat sunk by an unexpected wave.

The pair began the 300-yard swim to shore -- soon joined by the boat driver! Upon arriving on shore they promptly hid their gear, and then began pondering the task of returning to their vehicle parked on the other side of the channel, a task complicated by the facts that they had no boat, car or money, and that the area was soon swarming with Texas state policemen, who were apparently informed of the jump.

Soaking wet and painfully conspicuous, the trio walked to the nearest available retreat: a heavily-guarded chemical plant. Fortunately, a sympathetic worker hid the renegades in the back of his car and drove them out of the plant -- at the same moment as a state trooper drove into the plant to search! Luckily they were not noticed, and the three returned well after dark to salvage their boat and retrieve their gear.

The police, meanwhile, were much chagrined that they were never able to prosecute the jumpers. Local radio stations seemed to add insult to injury for the lawmen, when they broadcast stories later in the evening of the "anonymous jumpers."



Letters

Negative Influences?

In response to J.D. Walker's reprinted letter, I think it is unfair to imply that BASELINE has been less than diligent in preserving the facts and contexts of letters and articles you may have published. It seems much more likely that the writers' thoughts have fallen victim to the imperfect language we Americans use.

Whatever the extent of your editing of letters and stories to make them "more readable," BASELINE is indeed one of the most readable and exciting magazines in print.

In his letter, Walker took exception to several points you made in previous issues of BASELINE. Regardless of whom I agree with more on these points, I thank Andy, Phil, J.D. and all the others (yes, even Robin Heid) who have contributed their thoughts to the magazine.

Walt Appel
Johnson City, N.Y.

Gear Troubles?

Enclosed is a copy of a letter that I sent to Northwest Airlines, after getting hassled for carrying my rig aboard as carry-on baggage. Since this experience contradicts the airline's policy as published recently in your magazine, I propose to eliminate Northwest from the list of gear-friendly airlines.

Peter Kroon
Greenbrook, N.J.

As printed in BASELINE #9, Northwest Airlines accepts parachutes as carry-on baggage, and information to this effect can be accessed on Northwest's computer system by entering the code GIBAG-PARACHUTE. Jumpers who get hassled need only mention this computer code to clarify the issue.

However, since Mr. Kroon's letter stated that airline personnel refused to allow him aboard the plane unless his parachute was checked as baggage, BASELINE has sent a letter to Northwest Airlines, requesting an explanation. Their reply will hopefully be included in a future issue.

Any jumpers who have experienced problems carrying their parachutes onboard commercial flights are encouraged to send details of their encounters to BASELINE.

--Eds.

Training Jumpers

I'm enclosing an article I wrote for BASELINE. I didn't write it as a "how to" article for new jumpers, but rather as an article which will hopefully stimulate some thought among those of us who occasionally train new BASE jumpers. I think that almost everyone (certainly me included) has at one time or another trained someone to BASE jump, and later wished we had spent more time doing it.

"I just went to Bridge Day and threw myself over the edge, slider-up and with a 30-inch pilot chute! It gives me the willies when I think about it now."

In the article, I tried to bring out a lot of points that should be emphasized but seldom are. I hope that experienced BASE jumpers will rethink how we train new folks in our sport, so that maybe we'll all start to take it more seriously.

As for me, when I wanted to learn five-and-a-half years ago, I'd never seen a BASE jump and didn't know anyone that had! So I just went to Bridge Day and threw myself over the edge, slider-up and with a 30-inch pilot chute! It gives me the willies when I think about it now.

Well, I hope you like the article. Blue skies, and I'll see y'all at Bridge Day.

Steve Morrell, BASE 174
Dhahran, Saudi Arabia

Correspondent Morrell's article will appear in the next issue.

--Eds.

Bangkok Update

I just got back from Sydney, Australia, where I met up with Nick Feteris and made a few leaps with the local BASE subculture. All is well "Down Under"; they are a well-informed group and are still dynamic in their ideas.

I've been away from the "scene" for a while so it was good to catch up on the news and the blues. I hope to see you this year at some stage or building edge.

By the way, could you please send all back issues of BASELINE? I will be in London for one week, and then in a few days I leave my hazy state and present home of Bangkok.

I'm sorry for being in such a rush, but I will write again soon. Be careful and don't die yet. Green and yellow with pink spots and skies!

Mike McCarthy, BASE 24
Bangkok, Thailand

McCarthy is the British BASE jumper who has previously made international headlines after parachuting from New York's Empire State Building with Alasdair Boyd, Paris' Eiffel Tower with Amanda Tucker, and, most recently, a solo leap Aug. 5 from Italy's 179-foot Leaning Tower of Pisa.

--Eds.

Toggle Keepers

I have replaced the guide rings (O-rings) on my risers with 1/8" rapid links. This provides for a fast way to run your steering lines outside the keeper ring when using the line-release mod. Without the O-rings, there is no more need to undo the lines from your toggles every time. I haven't jumped it yet, but I think it will work OK. Key rings would probably work just as well.

Don Boyles
Tulsa, Okla.

Other jumpers have been experimenting with a single large ring attached to each riser, large enough for the entire toggle to pass through. This also saves the hassle of having to untie the steering lines, and has the added advantage that the canopy's original flight characteristics are maintained if the jumper does not activate the line-release mod.

--Eds.

Troubles with the Zoo

I recently experienced an incident while jumping from a 350-foot bridge. Using "Zoo toggles" for the first time ever, I was unable to release one of my brake lines after opening, and was forced to make a rear-riser landing.

...n't think much about this when it happened, but then I noticed a rash of reports in BASELINE regarding out-of-control landings due to toggle problems. So I am enclosing a summary of my incident in hopes that it may help someone.

***"As with flying an aircraft,
a forced landing under
controlled conditions is better
than simply spiralling
into the ground."***

Zoo toggles, like anything else, work only when used correctly. In some areas of the country Zoo toggles are seldom used at the drop zone, and may therefore be new to people using them for BASE jumping. It is important to become thoroughly familiar with new gear before using it for the first time on a fixed-object jump.

And, regardless of what type of problem a jumper may experience, the most important point is to always maintain control (especially directional control) of the parachute. As with flying an aircraft, a forced landing under controlled conditions is better (even if you hit something) than simply spiralling into the ground.

Nick Di Giovanni, BASE 194
Oceanside, Calif.

Di Giovanni's incident report is included in this issue's "Accident Reports" department. --Eds.

Nigel's Back!

I just received the most recent issue of BASELINE -- it's getting better every issue, and that was the best one yet! Looks really smart.

I fell off a pylon recently -- my first jump back on my Cruislite since my cliff-strike accident last year. A real head-down plummet -- but only 375 feet, so I couldn't delay long enough to correct my position. Whack! An identical opening to my Beer Head one: the canopy turned quickly around on first inflation. This time I was prepared and hauled down the riser, wondering if I had lost another brake line! Then it all came back to me -- that sinking feeling of facing solid rock. *Grim!*

Luckily this time I felt the canopy rock back as my buried riser stalled out one side of the parachute and brought me back heading straight. It is really humbling to think

how long I had been a toggle grabber. I guess, in retrospect, I had felt that off-heading openings were a cause for a loss of face or something. All those good openings just sucked me into a false sense of security.

As I said before, my accident has changed my thinking. I am now sure that the occasional turn on opening does you a world of good by keeping you sharp!

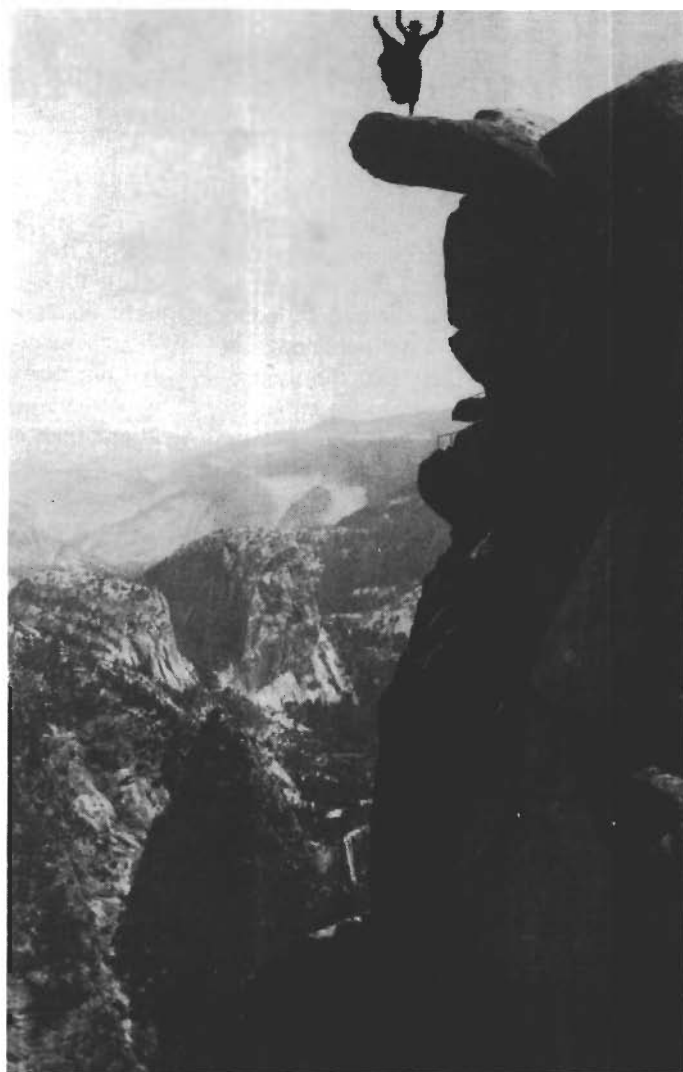
That reminds me, maybe you could point out in BASELINE that if you use a deeper brake setting to reduce opening surge, you'd better realize that if a brake comes off or breaks on opening, you probably won't be able to turn the canopy back with rear risers. Anyway, I have checked my line lengths and they are OK, so I guess my turns must be due to body position, the way the canopy lifts out of the container or the way I pack the tail. I'm now trying shorter folds and I think that should help.

I've included an article I've written on sliders, but I am curious about something. I would be very interested to know how the "victims" of past line-over malfunctions have been packing. Is there a common factor? All the line-overs I've seen at Bridge Day seem to be on top of the canopy before inflation, some even slipping off as the parachute cracks open. Maybe some of your readers know the answer.

Finally, do you think the BASE jumper directory is such a good idea? What happens when, say, the Park Service gets hold of a copy?

Nigel Slee, BASE 28
Stortford Herts, England

Slee is the editor of Jump Magazine, a publication on BASE jumping in Great Britain, which appears about once a year. Slee's article on sliders appears in this issue. --Eds.



An unidentified woman practices her "exit technique" from Yosemite National Park's Glacier Point circa 1900. Several successful jumps have been made from Glacier Point in this decade.

Parle Vous BASE?

I made my first BASE jump recently here in France, from a 185-meter [600-foot] bridge, and I just wanted to say *thank you!* I think I did it in good and safe conditions because of BASELINE's information.

I used an SST Racer with a Turbo (220 ft² 7-cell), a tertiary reserve and a 54-inch BASE pilot chute. I factory packed in a bag with the lines stowed in rubber bands, and I took the slider off the canopy for a fast opening.

My jump was very good, but I did have a small problem: I got some lines twists. What do you think about this problem? Is it a matter of equipment, or maybe bad body position? (I thought my body position was very good.) I have also been considering trying a spider slider. Do you think it is safe to use it below 200 meters?

I'm currently scouting some new sites here in France, and I'll write you again in two or three months if I have some success on good new jumps.

Makalu
Paris, France

Line twists can be caused by a variety of factors, including bad body position, bad packing or uneven shoulders at deployment time. More information on achieving on-heading openings with bags can be found in the Back to 'Basics' section of BASELINE Vol. 2, Issue 2.

Altitude considerations for spider slide vary according to the opening characteristics of individual parachutes. More information in this area is contained in Nigel Slee's article, "Zero-Drag BASE Sliders for Sky Freefalls," in this issue. --Ed

Book, Video & Equipment Review

Mesh Slider.

BASE gear from T&T Rigging,
2521-1/2 S. Vista Way, Suite
17, Carlsbad, Calif. 92008

\$35.00 plus \$2 P&H.

Any jumper who is considering making a short delay (three to six seconds) from a low object (700 to 1200 feet) is faced with a dilemma: packing slider-up and risking a slow, snivelly opening, or packing slider-down and risking gear damage or possibly a line-over malfunction. A mesh slider, such as the type made by T&T Rigging, could be the answer to both problems. (See Nigel Slee's slider article in this issue for more information.)

The T&T slider can be best described by two adjectives: functional and durable. Framed by Type 12 webbing and standard, No. 8 grommets, it employs a wide-screen (1/8" holes) mesh which is neatly integrated into the edges. There is no reinforcing "X" tape on the T&T slider, and there is no need: it is virtually bullet proof.

The T&T slider comes in any standard size or can be custom ordered. T&T can recommend sizes on request.

Priced at \$35, it's a bargain.

Sky-div'ing. By Bill FitzSimons.

96 pages, softbound, \$9.95
(Includes taxes, shipping, and handling).

Fodderstack Press, P.O. Box
38, Flint Hill, Va. 22627-0038

The advertisements for this book state: "You'll laugh 'till your sides ache..." And if you've had any thoughts of suing the author for deceptive advertising, you better forget about it before you lose in court:

FitzSimons' new book *really is* that funny!

This 96-page (8" x 8") softbound volume takes readers through a hilarious, irreverent, dictionary-style look at skydiving and BASE jumping "from A to Z." FitzSimons sets the tone for his book with the front-cover definition: "Sky-div'ing (sky' div'ing): n. A modern sport that involves parties, bragging, sexual excesses, the imbibing of large quantities of beer, and, on rare occasions, parachuting from aircraft."

The book goes on from there, and nobody is immune from FitzSimons' sarcastic touch: skydivers, BASE jumpers, the USPA, even the U.S. Army and the Golden Knights! Consider, for example, the following definition of BASE jumping: "A new sport derived from skydiving, the purpose of which is to make skydiving seem relatively sensible. 'BASE' is actually an acronym. To qualify for a BASE number, and be certifiable, BASE jumpers must make at least one jump from four different locations: a balcony (B), an apple tree (A), a staircase (S), and an emporium (E).

Or the first entry under the "E" section: "El Capitan: A religious shrine in California. Every faithful BASE jumper must make a jump from El Capitan at least once in his life. The mountain is also a shrine to the U.S. Park Police, who must arrest at least one BASE jumper to qualify for their retirement pension."

FitzSimons' book contains still other entries that might be applicable to both BASE jumpers and skydivers alike:

Flotation Device: A device, attached to the harness of a parachutist making a water jump, to help the rescue squad locate the body downstream.

Pin: A metal gadget that is passed through a locking loop of fabric to keep a parachute container closed until you throw out your pilot chute. If the pilot chute can't pull the pin out, the pin is said to be

locked, the pilot chute is said to be in tow and the parachutist is said to be in deep shit.

Fatality: An accident that seriously cuts tails one's future skydiving activity.

Ground Rush: The visual illusion experienced by parachutists in freefall, where they are approaching the ground. As the jumper goes low, objects on the ground appear to rush away from him in all directions. When he hits the ground, objects rush away from him in all directions.

And, of course, the book doesn't miss the opportunity to take a few good-natured pokes at the United States Parachute Association:

BSRs: The "R" stands for requirement and we all know what BS is, right, gang?

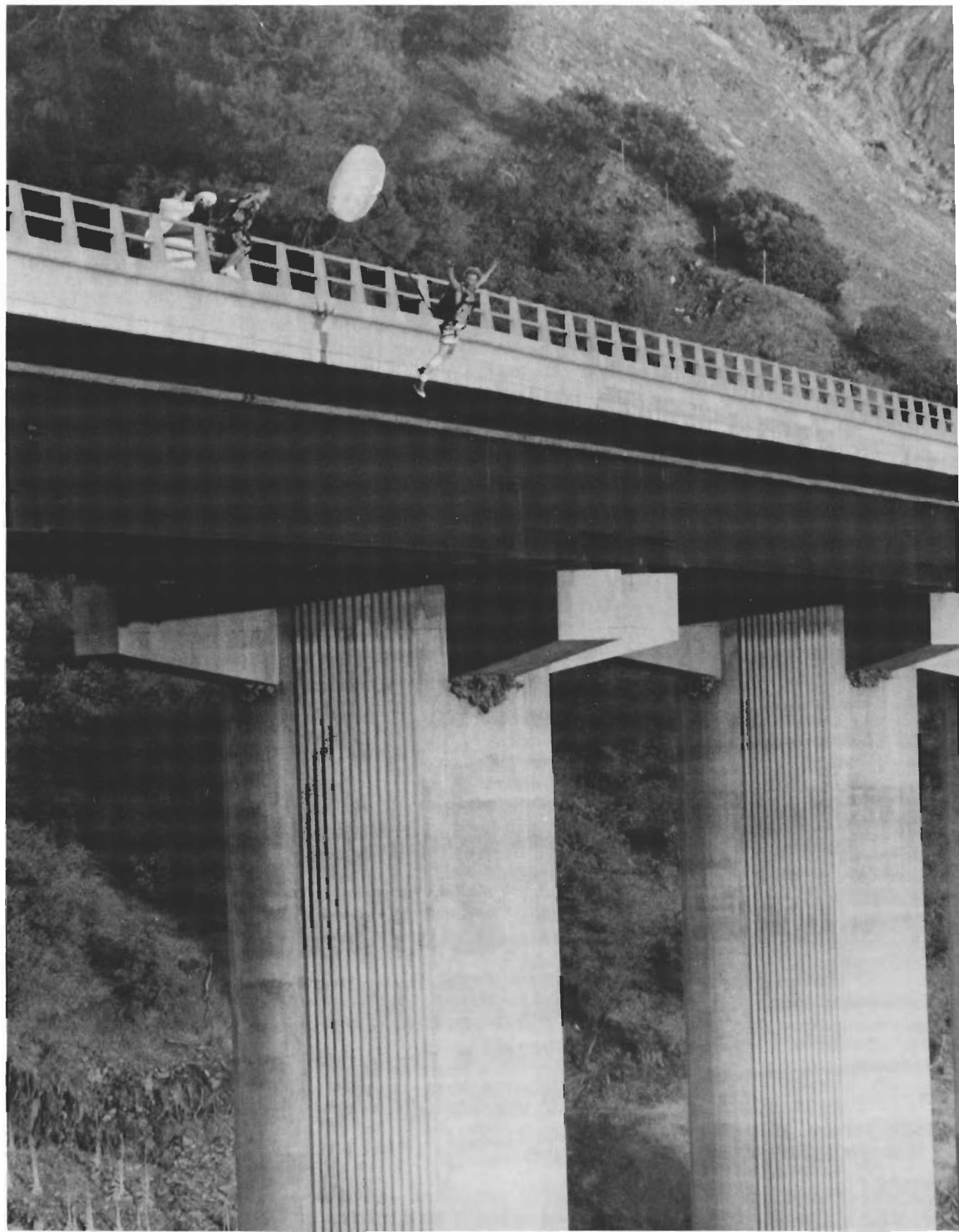
Instructor: A skygod with a U.S.P. rating.

Ottley: Bill Ottley, the only living skydiver who actually knew Leonardo da Vinci.

Pro Rating: An advanced demonstration rating that certifies that the holder is capable of making a large annual donation to the United States Parachute Association.

If you think we've already given away too much, we haven't even come close. FitzSimons' 96-page work contains over 160 definitions, and 47 full-page illustrations by the author. Its \$9.95 price tag includes all postage, handling, taxes, etc., and it is well worth the money.

It won't take you long to go through "Sky-div'ing" from cover-to-cover, and you'll enjoy doing so many times over. Besides, just wait 'till you see the entry for "Russian Roulette" ... !



Bridge Day Safety Tips

by John Hoover, BASE 95

"We want nothing more than to see everyone have a safe, exciting, more-fun-than-you-thought-was-possible BASE jump!"

As West Virginia's Bridge Day rapidly approaches, I wanted to share some thoughts on safety, especially in the aftermath of Steve Gyrsting's fatal jump at Bridge Day '87. There has been much printed in BASELINE and in the general media about that accident, and it all hits close-to-home for me: I was the "jump-master" that pin-checked Gyrsting before his ill-fated jump, and I watched him from exit to impact.

While I believe that a 52-inch pilot chute is a vital part of any BASE jumper's gear, I also feel that pin tension and bridl length are equally important. As an example, consider that dozens of people jumped at Bridge Day '87 with their skydiving rigs packed for a normal airplane jump, and they had no problems. Gyrsting himself had made two jumps earlier that day and opened just fine.

This leads me to believe that something went wrong besides just a "too small pilot chute." After studying all the pictures and watching the video tape many times, I am convinced Gyrsting's problem was some kind of a "pilot chute malfunction": for example, the bridle may have entangled with the pull-out handle, or may have gone through the hole in the bottom of the mesh. Both of these things can happen when you hand-hold your pilot chute, and it makes me wonder just how he folded the pilot chute and where he held the bridle. [Diagrams on how to properly fold and hold a hand-held pilot chute are included in this issue's Back to "Basics" department. --Eds.]

All of this brings me to the sad reality of the situation we have at Bridge Day every year: people who either can't or won't buy a BASE pilot chute for their once-a-year (or for some, once-in-a-lifetime) fixed-object jump. So I would like to offer a few suggestions to these people.

First of all, let's loosen up those containers, folks! It was really scary at Bridge

Day last year to see people tow a fully-inflated pilot chute for two or three seconds, and then hear the loud "pop" as the pin was finally extracted. It is fairly simple, and only takes a few minutes to make yourself a longer closing loop. Remember you are not dumping at 120 mph!

"It was really scary at Bridge Day last year to see people tow a fully-inflated pilot chute for two or three seconds, and then hear the loud 'pop' as the pin was finally extracted."

Second, *throw* your pilot chute out, don't just let it go. I watched lots of pilot chutes dancing on the edge of the burble before they finally took off, only due to the fact that the jumper simply released the pilot chute instead of throwing it vigorously to the side. This is not good, people, especially if you are using a small pilot chute (anything under 48 inches) or a short bridle (under 8 feet).

Finally, and perhaps most importantly, let's not let our prides and egos keep us from asking for advice. If you've never jumped with your pilot chute in your hand before, then by all means ask someone who has. Us folks in the yellow T-shirts with the BASE jumper patches are there to help you with your gear and answer any questions you might have; we won't bite! We're there to help, so please give us the opportunity to do so. We want nothing more than to see everyone have a safe, exciting, more-fun-than-you-thought-was-possible BASE jump!

Finally, I would like to remind everyone to write to the Fayette County Chamber of Commerce to express support for Bridge Day and BASE jumping. It is extremely important we do so, or the "crown jewel" of

BASE jumping could slip right between our fingers! Bridge Day will be October 15, and the latest word has it that BASE jumping will be allowed during the event.

However, we must all remember that until parachuting during the event is made official, the battle to keep the skydivers welcome is an ongoing endeavor. *It is never too late to send a postcard to the Chamber of Commerce and express support for BASE jumping during Bridge Day!* All you have to do is write the words "I support Bridge Day jumping and the parachuting activities which occur during that event," sign it, include your name and address but *no* date, and mail it to Doug Maddy, Fayette County Chamber of Commerce, 214 Main St., Oak Hill, W.Va., 25901. Remember, an 876-foot bridge is a terrible thing to waste!

About the Author: *California jumper John Hoover, BASE 95, is a member of the annual Bridge Day "staff" which helps newcomers with their equipment and techniques. An active BASE jumper and regular contributor to BASELINE, Hoover also serves as our Southern California correspondent.*

Subscribe to
**SOUTHWESTERN
SKIES**

12 issues for \$11.
Send payment to:

Southwestern Skies
P.O. Box 49191
Austin, Texas 78765
(512) 454-6547

Back to "Basics"

Many times a person's first BASE jump is also the first time they hand-hold their pilot chute. The pilot chute-in-hand method has the advantage that it allows a jumper to relax and enjoy the free fall (instead of having to look for, grab and pull a throw-out or pull-out pilot chute). It also ensures that the jumper can deploy at the time he chooses by simply throwing the pilot chute, instead of possibly burning up several hundred feet of altitude clawing for a knob or dildo.

However, the method involves more than simply grabbing one's pilot chute and jumping. Every year at Bridge Day, many jumpers are seen as their bridle entangles around their wrist or foot, or as they get flipped on their side because the pilot chute started to inflate and create drag before they let it go.

Furthermore, there has been at least some speculation that the way in which Steve Gyrsting was hand-holding his 36-inch pilot chute at Bridge Day last year caused it to foul itself upon deployment. Although this has never been proven, all these things should nonetheless show the obvious importance of properly folding and holding a hand-held BASE pilot chute.

The three primary considerations in this area are that the pilot chute catch air quickly once it is released, but *not* before, that the bridle is routed so that it will not entangle on the jumper's appendages or gear, and that the slack from pin to pilot chute is sufficient so that the jumper will not zap himself, yet short enough so that the bridle does not whip around excessively in free fall, increasing the chances for an entanglement.

The following illustrations depict one of the many safe methods for hand-holding a pilot chute. Although a deployment knob is shown for reference purposes, these types of pilot chutes should be avoided: not only does the knob present an extra opportunity for an entanglement (with the bridle or the pilot chute itself), but standard BASE pilot chutes don't have these knobs to begin with!

The method shown in these illustrations is a basic "S" fold, which has two primary advantages: first, it allows the major bulk

of the pilot chute to be contained neatly in the palm of the hand (even with the monster-size 52-inchers), thereby preventing loose material from catching air before the pilot chute is released. Second, it concentrates the mass of the pilot chute into a smaller volume, therefore giving the jumper a solid object to throw to the side at deployment time. A vigorous throw is important to keep the pilot chute out of the burble which occurs over a jumper's back during free fall.

Figure 1. Grab the top of the pilot chute with your left hand. Place your right hand on the pilot chute immediately below your left, then choke the material down to the point where the fabric meets the mesh.

Figure 2. Next, make an "S" fold out of the material as shown.

Figure 3. Grab the material completely with your *left* hand. Your left hand should now hold all of the top section of the pilot chute, with the mesh portion and bridle hanging freely below it.

Figure 4. Smooth out the mesh section with your right hand (as you did for the top section in step 1).

Figure 5. Grab the mesh section with your left hand. Begin to S-fold the bridle (as shown) until the proper length is remaining to the pin.

Figure 6. Grab the S-folded bridle with the fingers of your left hand. Open the palm of your right hand and place it as shown, ready to receive the folded pilot chute.

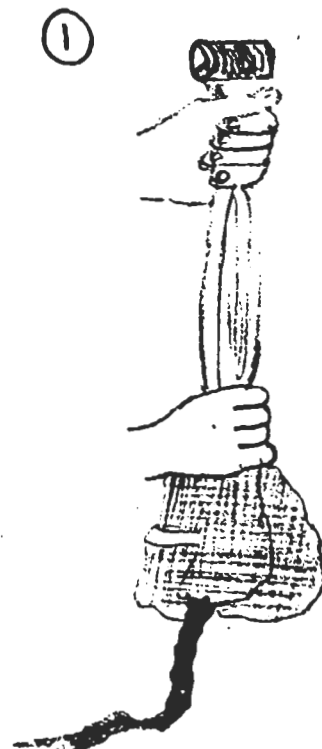
Figure 7. Place the pilot chute in your right hand. The S-folded bridle should sit on your palm. The top of the pilot chute should be held between your thumb and the tips of your four fingers.

Finally, you will need to determine the ideal length of exposed bridle (that between the pin and your hand). Keep in mind that on a vigorous exit you will probably hyper-extend yourself, and might zap your rig if there is not sufficient bridle exposed. To determine the ideal length, hand-hold your pilot chute and outstretch the bridle until there is just slight slack at maximum extension of your hands, but yet not enough to open your container. Some people have found it useful to mark off this spot with

tape for future reference.

The final topic which has not yet been covered involves whether the bridle should exit your hand on the back side (farthest from the thumb), or the top side (closest to the thumb). Both methods are successfully being used by experienced BASE jumpers. To determine which method is best for you, lie prone as if you were in free fall, and simulate tossing a pilot chute. If you use a back-handed throw (with the back of your hand up and the thumb pointing down), you should route the bridle out of the back side of your hand (farthest from your thumb). Furthermore, because there is a tendency for low-experience BASE jumpers to go head-low in free fall, they are usually encouraged to route the bridle out the back side of their hands to avoid a possible entanglement.

As was stated at the outset, the method diagramed here is only one of the many safe methods for hand-holding a BASE pilot chute. Jumpers who will attend Bridge Day this year can have this method, or others, demonstrated first-hand by one of the staff volunteers.





VIEWPOINTS

In reply to Joe Svec's attack on BASE jumpers and BASE jumping (Page 17), the Houston Chronicle printed the following letter from USBA President Phil Mayfield:

Much has been printed regarding recent parachute jumps from various BASE objects. In a recent letter, Houston skydiver Joe Svec attacked BASE jumpers as being "skydiving outlaws" who need their "egos caressed," unlike the "mature, responsible skydivers" who "make safe, sane jumps from aircraft." Svec also criticized the publicity afforded these "outlaws."

I suggest that to a large segment of the population, jumping from an airplane has as little to do with maturity, safety or san-

ity as jumping off a cliff or other object. I enjoy both sports because of the challenge and thrills, not the headlines or the ego aggrandizement.

The truth is, some sports are more dangerous than others. Downhill skiing is more dangerous than cross-country skiing. Likewise, some sports are more visible than others and are more likely to attract attention. Headlines, after all, are not goodwill gestures but news items.

Svec seems to have three pet peeves: BASE jumpers in general; illegal BASE jumpers; and publicity hounds, even though he has sought publicity for his own activities.

Certainly no sport has a monopoly on

fools and egotists. Parachute jumping is its share. I do not defend those who break the law, but there are numerous people who make legal BASE jumps. Nor do I promote BASE jumping or even roller coaster rides for those who are unqualified or unprepared. Good judgment cannot be legislated. There will always be people who do more than they can chew.

Svec also criticized Channel 2 News for covering "skydivers breaking the law" by jumping from the Ship Channel. However, neither jumper was found guilty of any crime on his day in Houston courtroom.

This Issue: As Bridge Day approaches, New York resident Bud Franz sent the following letter to SKYDIVING magazine.

To voice your input concerning Franz's letter, mail your letters to BASELINE Magazine, 3202 La Quinta Drive, Missouri

City, Texas 77459-3145.

I support Mr. Maddy on the issue about BASE jumping from the West Virginia Bridge. A bridge was made to drive across, not to jump off. I myself

love to ski, but you don't see me jumping down I-95.

Bud Franz II
New York, N.Y.

USBA Update

The United States BASE Association

The United States BASE Association (USBA) is an organization dedicated to the "safety, advancement and positive public image" of BASE jumping. Membership in the USBA is extended "to anyone interested in the concept of man jumping off fixed objects, an esoteric aspect of man's age-old dream of self-flight."

BASELINE Magazine is not a publication of, under the control or direction of, or in any official way affiliated or associated with the U.S. BASE Association. Our "USBA Update" section, and the information contained herein, is presented as a public information service to our readers. Contributions to this department are welcome.

Board of Directors

The United States BASE Association is governed by a board of directors consisting of the following people:

President

Phil Mayfield
Arlington, Texas

Vice-President

Phil Smith
Houston, Texas

Treasurer

Jean Boenish
Hawthorne, Calif.

Board Members

Andy Smith
Fredericksburg, Texas

Brad Smith
Wichita, Kan.

New BASE Awardees

172
181
206

Mark Bailey
Kathy Conklin
Marta Allen

Lexington, Ky.
Goleta, Calif.
Carmichael, Calif.

Texas BASE

10 Tim Addison Irving, Texas

California BASE

1 Dennis Murphy Orange, Calif.

Colorado BASE

1 Robin Heid Denver, Colo.

Arizona BASE

1 J.D. Walker Chandler, Ariz.
2 Kenn Noble Mesa, Ariz.
3 George Roso Irving, Texas
4 Rich Stein Northridge, Calif.

Virginia BASE

1 Adam Filippino Alexandria, Va.
2 Paul Rockefeller Falls Church, Va.

Bridge Day Plans on Track

Jean Boenish reports that plans and preparations for Bridge Day '88 are proceeding on schedule. "I have the boats squared away, and am currently lining up the ground crew trucks," Boenish reported. "Everything is looking good for Oct. 15."

Officials at the Fayette County Chamber of Commerce, National Park Service and West Virginia State Police have all confirmed that Bridge Day will occur on schedule this year, and that BASE jumping will be permitted during the event. "Even if the West Virginia legislature were to convene today, there would be insufficient time for them to pass a bill outlawing BASE

jumping by Bridge Day," reported one source at the Chamber of Commerce.

As in previous years, experienced BASE jumpers will be donating their time to serve as "staff volunteers" in Canyon Rim Park the Friday before Bridge Day. Jumpers who arrive early for the event will be able to attend informal seminars on exit technique, packing and other safety topics relating to BASE jumping.

Jumpers who wish to attend the annual event are asked to preregister by mail. Registration forms were included with the last issue of BASELINE; additional copies can be obtained free-of-charge by sending a self-addressed, stamped envelope to 3202 La Quinta Drive, Missouri City, Texas 77459-3145.

The Board's Report: *What Did It Say and What Did It Mean?*

On Oct. 10, 1987, 25-year-old Steven Gyrsting of Paoli, Pa., was tragically killed at Bridge Day '87 while parachuting from the New River Gorge Bridge. Within 11 days, the superintendent of the National Park Service, New River Gorge National River, ordered that a board of inquiry be convened to study this accident and prepare a formal report. To the Park Service, the event represented little more than Incident No. 870298. To the BASE community,

however, it represented the very real fear that this was the beginning of the end of Bridge Day.

Some seven months later, however, the board released a final report which has drawn a big sigh of relief from both the BASE community and the organizers of Bridge Day. The board's report has proven to be reasonable, fair and accurate, and reflective of an obviously thorough investigation.

The board of inquiry first convened Jan. 28 in Oak Hill, W.Va. Present were Robert L. Whitman, Assistant Superintendent (who served as the board's chairman), Chief Ranger Jason Houck, and North and South District Managers Richard E. Brown and Michael Murray. Also attending was Ronald Dixon, a skydiver from Evans, W.Va., who had made eight jumps off the bridge.

One month later, Houck mailed BASELINE the board's draft report, requesting comments, suggestions and any supplemental material we could provide. The five-man board also studied video tapes and photographs of Gyrsting's fatal jump, and included narratives from eye witnesses to the accident.

On June 2, 1988, the board sent a four-page final report to the park superintendent. The accident was summarized in very concise wording: "Steve Gyrsting was killed when he parachuted off the New River Gorge Bridge and landed in the river below, a distance of 876 feet. Gyrsting's main parachute failed to open and he pulled his reserve parachute too late for it to completely open. He suffered multiple injuries from the impact of hitting the water. This incident is classified by the coroner as an accidental death."

The report goes on to list four "probable contributing causes," and four general recommendations for preventing "recurrence of this type of accident." Briefly, the contributing causes are listed as: 1. The pilot chute did not properly inflate, so could not open the main container; 2. The pilot chute may have been smaller than recommended for a BASE jump; 3. The main parachute container was packed too tightly; and 4. Gyrsting initiated the emergency action of pulling the reserve parachute too late.

The recommendations state: 1. Work with the BASE organization to strengthen their safety recommendations, and insist that all BASE jumpers have a minimum diameter pilot chute; 2. Simultaneous, multiple or special parachutist launches should be pre-coordinated with and overseen by the BASE safety staff; 3. Allow only designated take-off points managed by a jumpmaster; and 4. Assist the BASE jumpers in working out a system to be more critical of poor jumps. This would serve to educate the jumpers to problems observed, and would help eliminate accidents.

The board also included as attachments

to their report some internal NPS paperwork, the Bridge Day BASE information package, Gyrsting's jump registration and liability waiver form, Larry Riddle's rigger report, seven pages of local newspaper accounts, and several xeroxed pages from BASELINE Vol. 2, Issue 3, including Gyrsting's fatality report, and Andy Calistrat's editorial "Once is Enough."

Overall, the board's report was positive,

reasonable and fair, and never carried the exaggerated, sensationalistic tone used by much of the local media in dealing with Gyrsting's accident. The report also does not suggest that BASE jumping from the bridge be banned; to the contrary, the overall tone seems to imply that since the activity will be around for awhile, at least the safety considerations should be strength-

... continued on page 18



This superimposed sequence of photographs, shot by Tom King, shows Gyrsting's fatal jump. The reserve free bag, pilot chute and bridle are clearly visible at the top, showing that reserve inflation did not begin until about 100 feet AGL. This also disproves previous assumptions that Gyrsting did not pull the reserve until the last 100 feet.

BASE Abroad: Australia's "Cap"

by Nick Feteris, BASE 71

"Frenchman's is more than just a BASE jump, and everyone who has gone there was motivated by more than just a sheer thrill."

Two years ago, Australia's first real cliff was conquered by several local jumpers. "Real," that is, being a cliff with captivating features like an actual sheer face and a landing area!

"Frenchman's Cap" is 1100 feet of baby Half Dome secluded in some of Tasmania's most rugged bushland. Getting to it, off it and back to civilization has become what is regarded here as the most singularly demanding challenge in "BASE Down Under." Sound dramatic? If the opinion of those who have made the jump is of any worth, it is.

Syman Wyatt qualified for Australian BASE #1 in January 1986 while making the first-ever jump from Frenchman's Cap. He has led only three groups there to date. For each trip, Wyatt prepared 70-pound

packs that included ground-to-air radios, survival equipment, and generally gear to handle -15° C in a blizzard.

"Getting to it, off it and back to civilization has become what is regarded here as the most singularly demanding challenge in 'BASE Down Under.' Sound dramatic? If the opinion of those who have made the jump is of any worth, it is."

The trail to Frenchman's Cap begins in southwestern Tasmania at a rickety old sign post which points off into the wilderness.

The first obstacle is a raging torrent of melting snow, surpassable only by a well-maintained flying fox. Then it's over the mountain, a few hours of squelching through swamps, and then planes of sometimes waist-deep mud. And that's only the first day! Next it's clambering up a steep mountain pass through ankle-deep tree roots, and a jungle of overhanging branches which act like catapults as they reach to catch unsuspecting backpacks. Finally a view of the Cap appears, which provides new-found energy to complete the second day and remaining walk.

Frenchman's is more than just a BASE jump, and everyone who has gone there was motivated by more than just a sheer thrill. Generally, however, it is the contrast of objects themselves, and the variety in getting there, that makes for most jumpers' ultimate reward. It was certainly such a philosophy that cracked this site!

The scene at the Cap is as tranquil as it is isolated. A cabin stands next to a small glacial lake within a 1,000-foot crater, and a dominating sheer wall of rock towers above that. Basically, with some good weather, it is a perfect formula for bliss.

Similar -- but more accessible -- havens around the world are spoiled by some type of governing authority, but so far not here. The "just do it" rule has been successful. Even with Wyatt being choppered out after dislocating his shoulder on the most recent trip, there have been no adverse repercussions from the rangers so far.

Moreover, it is gratifying to see that the hard-learned lessons of site preservation learned in the U.S. have been capitalized on here. Bungonia Gorge is a 650-foot, jump-in and



Nick Feteris (center, wearing helmet-mounted camera), photographs Tony Slaver (BASE 167, left) and Syman Wyatt (BASE 152, right) jumping from Tasmania's 1,100-foot Frenchman's Cap.

walk-out cliff about three hours from Sydney. It has been host for at least 80 recorded BASE jumps, and only recently have the rangers heard some rumors of people "hang-gliding in the canyon."

While walking out of Frenchman's after a most successful jump, I used my own philosophy to combat my delirious exhaustion as I dreamed of normality in Sydney. There, jumpers

however, compares with, what to many Aussies is only pure fantasy, the thrill of jumping at Bridge Day, off a real 2,000-foot antenna tower, or the unparalleled experience of El Cap itself.

About the Author: Nick Feteris, BASE 71, is an experienced skydiver and veteran of nearly 100 fixed-object jumps. The 25-year-old Australian has made national headlines after para-

"For each trip, Wyatt prepared 70-pound packs that included ground-to-air radios, survival equipment, and generally gear to handle -15° C in a blizzard."

can stroll into town with comparative ease, trek up a 600-foot stairwell, launch off into a maze of city lights and be reliably overwhelmed by the bizarre visual effect of office window flicking by like the rungs of a ladder.

Generally there is no shortage of "do-able" sites in Australia, and certainly many new Frenchman's-type challenges are open for more adventures. Nothing,

chuting from such high-profile sites as New York's World Trade Center, the Statue of Liberty [BASELINE #3], and when he was arrested while attempting to scale the outside of Chicago's 1,500-foot Sears Tower building.

Feteris serves as a jumpmaster on the annual Bridge Day staff, and is also one of BASELINE's Australia/New Zealand correspondents.



VIEWPOINTS: See the reply to this letter on Page 13

I wonder why the media in this city is suddenly interested in skydivers after ignoring them and their competitions for years. Is it because the recent "fixed object" jumps are more sensational than thousands of skydives made each year in and around Houston by mature, responsible skydivers, or is it because the jumpers are breaking the law?

Any weekend hundreds of skydivers make safe, sane jumps from aircraft in accordance with the basic safety regulations of the United States Parachute Association. In the five years I've been involved in this sport, I haven't seen one reporter at any drop zone.

DeWayne Bruette, who was arrested following his jump from the Texas Commerce Tower, is not representative of the skydiving community as a whole. After the extensive news coverage, I felt responsible skydivers were due equal time, as they got tired of being asked, "Are you one of those crazy guys who jumps

off buildings?"

Instead, just when the publicity over the building jump had died down and we thought the concrete circus was over, two of the troupe who believed they hadn't received enough publicity decided to jump from the Houston Ship Channel bridge. Channel 2 news obliged with full-color coverage -- exclusive films of skydivers breaking the law. Many of us wonder if Channel 2 would have made similar arrangements with a bank robber to enhance ratings.

But the publicity didn't stop with Channel 2. The daring duo emerged from 61 Riesner St. as heroes in the eyes of Chronicle reporter Barbara Karkabi in her recent halpage article.

A skydiver then decided to glean some media limelight in the middle of downtown on a Saturday afternoon. Unfortunately, fate was not kind to Richard Davis Sept. 6. There were no stories about how daring and wonderful he was, only how bloody and broken he was after

the jump.

Levying a \$75 to \$200 fine on a skydiver who needs his ego caressed is not going to work, as it is a small price to pay for the publicity it generates. There is no easy solution to the problem, but those of us who feel a responsibility to this sport and to the general public will seek a solution.

In the meantime, I find it disheartening that these skydiving outlaws received more coverage than the 1981 U.S. Parachute Team that is presently training for the 1981 world championships to be held in Florida Oct. 8-11. The U.S. team will compete against teams from 23 nations, defending its world title won in France in 1979. I have the honor of being team leader. It sickens me to see public hounds receiving more attention than young men who have practiced for months at great sacrifice to compete.

BASELINE Update

Art Appreciation

Many thanks to professional artist Donald Klawinsky for his contributions to this issue.

Corrections

The video review of Bryan Scott's *If Man Could Fly* incorrectly listed its price as \$44.95. The tape actually costs \$34.95, shipping and handling included. Checks or money orders can be sent to Scott at Lake Howell Plaza, 5471 Lake Howell Road, Suite 105, Winter Park, Fla. 32792.

Also, Marlen Burford's fatality report in the last issue of BASELINE incorrectly stated that Burford freefell from the 290-foot building. Burford had actually made a direct-bag static-line jump.

Back Issues Available

A few remaining sets of back issues are still available for the last two years of BASELINE. Volume 1 back issues cost \$7, and Volume 2 is available for \$9. (U.S. only. For all foreign addresses send \$10 and \$15, respectively.)

Cop Demo

John Hoover and George Roso had climbed halfway up a 700-foot California antenna tower, during daylight, when they noticed a police car had pulled over their ground crew. Figuring they were committed to the jump, the pair kept climbing.

The police, meanwhile, asked the ground crew who the people on the tower were. "They're gonna jump," said the getaway driver honestly. The alarmed cop quickly picked up his radio and called in, "Better get an ambulance down here. We have some suicide jumpers on the tower." "No, no," corrected the getaway driver. "They've got parachutes on!"

"Ohhh," said the cop, a smile spreading over his face. "Those kind of jumpers." He picked up his radio and called in a second time: "Any units that want a free show, come out to the tower, quick." Within minutes, the area was swarming with police cruisers.

The dismayed Hoover and Roso, meanwhile, reached the top, performed flawless jumps and made smooth stand-up landings right in the midst of the police cars. To their surprise, however, the officers began cheering and applauding instead of moving to arrest the pair. "Why did you land over here?" asked one of the cops of Hoover. "What?" he replied. "Why didn't you fly your parachute as far as you could and make a run for it?" the cop asked. "Well -- I wouldn't run from the law," said Hoover, trying to make the best of the situation. "Why not?" asked the cop. "We weren't going to chase you!"

Unfortunately the tower owners, who did not have as much of a sense of humor, insisted on pressing charges. The pair were assigned a token fine and six months of probation.

... continued from page 15

ened and taken more seriously.

The board's report also contains several valuable lessons for the BASE jumpers, as it very correctly points out that Gyrsting used an under-sized pilot chute, a too-tight container, and waited excessively long before activating his reserve. Another hard-learned lesson came not from the report itself, but from a supplemental narrative included as an attachment: "Paramedic Seamann and I checked the victim's clothing for identification and found none. In the victim's left front pants pocket, I observed a baggie containing a small amount of a green leafy substance that appeared to be marijuana, a pack of ciagerette rolling papers, and a disposable lighter." Other paperwork stated: "While checking the victim for identification, Ranger Murray found a baggie containing what he thought might be marijuana. Ranger Murray informed State Trooper Tolley of the possible marijuana found on the victim. Tolley indicated that the State Police would request a toxicology blood screen of the victim. I was later informed that there was not enough blood left in Gyrsting's body to run a toxicology screen. The victim bled extensively while in the water from a large opening in his back caused by the impact of hitting the water."

Because a positive blood test was never made, the fact that Gyrsting had marijuana on his person at the time of his fatality was never included in the board's final report. However, the related paperwork soon found its way into the hands of a local newspaper, which subsequently printed some very negative articles. Needless to say, this should carry an important lesson for jumpers attending Bridge Day.

While the nature of the overall report was essentially accurate, there were several small technical errors. The report states that Gyrsting "may have been using a pilot chute slightly smaller than the 36-inch minimum recommended by the BASE Association." Gyrsting actually was using a 36-inch pilot chute, and 42 inches is the general recommended minimum for short- to medium-delay BASE jumps.

The report also states that "in all probability, the pilot chute did not inflate because, during deployment, the plastic knob handle on top became wedged

through an opening between the tapes at the bottom effectively locking the pilot chute into an inversion." Careful study of photographic evidence has repeatedly shown that there is no substantial evidence to suggest that this is what happened to Gyrsting's pilot chute. While there is also no evidence to show that it didn't, it is nonetheless inaccurate to state that the inversion happened "in all probability," or to give jumpers a false sense of security in believing that small pilot chutes without knobs are an acceptable substitute for a proper BASE pilot chute.

The report's final inaccuracy was its statement that "the reserve chute apparently was not pulled until Gyrsting was 75-100 feet from the water's surface." Although this was first believed to be the case, a later study of a video shot from the bottom proved that the reserve did not begin to *inflate* until 75-100 feet from the water's surface; Gyrsting actually activated the reserve at 300 feet AGL. The 200-foot gap between activation and start of inflation is blamed on the sub-terminal deployment, small spring-loaded reserve pilot chute, extra-long reserve bridle and bagged reserve parachute.

Although Gyrsting was using a full-size slider on a slow-opening Raven reserve (the report correctly points out that the manufacturer later recommended bikini-sliders for Raven reserves), it is questionable whether a different slider would have had any effect on the jump: 75 feet at almost-terminal velocity is not enough altitude for nearly any reserve, square or round, regardless of the type slider used.

These small technical errors aside, however, the board's report remains a well-prepared document reflective of an obviously thorough investigation. BASELINE would like to openly thank the National Park Service, and especially Chief Ranger Jason Houck, for their level-headed approach to the investigation, and their spirit of cooperation throughout.

Furthermore, as an organization that could have just as easily concluded that BASE jumping during Bridge Day should be banned as a result of Gyrsting's accident, the NPS is due the appreciation off *all* BASE jumpers for the approach they took and the conclusions they reached!

Zero-Drag BASE Sliders for Short Freefalls

by Nigel Slee, BASE 28

For the last two years, newcomers at Bridge Day have been advised to pack with their sliders up as a precaution against the radical line-over malfunction (which can occur when the slider is packed down or left off). Although packing slider-up successfully protects jumpers from line-overs, I strongly feel that slider-up packing for short freefalls is a backwards step in BASE technique, which could compromise jumpers' safety at sites less forgiving (or less high) than the New River Gorge Bridge.

Bearing in mind that many jumpers use Bridge Day as a starting point in their BASE career, I suggest that they should consider, as an alternative, using a zero/low drag slider, such as the spider and mesh types which some jumpers are now using with good results. The primary advantage of these "BASE sliders" is that they offer the best characteristics of both slider-up and slider-down openings: fast, snivel-free "bottom surface" inflations, with the slider still controlling the line groups and thus preventing line-overs.

Watching Smitty's snivel at the last Bridge Day got me thinking about sliders: how they work, why they don't work (snivel) and what effects different airspeeds and sliders have on the process. Here is what I came up with. I hope it provides some food for thought.

First let's look at what is already common knowledge. Depending on the position of the slider, either up or down, a square canopy opens in two completely different ways. As shown in Illustration 1, a slider-down square opens "instantly" at line stretch, when the freefall wind spreads the bottom surface of the parachute. This happens even before cell pressurization. The cells do not inflate until the canopy surges forward. Over-delaying with the slider down (more than five or six seconds) could very easily result in broken lines or dam-



aged fabric.

Illustration 2, on the other hand, depicts a canopy opening in the slider-up configuration. Here the slider inflates at line stretch, blocking the bottom surface of the canopy from the air stream. The result of this is that the cells have to inflate to spread the lines and force the slider down, the opening will generally take at least 100 extra feet, and the jumper risks the possibility of a hesitation or snivel in the process.

What causes a slider to snivel? Quite simply, not enough air is entering the nose to spread the cells (inflating the canopy) and force the slider down. Why not? It would

seem sensible to suggest that the burble created by the outstretched and inflated slider prevents enough air from hitting the nose for a fast, clean opening. Eventually the slider drops as sufficient air enters the cells.

Interestingly, at the other end of the deployment speed scale, some tandem jumpers have installed "air spoilers" on their sliders to slow down the openings. These spoilers are essentially extensions to increase the deflection/burble to slow down openings. This makes you wonder how effective those holes were that we used to burn in the middle of our sliders. Surely we should have been removing fabric from

BASELINE Update

Art Appreciation

Many thanks to professional artist Donald Klawinsky for his contributions to this issue.

Corrections

The video review of Bryan Scott's *If Man Could Fly* incorrectly listed its price as \$44.95. The tape actually costs \$34.95, shipping and handling included. Checks or money orders can be sent to Scott at Lake Howell Plaza, 5471 Lake Howell Road, Suite 105, Winter Park, Fla. 32792.

Also, Marlen Burford's fatality report in the last issue of BASELINE incorrectly stated that Burford freefell from the 290-foot building. Burford had actually made a direct-bag static-line jump.

Back Issues Available

A few remaining sets of back issues are still available for the last two years of BASELINE. Volume 1 back issues cost \$7, and Volume 2 is available for \$9. (U.S. only. For all foreign addresses send \$10 and \$15, respectively.)

Cop Demo

John Hoover and George Roso had climbed halfway up a 700-foot California antenna tower, during daylight, when they noticed a police car had pulled over their ground crew. Figuring they were committed to the jump, the pair kept climbing.

The police, meanwhile, asked the ground crew who the people on the tower were. "They're gonna jump," said the getaway driver honestly. The alarmed cop quickly picked up his radio and called in, "Better get an ambulance down here. We have some suicide jumpers on the tower." "No, no," corrected the getaway driver. "They've got parachutes on!"

"Ohhh," said the cop, a smile spreading over his face. "Those kind of jumpers." He picked up his radio and called in a second time: "Any units that want a free show, come out to the tower, quick." Within minutes, the area was swarming with police cruisers.

The dismayed Hoover and Roso, meanwhile, reached the top, performed flawless jumps and made smooth stand-up landings right in the midst of the police cars. To their surprise, however, the officers began cheering and applauding instead of moving to arrest the pair. "Why did you land over here?" asked one of the cops of Hoover. "What?" he replied. "Why didn't you fly your parachute as far as you could and make a run for it?" the cop asked. "Well -- I wouldn't run from the law," said Hoover, trying to make the best of the situation. "Why not?" asked the cop. "We weren't going to chase you!"

Unfortunately the tower owners, who did not have as much of a sense of humor, insisted on pressing charges. The pair were assigned a token fine and six months of probation.

... continued from page 15

ened and taken more seriously.

The board's report also contains several valuable lessons for the BASE jumpers, as it very correctly points out that Gyrsting used an under-sized pilot chute, a too-tight container, and waited excessively long before activating his reserve. Another hard-learned lesson came not from the report itself, but from a supplemental narrative included as an attachment: "Paramedic Seamann and I checked the victim's clothing for identification and found none. In the victim's left front pants pocket, I observed a baggie containing a small amount of a green leafy substance that appeared to be marijuana, a pack of cigarette rolling papers, and a disposable lighter." Other paperwork stated: "While checking the victim for identification, Ranger Murray found a baggie containing what he thought might be marijuana. Ranger Murray informed State Trooper Tolley of the possible marijuana found on the victim. Tolley indicated that the State Police would request a toxicology blood screen of the victim. I was later informed that there was not enough blood left in Gyrsting's body to run a toxicology screen. The victim bled extensively while in the water from a large opening in his back caused by the impact of hitting the water."

Because a positive blood test was never made, the fact that Gyrsting had marijuana on his person at the time of his fatality was never included in the board's final report. However, the related paperwork soon found its way into the hands of a local newspaper, which subsequently printed some very negative articles. Needless to say, this should carry an important lesson for jumpers attending Bridge Day.

While the nature of the overall report was essentially accurate, there were several small technical errors. The report states that Gyrsting "may have been using a pilot chute slightly smaller than the 36-inch minimum recommended by the BASE Association." Gyrsting actually was using a 36-inch pilot chute, and 42 inches is the general recommended minimum for short- to medium-delay BASE jumps.

The report also states that "in all probability, the pilot chute did not inflate because, during deployment, the plastic knob handle on top became wedged

through an opening between the tapes at the bottom effectively locking the pilot chute into an inversion." Careful study of photographic evidence has repeatedly shown that there is no substantial evidence to suggest that this is what happened to Gyrsting's pilot chute. While there is also no evidence to show that it didn't, it is nonetheless inaccurate to state that the inversion happened "in all probability," or to give jumpers a false sense of security in believing that small pilot chutes without knobs are an acceptable substitute for a proper BASE pilot chute.

The report's final inaccuracy was its statement that "the reserve chute apparently was not pulled until Gyrsting was 75-100 feet from the water's surface." Although this was first believed to be the case, a later study of a video shot from the bottom proved that the reserve did not begin to *inflate* until 75-100 feet from the water's surface; Gyrsting actually activated the reserve at 300 feet AGL. The 200-foot gap between activation and start of inflation is blamed on the sub-terminal deployment, small spring-loaded reserve pilot chute, extra-long reserve bridle and bagged reserve parachute.

Although Gyrsting was using a full-size slider on a slow-opening Raven reserve (the report correctly points out that the manufacturer later recommended bikini-sliders for Raven reserves), it is questionable whether a different slider would have had any effect on the jump: 75 feet at almost-terminal velocity is not enough altitude for nearly any reserve, square or round, regardless of the type slider used.

These small technical errors aside, however, the board's report remains a well-prepared document reflective of an obviously thorough investigation. BASELINE would like to openly thank the National Park Service, and especially Chief Ranger Jason Houck, for their level-headed approach to the investigation, and their spirit of cooperation throughout.

Furthermore, as an organization that could have just as easily concluded that BASE jumping during Bridge Day should be banned as a result of Gyrsting's accident, the NPS is due the appreciation off *all* BASE jumpers for the approach they took and the conclusions they reached!

Zero-Drag BASE Sliders for Short Freefalls

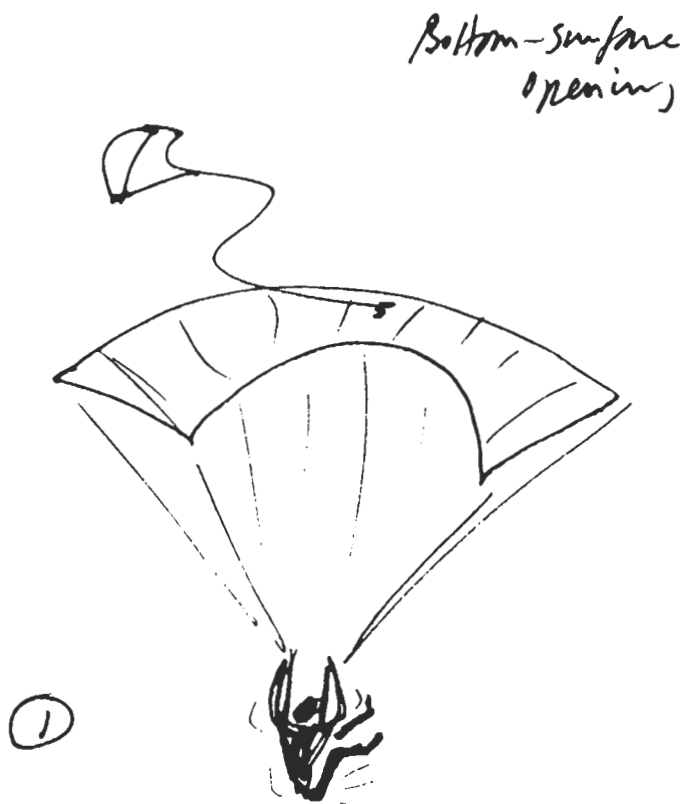
by Nigel Slee, BASE 28

For the last two years, newcomers at Bridge Day have been advised to pack with their sliders up as a precaution against the radical line-over malfunction (which can occur when the slider is packed down or left off). Although packing slider-up successfully protects jumpers from line-overs, I strongly feel that slider-up packing for short freefalls is a backwards step in BASE technique, which could compromise jumpers' safety at sites less forgiving (or less high) than the New River Gorge Bridge.

Bearing in mind that many jumpers use Bridge Day as a starting point in their BASE career, I suggest that they should consider, as an alternative, using a zero/low drag slider, such as the spider and mesh types which some jumpers are now using with good results. The primary advantage of these "BASE sliders" is that they offer the best characteristics of both slider-up and slider-down openings: fast, snivel-free "bottom surface" inflations, with the slider still controlling the line groups and thus preventing line-overs.

Watching Smitty's snivel at the last Bridge Day got me thinking about sliders: how they work, why they don't work (snivel) and what effects different airspeeds and sliders have on the process. Here is what I came up with. I hope it provides some food for thought.

First let's look at what is already common knowledge. Depending on the position of the slider, either up or down, a square canopy opens in two completely different ways. As shown in Illustration 1, a slider-down square opens "instantly" at line stretch, when the freefall wind spreads the bottom surface of the parachute. This happens even before cell pressurization. The cells do not inflate until the canopy surges forward. Over-delaying with the slider down (more than five or six seconds) could very easily result in broken lines or dam-



aged fabric.

Illustration 2, on the other hand, depicts a canopy opening in the slider-up configuration. Here the slider inflates at line stretch, blocking the bottom surface of the canopy from the air stream. The result of this is that the cells have to inflate to spread the lines and force the slider down, the opening will generally take at least 100 extra feet, and the jumper risks the possibility of a hesitation or snivel in the process.

What causes a slider to snivel? Quite simply, not enough air is entering the nose to spread the cells (inflating the canopy) and force the slider down. Why not? It would

seem sensible to suggest that the burble created by the outstretched and inflated slider prevents enough air from hitting the nose for a fast, clean opening. Eventually the slider drops as sufficient air enters the cells.

Interestingly, at the other end of the deployment speed scale, some tandem jumpers have installed "air spoilers" on their sliders to slow down the openings. These spoilers are essentially extensions to increase the deflection/burble to slow down openings. This makes you wonder how effective those holes were that we used to burn in the middle of our sliders. Surely we should have been removing fabric from

the nose edge of the slider? An example of this is shown in Illustration 3.

Remember the old Units that used to snivel so badly? Something about that design meant that the nose cells fluttered seemingly uselessly above the slider in what I now realize was the slider burble. British CRW pioneer Ian Marshall cured his burble problem by removing *all* the fabric from the slider. All he had left was four grommets and binding tape. It was then ideal for CRW and it never snivelled again! That's an extreme example, but an increasing number of BASE jumpers today are finding that similar sliders work very well for short delays.

A sort of "grey area" occurs, however, in the region of five- to six-second delays. Smitty's snivel was especially alarming to those of us who thought it was OK to put the slider back up for a five. What happened? Possibly it was the extra drag on the inflated slider. Not only would that slider be harder to push down, but it would also create a larger slider burble, thus starving the nose cells of air and inhibiting the canopy's inflation. And in Smitty's case, the snivel was compounded by the spinning of the uninflated canopy, which

caused line twists that blocked the slider from its normal downward descent.

One idea which might work well in this grey area is a "low-drag BASE slider," such as a fabric "bikini" slider with a cut-out leading edge, or a mesh slider. Both of these would provide for a fast nose inflation, but without the violence of an instant bottom-surface opening shock (and the possible accompanying damage). Examples of bikini and mesh sliders are shown in Illustrations 4 and 5. [Editors' Note: Jumpers should be cautious of making extended delays with these types of sliders, or testing them on airplane jumps. Several jumpers have reported extremely hard openings under these conditions.]

Another observation from past Bridge Days is that slider-up canopies packed in bags seem more prone to sniveling than free-packed ones. Curiously, I have also found that my fast-opening trashpack-derived BASE pack job snivels terribly at terminal if packed in a bag, yet on the few instances where I've been able to make free-packed slider-up jumps, taking four- to five-second delays, it opens smartly enough (though it does have a tendency to turn off-heading as the slider drops). Obviously

some pack jobs and bags don't mix well for reliable openings. I'm sure the answer lies in the way the canopy is exposed to the air stream either before (free-packed) or after (bagged) the slider inflates at line stretch.

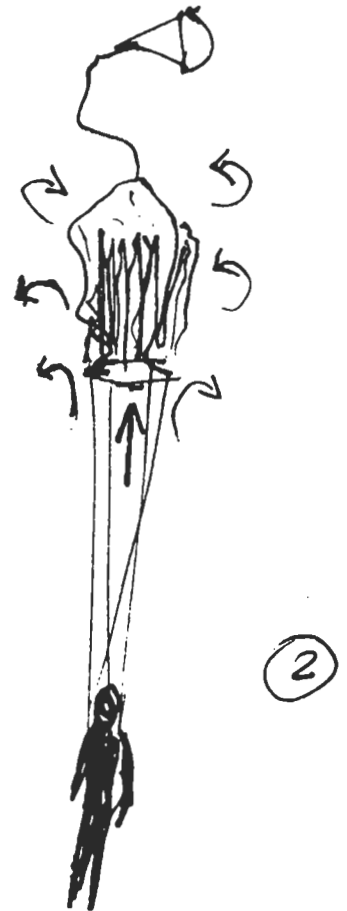
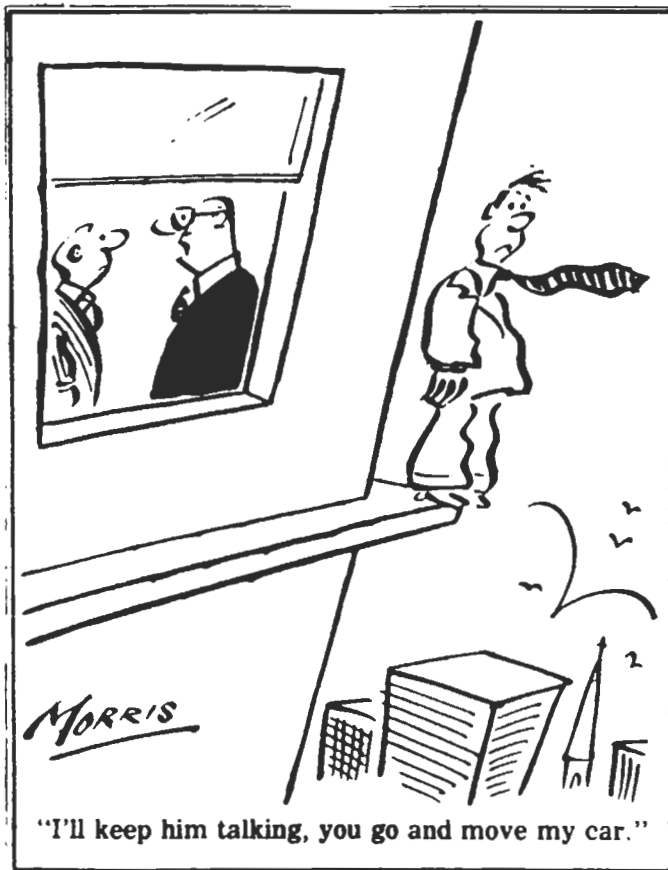
What this all boils down to is getting to know the characteristics of your canopy and pack job, and understanding the effect of the various deployment stages (i.e.: bag, slider, pilot chute, bridal and pin) at different airspeeds, on your openings.

Of course the biggest hesitation most people have about slider-down jumps (aside from possible gear damage) is line-over malfunctions. For inexper-

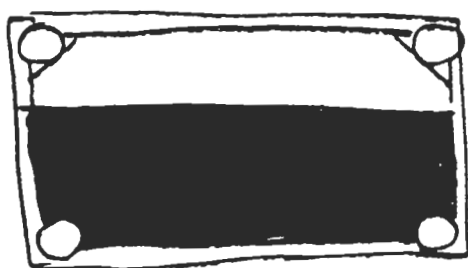
ienced jumpers who intend to use Bridge Day as a starting point in BASE, low-drag sliders have the advantage that they allow the jumper to use their regular pack job, without having the extra worry of learning a new (slider-down) pack job, or the quite different technique of flaring with free brake lines. Whether the canopy will open on-heading with these sliders is entirely a different matter!

Personally, however, I like the way squares open when packed slider-down. That is what I'm used to, and I wouldn't want to use a regular slider for short free-falls (even though I would have no hesitation recommending a newcomer to use a zero-drag slider for all the reasons I've stated). If I was lucky enough to be making regular five- to six-second delays, I would try using a low-drag bikini- or mesh-type slider.

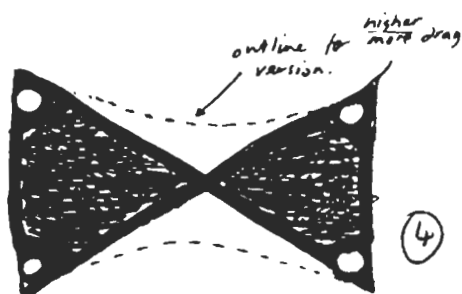
As this is not the case, however, I have chosen to use the free brake line Zoo toggle



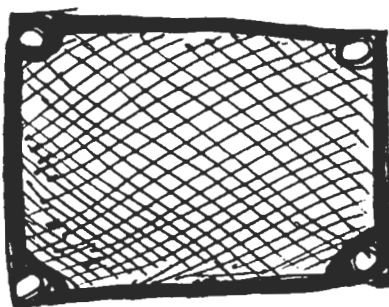
*Slider-up
showing burble*



③ open leading edge



'Butterfly' double out-away allows for more surface + more inflation.



⑤ Mesh slider

modification as a potential cure for line-overs. I find this a natural progression from what I'm used to, as it offers me a proven remedy at heights too low for a tertiary reserve. Furthermore, with short canopy rides I don't find the lack of steering keepers to be a problem. And as Mark Hewitt commented in a previous BASELINE: "who wants to land under a tersh?"!

In fact, I have found two unexpected benefits of the mod. The first is better canopy handling in deep brakes, especially when used with the slider completely off (rather than just pulled down). It does take a few jumps to learn how to use the brakes, as pushing out sideways to flare does nothing but put the canopy in half brakes. And the really annoying thing is having to stow the brakes back on the risers immediately after landing to avoid trailing and tangling them. Replacing the toggle/riser velcro might be a worthwhile idea.

BASE sliders should be fairly easy to obtain, and they are fairly inexpensive: a good mesh or bikini slider is usually cheaper than a BASE pilot chute. You can ask your local rigger to make you one, or order one from a dealer advertising in BASELINE.

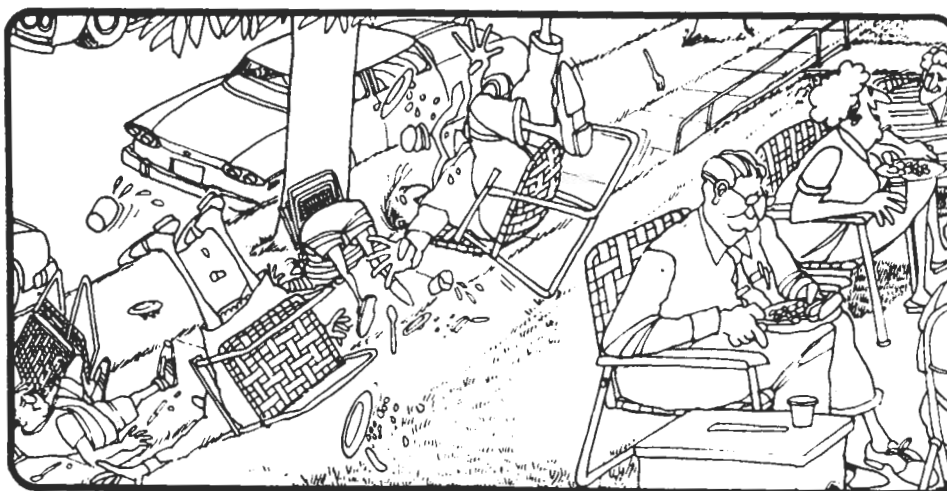
Finally, I want to stress that everything I have said here comes only from my own experience, which is limited to mainly short slider-down delays with a variety of

older seven-cell parachutes. Many of the newer generation of small canopies seem to open both faster and harder, which seems to make sense as less air needed to fill the cells. Also, it's worth remembering that smaller sliders inflate faster than large ones and this advice could be applied to help your skydiving openings as well.

As a rule of thumb, if you have short openings on airplane jumps, especially low-speed hop-and-pops, then you should consider using a low-drag slider for BASE jumping. Having to worry about a slow (and subsequently low) opening is the last thing you need when you're about to make your first BASE jump. Luckily, Bridge Day is an ideal time to experiment without undue risk.

Hopefully this article has given you some food for thought, and encouraged you to think about exactly how you are going to pack for a BASE site such as the New River Gorge Bridge. After all, Less Worry = More Fun. Good luck!

About the Author: Nigel Slee, BASE 28, is an active BASE jumper from Stortford Herts, England. Slee serves as the annual Bridge Day "staff," and is the publisher of Jump magazine, a publication on BASE in Britain that appears about once per year.



Nobody in the Earl Greebey family knows anything about gravity.

They Don't Make 'em Like They Used To!

by Nick Di Giovanni, BASE 194

I'd like to pass along some thoughts on gear. I hope this information will be useful to someone; it would have kept me out of plaster!

Today's ram air parachutes are built for skydiving, not BASE jumping. In response to jumper requests for lighter gear, the manufacturers just don't build bullet-proof squares anymore. It's not that uncommon to see properly bagged and reefed canopies destroy themselves at the DZ. Gone from some designs are crow's feet along the ribs between the top and bottom skins, and some canopies no longer have reinforcement tape along the trailing edge.

One very critical area is located right below the bridle attachment point. Because modern square canopies are designed to be bag deployed, the snatch force is applied to the grommet on the bag and not on top of the canopy. (Snatch force is generated right after line stretch, as the jumper accelerates the inflating canopy to his freefall speed. This force peaks just prior to opening shock.)

When a canopy is free-packed, however, this snatch force is applied directly to the bridle attachment point, and to the rib area directly underneath. With a three-second delay, a 10-12 foot bridle and a 48-inch (or bigger) pilot chute, a tremendous force is placed on the canopy. So far the damage

I've inspected involved a Cruislite (my own), a Cruisair and a Nimbus. The damage involved the rib below the bridle attachment point separating from the canopy skin.

I don't think this is exclusively a Para-Flite problem; in my opinion, any modern canopy is susceptible. Some canopies are better suited for BASE jumping strength-wise because of the use of 1.5-ounce fabric instead of lighter F-111, or the use of dual attachment points for the bridle (such as some Unit canopies). Dual attachment points spread the snatch force over a greater area, thereby reducing the overall stress on the parachute.

If your canopy is not built like an old Strato Cloud, I suggest crawling inside the parachute's center cell and checking the area below the bridle. If it appears that reinforcement is needed, it can be accomplished by adding crow's feet reinforcement tape below the bridle area, or reinforcing this area with 1.5-ounce material. Doing both won't hurt, either.

If your bridle attachment point does rip on a jump, it probably won't cause a catastrophic failure, because the damage usually occurs *after* line stretch. However, if the damage is bad enough, you'll find yourself test-flying a new design.

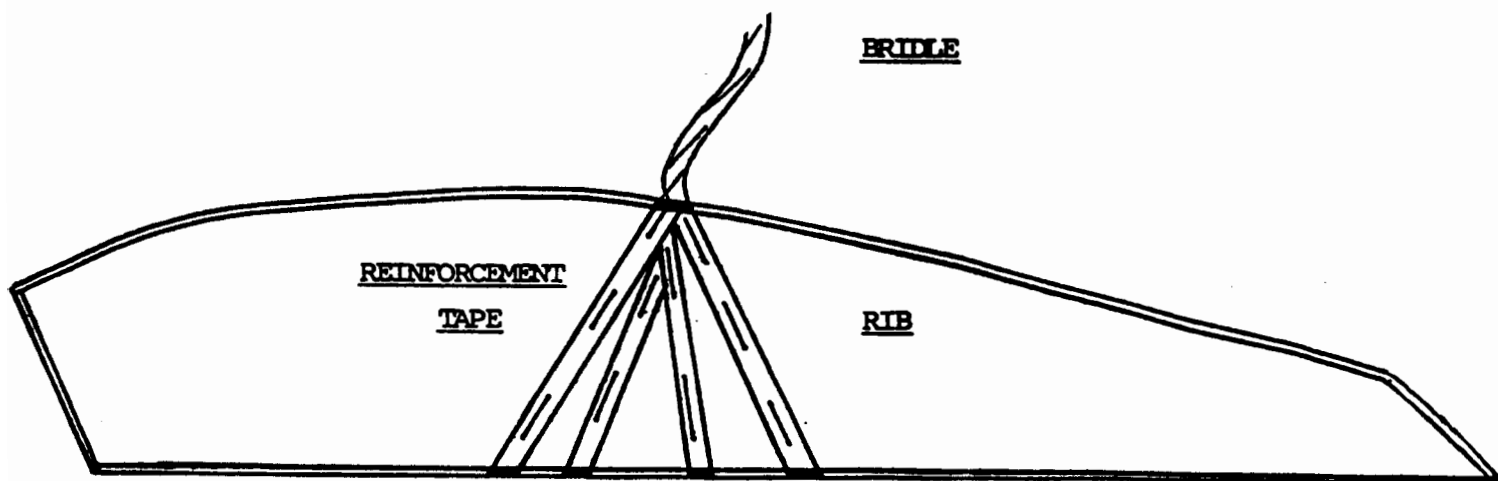
I would like to ask that anybody having

this problem let us know through BASE-LINE. Think of BASELINE as a clearing house of information. I think it is important to know what the other guy is doing, and our sport is too young for anybody to have it all wired.

Finally, I would like to share the method I have been using on most of my jumps, which has always given me good results. Most of my jumps are low ones, so I free pack, slider down with a tail pocket and the line-over mod. However, while flaking the tail I make the trailing edge even with the bottom of the stabilizers, and then stow the excess steering lines in rubber bands.

The idea is to keep the steering lines down and away from the nose. As the tail begins to spread, the steering lines come out under tension. This keeps them from flopping around, and I believe this may prevent line-overs. The possibility of the steering lines hanging up is there, but I've never seen it happen. Even if they did, you would not turn as much as with a line-over, and you could always fire the line-over mod to clear the problem.

About the Author: *Nick Di Giovanni, BASE 194, is an active skydiver and BASE jumper from Oceanside, Calif.*



These reinforcements are installed upside-down from normal crow's feet, which were used for line attachment. This installation allows a spreading force along the rib and bottom skin.



Kevin Venell, BASE 58, and an unidentified companion exit from the top of a moving truck traveling over the Jesse Jones Bridge. The pair landed in the Houston ship channel. Photo by Tom Cosgriff, BASE 42.

Profiles:

Meet J.D. Walker

Part II

BASELINE: How do you feel about the fact that when you go to make a BASE jump, you know you will be breaking the law?

Walker: Well, let's put it this way. I try not to do anything that will hurt anyone else or damage property. I know that I can get arrested at certain sites, and there are objects that I don't even jump anymore just because I know that I can get arrested there.

BASELINE: So seven arrests is enough, huh?

Walker: Yes. [Laughter]. I'm tired of the hassle. After you've been in jail a couple of times, or had to travel to a different city for another hearing and then a court date ... well, you lose the time and the money and a lot of times it just isn't worth it. I used to have this righteous thing about "I can jump off this and if they don't like it the the hell with 'em," but after a while it just gets old.

BASELINE: So how do you keep up your BASE jumping?

Walker: I try to keep a low-key profile. I go to places where I don't think I'm going to get hassled. That's why we've made so many jumps at and

BASELINE: How do you foresee the future legal status of BASE jumping?

Walker: To tell you the truth, I think it's going to stay the way it is. At least in the frame of mind of today's society, with all the litigation going on. You know, if you walk into someone's car, either they're going to sue you for denting their car, or you're going to sue them for having their car parked where it was at that point in time. No one in their right mind is going to let you jump off their building.

BASELINE: And you think it's going to stay this way?

Walker: Well hell, I'd be the same way. If you own a multi-million dollar piece of property and some yo-yo kills himself on it, you know you're gonna get sued. I think that's why a lot of object owners don't let us jump. Now I know that there have been isolated instances of legal BASE jumps -- like Carl's and Jean's building jump in Tennessee, and the bridge in West Virginia, which happens once a year. But those are rare cases.

"If you own a multi-million dollar piece of property and some yo-yo kills himself on it, you know you're gonna get sued. No one in their right mind is going to let you jump off their building."

BASELINE: You have two children, right?

Walker: Yes, Christie is 7 and Bret is 3.

BASELINE: Would you ever let them BASE jump?

Walker: No way! Over my dead body! [Laughter]

BASELINE: Would you let them sky-dive, at least?

Walker: I doubt it.

BASELINE: That's kind of selfish, don't you think?

Walker: It's very selfish. And it's also hypocritical. You know, to say 'Well this is OK for me but not for you.' But when you have your own kid you'll understand. Every day of your life you watch them grow up, and you love them more than anything in the world, and you want to shield

them and protect them. Any father will tell you the same thing. But who knows, maybe my thinking will change 15 years down the road when my kids are grown up.

BASELINE: Do they want to jump?

Walker: Oh yeah, kids are imitative, you know. Bret watches all my BASE videotapes over and over. And all my California buddies have taught him to say, "Party naked, see ya!" So now he's climbing on the dresser and the fence, with a pilot chute in his hand, and yelling "Party Naked! See Ya!" and jumping off. And I'm really afraid one of these days he's gonna hurt himself bad.

BASELINE: Tell us more about your relationship with Carl Boenish.

Walker: I didn't get to know Carl real well until 1982, when I started BASE jumping and we worked on some film projects together. I think the first thing we did together was the video at Burro Creek. That's the first weekend we really spent some quality time together. And I really got to know him and find out how cool he really was.

BASELINE: How did you feel about Carl?

Walker: I loved Carl. He was the epitome of what I wanted to be. Not so much who he was, but what he was. He gave up a great career potential to do what he wanted to do. He was one of the guys who succeeded in a way that I call success: he was doing what he loved to do, when he wanted to do it and how he wanted to do it, and he could make a living at it.

Nature-wise, I never met anybody who had the kind of nature he did at the age he was. Usually guys that are 40 years old have a cynical outlook on life and have a bad attitude towards things. They're set in their ways. Carl definitely wasn't like that. Carl would listen to anything you had to

say. And the thing that was neat about Carl was that he would sit there, and he had 30 or 40 or 50 BASE jumps, and I had only one, and he would sit and listen to your story and go "ooooohh!" "ahhhh!" "yeah!" "wow!" and just make you feel like you were the greatest thing in the world. And he would do that all the time with everybody.

BASELINE: When did you first find out he had died?

Walker: I found out the next morning. Bret Mauer, a friend of mine from California, his buddy was with the expedition, as a climber. So he said something to Bret and Bret called me. At first I didn't believe it. I thought it was just another rumor out of control. Not Carl. Carl was just so ridiculously meticulous in everything he did, I just thought no way.

Well he had actually died on Saturday, and I found out Sunday morning. Within the next few days a lot of people had called me, and I knew it must be true. And then it took a few days to really sink in. By Tuesday night I just totally broke down. I couldn't believe that somebody I knew that closely was really dead. It hit me very hard. It was like my brother had died.

BASELINE: How did it affect you as far as BASE jumping was concerned?

Walker: I was going to quit at first. I thought I was just fooling myself, believing all the old cliches, that people only die when they make mistakes and stuff like that. And I was ready to hang it all up. I really thought about it for a while. And then at some point in time, probably a month or two later, I just said Hey, what is it that I want to do?

I loved what I was doing, I was having a lot of fun, and I was getting to a point where I thought I was earning some respect from my friends, and learning enough stuff that I was getting some credibility at the drop zone other than just the idiot who jumps off of things. And then I finally realized that Carl wouldn't have wanted me to quit. Carl didn't quit when Jim Tyler died or when Frank Donnellan died.

So I just started jumping again. And whenever I jumped something new or that was in a different place, I just said a little prayer and thought, "Hey, this one's for Carl, because he can't be here."

BASE GEAR

*...built for BASE jumpers
by BASE jumpers.*

NEW HARNESS AND CONTAINER **\$300.00 + \$5.00 P&H**
CUSTOM BUILT FOR YOUR CANOPY. D-RINGS UP FRONT FOR RESERVE.
VELCRO SHRIVEL FLAP DESIGNED SPECIFICALLY FOR BASE JUMPING.

BASE CONTAINER ON YOUR HARNESS **\$100.00 + \$5.00 P&H**
CUSTOM SIZED CONTAINER SEWN TO YOUR HARNESS. INCLUDES SHRIVEL
FLAP AND SPANDEX PILOT CHUTE POUCH. BACK PAD AND LEG PADS EXTRA.

TAIL POCKET **\$15.00 + \$2.00 P&H**
FOR FAST, ONHEADING OPENINGS. FOR SLIDER UP OR SLIDER DOWN
JUMPS. VELCRO SIDE CLOSURE.

DIRECT BAG **\$35.00 + \$3.00 P&H**
FOR THOSE OBJECTS TOO LOW TO FREEFALL, THIS BAG HAS SAFETY
FEATURES TO HELP PREVENT YOUR BAG HOLDER FROM GIVING YOU A 180.
BAG HAS HANDLES AND 6 FT SAFETY LINE.

ZOO TOGGLES **\$18.00 + \$2.00 P&H**
THE BEST BRAKE RELEASE SYSTEM AVAILABLE. A MUST FOR BASE JUMPS
WITH THE BRAKE LINE MODIFICATION. GREAT VALUE—COMPARE WITH
PARA-GEAR AT \$22.00!

MESH SLIDER **\$35.00 + \$2.00 P&H**
HELPS TO AVOID LINE-OVERS BUT STILL ALLOWS FOR A FAST OPENING.

42" PILOT CHUTE **\$47.00 + \$3.00 P&H**
BASIC BASE EQUIPMENT. INCLUDES A 9 FT BRIDLE WITH CURVED PIN.
CUSTOM COLORS AVAILABLE.

GEAR BAG **\$40.00 + \$3.00 P&H**
CORDURA BAG WITH SOFT SHOULDER STRAPS. CARRYING HANDLE, YKK
ZIPPER.

BASE PACKING VIDEO **\$25.00 + \$2.00 P&H**
WEST COAST BASE PACKING TECHNIQUES FOR D-BAG AND FREEFALL.
FOOTAGE OF MARK HEWITT'S LINE MOD. IN ACTION OFF A 340' BRIDGE.
ALSO 12 MINUTE VIDEO OF 15 JUMPS OFF SAME BRIDGE INCLUDING 3-WAY
EXIT. VHS ONLY.

T&T RIGGING
2521 1/2 S. VISTA WAY
SUITE 17
CARLSBAD, CA. 92008
619-945-1932

SEND FOR OUR FREE CATALOG

BASELINE: Would you consider yourself to be an active BASE jumper now?

Walker: Oh yeah! I've almost doubled my BASE jumps in the last year. And that's mainly due to improvements in the technology. The direct bag is a good example. I've known about the direct bag for three years, but I've only started using it in the last year and a half. I have a "wait and see" attitude. Once I accepted the direct bag, that opened up a lot of objects for me that I wouldn't have otherwise jumped.

BASELINE: Do you skydive actively?

Walker: Not really.

*"You know, skydiving
is full of egotistical
assholes. It really is."*

BASELINE: A lot of people would say that the only jumpers who turn to BASE are those that are no good at skydiving. How do you feel when you hear stuff like that?

Walker: I've stopped trying to fight or argue with that mentality. As a matter of fact, it's one of my standard lines around the drop zone. When people ask me how come I BASE jump, I say, "Well I can't do RW so I might as well jump off rocks." [Laughter]

BASELINE: But you're being sarcastic, of course.

Walker: Yeah. I have all the bullshit awards: SCR and SCS and night SCS and all the stack awards, and Eagle and double Eagle -- after a while I just stopped applying for more, because I figured it's just another way to milk 20 or 25 bucks out of you.

BASELINE: So what do you think of the USPA?

Walker: USPA does serve a purpose, and I believe they are doing some good, but they don't represent me. When they buried their heads in the sand at El Cap, that's when I realized they weren't really doing

anything for me. They're mainly just concerned with their own images.

BASELINE: So why don't you skydive anymore?

Walker: Mainly because I'd rather spend my time and my money going places and doing things with my BASE jumping friends. I enjoy it more. I'd rather go on a three-day trip to a cliff somewhere, and make a bunch of cliff jumps, than to spend two months skydiving.

I like to skydive, now don't get that wrong. I enjoy skydiving. I'd like you to say that. I can go jump by myself and still have fun. It's a matter of financial resources, really. If I had a lot more money, I'd be doing a lot more skydiving and BASE jumping.

BASELINE: Would you say BASE jumping is a social sport?

Walker: Oh yeah, without a doubt. I've met more good, quality people BASE jumping than I ever have skydiving. You know, skydiving is full of egotistical assholes. It really is. With BASE jumping, well, we all have our little quirks and egos too, but as a whole, I'd say you can feed us all the politics and the bullshit, and afterwards, we're all still friends.

BASELINE: Along those lines, you have sent several "gripe" letters in the past to both us and to SKYDIVING, complaining about BASELINE. Tell us more about that.

Walker: Well let me start out this way. BASELINE is a great format. It really is. It's *needed*. And it's a good magazine. The quality of it is fantastic. And there's some really good information in it. But I've read some of the stuff that you guys have put in there, and just sat back and said, "Wow!



J.D. Walker, BASE 37, wearing a chest-mounted tertiary reserve, jumps from a 600-foot cliff.

Where's this guy coming from?!" It would be like you guys saying, "The reserve malfunctioned, therefore the jumper shouldn't have been using a reserve." If you look at it in those terms, to me, that's what it was saying. And I thought that, at least in my eye, that's not what BASELINE should be saying.

And by the same token I can see that that's selfish, because I'm saying what you should be saying, and if that's the case then I should be writing my own magazine. So I thought that the format was there, I may as well send in my letter. So I wrote it, and I gotta give you guys credit for having the balls to print it.

By writing it, I realize that I'm hypocritical. And you can print that. I state all the time that BASE jumping is getting too political, yet here I am playing politics. But I feel really strongly about these points. I think the information should be printed, and let the jumper make his own

decision. To do anything else would be dangerous.

BASELINE: How do you feel in general about the danger aspects of BASE jumping?

Walker: I think if you keep doing it, sooner or later you're going to hurt yourself. But I also think you can get rid of most of the danger just by keeping yourself covered. You have to play by the rules. You don't jump a square into the wind off a building. You know, if you look at all the accident reports, they're all stupid. A lot of people get hurt doing really dumb things. And sooner or later I'll probably do the same thing, and then you can write that about me.

BASELINE: [Laughter]

Walker: I'm just saying it matter-of-factly because it's probably true. It's just like skydiving or flying. BASE jumping can be as safe as you want to take the time to make it. That's basically how I feel about the danger end of it.

BASELINE: It's long been the contention of BASE jumpers that skydivers understand as little about BASE jumping as whuffos understand about skydiving. How do you feel when skydivers take you to task about the danger aspects of BASE jumping?

"Usually guys that are 40 years old have a cynical outlook on life and have a bad attitude towards things."

Walker: You know, we used to have this skygod on our drop zone. He was a 5,000 jump wonder. He was really good. And I really used to like him. He was my "hero" -- until he started giving me a hard time about BASE jumping.

He always used to tell me, "If you keep doing that shit, you're going to bounce yourself." And I just got to the point where one day, I came up with a stock answer. I said: "Hey, what the hell do you

know about BASE jumping?" And they never could tell me anything that had anything to do with BASE jumping, other than you jump off something and use a parachute.

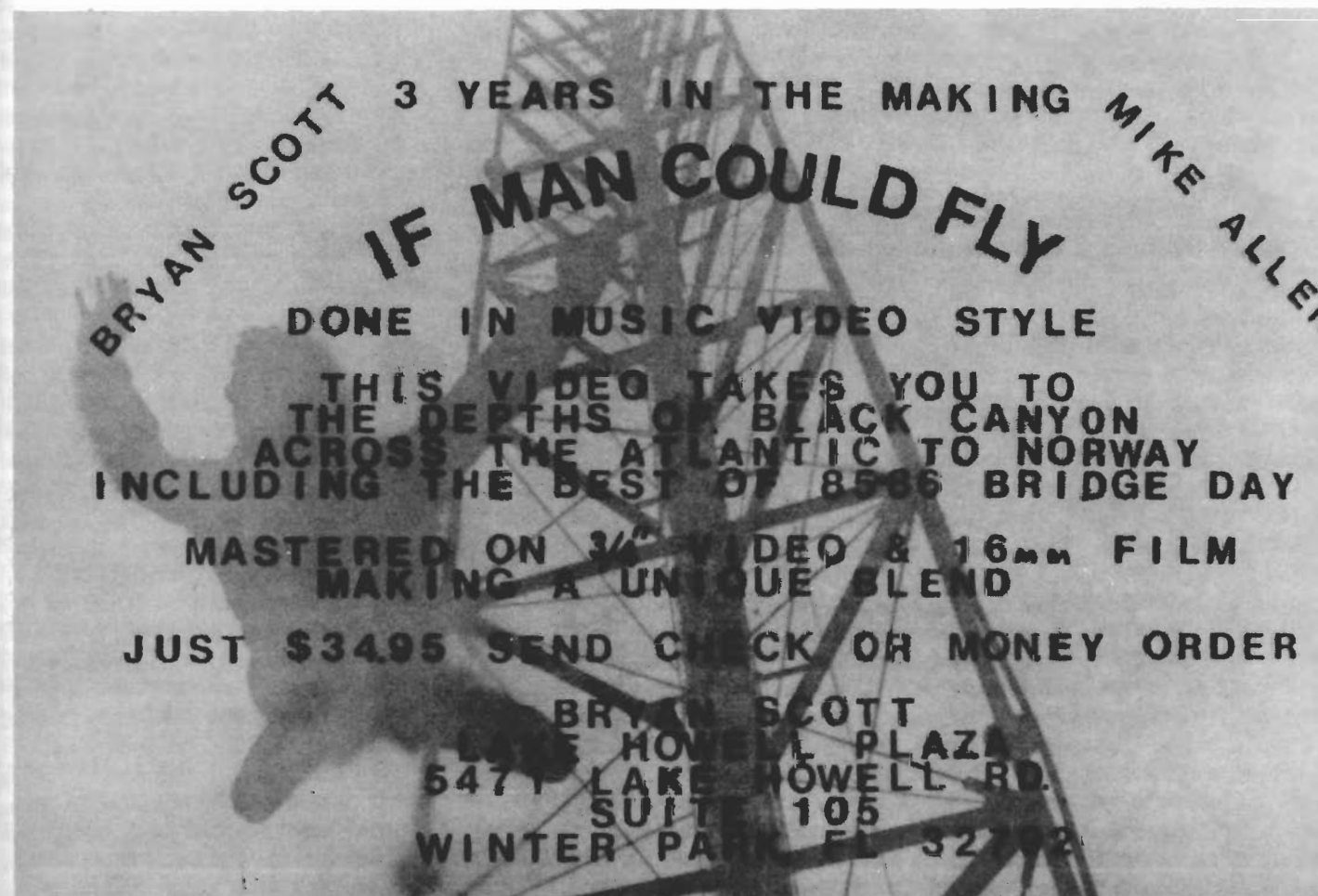
It would be like me trying to tell an F-16 pilot that he's nuts for doing aerobatics, when I don't know anything about F-16s or aerobatics.

BASELINE: Does this attitude bother you?

Walker: I never did like that. I always thought that if someone is criticizing me for BASE jumping, they're either jealous of what I'm doing, they don't understand it, or they're just looking for something to yap at. You know, a lot of guys go the drop zone just to yap.

BASELINE: So how do you deal with it when skydivers do get on your case?

Walker: It's gotten a lot better, because I try to avoid the subject when I go to the drop zone. I don't talk about BASE jump-



BRYAN SCOTT 3 YEARS IN THE MAKING MIKE ALLEN

IF MAN COULD FLY

DONE IN MUSIC VIDEO STYLE

THIS VIDEO TAKES YOU TO
THE DEPTHS OF BLACK CANYON
ACROSS THE ATLANTIC TO NORWAY
INCLUDING THE BEST OF 8566 BRIDGE DAY

MASTERED ON 3/4" VIDEO & 16mm FILM
MAKING A UNIQUE BLEND

JUST \$34.95 SEND CHECK OR MONEY ORDER

BRYAN SCOTT
LAKE HOWELL PLAZA
5471 LAKE HOWELL RD.
SUITE 105
WINTER PARK, FL 32782

ing unless I'm asked a question, and even then I only answer it and leave it at that. I never pursue drop zone BASE talk. And if you treat it that way, I find that most skydivers will give you space and let you do your own thing.

A lot of BASE jumpers have egos as big as skydivers, and a drop zone is a bad place to have a BASE ego. I've seen friends go to the drop zone, and if everyone there doesn't have 20 or 30 BASE jumps like they do, then no one is as good as they are, and they have to let everyone know it. People like that give all BASE jumpers a bad name.

"I guess there's the ego end of it, and the image thing. I have to keep up my image."

BASELINE: What's been your lowest BASE jump?

Walker: A little cliff that we have out here in Arizona. It's 165 feet.

BASELINE: What's been your highest?

Walker: El Cap.

BASELINE: How do you feel about low altitudes?

Walker: I don't really have a problem with it. It's like anything else: you have to take the time to make it safe. You know, you can regularly make jumps from 250 feet, if you take the time to do things right. All of my BASE jumps, with the exception of maybe about 10, are from below 500 feet.

BASELINE: What kind of attraction does BASE jumping hold for you? Why do you keep doing it?

Walker: I don't know. I guess it's partly the social aspect: I've met a lot of really neat people. It's fun to go to Bridge Day now. I go to Bridge Day for the social aspect, not just for the bridge.

BASE jumpers today are still like skydivers were 25 years ago. You know, there's only so many people doing it, and you generally know most of the hard-cores, and you have good times when you get

together. That's most of it. And then I guess there's the ego end of: "Yeah, I'm a BASE jumper." That has something to do with it. And then there's the image thing. I have to keep up my image.

BASELINE: How much longer do you think you're going to keep BASE jumping?

Walker: I really don't know. There's not a lot I really want to do that I haven't already. I've never jumped a really tall building, like 1,000 feet. I want to do

that. And I want to go to Norway. And I've never jumped an antenna over 700 feet tall.

BASELINE: Do you still get scared when you BASE jump?

Walker: Oh hell yeah. Anybody who says he doesn't is a liar. There are times when the apprehension is very little, and then there are times when I wonder what the hell I'm doing there. But I think everyone goes in and out of those phases -- even skydivers do.

BASELINE: What do you worry about most when you BASE jump?

Walker: Believe it or not, there's two reasons why I don't want to die BASE jumping -- or skydiving, for that matter. Number one, so all the assholes I know won't say "I told you so." You know, I've been doing it ten years, and make 800 or 900 jumps, but they'll still say, "Well, you finally killed yourself, didn't you?" I don't want people telling my family that.

And number two, and probably the biggest reason, is that I want to see my kids grow up. I love my kids more than anything else in the world. And to me, it would be a real travesty to be killed doing something really stupid, which is probably how you'll get killed, doing something stupid. And for the sake of what? My kids are an integral part of my life, and I want to

sky•div'ing

by Bill FitzSimons

A DICTIONARY FOR THE NOVICE, THE SKY GOD,
AND MISCELLANEOUS FOLLOWERS OF THE SPORT

You'll laugh 'til your sides ache at this hilarious lexicon of skydiving terminology! 96 pages of outrageous definitions, with 47 illustrations. Softbound. A "must" for every skydiving library. Order yours today.

Freefall Photographer - A skydiving masochist whose special interests are parachuting, photography, and whiplash.

Drop Zone - A location for dropping controlled substances which have been flown into the country from south of the border. A skydiving school is frequently operated at these fields.

Glide Ratio - The mathematical relationship between the vertical descent of a gliding device and its forward motion. For example, a canopy that descends ten feet for every one foot of forward motion is said by the manufacturer to have the glide ratio of three to one.

9.95 includes taxes, shipping, and handling

FODDERSTACK PRESS - P.O. Box 38 - Flint Hill, VA 22627

see them grow up and do great things.

BASELINE: Any last words?

Walker: I just want to say that if I appear to be politically motivated, and can't stand Andy, or Phil, or BASELINE, that isn't true by any means. I've been trying to get a point across, that I feel that BASE jumping is a hazardous and dangerous enough sport to where every jumper needs to make his own decisions. Wouldn't it be great if we could just open up a book and say here are all the ideas, you can each just pick and choose what you want to do?

If you stop and think about it, if you don't know your techniques and gear well enough to be making a BASE jump, then you're a fool to be doing it. Do you follow what I'm saying? If you have to walk up to someone and say, "How do I pack my parachute for a BASE jump?" and the guys says, "Well leave your nose exposed and put the slider down and flake your tail out," and then he has to show you, then you don't have any business doing it. It's just that kind of a sport. And that's where I come from.

It's not that I can't stand Andy Calistrat or that I can't stand Phil Smith or I can't stand BASELINE. I just think that there needs to be a little editorial change. You know, I love to BASE jump, and I think that anyone that wants to is able to if they have the right information. And that's what it's all about.

Reports in this section are compiled from information obtained from jumpers in the field. They are printed here for their educational value, and are divided into three categories: incident reports involve any BASE jumping mishap ending without injury, which others might profit from reading about; accident reports detail BASE jumps which resulted in injury to the jumper; and fatality reports involve any person who was killed as the result of making a BASE jump. Names are generally included with all

reports; however, anonymity will be granted to any subject who specifically requests it.

Please help us insure that the reports in this section are as accurate as possible: if you are involved in, or are witness to, any type of a BASE jumping mishap, contact us with the pertinent details. All it takes is a phone call to (713) 437-0323 or 931-7709, or simply jot down the essential information on a post card and mail it to us.

Incident Reports

Name: Nick Di Giovanni **Age:** 33
BASE Jumps: 17 **Skydives:** 950
Main: Cruislite **Reserve:** None
Container: Velcro-closed BASE rig
Pilot Chute: 48"
Packing: Free-packed slider down, tail pocket, line-over mod with Zoo toggles.
Object: Bridge **Altitude:** 342'
Delay: 1 second
Type of Jump: Day-time, solo exit
Nature of Incident: Jammed brake lines

Description

The jumper performed a stable exit and one-second free fall, then pitched out his hand-held 48-inch pilot chute. He experienced a normal straight opening, made minor corrections to his heading with rear risers, and then attempted to fire his brakes.

However, having just installed Zoo toggles and using them for the first time ever on this jump, Di Giovanni ended up pulling straight down (as would be done when releasing the brakes using conventional toggles). This put the force on the non-pin side of the Zoo toggle, and only the left brake released while the right one did not.

Although this situation would normally result in a sudden and violent spin, Di Giovanni quickly reacted by keeping his left steering line in the "half-brake" position, thus allowing his parachute to fly straight. After a second unsuccessful attempt to release the right toggle, the jumper was low enough that he abandoned further attempts, and instead used rear risers to steer himself into the wind and flare for landing.

Conclusions

This incident demonstrates the importance of being thoroughly familiar with your gear before using it for a BASE jump. If Di Giovanni had familiarized himself with Zoo toggles by using them at the drop

zone, he would have probably been able to release his brakes with no troubles.

However, any new piece of equipment, be it a set of toggles, a new canopy, or a new harness/container system, requires a certain amount of familiarization. The time to do this as the drop zone, where the jumper has plenty of time and altitude. No new piece of equipment or technique, no matter how small or seemingly insignificant, should be tested for the first time on a BASE jump.

"No new piece of equipment or technique, no matter how small or seemingly insignificant, should be tested for the first time on a BASE jump."

To his credit, Di Giovanni effectively dealt with his problem by keeping the left steering line in the half-brake position, thereby keeping control of his parachute and allowing for a good landing. Emergency situations are best dealt with when the jumper remains calm, analyzes the situation and takes appropriate corrective measures. Although Di Giovanni could have taken steps to prevent this incident in the first place, the steps he *did* take once confronted with the problem no doubt saved him from serious injury.

Name: Marta Allen **Age:** 23
BASE Jumps: 20 **Skydives:** 126
Main: Firefly, 178 ft² 7-cell
Reserve: K-20
Container: Racer
Pilot Chute: 38" stowed in leg pouch
Packing: Slider-up, lines on tail pocket.
Object: Cliff **Altitude:** 1800'
Delay: 12 seconds

Type of Jump: Day-time, 3-way exit (no contact).

Nature of Accident: Object strike

Extent of Injuries: Bruises and scrapes.

Description

The jumper made a good exit, then spent nine seconds in what witnesses described as an "ineffective tracking position." The jumper then deployed only to find that she had at least three sets of line twists, and her canopy was facing the wall.

Marta began trying to kick her way out of the line twists, and attempting to steer her canopy with rear risers, but she struck and stopped on a small ledge on the cliff face, a mere 40 feet above the 2,000-foot 45-degree talus.

Dazed and bruised but otherwise unhurt, she secured her position and waited for help. Luckily some kind-hearted climbers soon found Marta, and helped get her and her gear to the valley floor, without attracting the attention of any park rangers.

Conclusions

This accident underscores the need for fundamental skydiving skills on certain BASE jumps. Essential abilities such as effective tracking, canopy control and consistently-good-opening packing techniques should all be developed and refined before a jumper attempts a BASE site. This is especially true at a site such as an 1,800-foot cliff, where a weak track could leave the jumper dangerously close to the wall, and line twists could inhibit the recovery time from a bad opening.

Marta is very fortunate that her ledge landing resulted in only bruises and scrapes. This is very likely attributable to the slower initial velocity of her canopy, which was due to deep brake settings, a commonly-used modification for BASE jumps. It was sheer luck, on the other hand, that she hit the cliff where she did. Another 40 feet lower would have left her helplessly tumbling down the 2,000-foot, 45-degree rocky talus.

Finally, this accident demonstrates that no packing method, including free-packing, is immune from line twists. Although many BASE purists have abandoned bag-

deploying because of the possibility of twists, Marta's accident conclusively proves that even free-packed canopies can open with multiple sets of line twists. Regard-

less of the deployment method used, the important thing is to achieve consistency on test jumps at the drop zone *before* making a BASE jump.

Accident Reports

Name: Withheld **Age:** 27
BASE Jumps: 200 **Skydives:** 600
Main: Unit, 200 ft² 7-cell
Reserve: None
Container: Velcro-closed BASE rig
Pilot Chute: Para-Innovators 52-inch
Packing: Free-packed slider down, lines stowed on tail pocked, line-release mod but no toggle keepers.
Object: Building **Altitude:** 375'
Delay: 1 second
Type of Jump: Night-time, solo exit.
Nature of Accident: Spiralling impact.
Extent of Injuries: Cracked left heel, chipped right heel, broken tailbone, compressed vertebra.

Description

The jumper, after making a short delay from a low building, reported that since he experienced a seemingly quick and normal, on-heading opening, he did not bother to look up and check his parachute. He released his brakes and maintained a straight-ahead, level flight for several moments.

However, while attempting to make a heading correction on final approach to a tight landing area, the jumper suddenly realized that his canopy did not respond to the toggles. Looking up at his parachute for the first time since exit, the jumper was shocked to find that he had what was either a line-over malfunction or a bad line entanglement on the left side of the canopy.

Even though he was in straight-ahead level flight, the jumper elected to let go of his toggles, thereby activating the line-release modification which is normally used only in case of line-over malfunctions. At this point the canopy went into a radical spinning dive, and slammed the jumper onto a concrete parking lot before he had time to take any further corrective action.

The jumper suffered a cracked left heel, chipped right heel, broken tailbone and

compressed vertebrae. Because these injuries were not life threatening, the ground crew put the jumper in the waiting getaway car and drove him to the nearest emergency room. The jumper was up and about within a week, and is expected to recover completely.

Conclusions

This accident demonstrates the importance of not only checking your parachute immediately upon opening, but of correctly identifying a potential problem so that appropriate corrective action can be taken. By the jumper's own admission, he did not bother to look up and check his parachute until he was on final approach to his landing zone. Had he realized his problem with line entanglements earlier in the jump, he would have undoubtedly had more time to analyze the problem, and would not have had to make his decision to fire the line-release mod so hastily.

Equally important in this case is the jumper's failure to correctly assess the condition of his parachute. The line-release mod is effective *only* in curing line-over malfunctions, and even then it works only if the line-over is of a steering line (which has been the case in all reported line-overs to date), and if the steering line successfully unwraps from around the parachute. Although the line-release mod has saved many jumpers (including the one in this accident) on previous occasions, it must nonetheless be used under the appropriate circumstances to be effective.

Because the jumper in this incident experienced what may well have been only a line en-

tanglement, firing his mod resulted in a radical spin which ended up being the source of the jumper's injuries. According to the jumper, "if I had fired the line-release mod any higher, the canopy would have had more time to increase its rate of spin, and I probably would have died."

The primary factor which any jumper should consider when taking corrective action in an emergency situation is whether his parachute can be safely landed. Because the jumper in this incident reported that he was in straight-ahead, level flight when he noticed the line entanglement, he would have probably been better off to ride it in. "I would have definitely received less injuries, maybe even walked away from it," the jumper agreed.

All of these things ultimately point to the jumper's lackadaisical attitude. From his failure to check the parachute immediately upon opening, to his mis-evaluating the condition of the canopy, to taking the inappropriate corrective actions, the bottom line is, in the jumper's own words, "I was a bozo, and now I'm paying the price."



"I can save the jumper. I work for the circus!"

Photo-Finish



Rick Payne, BASE 137, jumps from the 500-foot "Mokey's Face" cliff on Smith Rock, Ore. The leap is believed to represent the first-known BASE jump in that state. Photo by Mike Allen.

BASELINES

"The highest virtue is always against the law."

Ralph Waldo Emerson

"Give me opening shock, or give me death!"

Andy Smith, BASE 9

"While the normal man sleeps, the BASE man leaps."

Amy Baylie, BASE 204

"Tonight it ain't right, I gotta have me a week.

But I'll be back for this cliff, Jack, and I'll let the machine speak."

John Hoover, BASE 95

with apologies to ZZ Top

"Folgoré!"

Tristano Caracciolo

Prior to exiting El Cap at 4:30 a.m.

"I'd rather DB than be at the DZ"

Alan Hetherington, BASE 108

After static-lining a 90-foot building

"I'd rather watch TV than DB"

Rick Payne, BASE 137

*After freefalling a 240-foot building, over
hard ground, with a 24-inch pilot chute*

"Give me three steps mister, and you'll never see me no more."

Lynyrd Skynyrd

"There ain't no time to wonder why: Whoopee! I'm gonna die."

Country Joe and the Fish

"Keep an eye out for the police."

Bob Seger

"When are you gonna come down? When are you gonna land?"

Elton John

"Mamma's gonna worry, I've been a bad, bad boy.

No use saying 'sorry,' It's something I enjoy!"

Ozzy Osbourne



Kevin Foust, BASE 201, free falls from California's 175-foot Stevens Bar Bridge. Foust is wearing a velcro-closed BASE rig containing a slider-down square; the landing was into the Tuolumne river. (Note the tripod-mounted video camera on the far side of the bridge.) Photo by Michael Allen.