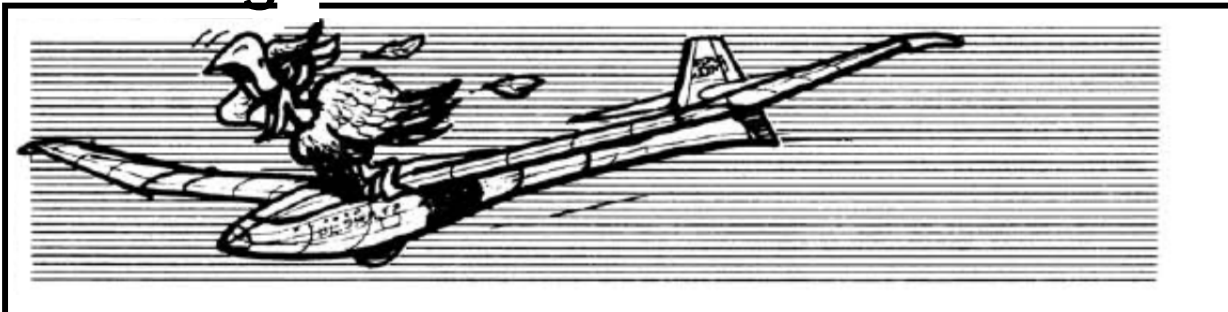




President: Harvey Jenkins **Contest Dir:** Eber Graham
Vice President: John Barr **Treasurer:** Bruce Aveson

Equipment Manager: Major Anderson

Soaring



Keith Kindrick January 2015

As I start this newsletter it is the middle of December. We have a great start for the winter rains with a storm pouring rain on us today. A lot has happened in 2014 for the SWSA team. We had great leadership from our President Harvey, Bruce Aveson paid all our bills, we've seen the tree line break apart due to the extreme drought over the past 2 years, new carpet is on the landing section, SC2 contest held at our field went well and filled our treasury, we survived the smoky days of the Colby fire in Glendora, Vulcan is proving entertainment by cutting down our foothills (in a 100 years we could be like Visalia?), our design team has born a SWSA Bird, Dan has flown his helicopters after our contest, Henry Rodriguez has shown us the light with his NEON Yellow shirt, Henry Arance made a ghost appearance when a picture of his Addiction showed up on a hill 5 years after it left us, Mike Deckman has mastered FPV, we shared in the thrill Major had when he turned into an expert for SC2 in 2015, and finally we witnessed a great shoot out for the year end with Eber winning open class overall. It really has been a great year for SWSA.

For 2015 I expect the same amount of fun and dedication as ever. Hopefully you all had terrific holidays and are ready for more flying this season.

Some guys never stopped flying all winter!



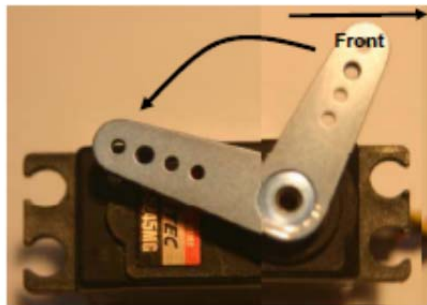


At the end of the flying session for the December Contest there was a *side bar* discussion for a few of us as we looked over the Xplorer 4.0 that Major used to place third with overall. It caused me to think of what I had learned over time to pass it along for setting up servos in a wing. As some of us have found out we can trim anything using sub-trims from our radios. Does that solve a problem or create more? YES! Nothing can start you off on a proper setup if you do not have proper mechanical alignment. Since I am always here to help as your trusty newsletter guy here is what you need to know. (I'm writing this as if were doing first time installation)

Equal Angles/Lengths

Open the sub menu in your transmitter and zero out all the flap and aileron trim values. Then go to the travel adjustment menu and access the flap travel adjustment. **This is important:** Set the flap travel adjustment at the lower setting (flap closed) to be the same value for each flap servo (right and left). Do the same for the ailerons.

The most important concept to keep in mind is to maintain symmetry between servo arm angles for the flap and aileron servos. Align the pair servos (aileron and flap) side by side on the bench without servo arms. Then place the servo arms on each servo without screws to synchronize them mechanically. As shown below the front arm position is where we need to start for proper flap deflection. (Front arm should point toward the leading edge)



Once arms have been installed and are face to face adjust for symmetry by adding some sub-trim to both servo channels as needed. Now place the servos in the wing. Use the pushrods, not sub-trim if significant adjustment is needed after installation.

Equal pushrod lengths are very important. If your servos are aligned unequal pushrods will produce unequal servo locations which will very slightly change the pushrod angles and cause a surface travel synchronization issue. Push rods should be equal for the initial installation. They should be the first thing to you adjust before you starting using the sub trims on you radio if adjustment is needed.

Servo Travel Extremes

With some radios we like to use the full potential of the servo. But if we use a clevis it will rub against the servo shaft. If one looks at the clevis below it is mostly one side that has full support



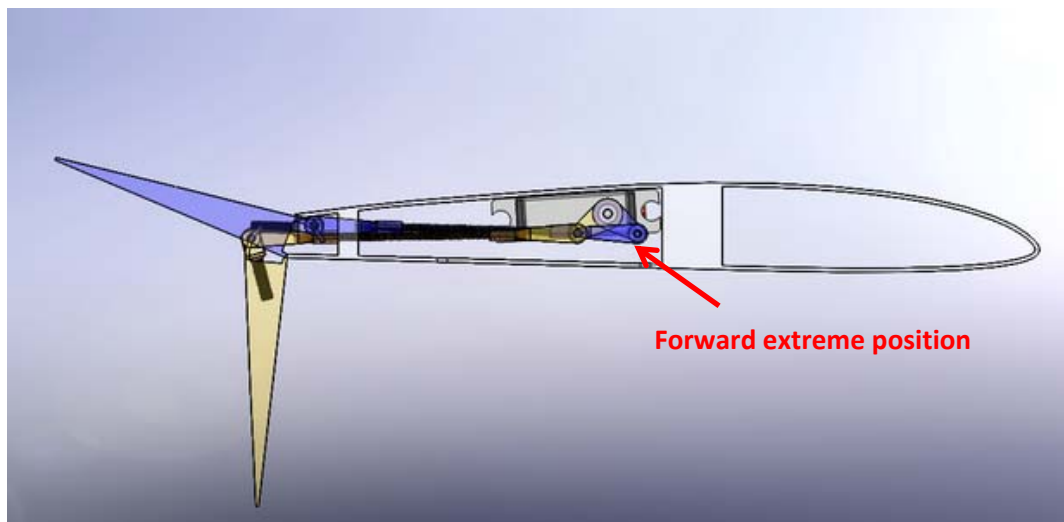
of the forces. The other side can be ground down to let the servo shaft have room. This allows the full potential of the servo with very little slop and obtains all the movement we need.



In the figure below I suggest running the servos to their forward extreme such that the clevis just begins to bind and hope this occurs at exactly the perfect angle. But in practice this angle will be too far forward or aft:

- If the arm is too far forward you will get improved performance around in-section and upward, reduced performance in the down direction, and will require more servo travel than is permitted.
- If the arm is too far aft you will get improved performance in the down-flap region (generally beyond 30-40deg) at the expense of performance mid-range servo travel. More servo travel would be needed than is possible to reach 90 degree flaps.

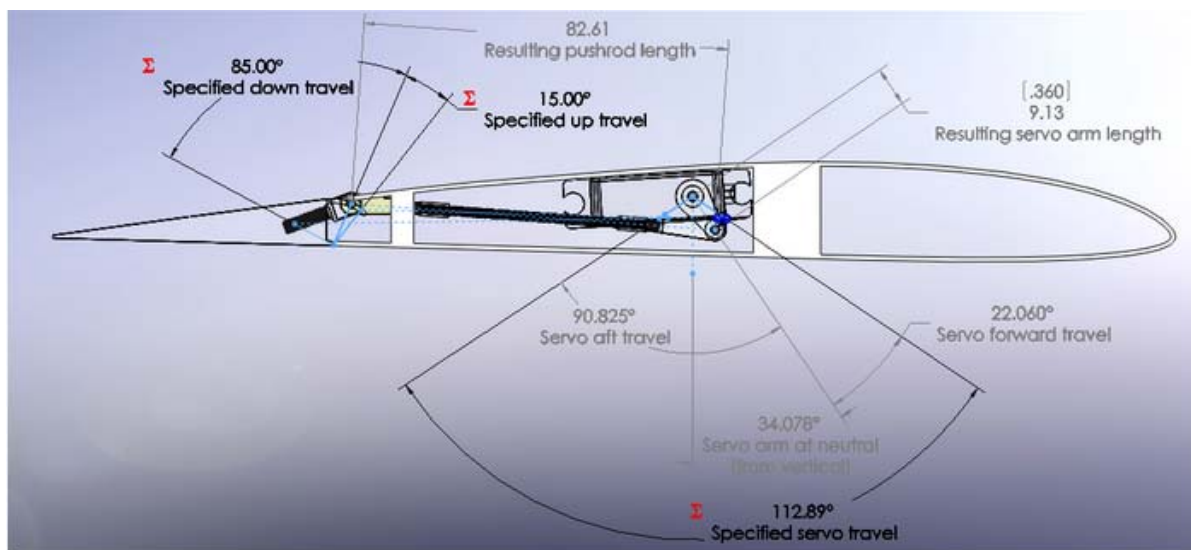
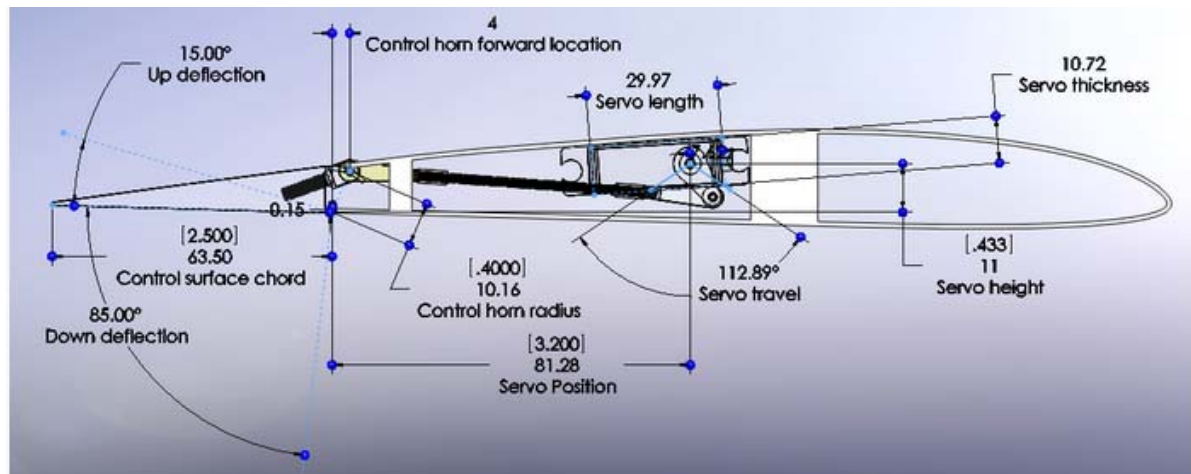
This is another reason why I suggest ensuring that the servo/clevis can go all the way forward. It's generally preferable to have it too far forward than too far aft.





January 2015

These are rather complicated diagrams showing all of the important physical key characteristics to do a perfect installation which never happens. You do have to understand why they all are important as the mechanic of your radio installation. Once the mechanicals have been finalized you now will use the radio to make the electronic adjustments needed. This is where I stop. Hopefully this helps.





January 2015



"New innovation is often feared, because innovation challenges the status quo," said Lisa Ellman, who formerly led the Justice Department's working group on domestic use of drones and who is counsel at McKenna Long & Aldridge LLP.

2014 is the year America was struck by 'Drone Fever': we have a rapidly growing group of creative engineers, artists, scientists and businesspeople who want to use drones to make their work smarter and more efficient. Then we have a vocal group of people who protest drones over privacy concerns. And we have policy makers, who are trying, and failing, to sort it all out.

Need a wiring idea for the DB9 connector's?
Use the pin locations for your next harness and enjoy the wiring process

The responsibility of responding to privacy concerns has, by default, fallen on the Federal Aviation Administration, the group tasked with issuing regulations as to how commercial drones could operate in the U.S.

Opinion: America already lost the drone race to a Japanese farm in the 1980s

Sally French MarketWatch.com
Published: Dec 15, 2014 7:00 a.m. ET



But the already bureaucratic FAA doesn't have the expertise to solve privacy concerns, and has historically only been involved in the safety side of aviation.

"The FAA has no jurisdiction or inclination to worry about privacy," Ellman said.

Because of so much outcry over privacy, the FAA has implemented legislation that has been flawed and outdated. Commercial use of drones is completely banned, unless you file for a Section 333 petition with the Federal Aviation Administration, which usually takes a neither speedy, nor efficient, 120-days to process from the time you file to when it's approved.

Whenever someone approaches me as I'm flying a drone, the first thing they ask is, "so, are you trying to spy on someone?"

Translation: the government makes it really hard to legally make money off flying your drone.

Every time.

That's a problem for people like me and the thousands of other Americans who own a drone (or will get one for Christmas this year) and want to use it to take pictures, or for real estate agents who want to show off large parcels of land, or for farmers who want to survey their crops. Japan has been using drones for crop-dusting since 1987.

And every time, my answer is no. Unlike your surprisingly stealthy iPhone camera, drones are too large to not see. They're also too loud to not hear. Have you heard one? They sound like a pack of bees.



Silent Wings Soaring Association

January 2015

For a country that places so much value on innovation, why does the U.S. allow policy that clearly impedes it?

Drones certainly bring privacy issues. One real estate agent used pictures taken by a drone to market a property without realizing they included images of a neighbor sunbathing, topless, in her backyard.

And celebrities worry that paparazzi will use drones to sneak photographs. But those privacy concerns apply just as much to someone with a telephoto lens, satellite views such as Google Earth, or a camera on a helicopter.

"There's enough framework that already exists in government, enough of a framework to legally protect yourself," said Gretchen West, former executive vice president of drone lobby group [AUVSI](#). "'Peeping Tom' laws exist already.

Instead of solving the safety concerns that come with drones, such as addressing technical failures or sorting out flight patterns when multiple drones are flying in the same region, the FAA is wrapped in a box of trying to fix all the world's drone worries.

In doing that, the FAA keeps messing up.

In the latest ruling in the Huerta v. Pirker case, the National Transportation Safety Board reversed a judge's ruling against the FAA that drone operator Raphael Pirker shouldn't have to pay a fine for reckless flying.

It seems to be an issue of word choice. Ellman says there is an unclear differentiation between what's "prohibited" vs what's "unregulated."

The FAA has wanted to require drone operators to have a pilot's license, a time-consuming and expensive process.

"There is a general community concern that requiring a pilot's license to fly a drone is a bit excessive," said Helen Greiner, chief executive of CyPhy Works Inc. and co-founder of iRobot. "Requiring a pilot's license for drone operators

does not make sense. Flying a plane is not like flying a drone."

She said that drone operators would benefit from the ground-school classes that teaches about airspace.

"But we can now program this knowledge into the drones...which is better than depending on a pilot to look it up for each flight."

She also said that the FAA's requirement that drones operate only during the day is also a bit short-sighted.

I've handed my drone off to teenage neighbors who aren't old enough to have a driver's license, but can fly it without a problem, on their first try. That's the beauty of drones. Drones are supposed to lower the barrier to entry in innovation.

We tell college students to be entrepreneurs. A recent graduate still paying off student loans can't afford to get a pilot's license, but buying a \$400 drone wouldn't be unheard of.

A farmer could hugely benefit from an aerial view of his land to indicate dry spots or bacteria, but hiring a plane is expensive.

An aerial shot in a film could be stunning, but indie filmmakers often can't afford to pay for a helicopter.

Even major companies like Amazon have gotten so sick of dealing with the U.S.'s drone regulations, or lack thereof, so they say they'll take their drone delivery testing to another country.

"It's hurting the American economy if all this business is going abroad," Ellman said, who is now heading up her law firm's newly formed drone practice.

The solution? America needs to adopt rules similar to that of Canada or France. In Canada, the government factors size of a drone (drones weighing less than 4.5 pounds are legal for commercial purposes after you provide



Silent Wings Soaring Association

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Transport Canada basic information) when determining whether you can commercially use your drone.

"Why is Canada so much better?" Ellman said.
"We're late to the party."

America is long overdue on a basic set of ground rules that permit commercial usage of drones. From there, we can let the drone operators innovate, and the policy iterate.

Check out this Video of inflight refueling. It's not what you think!

http://www.youtube.com/v/pd5BMP_41bl%26rel%3d0%26hl%3den_US%26feature%3dplayer_embedded%26version%3d3

LDS will be making its presence in new designs in 2015. Here is a sneak shot of what is to come from Vladimir's models. This is currently available on their Shinto F3B/F3F sailplane.





Silent Wings Soaring Association

January 2015

More from the SWSA 2 meter design team

Keith ,
Sat, at our field, was "fly the SWSA 2M"
day. John Barr and Harvey shared their
little birds,,, Mark , Ian and Frank each
made full flights with each glider
(launched thru landing) Quite impressive ,,
starting with a strong zoom. The idea was
to see if they preferred the S3021 or
AG35 airfoil. In addition John shared the
CAD Drawing and Frank the instructions.
I don't think the performance (airfoils) were
much different. Great work Harvey and John

My "Wing" SWSA 2M is still on the building
board.

Frank







Silent Wings Soaring Association

January 2015



Mike is our new fashionista for this season!

That is it for this month.

Thermals to all ~ Keith

Take a look back in time during the 1970's SUD City Soaring event located at the end of this newsletter. At the time it was a premiere event.

2015 Contest Schedule

<u>DATE</u>	<u>EVENT</u>	<u>CD</u>
Sunday Dec 7, 2015	SWSA CLUB	Dan Borer
Sunday Jan 11, 2015	SWSA CLUB	Phil Halford
Sunday Feb 8, 2015	SWSA CLUB	Mike Deckman
Saturday_Sunday Feb 22-23, 2015	SWC	CASL

Sunday March 8, 2015	SWSA CLUB	John Barr
Sunday April 12, 2015	SWSA CLUB	Frank Corsaro
Saturday & Sunday May TBD/2015	CVRC Bent Wing	CVRC
Saturday May 9, 2015	SWSA CLUB	Henry Rodriguez
Sunday June 14, 2015	SWSA CLUB	Harvey Jenkins
Sunday July 12, 2015	SWSA CLUB	TBD
Sunday August 9, 2015	SWSA CLUB	Bruce Averson
Sunday Sept 13, 2015	SWSA CLUB	James Smith
Sunday Sept TBD, 2015	Wilson Cup	CVRC
Saturday & Sunday Oct 3-4, 2015	VISALIA FSF	CVRC
Sunday Oct 11, 2015	SWSA CLUB	Keith Kindrick
Sunday Nov 8, 2015	SWSA CLUB	TBD
TBD December 2015	SWSA Year End Party	

2015 SC2 Contest Schedule

	Club	Location
Sunday January 25	Downey	Field of Dreams
Sunday February 15	SWSA	SWSA
Sunday March 22	SULA	Field of Dreams
Sunday April 26	SWSA	SWSA
Sunday May 17	VVRC	VVRC
Sunday June 28	Harbor Soaring	Harbor Soaring



Silent Wings Soaring Association

January 2015

2015 SC2 Contest Schedule

Sunday	Club	Location
July 19	Inland Soaring	Inland Soaring
Sunday		
August 23	TOSS	TOSS
Sunday	Club	Location
September 20	SULA	Field of Dreams
Sunday		
October 18	TPG	TPG
Sunday		
November 15	Rain Date	

More Information @
www.sc2soaring.com

If you have any events let me know



2015 Holidays and Observances

Jan 1	New Year's Day
Jan 19	Martin Luther King Day
Feb 14	Valentine's Day
Feb 16	Presidents' Day
Apr 5	Easter Sunday
Apr 13	Thomas Jefferson's Birthday
May 10	Mothers' Day
May 25	Memorial Day
Jun 21	Fathers' Day
Jul 3	'Independence Day' observed
Jul 4	Independence Day
Sep 7	Labor Day
Oct 12	Columbus Day (Most regions)
Oct 31	Halloween
Nov 11	Veterans Day
Nov 26	Thanksgiving Day
Dec 24	Christmas Eve
Dec 25	Christmas Day
Dec 31	New Year's Eve

SUDS CITY SOAR IN

**IF YOU MISSED
ONE OF THE MOST
PRESTIGIOUS SOARING
EVENTS OF 1976,
HERE'S A PREVIEW OF
WHAT TO EXPECT
THIS YEAR.**

BY DON CONDON

Mr. Carl Liedtke, owner of Lake County Beverage, Schlitz and Old Milwaukee distributor for Waukesha County, looks at one of the trophies donated by parent company. Ron Kopp, one of host club's directors, looks on.



● The Second Annual Suds City Soar-In is now history for this year. The second year's event was held July 10 and 11.

The weatherman was kind this year, after Saturday's rain out last year, since he gave us two days of temperatures in the 90's with lots of sun and a bit more wind than was needed on Saturday, but Sunday was near perfect for a sailplane meet.

Attendance was up from last years event, but I saw a lot of familiar faces plus lots of new ones.

This meet has four power launches, with an attendant at each launch to wind the cable. They also used the open winch method which allows contestants to put in their flights any time there is a winch open or their frequency pin is available. The system seems to work well with everyone having plenty of time to put in all his required flights.

There seemed to be no one great choice of bird, but I did see quite a few Aquilas and Olympics with some Astro Jeffs and Legionairs, too. One could only surmise that the end result of any combination of man and machine is largely the result of the man on the sticks rather than a perfect flying machine.

Contestants came from most of the neighboring Mid-west states, with farthest recorded from Denver, Colorado.

The quality of flying seems to get better ever year, especially in the brisk winds we experienced on Saturday. I saw some great saves and fine flying as well during the two day contest.

Once again, Old Milwaukee Beer was the sponsor, but this year a new co-sponsor was added. The First Wisconsin Bank provided a beautiful traveling trophy for the Wisconsin Soaring Champion. It was won this year, after a really hot battle among Wisconsin contestants, by John Czeszak of the host club. Next year, John will have to really "hang in there" to retain this beautiful trophy.

Allen Epps from Country Club Hills, Illinois, 12 years old, was the Meets Junior Champion, both days. He's good now, so when he adds a few more years on — look out guys!

Saturday's Grand Champion was Jack Hiner, while on Sunday, Paul Wilson took the honors.

The host club provided a contestant get-together on Saturday night with free Old Milwaukee for all. I don't have to add that everyone had a great time, and besides, when we used to fly rudder only, years ago, the standard statement on windy days was "have another beer and the wind will go down." It always seemed to work, too!

I believe that with the hard work of the host club and the generous backing by two fine sponsors, future Suds City Soar-In's can only get better and will, one day, be ranked as the finest sailplane meet in the country. □

1976 SUD CITY SOAR-IN WINNERS SATURDAY, JULY 10

Standard — 2 min.

1. Jack Hiner	1219
2. Paul Wilson	1214
3. Jim Porter	1177
4. Greg Seydel	1150
5. George Louthain	1149

Standard — 6 min.

1. Jack Hiner	1108
2. George Louthain	1046
3. Greg Seydel	969
4. Paul Wilson	839
5. J. Borowski	772

Open — 2 min.

1. John Czeszak	1194
2. Larry D'Attilio	1193
3. Chris Erkmann	1193
4. B. Stevensen	1164
5. J. Nelson	1097

Open — 6 min.

1. John Czeszak	976
2. Larry D'Attilio	949
3. John Nelson	838
4. Effrim Villa	797
5. Robert Catlin	769

Grand Champion

Jack Hiner2327

Junior Grand Champion

Allen Epps443

SUNDAY, JULY 11

Standard — 2 min.

1. Jack Hiner	1141
2. Ed Harris	1138
3. Ken Olson	1086
4. Paul Wilson	1084
5. Frank Spearman	1072

Standard — 15 min.

1. R. Burnowski	1132
2. George Louthain	1112
3. Paul Wilson	1109
4. Greg Seydel	1075
5. Helen Olson	907

Open — 2 min.

1. Chris Erkmann	1114
2. John Czeszak	1084
3. Larry D'Attilio	1018
4. Frank Spearman	956
5. Jim Porter	949

Open — 15 min.

1. Larry D'Attilio	1075
2. John Czeszak	1058
3. Chris Erkmann	1007
4. Frank Spearman	990
5. Jim Porter	941

Grand Champion

Paul Wilson2193

Junior Grand Champion

Allen Epps1270

Wisconsin Soaring Champion Trophy

John Czeszak



Roger Scher, launching Legionaire while Bill Rohring does the timing.



Effrin Villa flying as Greg Seydel launches his Maestro MK 3.



Walt McKee of Cedar Rapids Skyhawks and Lee Nelsen launching his Cirrus.



Ron Kopp of host club and Suds City Soaring Team with his Cumulus.



Bill Catlin flying while Jim Catlin launches Challenger, built from plans.



Greg Seydel of host club does some checking on his Olympic 2, built from plans.



Full scale Switzer SG-2 at meet site, used for instruction.



Jack Hiner of S.O.A.R. launching his Aquila. Look at the audience he draws!



Jim Porter of Cedar Falls, Iowa, with magnificent Shrike-S.



Jim Porter launches the Shrike-S, with 16 foot span.



John Czeszak of host club with Astro Jeff. Member of Suds team too.



Two beautiful launch site scenes at the Suds City Soar-In, in beautiful Wisconsin.



NYPUM youth group from Milwaukee area did a fine job for 2 days retrieving tow lines for flyers.



Pretty trophies. This many awarded each day.



Line-up of Saturday's winners - - -



- - - and the champions on Sunday.