

Starduster

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Back cover photo: This rainbow-striped Starduster I belongs to George Gage of Lawndale, Ca. Isn't it a beauty?

Dedicated to the
ACTIVE Homebuilders

JULY 1984

July Starduster Magazine 1984

Starduster Magazine acts as an open forum for Homebuilders. The ideas expressed are often those of our Readers, and Starduster assumes no liability or responsibility, either expressed or implied, as to the suitability or accuracy thereof. Anyone using these suggestions or ideas does so at his own risk.

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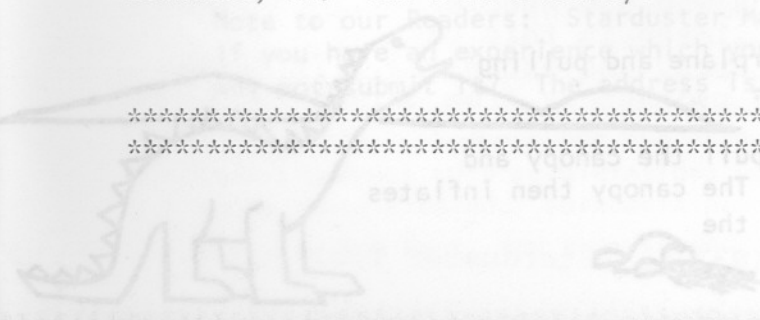
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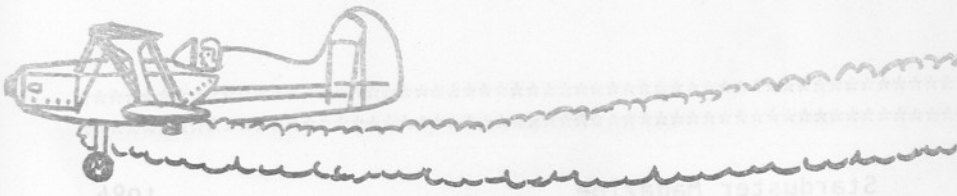
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PRESIDENT'S COMMENTS



Parachute:

An apparatus or device which is designed to allow a person or object to descend through the air to the ground safely; a broad description of a life-saving device.

Parachutes are known as to category and type:

Category #1; Standard: Designed for exits and openings in excess of 150 mph. Mostly all standard parachutes are back type and can be identified visually by noticing that the "container" is part of the harness (sewn to the harness). Standard category parachutes are mandatory with all high speed, high altitude operations. Most are equipped with oxygen and automatic openers. I do not feel that any of our operations dictate a chute of this kind.

Category #2; Low speed, 150mph or slower: This is the most popular parachute and most of us have and use one of this category. (If you exit an airplane at 300 mph, in 5 seconds you will decelerate to 125 mph)

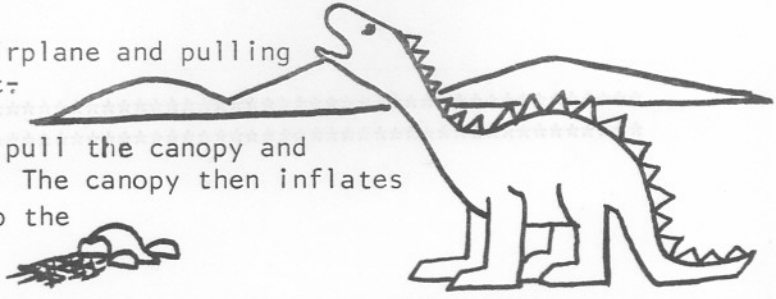
Parachute type: Aside from category, parachutes are known or identified by type; back, seat, chest, and chair type. The seat pack is most popular with our bi-planes because of cockpit design.

A parachute consists of 3 major parts or components; harness, canopy, and container. The harness is designed to be fitted to the torso so as to distribute the opening shock without bodily injury and to keep the body from being ejected from the harness during opening shock of 8-30 Gz.

Canopy: Almost all emergency parachutes are parabolic in shape and 21'-28' in diameter. They are made up of triangular "gores" to make up the umbrella shaped canopy. Size or diameter does not determine the rate of descent. The porosity of material and the cut of the canopy predict the rate of descent with equal weights. A 200 lb. man under a 1.1 Oz. 28' canopy (surplus military) will have a rate of descent of 18' per second. The same man under a 26' low porosity, elliptical cut canopy will enjoy a 16' per second rate of descent.

Container: That part of a parachute that contains the canopy, pilot chute, and suspension lines until ready for use (deployment). Normally held closed by one or more pins which are extracted by the "rip cord".

Deployment: After exiting an airplane and pulling the rip cord, the pilot chute (fabric covered coiled spring) clears the container and creates enough drag to pull the canopy and suspension lines from the container. The canopy then inflates and allows the user a safe descent to the ground.



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At terminal velocity (120-125mph) most emergency parachutes open in less than 1 second.

Care of a parachute: Keep it dry, out of the sun and get it repacked on schedule.

This has been a very brief and condensed description of a parachute. It is not intended to educate you on all aspects of parachutes, but to excite your interest and encourage you to further research. It would be very beneficial for all expected users to attend a first jump course (not to experience a jump but for the information) to understand all the parameters of parachuting.

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Note to our Readers: Starduster Magazine accepts material from its Readers. If you have an experience which you would like to share with other Stardusters, why not submit it? The address is 4301 Twining Riverside, Ca. 92509

CHARLES E. LARGAY JR.
8201 N.W. 108 STREET
MIAMI, FLORIDA 33178

Charles Largay Jr. (Starduster too)

July 1984

3

CHARLES E. LARGAY JR.

9501 N. W. 106 STREET

MIAMI, FLORIDA 33178

Dear Bill and Crew,

April 24, 1984

I hope this letter finds you all well and prosperous. This letter, however, is being written for a sad reason rather than to discuss our prosperity.

On March 18, 1984, one of our most renowned and likable builders and pilot was killed in his Starduster Too along with his wife. Bob Aleva and his pretty wife, Donna, were killed while doing low level aerobatics in front of their home in Lakeland, Fla. The accident took place in front of their two young daughters.

Remarkably, Bob was known for his conservatism and level-head. How he would allow himself to do such a thing is beyond anyone who knew him can realize. Bob was not an expert aerobatic pilot. But he was capable.

The aircraft, I understand, pancaked into a field and both died instantly. The plane withstood the accident almost intact except for the landing gear which buckled and came through the front cockpit. Afterwards, Bob's brother, dug a big hole, burned the aircraft, and buried it with a bulldozer.

His Starduster Too was a Grand Champion bird from Oshkosh and many fly-ins around the country. A deep marron with white trim set the aircraft off beautifully. Workmanship was outstanding.

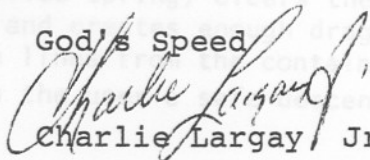
All of us who knew Bob and Donna will miss them terribly. We are all stunned at their deaths.

We all should take note that:

1. Low level aerobatics are very dangerous and survivability in an accident is very low.
2. Aerobatics at gross weights or even slightly heavy is an absolute NO-NO.
3. The M-6 airfoil is NOT a very good wing for inverted flight (my opinion).
4. The fun of showing off is not worth the risk of the consequences. NOTHING, NOTHING, is worth a persons life, no matter how exciting.
5. Consider the well being of OTHERS if anything should happen those who die needlessly. Consider Bob and Donna's children in this case.

Pray for Bob and Donna, their children, and ourselves. It seems we need all the help we can get to protect us from ourselves.

God's Speed



Charlie Largay Jr. (N333CL Starduster Too)

Physiological Hazards of Aerobatic Flight Explained

The physiological effects of gravitational forces (G's) on pilots performing aerobatic maneuvers have been associated with several accidents and incidents occurring during aerobatic flight, prompting the Federal Aviation Administration to issue guidelines to better inform pilots concerning incapacitation through excessive G-forces and how best to avoid them.

The effects of G's on the pilot vary with maneuvers performed, and the amount of G-force experienced by the pilot depends on a number of factors, including the abruptness of the maneuver performed and the responsiveness of the aircraft. G's are designated according to their alignment with the axes of the pilot as he sits in the aircraft cockpit (see illustration). Fore and aft accelerations (G_x) have little effect on the pilot's physiology and can be tolerated more easily than head-to-foot accelerations (positive G_z) and the reverse, foot-to-head G's (negative G_z).

The main effects of G_z accelerations are upon the blood in blood vessels, and adverse symptoms may occur during both positive and negative G_z maneuvers.

In maneuvers producing positive G_z loads, physiological effects can include grayout, blackout and loss of consciousness. Grayout is a graying of vision caused by diminished blood flow to the eyes and, although there is no associated physical impairment, the condition should serve as a warning of imminent impairment of blood flow to the brain.

Blackout is a complete loss of vision, and results when the oxygen supply to light-sensitive retinal cells is severely reduced. Contrary to common usages of the term, consciousness is maintained during blackout and some mental activity and muscle function remain. Consequently, blackout may serve as a warning of seriously reduced blood flow to the head and impending unconsciousness. However, the FAA warned that, "In some centrifuge studies, 50 percent of the pilots had simultaneous blackout and loss of consciousness. Therefore, a pilot cannot rely on blackout to precede loss of consciousness."

When blood flow to the brain is reduced to a certain level, the pilot will lose consciousness. "He or she may have jerking, convulsive movements," the FAA explained, and "these have been seen in many subjects of centrifuge studies and in some pilots during actual flight. The pilot will slump in his or her seat. Possibly, the pilot will fall against the controls, causing the aircraft to enter flight configurations from which it cannot recover even if consciousness is regained. In centrifuge studies, many pilots lost (and regained) consciousness without realizing they had done so."

Negative G_z effects are generally encountered during inverted flight, outside loops or pushover maneuvers. During these maneuvers, blood is pushed toward the head, and the amount of blood returning from the head to the heart is diminished. The result is stagnation of blood in the head, and engorgement of blood vessels caused a reddening or flushing of facial skin. Blood vessels in the eyes become dilated, and some persons may complain of headaches. A condition called redout may occur; when the lower eyelids, reacting negative G's, rise to cover the pupils, allowing the pilot to see light through the eyelids.

Little is known about the effects of excessive negative G_z loads on humans because such accelerations have caused considerable discomfort among those studied. Aerobatic pilots have reported small hemorrhages in the skin and eyes, and experienced aerobatic flyer Harlod Krier wrote that

during maneuvers at three to five positive Gz, a level of acceleration frequently encountered in civil maneuvers."

The FAA reported a number of incidents and fatal accidents attributable to loss of consciousness, including the following: "During a practice flight, an experienced aerobatic pilot completed a series of 18 maneuvers and, after a short rest, began his 'free' sequence of 23 maneuvers under the watchful eye of his ground observer, a judge of aerobatic flying. After the 19th maneuver, a three-quarter outside loop followed by 2 1/2 rolls from inverted to upright, the aircraft flew straight and level for a short time, departed from the practice box in a 45-degree nose-down attitude and crashed. The pilot was killed. He had not responded to a radio call made just before impact. The events suggest that the pilot had become incapacitated. Post-mortem examination did not reveal pre-existing disease that could be related to the accident."

Avoiding Incapacitation

The FAA offered the following suggestions for pilots intending to perform aerobatic maneuvers:

- If you are just beginning in aerobatics, fly with an instructor. Take advantage of the instructor's experience and knowledge;

- Ask the instructor to familiarize you with the "feel" of various maneuvers, not only the rapid executions expertly done, but the hesitant, sluggish ones you will be doing in your early practice. Remember that the rate of onset of acceleration is an important factor that you must learn to appreciate;

- If you experience dimming or graying of vision during flight, realize that this represents diminished blood flow through the eyes and that you may be close to your tolerance limit. Ease off on the controls to reduce the G-load;

- If you experience incapacitation or have any lingering symptoms as a result of aerobatics, consult a knowledgeable flight surgeon before you resume flying. Some people may be unusually susceptible to G-loading. If you are one of these, you need to know about it; you may not be so lucky the next time;

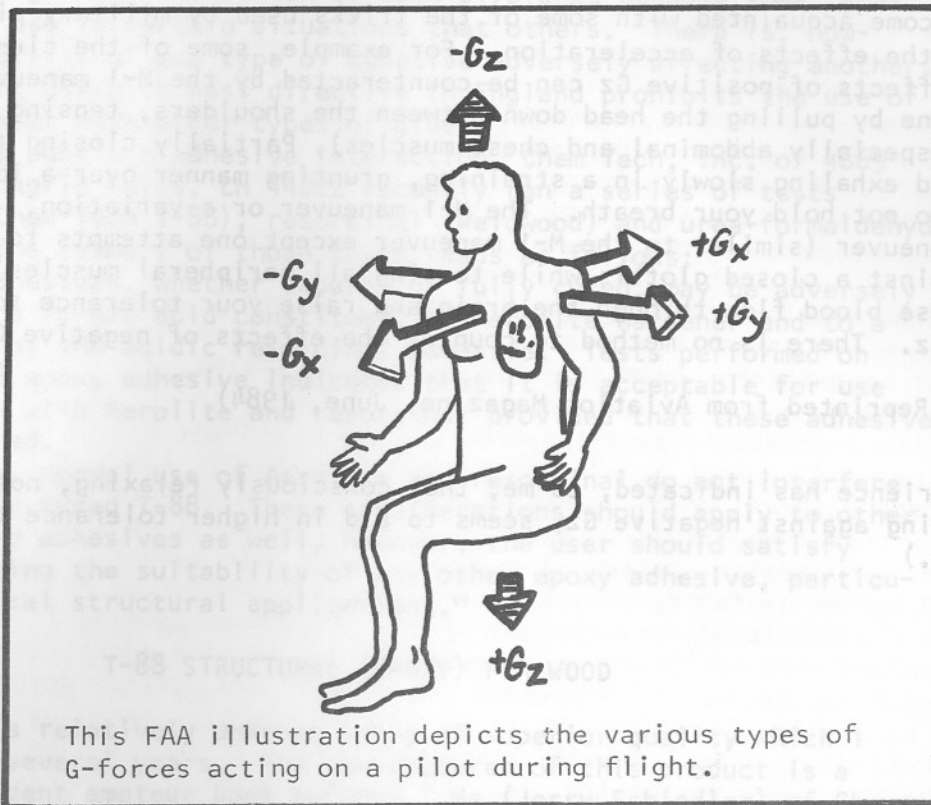
- Frequent exposure to G-stress may "tune" the human system, making it less sensitive to higher G-loads. If you have not flown aerobatics for some time, begin with the simpler, less stressful maneuvers when you take it up again;

- Physical conditioning does not seem to increase tolerance to G-loads; marathon running lowers tolerance. On the other hand, a well-tuned cardiovascular system seems to recover more rapidly from many kinds of stress. Keep in shape;

- Be especially mindful of your current physical condition. Do you really "feel" like aerobatics today? If you don't feel well, wait until you do. Consult a physician if you have any doubts about your health;

- Be aware that if you are accustomed to flying in a coastal region and then undertake the same aerobatics at a region of higher altitude, such as Denver, Colo., you will have a lowered tolerance to G's. The oxygen content of the blood is lowered by exposure to the higher altitude, and the oxygen supply to the brain might be reduced to critical levels during positive Gz loading.

- Remember that anything that reduces blood volume or cardiovascular response may reduce G-tolerance. Dehydration, excessive sweating, severe sunburn, low blood pressure, prolonged standing or sitting, hypoxia, infection (even minor illnesses) and medications all lower



he sometimes eases off on negative G_z maneuvers to relieve pains in the top of his head.

As slowing of the heart occurs in virtually all subjects during negative G_z maneuvers, and in some individuals there is such a marked slowing of heart action that intervals of several seconds occur between beats. In some persons, the heart may beat irregularly after exposure to such G-forces. "Thus, it appears that the greatest threat from negative G_z is the loss of consciousness from the slowing of the heart, irregularities of the heartbeats and stagnation of blood in the head," the FAA warned in an advisory circular.

Art Scholl, a well-known professional aerobic pilot who has performed numerous outstanding feats for television and motion pictures, reported a relevant incident that occurred while he was practicing aerobatics on a day when he was not feeling well.

Scholl "attempted a vertical 8 'the hard way,' an outside loop on the top and an inside loop on the bottom," the FAA stated. "He completed the top loop and was pulling out of the bottom loop when he imagined he heard the sound of a clock alarm and he had the vague thought that there was some urgency in 'getting up', that there was something important to do. When he became fully conscious, the aircraft was flying inverted about a mile away from the practice box. This was his only experience of unconsciousness during an aerobic maneuver."

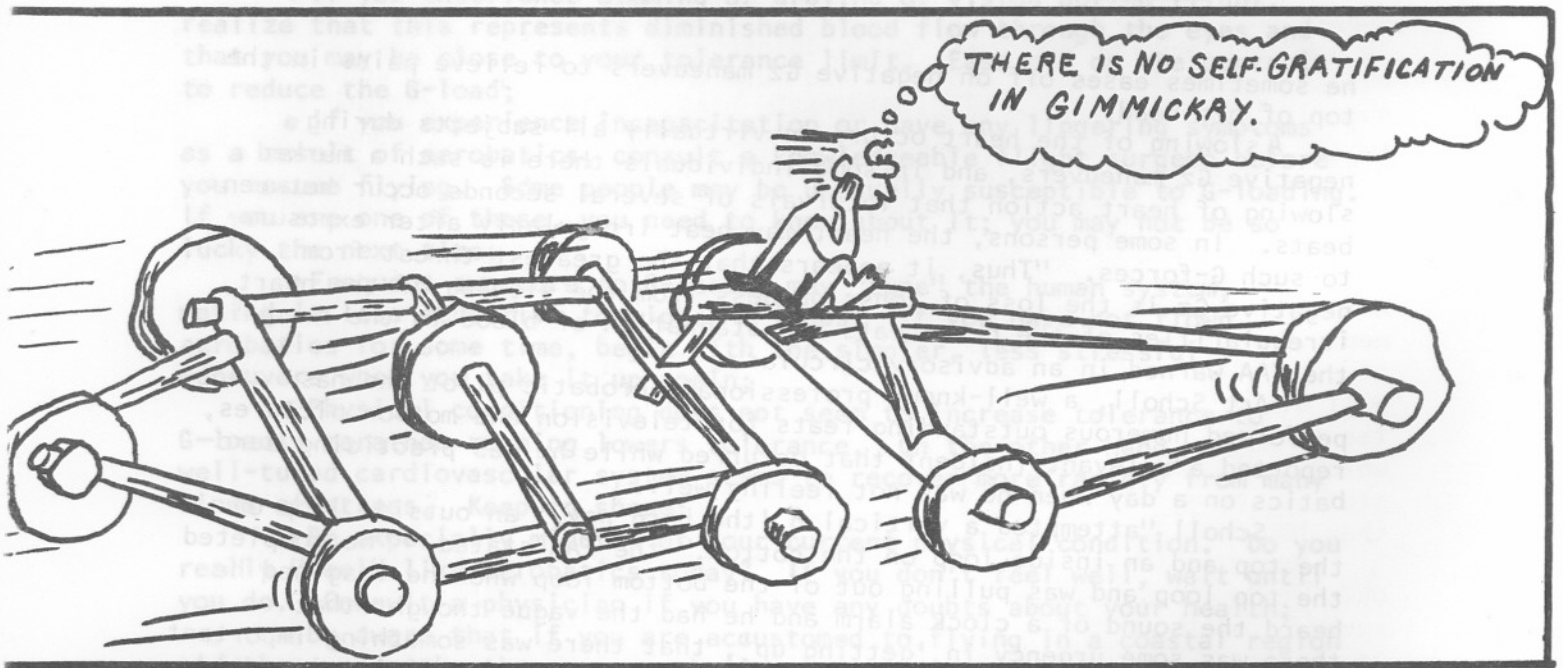
An unknown number of accidents have occurred as a result of aerobic-induced unconsciousness, the FAA stated, adding that, "Because of inadequate investigating and reporting systems, we do not know how frequently G-induced loss of consciousness causes civil aerobic accidents. Each year, however, there are a number of well-documented incidents in which military students or instructors experience loss of consciousness

G-tolerance. Alcohol and hangovers will reduce your ability to perform aerobatic maneuvers. Make sure you are as fit as your aircraft; and

• Become acquainted with some of the tricks used by military pilots to reduce the effects of acceleration. For example, some of the circulatory effects of positive Gz can be counteracted by the M-1 maneuver. This is done by pulling the head down between the shoulders, tensing muscles (especially abdominal and chest muscles), Partially closing the glottis and exhaling slowly in a straining, grunting manner over a long period. Do not hold your breath. The M-1 maneuver or a variation, the L-1 maneuver (similar to the M-1 maneuver except one attempts to exhale against a closed glottis while tensing all peripheral muscles), can increase blood flow through the brain and raise your tolerance to positive Gz. There is no method to counter the effects of negative Gz.

(Reprinted from Aviation Magazine, June, 1984)

(Experience has indicated, to me, that consciously relaxing, not fighting or straining against negative Gz, seems to aid in higher tolerance to negative Gz.---B.C.)



A pressure carburetor demands a compatible fuel pump and back-up system which will supply a minimum of 15 lbs. PSI. A Starduster recently suffered major damage after engine failure--due to a mechanic mistakenly reducing fuel pressure to 6 lbs. on an AN fuel pump.

It is a common practice for homebuilders to use several kinds of adhesives during the construction of wood airplanes because some types are easier to use in certain situations than others. There is, however, a possibility of one type of adhesive adversely affecting another. A long-standing airworthiness directive in England prohibits the use of Aerolite hardener near other types of glue.

To assess possible adhesive interaction, Chem Tech, Inc. of 4669 Lander Rd., Chagrin Falls, OH 44022 recently ran a series of tests using epoxy (Chem-Tech T-88), resorcinol (Weldwood) and urea-formaldehyde (Aerolite). The summary of those tests reads as follows:

"Epoxy adhesives, whether uncured or fully cured, may be adversely affected by the formic acid constituent of Aerolite hardener and to a lesser degree by the acidic resorcinol adhesive. Tests performed on Chem-Tech T-88 epoxy adhesive indicated that it is acceptable for use in conjunction with Aerolite and resorcinol provided that these adhesives have fully cured.

Similarly, normal use of Aerolite and resorcinol do not interfere with previously cured T-88. These considerations should apply to other brands of epoxy adhesives as well, however, the user should satisfy himself regarding the suitability of any other epoxy adhesive, particularly in critical structural applications."

T-88 STRUCTURAL (EPOXY) FOR WOOD

T-88 is a relatively unknown epoxy of superior quality which I have used for several years. The manufacturer of this product is a chemist and ardent amateur boat builder. He (Jerry Schindler) of Chem-Tech has informed me that our own Tony Bingelis, who writes the "Designee Corner" in SPORT AVIATION and is the builder of an Emeraude and a Turner T-40, is a user of T-88. I don't blame Tony one bit for using it. It really is a fine epoxy. A few of its major advantages are:

1. The mix is one-to-one (Equal parts).
2. It can be used at temperatures just above freezing (35°).
3. It is non-staining; after drying, the color is that of varnish.
4. The thickness of the glue joint is not critical. (Some epoxies demand a joint of no more than .011 gap.)
5. It is not affected by rot, fungus, oil or gasoline.
6. It does not shrink.
7. It has good pot life. (35-40 minutes at 75° plus you have an additional 15-20 minutes immediately after mixing during which time the mix is heating. It is then re-stirred and is ready for use.)

(This article was supplied to Starduster by Jerry Schindler, of Chem Tech.)

In our next issue, we will explore the fascinating world of spades and servos. Don't miss it!

Dear Bill,

I have been wanting to tell you just how much I enjoyed your '84 fly-in at old Flabob Airport. The Saturday evening Bar-B-Q, awards, and dance gave me a very warm feeling of friendship with other builders, and have built. The sharing of great ideas by prize winning builders has stimulated new thoughts on my bery own project. I think the condition of my project was in perfect timing with your Air Show. That grand prize winner woned by Pattie & Maynard Engles inspired me to focus on greater details to produce a great show plane that some day may also be a competitor for the Oshkosh Grand Champion "Starduster". I must also mention that beautifully built AC300 done by Lowell Slatter from Idaho. There are many more whose names slip my mind, but should receive honorable mention for their magnificent projects. The one thing missing was Crash McPherson. Can you imagine him with Capt. Mike Kawato! Just think of it, Mike could write a new book about the oldest flying chicken, and chicken fat to save our old engines, (as "Crash's quote). A thought I had on my way back home. With all of the ideas that each builder sends in to you each year, you must have a million great inventions hidden in a file. Suppose you were to catalogue these ideas, and put them into a book like, "Building the Gold Duster". Can you imagine a book with a chapter on NOV-COM antennas or omni localizer antennas hidden the wings, landing lights in the wings, wooden wing tip bows, using plywood/foam leading edges, smoke systems, etc. with lots of pictures, schematics, and written descriptions of "how to do it". All those back issues of Starduster magazines hidden here and there just filled with answers to questions many builders always have. "How did you do that?" Its like a 1001 ways to succeed in your project. Well, give it a thought. After such a great trip, and purchase of many dollars worth of parts I will not see you at Oshkosh this year. However, if you are interested, the Shenandoah Valley, Va. Fall Foliage Fly-in, October 5-7. We hope it will be better than ever. I hope there is at least one "Starduster" there. Hope to see you soon or at least hear from you.

Walt DeGroot

P.S. Would you send me Patty & Maynard Engles' and Lowell Slatter's addresses. I want to drop them a line thanking them for my first ride ever in a "Starduster" and the inspiration, and boost they gave me toward my very own project. Also tell your staff how much I enjoyed visiting with them in the shop, and front office.

Enclosed you will find my order and check for more parts. Also, I have mailed the Gascolator to you for refund on a better one.

Thanks,
Waldo

ATTENTION, FLY-IN PARTICIPANTS:

We still have a great many participation trophies which were not picked up due to people leaving before the awards ceremony. If you flew in but did not receive a trophy, please write and let us know. The address is Stolp Starduster Corporation, 4301 Twining Street, Riverside, California 92509.

"The Key to a Lost Art"

Dear Bill and Stardusters-

Now that we have read the final installment in Crash's "Round-Power" program, it's time to reflect on exactly what we have learned! Please come with me!

Let's turn the clock back through the years of tri-gear spam-cams, electronic gadgets for incapable pilots, and dozens of ratings when one or two would have sufficed, to a time when flying was different! We're back 47 years. The pilots were different-the airports were grass or cinder runways, and the airplanes were each a masterpiece in individual artistry. Let's get closer!

We're now in the main hanger at Land-o-Lakes Flying Service, Pontiac, Michigan.

It's Spring, 1937 and a sign on the wall says "Home of Zephyr Airplane Corp." We see no Zephyr airplanes and therefor assume they went out of business during the Crash of '29, along with many others.

There are, however, about a dozen other airplanes parked in there and we study them over one by one, eyes darting over them in fascination from the glistening Hamilton Standard propellers to the trade-mark on the vertical fin. They all had trade-marks! White airplanes were never seen, nor wanted (but they came in practically all other colors!)

The Stinson SRJR we're looking at has a beautifully arched Bow with arrow pointing up. She's all black with gold trim and so shiny it's like looking in a mirror. Perhaps a hundred coats of nitrate dope went into the hand-rubbed finish! She's a big ship with about a 42 foot wing spread. It was actually designed with retractable gear, but was way too early yet for that sort of nonsense so the ship just sat there on its wide center-section with 2 gear legs pointed straight down, wheel pants housing "do-nut" tires, a "must" on muddy runways. We open the cabin door and poke our head in to the "genuine" red leather interior. It smells like an airplane should. A mixture of leather, dope, and gasoline that no airplane has had since that time! Each seat has an "Ervin" air chute built right in! At least you can save yourself, if something goes wrong, we muse! Peering further in at the rose-wood grained instrument panel we see most of the instruments we see today. But, there is a difference! There are no red-lines, no yellow lines, no white or green lines! There are no restrictions and no Ad notes and no bulletin on this airplane! No worry! Fine airplanes are hard to come by, and treated gently! It was built by craftsmen, having a love for the product. Likewise, with most other ships around the Stinson in the din of the early morning sunlight shining through the pane-glass windows. We take one final long look in the Stinson. The pilot's windows cranked down like car windows. Safety glass, too! A leather strap on the door post helped ease entry. Just think! 125mph and all this plushness! Boy! If only we could fly her just once! It's quiet inside the ship; no noise except that of the Jaeger clock on the panel ticking faithfully on for over a week, if necessary, until the owner shows up to rewind it. We step down from the strut steps and gently close the cabin door. The hanger floor is just plain black dirt, ideal for eliminating rust causing moisture in hangers in wet weather. We go over to the east wall of the hanger to the stairway up to the loft. Up on the 1st landing we gaze out over the airplanes below us. We see a 90 Warner Porterfield, Rearwing Sportster, and Davis monoplane in the left far corner with a Butler Blackhawk with chrome-plated wing struts. In the hanger floor center there's a Waco EQC-6, a Waco "5" and a bold-red AW Cessna in front of it. On the far side we see a dark green and gold SM8A Stinson with fabric covered wing struts. The sign in the pilot's window says "For Sale \$750.00. "Too much," we agree. \$500.00 would

be better! Further forward there's a luna green Kinner powered Bird bi-plane, and a yellow, low-wing Warner Aeronca. In front of it sits the largest bi-plane in the hanger, a new Standard 5-place open bi-plane. Then back this way on the front row are the Queens of the hanger! A beautiful olive green and yellow p-26 Boeing fighter, and a blue and yellow BT-9 both from Selfridge Field, Michigan visiting for a forthcoming air show! The Army sent them over for some pre-show publicity to be followed by the entire P-35 squadron!

We regretfully close the hanger door and go back out into the bright sunlight.

Kenny Barber's Waco Custom Cabin Bi-plane is coming in on final on the N-S runway heading north and is now over the diner across the parking lot. She side-slips in nicely over the cyclone fence where airplanes rides were \$2.00 each in Charlie Giles' Waco "S" on Sundays. Kenny's on the ground now and rolling on the cinder runway with a loud rumble that only ships with tight fabric covering make. I guess it's the same principal as a bass drum. The powerful 350 H.P. Wright "Whirlwind" swings her around at the intersection and she taxis in, "S" turning across the grass field, occasionally "blimping" the throttle to give rudder steerage without wearing out the brakes. She's real close, now, stand back, she's gonna swing around in front of the hanger!

As the ship swings 180 degrees, the big prop slows down and the push-rods start clanking as she comes to a stop, and Ken didn't even blow dust into the hanger door on this sunny spring morning long ago!

Yes, Pilots, things were different then! Can you understand? Can you feel it? The excitement and pride of being a part of the "Real Aviation"! The Aviation that has been "Temporarily misplaced". Stuck back on the top shelf behind a row of "Wichita Spam-Can" books, jets and guided missile articals! Back there so long the dust is an inch thick and no one even sees them! If only it could live again! What a story it could tell!

Listen, Pilots! Listen to it! It's calling all of us! But there's a way! There is a WAY! No, we can't go back to it! But we CAN bring it up to US! Only you and I can do it! Let's all pull together and bring the Real Aviation up to our time! Push the books of boredom aside on that top shelf and open up the one that has the Real Aviation Story! The one where pilots were proud and dedicated, where pilotage was an art, a map was his only guide and he learned to use it. He relied only upon himself, and didn't tax the resources of modern ground control to the point of FAA pulling it out from under him, (which is about to happen!) The one where you weren't a pilot till you could recover from a tail spin, and right on the money! Where a traffic pattern was an exacting and religious ordeal that protected every one who used it properly and without ground control! A ball in the center, precise way of handling the ship that showed even an amatuer knew your stuff!

And get a new respect for a conventionally geared airplane! You'll be a better pilot for it! Get it in your mind that a tricycle landing gear is the odd ball one! There all conventionally geared Radial engine airplanes from now on in!

If you don't believe me, just find the key to that special hanger door! It's not easy. Most pilots today will never do it! Particularly the ones who mis-use aviation and defame it and the airplanes they use in hauling dope and the like. You will never find a U.S. Customs sticker on any airplane in that Land-o-Lakes hanger! And you will never find a Real Aviation pilot hauling dope! They are a proud lot who keep their ships in that hanger! All the airplanes have hand-rubbed paint jobs and clean running radial engines--And, oh Yes, conventional landing gears! A lot of bi-planes, too!

Just remember, that once you've found that special Key to that old

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hanger, hold on to it and don't lose it for you'll never get a second chance! Only the dedicated pilots get to look inside and see just how beautiful an airplane can be! I know! I was the "Line Boy" at Land-o-Lakes in the Spring of '37!

Sincerely,
Crash McPherson
The World's Oldest Flying Chicken

Round Power Department

"Crash" was outside the ole "chicken house" sniffing out early worms and other trash and guess what he came up with? Something very important! A potential weak point previously mentioned in the last "Round Power" article (Jan. '84 Starduster) in which I suggested the addition of FALSE or SOLID NOSE RIBS in the "Bull" Starduster wings to eliminate the possibility of crushing at high "G" and excessive dive speeds!

Low and Behold! Crash checked the "chicken coop mail box" and here's the latest issue of "Sport Aviation" (EAA Mag.) with a crushed nose ribbed Pitts Special, looking mighty sad with all the rag off the top wing! (See enclosed Pics and Reprint).

Soo-oo--Stardusters, the next time Crash tells you about a potential "trouble spot", even one that has given no previous history of failures, better do it, 'cause there's nothing better than the intuition of a bird! Even if it is an ole Chicken!

Save Chicken Fat
Crash

By the time Kermit got home from Europe, it was time to head off for Conroe, Texas. He flew up to Gainesville to practice. The airplane now had about 100 hours on it. On the fourth flight (fourth from his four-minute freestyle in Czechoslovakia), he found he'd gotten a tad carried away in lightening the plane. He had left the nose ribs out of the upper center section of the wings. Suddenly, he heard a pop. It was the sound of the leading edge collapsing. For some reason, the left leading edge went with it and all of the fabric on the top of the left wing, the center section the two-thirds of the right wing blew off. The Weeks Special was rapidly transforming itself to a monoplane.

Kermit got it down safely, packed it on a U-Haul and skipped the Nationals that year. He let out the word, however, that he was now working on a new plane.

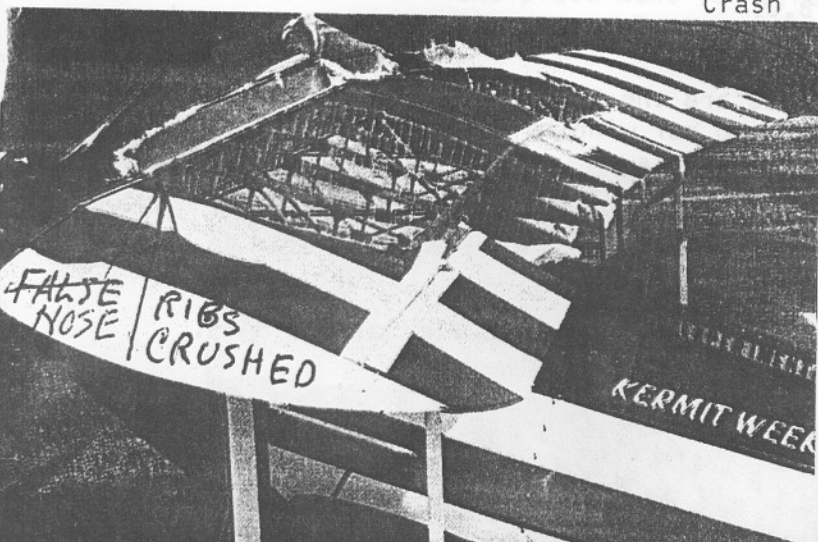
First he needed to repair his Special. This time he rebuilt the wings, complete with nose ribs all the way.

SPORT AVIATION 47

Regarding leading edge failures, I can verify they are near catastrophic. We had a failure recently on the Super Starduster being flown by Richard Green. Failure occurred at 220mph and 3.5 Gz. I believe the failure started in an area of the lead-

ing edge where flying wire attach fitting exited and nose rib was also notched for fitting clearance. We believe we've solved the problem. After stripping all 4 panels, inspecting, adding J channel stiffeners, we replaced leading edge (.016 aluminum) and bend over the aft edge of the spar to put nails in the shear. Then we added foam to complete the leading edge by pouring into access holes bored in the leading edge. With 19'6" wing span the weight penalty was less than 10 lbs. A small price to pay for added strength.

B.C.



SEE PAGE 7 LAST ROUND POWER ARTICLE WRITTEN PRIOR TO MAILING DATE OF THIS SPORT AVIATION! READ AND HEED!
"Crash"

July 1984

13

1984 "Starduster Fly-In"

The gods of weather were with us. "Thor" was held in abatement and many flew "in". Lowell Slatter was the furthest, I think-Filer, Idaho-. The Bay Area bunch inundated us. Visitors came from Virginia, Minnesota, Michigan, Washington, Oregon, Arizona, Nevada, and Texas.

A total of 31 airplanes and 200 plus people-all aviation people-outstanding! Nothing less than a very good time was had by all.

The Bar-be-que was also a great success-tributes given to those who made it a success-Hank Schmel, John Hampson and Art Evans, "The cooks and Organizers".

The winners of the trophies were--

- #1 Marquart Charger, J. Smith
- #2 Starduster Too, Maynard and Patti Ingals
- #3 Steen Skybolt, Buzz Lynch
- #4 Starlet, W. Kelley

And judging being what it is, #5 and #6 tied. Both are champion aircraft. Lowell Slatter and Bob Brunner's Acroduster too's.

All participants that flew in received a trophy-"Starduster '84"- We have 20 here, so if you left without one, let us know and we'll mail it to you.

We all want to remember '84 and already anticipate '85, the 1st weekend of May.

Thanks to all of you. We had a great time!

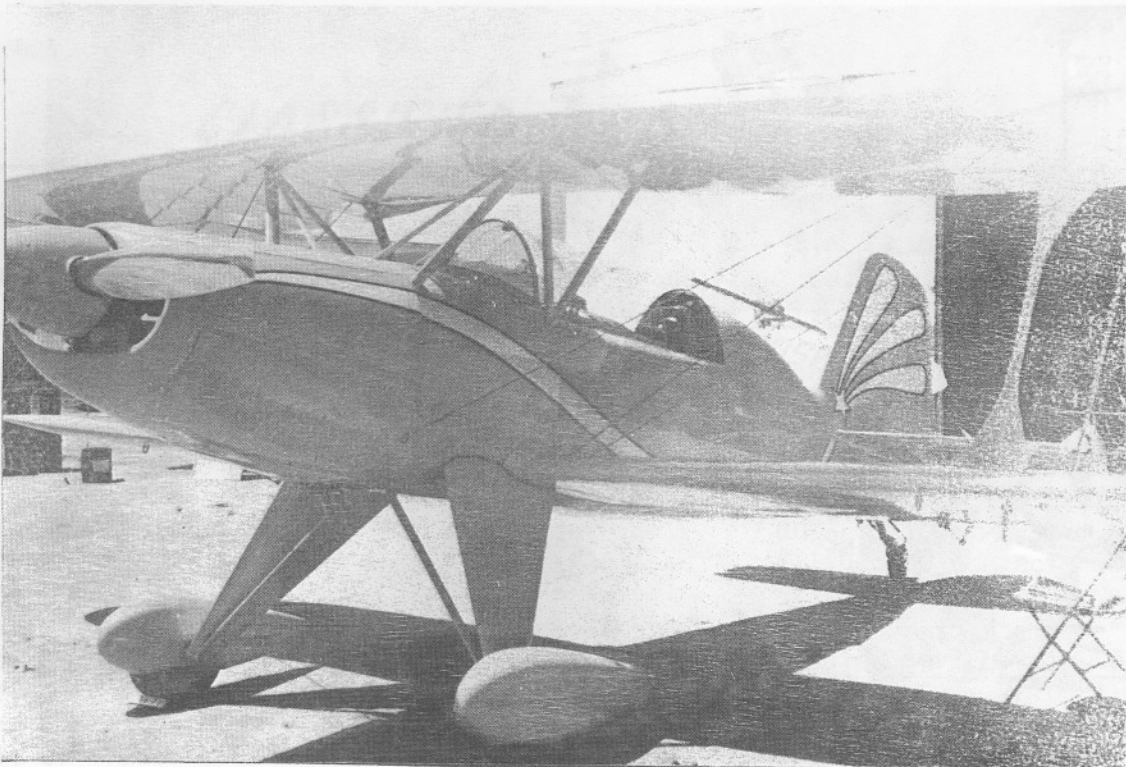
B.C.



These are the trophies which went to our winning Fly-in participants.

1st place was awarded to Jim Smith's MA-5.





For Sa
duster Wings

Poor quality workmanship
\$600.00 Also Bubble V
& Acro Top Turtle Back
1/2 new price. If inter-
ested, contact Dave
number (503) 639-8792

2nd place went to Maynard Ingalls for his
Starduster Too.

ship, take off
lower with leather or plastic.
Excellent crash protection for
Only \$6.95 for 6'
length. Order from Starduster
Corporation.



3rd place was taken by Buzz Lynch's Skybo1t.

Honorable Mention went to Lowell Slater for
his Acroduster Too.



Thanks to all of you. We had a great time!

4th place was given to Bill Kelly's Starlet.

These are the trophies which went to our winning Fly-in



Honorable Mention went to Lowell Slatter for his Acroduster Too.

CLASSIFIED ADS

ADVERTISING CLOSING DATE: JANUARY 1, APRIL 1, JULY 1, OCTOBER 1.
 CLASSIFIED ADVERTISING RATE: \$3.00 PER COLUMN INCH--MINIMUM CHARGE \$3.00
 PLEASE MAKE CHECKS PAYABLE TO STOLP STARDUSTER CORPORATION. THANK YOU.

Starduster Too For Sale:

77BG has 470 Hrs. T.A.
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For Sale 10 360 AIA 200
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Chrome Cylinder:

All new or Overhauled
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 J. Kruger at (714)792-
 8868 or (714)794-1225
 Skyways Charter
 Redland Airport

Propeller For Sale:

one wood prop 60"x30"
 pitch. For Volkswagon
 powered aircraft. All
 interested parties
 contact Bill Clouse at
 Starduster Corp. 686-7943

Starduster Too Project:

For sale, 80% complete,
 full canopy, 0-435 Engine.
 For more info, phone
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Summer Sale-Starduster:

July 1st-15th: Wood,
 steel, aluminum, fiber-
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 much more. 10% discount
 on pre-paid orders only.
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Starduster Too Wings:

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 Ready for cover. All Steel
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Better performance inverted
 Faster and lighter ailerons
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 Very light & very small!
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1 1/4" O.D. x 7/16" I.D.
 Soft rubber padding. Install
 over small dia. metal tube and
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 Excellent crash protection for
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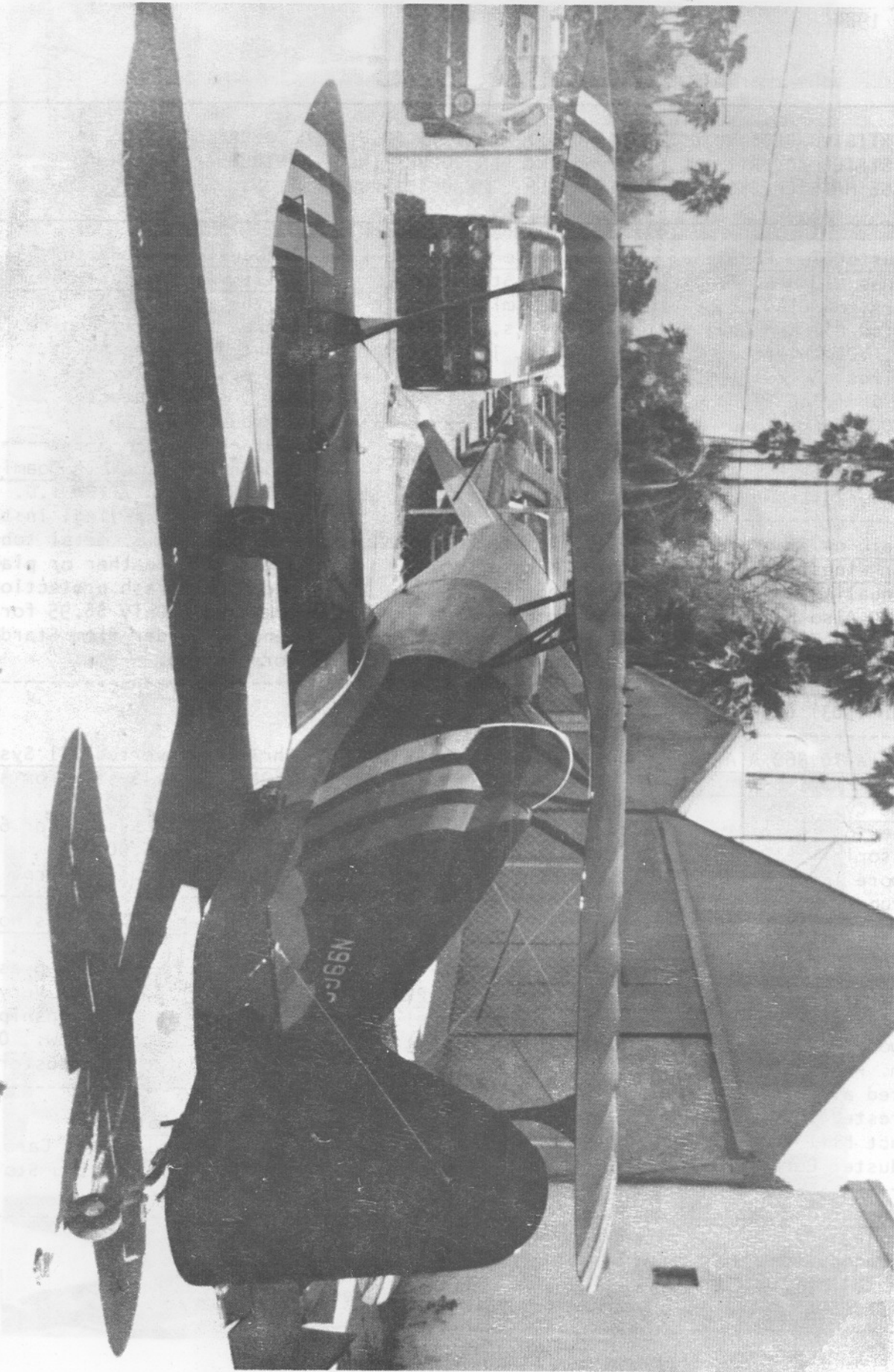
Acroduster Too Patches Now

Available:
 4" length. Same design as
 Starduster patches. Very nice
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 blue, red, and yellow. Only
 \$3.95 Contact Starduster.

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LY 1984



Honorable Mention went to Lowell Slatter for his Acroduster Too.