HSS PLANE RAP NEWSLETTER

HSS is the oldest AMA chartered R/C Soaring Club in the USA. Founded 1964.
Silver Leader Club since 2009, Gold Leader Club 2011-2013, 2015-2016.

July 2017 **HSS IS NOW OVER 53 YEARS OLD!** **Volume 54**

Big Notice: There will be no HSS General Meeting on the first Tuesday of July as it is July 4th Independence Day. Have a safe and sane 4th. See you August 1.

Plane Rap Index

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Coming Events and Soaring Competitions
July - September 2017

- Sunday July 16, 2017. Fifth SC-2 Soaring competition. Hosted by Inland Soaring Society (ISS) – www.glideiss.us for details.
- Tuesday August 1 , 2017. HSS monthly meeting, Round Table Pizza, 11095 Warner Ave. General meeting, 7 PM. See P.14 for details.
- Saturday August 12, 2017. National Model Aviation Day will be sponsored by OCMA at Blackstarr field. Further details will be distributed soon. See web site at www.flyocma.com .
- Sunday August TBD. Sixth SC-2 soaring competition. Check with https://www.sc2soaring.com .
- Tuesday Sept. 5, 2017. HSS monthly meeting, Round Table Pizza, 11095 Warner Ave. General meeting, 7 PM. See P.14 for details.
- Sunday Sept. TBD. Seventh SC-2 soaring competition. Check with https://www.sc2soaring.com

June 6 General Meeting Minutes

Unfortunately we have not received our Secretary's minutes for the June 6 meeting. Maybe next month.

July 4, 2017 No Meeting Announcement

Our monthly general meeting will not be held on Tuesday July 4. See you at the next meeting August 1.

August 12, 2017, is National Model Aviation Day

The Academy of Model Aeronautics has just announced plans for the annual National Model Aviation Day. Here is their report. In the past, HSS has participated in this event.

> Every year, National Model Aviation Day grows. We invite all clubs to host an event on August 12 to celebrate the hobby and raise public awareness for their groups and our national organization. AMA has developed several resources to help make your event a success. This year the AMA Executive Council has selected the AMA Foundation as the national charity of support for the 2017 celebration. We are now accepting 2017 sponsorships.

Joni Whitsitt's Report on the OCMA Board Meeting

Last night I attended the OCMA Board Meeting. OCMA now has 320 members so far this year. The Board held their annual elections. The OCMA Board for 2017-2018 are:

President	Tim Cardin, Scale Squadron	Treasurer	Greg Stone, OCRCC
Vice-President	Jim Richards, TMAA	Member at Large	Frank Sims, OCRM
Secretary	Nathan Stone, OCRCC	Safety Officer	Greg Stone, OCRCC
Warren Fox	Member at Large (Life)		

OCMA will hold an event on Saturday, August 12th for National Model Aviation Day at their field. A new flyer will be published and the event will be open to the public. OCMA will be seeking help to run the event. They are planning several different type of flying events including an electric pylon race with P51's and drone racing and food. HSS and its members are also invited to participate and help where needed.

Donations For Club Raffles

Members are invited to donate planes, radios, and all the things needed to keep them flying, These will be used for the raffles held at each monthly General Meeting. Stuff can be anything that has some value and/or can be repaired. Contact Henry Smith III with your donations. Contact info on last page of this newsletter.

Help Needed for Concerts In The Park – Community Service

The 2017 series of Concerts In The Park is being scheduled by the Costa Mesa Foundation. Three concerts are planned, for July 11, 18, and 25, at Fairview Park. These are all Tuesdays. HSS has been invited to participate, so members are needed to staff the booth from about 4 to 8 PM. Contact Joni if you can help on any one or more concerts. Food and drinks will be available for purchase.

Orange County Finally out of Bankruptcy

Here is an interesting announcement from the newsletter for Friends of Harbors, Beaches, and Parks grass roots action group.

On July 1 the County of Orange will make the final debt service payment for the 1995 Chapter 9 bankruptcy. It's been rough on the county budget and sacrifices have been made by various departments. Nearly $300 million has been diverted from the OC Parks budget over the past 20 years. Because of this there has been a back log of deferred maintenance and other capital expenditures. Thankfully, OC Parks has been diligent in tracking, prioritizing, and implementing needs. We commend park rangers and OC Parks management for their dedication and commitment to our regional park system.

Warbirds Classics Report

Scale Squadron of Southern California put on the 11th annual scale model fly-in event called the Warbirds Classics. This was held June 9-11 at the OCMA Blackstarr field next to Irvine Lake. Unfortunately, our star club photographer, Rob Askegaard, was out of town and did not record the event. Fortunately, Mike Greenshields has prepared a report that follows. Thanks for sharing, Mike. – Ed.

First, THANK YOU to all the participants! We had people from ALL OVER So CAL, AZ, and NV! Great people who all share a common love for scale aircraft. It showed as we saw potentially more scale aircraft at that field than I've ever seen. Everyone put on a SHOW!

I can't completely express our appreciation for these pilots and their majestic, award winning, incredible aircraft.

Over 60 registered pilots and I would guess well over 100 aircraft filled the OCMA field from one end to the other.

OCMA looked great too with many last-minute field improvements including a new surfaced drive and re-positioned containers were the finishing touches to a field that simply looked awesome. THANK YOU to everyone at OCMA for maintaining the field and keeping it AWESOME!

I was personally blown away by the volunteers that pulled together to setup, run, and tear down. From Sam's hand-made awards to the team of people that dealt with parking direction and flight-line management, it was an incredibly nice group of people, dedicated, and professional. THANK YOU THANK YOU THANK YOU!!!

Saturday Morning started with free flight competition. While small, the planes were great and Ed McCormick's two planes flew awesome!!! Tim C flew his scale model while Ed flew his competition aircraft.

Along with beautiful planes, great pilots, and good times for all, we also got the chance to hand out some throw gliders and other flying toys to the kids! We had an increased amount of spectators over last year and it was a joy to watch the kids and families enjoying entry-level flying toys! Sort of the flying icing on the aviation cake.

Saturday evening ended with a great banquet overlooking Irvine Lake (with actual water in there!!!). The Gary James Events team who hosted the event helped us have an effortless, tasty banquet. And, we topped it off with Awards to recognize some of the top-aircraft and pilots! We're so fortunate to be able to work with Gary James to have the banquet and use so much of his equipment for the event.

Good thing Saturday was so beautiful because Sunday was a wee-bit challenging with rain and wind that was simply NOT in the forecast. And still, people flew pretty much all day long. Unfortunately it did make for a very light Sunday.

FIRE! You may have noticed.. no over-flying helis from the fire dept.. Do you know why???? Tim Cardin found an opening to talk to the helicopter fire-operations chief. Tim explained our event and the fire dept was HAPPY to move their operations for the weekend! THANK YOU TIM!!! And THANK YOU OC FIRE for moving your operations for our modest little event!

The stars aligned, the heavens cleared, and Warbirds and Classics 2017 was completed with astounding success!

I'm proud of our event, proud of our club, proud of the flying field, proud of the event sponsors, and proud to be a part of WC 2017.

THANK YOU

Mike Greenshields
Commander.

2017 Consolidated Schedule of RC Events

The following activities are planned by this group known as The Inland Valley Clubs, located east of Orange County. Part of the Southern California Soaring Clubs (SC2) competition schedule is included.

- ...Sunday, February 26th — SC2 Soaring Contest at Hemet Model Masters Lakeview/Davis Field
- ...March 3/4/5th — Coachella Valley RC Club IMAC Event
- ...Saturday, March 4th — Orange County Modelers Association Swap Meet
- ...March 17/18/19th — Victor Valley RC Flyers IMAC Event
- ...March 18th/19th — Hemet Model Masters Harry Gould Memorial Pattern Contest
- ...Saturday, March 18th — Corona RC Club Float Fly at Lake Perris
- ...Saturday, March 25th — Gilman Springs RC Flyers Club 40 Pylon Race
- ...Saturday, April 8th — Hemet Model Masters Springtime Fun Fly
- ...Saturday April 8th — Menifee Valley Flyers Bomb Drop Competition
- ...April 8/9th — US Scale Masters Qualifier/School at Gilman Springs RCF
- ...Sunday, April 9th — Chino Flyers Trainer 40 and Club 40 Pylon Races
- ...Saturday, April 22nd — Victor Valley RC Flyers Warbirds Pylon Race
- ...Sunday, April 30th — SC2 Soaring Event at the SCAMPS Field (next to RRCC Field)
- ...Saturday May 13th — Menifee Valley Flyers Spring Swap Meet
- ...May 12/13/14th — Hemet Model Masters "IMAC Event"
- ...Sunday, May 21st — Victor Valley RC Flyers SC2 Glider Event
- ...May 20/21st — Riverside RC Club Quickie 500 Pylon Race
- ...Saturday June 10th — Menifee Valley Flyers Electric Glider Competition
- ...Saturday, June 10th — Victor Valley RC Flyers Fun Fly
- ...Saturday, June 10th — Riverside RC Club Classic Pattern Get Together
- ...Sunday, June 11th — Chino Flyers Trainer 40 and Club 40 Pylon Races
- ...Saturday, June 17th — Corona RC Club Fun Fly
- ...Sunday June 25th — Fifth SC2 Soaring Competition. Harbor Soaring Society.
- ...Saturday, July 1st — Victor Valley RC Flyers Combat Event (Fly Till You Die)
- ...Sunday July 16th — Sixth SC2 soaring competition. Inland Soaring Society.
- ...Saturday August 5th — Menifee Valley Flyers Members Appreciation Night Fly
- ...Saturday August 12th — Menifee Valley Flyers Summer Swap Meet
- ...Sunday, August 13th — Chino Flyers Trainer 40 and Club 40 Pylon Races
- ...Saturday, September 9th — Hemet Model Masters Autumn Swap Meet
- ...Saturday, September 9th — Victor Valley RC Flyers Warbirds Pylon Race
- ...Saturday, September 16th — Victor Valley RC Flyers Tailhook Contest
- ...September 22/23/24th — Victor Valley RC Flyers IMAC Event
- ...Saturday September 23rd — Menifee Valley Flyers Annual Poker Fly
- ...Sunday, October 8th — Chino Flyers Trainer 40 and Club 40 Pylon Races
- ...October 21/22nd — AMA District 7 Pattern Championship at the RRCC Field
- ...Saturday, October 28th — Corona RC Club Halloween Float Fly at Lake Perris
- ...November 4/5th — F3J Soaring Event at the SCAMPS Field (next to RRCC Field)
- ...Saturday November 25th — Menifee Valley Flyers Fall Swap Meet
- ...Sunday, December 10th — Chino Flyers Trainer 40 and Club 40 Pylon Races

Rev: 28 June, 2017

Stratolaunch – AKA "Cosmic Girl"

Paul Allen's intriguing launch company, Vulcan Aerospace, has gone relatively quiet in recent years, and questions about the venture's viability have been increasing. But on Wednesday, the cofounder of Microsoft shared a new photo of the company's Stratolaunch airplane—the largest in the world—and it seems the company is moving forward.

The new plane is, in a word, *bigly*. The aircraft has 385-foot wingspan and, powered by six Pratt & Whitney engines used on Boeing 747 aircraft, has a maximum takeoff weight of 1.3 million pounds. The Stratolaunch's wingspan is the largest in history, blowing away the previous record-holder (Howard Hughes' Spruce Goose) by 65 feet. Vulcan Aerospace says its Stratolaunch airplane will have an operational range of 2,000 nautical miles. Serving as a reusable first stage for rocket launches, the Stratolaunch system will be capable of delivering payloads to multiple orbits and inclinations in a single mission.

The Stratolaunch system is part of Allen's plan to lower the cost of access to space through reusability. Vulcan has released few details about the launcher's capacity, but in October it did announce a partnership with Orbital ATK by which the Dulles, Virginia-based company would provide "multiple" Pegasus XL air-launch vehicles for use with the Stratolaunch aircraft. These rockets can launch small satellites weighing up to 1,000 pounds into low Earth orbit. With this concept and capacity, Stratolaunch is competing with companies such as Virgin Orbit, which plans to launch rockets from a modified Boeing 747-400.

Thanks to Jim Sonnenmeier for the lead and link to this article at the ARS Technica.com web site. Lots more photos and text at:

https://arstechnica.com/science/2017/05/paul-allen-showed-off-his-new-rocket-launching-plane-today-it-is-big/=

Model of the Month

Murray McDole with his "Daddy-O" 52" built-up from a Stevens Acro kit. beautifully built, flies well.

Gilman Springs RC Flyers Lose Their Flying Site

For your information ... this was received from the Gilman Springs RC Flyers ...

> The Gilman Springs RC Flyers have been informed, by the new Property Owner, that the Club will be issued a Notice to Vacate within weeks. As a result, due to the uncertainty of how long we will have our Flying Site there, we have cancelled all future Gilman Springs RC Flyers Events, except for the upcoming April 8/9th Scale Masters Qualifier/School. The Consolidated Schedule of RC Events (shown on P. 4) has been updated.

This is a real shame as they are losing a beautiful paved runway, taxi strips, and pits.

5th SC-2 Soaring Competition Hosted by HSS

This past Sunday, June 25, HSS hosted the fifth of this year's series of soaring competitions organized by Southern California Soaring Clubs (SC-2). Mike Lee, President of Inland Soaring Society, has provided the following report. Thanks, Mike. - Ed.

> The weather conditions started out pretty nice with a hint of a breeze coming right into the winch pattern. Mondo launches! Then the off-shore push kicked in and made the lift spotty and weak. Round four, a 10-minute task, was more like playing chicken...waiting for other people to launch and see if they thermal out. By round three, the off-shore breeze was here to stay. Launch at your own risk. I saw a four plane group go up and it seemed to be doing just fine, when a couple minutes later one plane was below bingo altitude and failed to make the field. The other three made the field but not on time. You had to take some risk and be willing to carry downwind to make the time. LJ (Larry Jolly) took the risk, bounced his bird off a steel pole and did significant damage to his aircraft...Sorry, LJ. The real challenge was the landing. In the past, this club would lay down some sod for the landing target, but not this year! With the wind picking up, pilots were faced with bringing in the planes to a compacted dirt surface that was hard on the guys doing a dork landing. So, we had a moderate but blustery landing approach to a hard landing guaranteed to rattle your teeth. If you know your plane real good, you came into the LZ (landing zone) in a stalled condition and dropped the nose for the landing.
>
> Congrats to Stephan Hess who won the overall event with some solid flying...he's a machine! We miss you, Tom Trivett. all the best.
>
> Mike Lee

The results are shown below, with some astonishing twists. Stephan Hess, an Intermediate Class pilot took first overall, ahead of Mike Lee who took first in Expert Class.

HSS did remarkably well, with Erv Szego taking third overall and second in Intermediate Class. Bruce Schaefer took first in RES Class, with Robert Sliff who had not flown competitively for over 20 years, took first in Woody Class. Ross Thomas took second in Woody Class, and Chris Adamczyk took third in RES.

SC2 Contest # 5 Harbor Soaring Society - Costa Mesa June 25, 2017	Hosted By HSS Contest Director: Erv Szego Scorekeeper(s): Les Ward	Normalized Sort	Contest Entries 22

Thermal Duration						Round 1, 8 mins.			Round 2, 8 mins.			Round 3, 10 mins.			Round 4, 10 mins.			Overall	
Place	PID	Pilot	Club	Class	L	T1	L1	S1	T2	L2	S2	T3	L3	S3	T4	L4	S4	Overall	Norm
1	202	Hess, Stephan	TPG	I	W	8.03	57	972.6	8.02	30	961.0	9.59	81	988.9	9.59	72	984.4	3906.9	1000.0
2	1	Lee, Mike	ISS	E	W	8.01	100	998.0	7.59	49	972.5	10.02	57	975.3	8.58	72	887.8	3833.7	981.3
3	223	Szego, Erv	HSS	I	W	8.03	0	944.1	7.27	0	884.7	10.03	23	956.8	10.00	82	991.0	3776.5	966.6
4	112	Garber, Jonathan	TPG	E	W	8.02	84	988.0	8.00	80	990.0	8.13	88	824.6	10.05	61	972.6	3775.2	966.3
5	408	Schaefer, Bruce	HSS	Res	W	8.06	0	938.1	8.04	5	944.6	10.01	46	971.4	5.16	0	500.3	3354.5	858.6
6	303	Tau, Manny	SC2	S	W	4.53	0	579.9	8.08	0	934.2	8.02	0	763.2	9.59	0	948.4	3225.6	825.6
7	229	Campbell, Frank	SWSA	I	E	4.56	54	612.8	5.16	0	625.4	9.54	65	973.0	10.11	65	965.1	3176.3	813.0
8	4	Thonet, Andy	SWSA	E	W	8.02	59	975.5	4.57	0	587.8	6.15	0	593.8	9.22	0	889.8	3046.9	779.9
9	306	Smith, Paul	ISS	S	W	6.38	0	787.7	6.04	0	720.4	8.25	39	819.1	6.42	38	655.5	2982.7	763.4
10	203	Stanton, Steve	ISS	I	W	8.02	0	946.0	5.21	49	659.8	7.43	0	733.1	5.30	66	555.5	2894.4	740.8
11	117	Jolly, Larry	TPG	E	W	8.04	76	980.1	0.00	0	0.0	9.05	0	862.9	10.00	81	990.5	2833.5	725.2
12	126	Morjoseph, Mike	SWSA	E	W	5.06	0	605.6	5.53	47	722.1	7.25	55	732.1	6.57	64	692.3	2752.1	704.4
13	3	Vera, Edgar	SWSA	E	W	3.41	64	469.4	7.57	76	982.1	3.34	94	385.8	8.59	84	895.4	2732.7	699.5
14	410	Sliff, Robert	HSS	Woody	W	7.52	76	972.2	3.09	29	388.6	7.01	80	706.6	4.03	0	384.8	2452.1	627.6
15	302	Aber-Song, Ed	EDSF	S	E	7.21	48	896.8	7.23	0	876.8	3.48	0	361.0	3.13	0	305.6	2440.2	624.6
16	2	Khani, Ali	SC2	E	W	8.00	0	950.0	8.01	48	972.0	5.10	0	490.8	0.00	0	0.0	2412.9	617.6
17	425	Higgins, Walter	TOSS	Res	W	0.00	0	0.0	8.00	84	992.0	6.25	0	609.6	6.24	0	608.0	2209.6	565.6
18	311	Blinn, Jake	ISS	S	W	7.57	88	988.1	4.05	0	484.9	2.51	0	270.8	3.53	51	394.4	2138.1	547.3
19	433	Thomas, Ross	HSS	Woody	W	7.54	0	938.1	3.13	50	407.0	1.30	56	170.5	6.25	0	609.6	2125.2	544.0
20	401	Adamczyk, Adam	HSS	Res	W	3.55	79	504.6	3.25	48	429.7	2.35	0	245.4	3.16	4	312.3	1492.1	381.9
21	312	Blinn, Kyle	ISS	S	W	2.30	0	296.9	2.25	0	287.0	4.10	0	395.8	4.56	0	468.7	1448.4	370.7
22	307	Summers, Sean	ISS	S	E	0.00	0	0.0	2.05	0	247.4	2.35	0	245.4	1.58	0	186.8	679.6	174.0

The following pages are photos of the action, taken by Rob Askegaard, our club photographer. This feature concludes with Rob's photos of the awards presentation. Additional photos may be found at:

https://www.rcgroups.com/forums/showpost.php?p=37792775&postcount=186

5th SC-2 Soaring Competition Hosted by HSS (Continued)

Erv Szego preparing for a launch.

Bob Sliff piloting while Chris Adamczyk times.

Bob Sliff launches his Gnome glider.

Bruce Schaefer gets off a winning launch.

Rob Askegaard has captured 13 participants in this photo of a landing attempt.

5th SC-2 Soaring Competition Hosted by HSS (Continued)

Torrey Pines Gliderport Threatened by UCSD Growth

When the famed pilot Charles Lindbergh launched a motorless sailplane from Mount Soledad in 1930 and headed north above the coast, he was the first person to realize the cliffs at Torrey Pines generate a lift that can be used for gliding, writes Gary Fogel in his book, “Images of America: The Torrey Pines Gliderport.”

Since the 1930s, sailplanes have been taking off from the Torrey Pines Gliderport (with a three-year break for World War II) until 2009, the last year a license agreement was signed between the Associated Glider Clubs of Southern California (AGCSC) and UC San Diego — the owner of the land where the runway sits.

“It’s a fantastic thing to have a historic site operating the way it always had, so it would be a huge loss, not only for San Diego but the country, to shut one of the last glider operators,” said Save Our Heritage Organization (SOHO) director Bruce Coons. “We’ve been supporting the effort to keep the Gliderport working for 10 years now.”

The flying of sailplanes at Torrey Pines Gliderport was first curtailed in 2009, when UCSD built the Stem Cell Core Facility at 10010 North Torrey Pines Road. AGCSC historian Fogel told *La Jolla Light* between construction staging and trying to meet the requirements the Federal Aviation Administration (FAA) demands, “We haven’t been able to operate.”

With UCSD’s growing development in mind, Fogel fears the future of the sailplanes at the Torrey Pines Gliderport is doomed. The construction of the university’s proposed Living & Learning Neighborhood (2,000 residential beds, 1,200 parking spots and several academic and community buildings) on North Torrey Pines Road is slated for completion in 2020, and although the likely 10-story buildings won’t affect the runway, in Fogel’s opinion, “What would (affect us) is the construction staging for those projects because the Gliderport is a great place for them to store their equipment.”

Jim Sonnenmeier was kind enough to provide this information which was available in the La Jolla Light. The entire article may found at the following link.

http://www.lajollalight.com/news/local-news/sd-gliderport-sailplane-ucsd-growth-20170613-story.html

Southwest Vintage R/C Festival

Joni Whitsitt requested that we run this flyer for the Cedar City, Utah, RC Club and their Vintage R/C Society Festival. It is a bit of a ways to go, but what beautiful scenery and a great runway.

Vacation Pictures

Our favorite club photographer, Rob Askegaard, recently took a trip up North. Here is his report and photos.

Rob and Shirley Leyva stopped at the Evergreen Air Museum in McMinnville, Oregon. This is the home of the Hughes H4 Hercules (Spruce Goose). The museum is a very beautiful facility with not only the giant Spruce Goose but many historic planes such as a Wright Flyer, Curtiss pusher, Me-262 jet (non flying), B-17, many home built planes, FW-190 and lots more. It's got many displays such as engines and historic items. There is also facilities for education and meetings. There are also several planes on display outside. In addition there is a Space Museum facility. All in all, it's a beautiful facility. Thanks, Rob. - Ed.

Developments at the Naval Research Laboratory

Jim Sonnenmeier has provided this interesting press release from the Naval Research Laboratory. This was first published in the July 2017 issue of Soaring Digest. Thanks, Jim.

NRL Tests Autonomous "Soaring with Solar" Concept

<https://www.nrl.navy.mil/media/news-releases/2017/NRL-Tests-Autonomous-Soaring-with-Solar-Concept>

(WASHINGTON • May 9, 2017) – Researchers at the U.S. Naval Research Laboratory (NRL), Vehicle Research Section and Photovoltaic Section are building on the proven concept of autonomous cooperative soaring of unmanned aerial vehicles (UAVs). Their research investigates the presence of solar photovoltaics (PV) to the cooperative autonomous soaring techniques, which enables long endurance flights of unmanned sailplanes that use the power of the Sun.

The Solar Photovoltaic and Autonomous Soaring Base Program and the U.S. Marine Corps' Expeditionary Energy Office (E2O) want to improve the ability of unmanned platforms to support a 24-7 information, surveillance, and reconnaissance (ISR) mission. By doing so, the warfighter will greatly benefit because it will reduce the amount of batteries or fuel they must carry into battle, and improve the availability of continuous coverage of ISR assets.

Holding the photovoltaic (PV) UAV based on the SBXC sailplane, are members of the "Solar-Soaring" research flight crew (l-r) Dan Edwards and Trent Young (not shown: Chris Bovais, Sam Carter, Matthew Kelly, and Dave Scheiman). (U.S. Naval Research Laboratory)

Researchers at the U.S. Naval Research Laboratory (NRL), Vehicle Research Section and Photovoltaic Section tests a photovoltaic (PV) UAV [based on the SBXC sailplane], shown on takeoff at sunrise, October 14th, 2016. The research is to investigate the value of combining autonomous soaring algorithms and solar photovoltaics for capturing energy from the environment to extend the endurance of an aircraft. (U.S. Naval Research Laboratory)

Developments at the Naval Research Laboratory (Continued)

"NRL has twice flown our solar UAV [based on the SBXC sailplane] over 10 hours using a combination of solar photovoltaics and autonomous soaring as part of the 'solar-soaring' research program," said Dr. Dan Edwards, aerospace engineer. "This research is investigating the value of combining autonomous soaring algorithms and solar photovoltaics for capturing energy from the environment to extend flight endurance and mission operations of an aircraft."

A photovoltaic array, custom built in NRL's Vehicle Research Section and Photovoltaic Section, is integrated into the center wing panel of the PV-SBXC aircraft as a drop-in replacement to the original wing. A power management and distribution system converts the power from the solar arrays into direct current (DC) voltage, which the electric motor can use for propulsion, or recharge a 'smart battery.'

Additionally, an autonomous soaring software algorithm — that would typically monitor the local vertical winds around the aircraft — commands the aircraft to orbit in any nearby updrafts, very similar to soaring birds. However, the algorithm was disabled for the two solar flights in order to assess the solar-only performance. Passive soaring — meaning no specific maneuvers are attempted to catch thermals — was still allowed, to let the aircraft turn the motor off if altitude increased because of an updraft along the aircraft's pre-defined flight path. The autonomous soaring software was tested extensively in previous flight demonstrations in late October 2015.

The UAV with solar arrays built at NRL using SunPower Inc. solar cells, flew for 10 hours, 50 minutes on October 14, 2016. Takeoff occurred at 7:20 a.m. at 95 percent battery state of charge and landing occurred at 6:10 p.m. with the battery at 10 percent state of charge. Thermal activity was very good in the middle of the day and 40 percent of the flight was spent with the motor off, and the solar array partly recharged the battery while the motor was off.

The UAV equipped with solar wings incorporated PV arrays from Alta Devices, Inc. It flew for 11 hours, 2 minutes on April 19, 2017. Takeoff occurred at 7:46 a.m., approximately an hour after sunrise, with the battery's state of charge at 90 percent. Landing occurred at 6:48 p.m., approximately an hour before sunset, with the battery's state of charge at 26 percent. Thermal activity was very weak and almost all of the flight was spent running the motor. Near solar noon, the solar array provided sufficient power to cruise on solar power alone.

The power management system for both flights was provided by Packet Digital, Inc., as part of a grant from the North Dakota Renewable Energy Council.

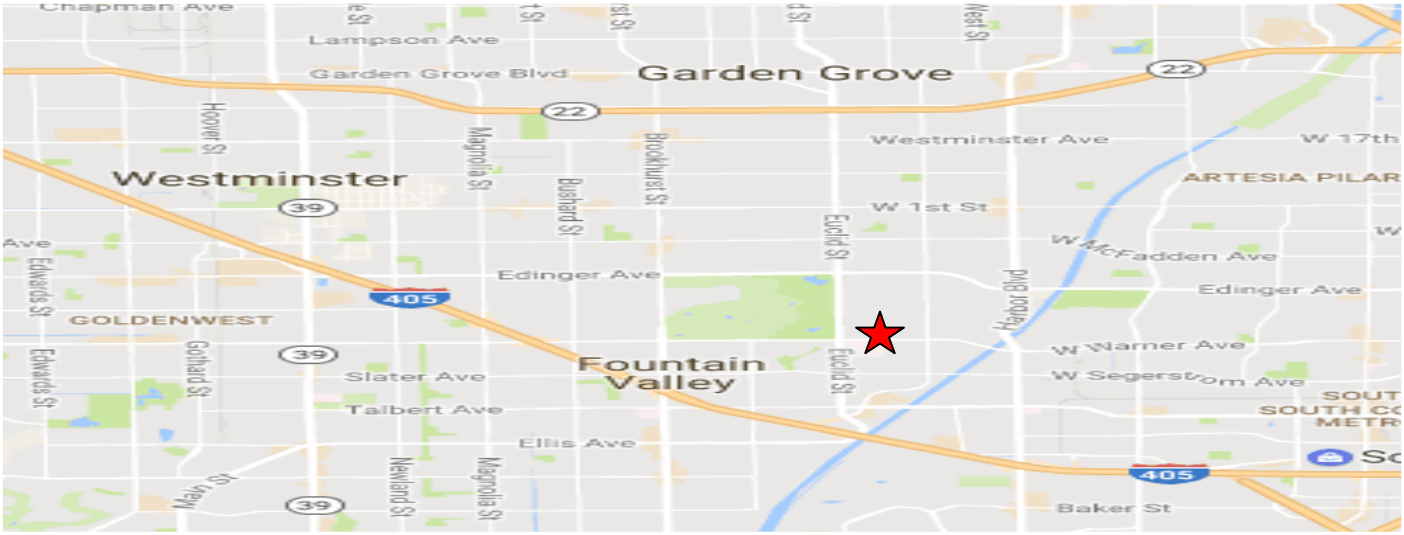
"The experiments confirm significant endurance gains are possible by leveraging thermal updrafts and incident solar radiation, rather than ignoring these free sources of energy," Edwards said. "Future testing will focus on quantifying the trade space between improvements in solar cell efficiency and combining with autonomous soaring for improved solar-recharging."

The Vehicle Research Section at NRL conducts research to develop technologies for autonomous, affordably expendable, unmanned systems that carry a wide variety of payloads for numerous mission scenarios. The Section is composed of aeronautical, aerospace, electrical, and mechanical engineers, scientists, and technicians dedicated to advancing the state-of-the-art in unmanned systems technology.

The Photovoltaics Section at NRL conducts research to develop photovoltaic (solar cell) technologies to enable logistics free, renewable, portable, power sources for the warfighter. The Section is composed of physicists, electrical engineers, and chemists dedicated to advancing the state-of-the-art in PV power sources and systems.

June 6, 2017 Meeting Announcement

Our monthly general meeting is held on the first Tuesday of each month. We meet at Round Table Pizza, 11095 Warner Ave. & Euclid (North-east corner) in Fountain Valley, at 7:00 PM. Phone number is (714) 839-0276. The Family Night rate is all-you can-eat pizza, plus one salad bar, for $8.99. Fountain drinks are an additional $1.59, self-service, or $2.99 per liter. Beer and wine are available. Time will be allowed for show-and-tell of your favorite plane. Bring your wife, family, and friends. There will be a raffle. The location map is shown below. Note there is no meeting planned for Tuesday July 4th.



Seen Around the Field

Photos and captions thanks to Rob Askegaard.

Above is Kevin Koch (Hey Rob: What's the plane?)
At right is Robert Shourt with his Super-E.

Larry Koch and his built up Cub look-alike.

Kevin Koch brought his foam Waco.

Dave Maze, Kevin Koch and Larry Koch with a bunch of other planes they brought.

Foam P-47 owned by Murray McDole.

HSS Membership – Renew now if you haven't.

Our 2017 HSS membership enrollment season is in full swing. Note that the new membership rate of $25 per year is now in effect. PayPal will no longer be accepted as the cost and inconvenience did not justify the service. The latest membership application, dated 16 Jan 2017, is included in the last pages of this newsletter. These can be mailed to our post office box shown on the last page, or given to a club officer. Alternately, HSS and AMA membership applications can be obtained from any club officer, or available on our club web site at **www.harborsoaringsociety.org**.. Applicants must be members of the AMA prior to joining HSS. AMA Membership applications can also be obtained at the AMA web site **www.modelaircraft.org** , download document No. 902 from the publications page. Or you can apply on line. If you renew your AMA membership online, be sure to print the receipt that they provide as proof that you joined. And, don't forget your City of Costa Mesa Flying Permit. Details are shown on page 18 of this newsletter.

AMA District X Web Site

AMA District X Vice President Lawrence Tougas wants to invite AMA members from all districts to enjoy District X's new website. "We have a lot of great articles in our blog, plenty of pictures in our photo albums, and a spot where you can learn more about our associate vice presidents and myself," says Lawrence, District X VP. All of the information is at www.ama10.org . Why not consider helping your district with its website.

Fairview Park Weather Station

Jim Sonnenmeier suggests that HSS utilize the very excellent weather station located at Waldorf School. Try this web site as it has an amazing amount of detail, both historical and predictive. There is even data that suggests good flying days and hours for slope soaring. This link will also be featured on our web site.

https://www.wunderground.com/cgi-bin/findweather/getForecast?query=pws:KCACOSTA18

SC2 Competition Schedule for 2017

Jim Sonnenmeier has provided the following tentative schedule for 2017. Several new clubs may be added. All dates will be Sundays unless otherwise specified.

February 26 – Hemet Model Masters - *Location:* Intersection of Warren and Simpson Road, Hemet.

March 19 – Silent Wings Soaring Association (SWSA) – www.silent-wings.org

April 30 – Riverside RC Club – Perris - www.riversidercclub.org

May 21 – Victor Valley RC Flyers (VVRCF) – www.vvrcf.org

June 25 – Harbor Soaring Society (HSS) – www.harborsoaringsociety.org

July 16 – Inland Soaring Society (ISS) – www.glideiss.us

August?

September?

October ?– Torrey Pines Gulls (TPG) – www.torreypinesgulls.org

November ?– Rain Date

To be added:

Thousand Oaks Soaring Society (TOSS) – www.toss.freeservers.com

Big Bear? Palomar? Bakersfield?

Gone for good?

Soaring Union of Los Angeles (SULA) – sula.club.org

Downey Soar Heads (DSH)

4th SC-2 Competition Results

The results of the SC-2 soaring competitions held since May have not been posted at the SC-2 web site (sc2soaring.com) This web site has been abandoned. Try going to http://www.rcgroups.com/forums/showthread.php?t=2572561&page=1 and sort through more than 11 pages of comments which are at least in chronological order. Alternately, try https://www.rcgroups.com/forums/showthread.php?2806592-SC2-2017-Southern-Califoriia-Soaring-Clubs-Official-Thread . Not nearly as convenient as the old way of getting results from the SC-2 web site.

Disregarding the above comments, Jim Sonnenmeier has provided the results of the 4th SC2 competition hosted by Victor Valley RC Club. This was held on May 21, 2017. Note: No HSS participants.

SC-2 Contest # 4

Victor Valley RC Park - Hesperia

May 21, 2017

Place	PID	Pilot	Club	Model	Class	Total	Norm	LSF Paperwork Format (Your Score ÷ Winning)		(No. of Entrants - Final)		Points
1	112	Garber, Jonathan	TPG		E	3930.5	1000.0	3930.5	3930.5	23	1	2300.0
2	3	Vera, Edgar	SWSA		E	3899.7	992.2	3899.7	3930.5	23	2	2182.8
3	1	Lee, Mike	ISS	Xplorer 2.5	E	3686.6	937.9	3686.6	3930.5	23	3	1969.7
4	117	Jolly, Larry	TPG		E	3610.8	918.7	3610.8	3930.5	23	4	1837.3
5	4	Thonet, Andy	SWSA		E	3517.8	895.0	3517.8	3930.5	23	5	1700.5
6	202	Hess, Stephan	TPG		I	3505.3	891.8	3505.3	3930.5	23	6	1605.3
7	145	Reagan, Mike	TOSS		E	3465.8	881.8	3465.8	3930.5	23	7	1499.0
8	425	Higgins, Walter	TOSS		Res	3371.6	857.8	3371.6	3930.5	23	8	1372.5
9	110	Schwemmer, Rick	ISR	Xplorer 2.5	E	3350.6	852.5	3350.6	3930.5	23	9	1278.7
10	5	Trivitt, Tom	ISS	Supra Pro Comp	E	3305.6	841.0	3305.6	3930.5	23	10	1177.4
11	2	Khani, Ali	SC2	Pike Perfection	E	3234.5	822.9	3234.5	3930.5	23	11	1069.8
12	303	Tau, Manny	SC2		S	3195.4	813.0	3195.4	3930.5	23	12	975.6
13	107	Filice, Gary	TOSS		E	2767.6	704.2	2767.6	3930.5	23	13	774.6
14	311	Blinn, Jake	ISS		S	2541.8	646.7	2541.8	3930.5	23	14	646.7
15	306	Smith, Paul	iSS		S	2534.0	644.7	2534.0	3930.5	23	15	580.2
16	312	Blinn, Kyle	ISS		S	2513.5	639.5	2513.5	3930.5	23	16	511.6
17	314	Creager, Ronald	SC2		S	2469.1	628.2	2469.1	3930.5	23	17	439.7
18	229	Campbell, Frank	SWSA		I	2304.9	586.4	2304.9	3930.5	23	18	351.8
19	109	Ward, Les	ISS	Stork 6	E	2261.0	575.3	2261.0	3930.5	23	19	287.6
20	129	Pearson, Rick	VVRC		E	1888.8	480.6	1888.8	3930.5	23	20	192.2
21	446	Filice, Gary	TOSS		Res	1779.4	452.7	1779.4	3930.5	23	21	135.8
22	302	Aber-Song, Ed	EDSF		S	1344.7	342.1	1344.7	3930.5	23	22	68.4
23	409	Creager, Ronald	SC2		Res	628.6	159.9	628.6	3930.5	23	23	16.0

Plane Rap Archives

Thanks to John Brown, a previous editor of Plane Rap, we have found out that four recent issues were not published, so we won't list them as missing from our Plane Rap newsletter archives. January, July, and December of 2000, and January of 2001 are non-existent. Again, if any one has any part of the issues listed below, we would love to add them to our archives (or at least a copy of what you have).

1964 through 1983: All issues missing.
1984: Jan through Sept and Nov missing.
1985: June missing.
1986: May missing.
1987: Feb missing.
1994: Nov missing.
1995: Aug missing.
1996: Feb, June missing
1999: Dec missing.

Plane Rap issues from 1984 to present are maintained by our Secretary Bruce Gale. This is 33 years of HSS history. These archives are open to all members. Copies can be made upon request, or issues may be checked out for temporary use. If you wish to access any issues, contact Bruce Gale as shown on the last page of this newsletter.

Interesting Links

Here is another internet link that might be of interest, provided by Jim Sonnenmeier. Thanks, Jim. - Ed.

F3F (Slope Racing) USA Team Selection Event For 2018 F3F Worlds - Rugen, Germany

SCSR (Southern California Slope Racing) is pleased to announce the official details for the US Team selection event for the 2018 F3F World Championships that will be held in Rugen, Germany in October of 2018.

The AMA has approved the bid by Southern California Slope Racing to host the US Team selection event this August, 2017.

The event will be held at Point Fermin & White Point (pending availability) on the coast in San Pedro, CA.

Contest Details:

Day 1: August 18th @ Point Fermin.
Day 2: August 19th @ White Point.
Day 3: August 20th @ Point Fermin.

The contest will conclude once 20 rounds have been completed or at the end of competition rounds on day 3, whichever happens first. We will do our very best to complete the 20 rounds as quickly and efficiently as possible. The top 3 pilots will represent the US Team along w/ 2 alternates. For more details, go to:

https://www.rcgroups.com/forums/showthread.php?2910138-Official-2018-F3F-USA-Team-Selection-Event-2018-F3F-Worlds-Rugen-Germany

2017 City Flying Permits Available

A permit to fly radio-controlled model aircraft is required to operate model aircraft at Fairview Park. This permit can be obtained by going to www.costmesaca.gov and downloading the file Model Airplane Fly Permit 2014.pdf You must also show proof of adequate liability insurance in the form of a current Academy of Model Aeronautics (AMA) membership card or a current homeowners/personal liability policy specifically covering model aircraft operation with a minimum limit of $500,000. Rules and regulations for flying the model aircraft can be found in the City of Costa Mesa Municipal Code, Title 12, Chapter II, Articles 2 & 3.

Permit Fee: $25 per year. Learner's Permit for youths 6-14 years old - $15 per year.

WALK-IN Costa Mesa City Hall (77 Fair Drive, Costa Mesa 92626), 3rd Floor Recreation Counter Tuesday through Thursday from 8:00 AM – 4:30 PM (excluding City-observed holidays),

MAIL-IN Mail your renewal packet (see list below), to include full payment, to:

Recreation Division – Fly Permit
City of Costa Mesa, P. O. Box 1200, Costa Mesa, CA 92628

Renewal Packet must include **ALL** of the following:

- Permit Application (filled out and signed).
- Copy of your drivers license.
- Copy of the AMA Membership Card (showing the required year) or homeowner's/personal liability insurance policy (specifically covering model airplane/aircraft flying with a minimum limit of $500,000).
- Renewal Fee ($25); payment by Check (payable to City of Costa Mesa) or charge to Credit Card (filled out and signed).

Note: Current permit holders with email addresses on file with the City will receive renewal packet via email.

If you have questions or need additional information, please call the Recreation Division at (714) 754-5300.

Note that to fly at Fairview Park you need the above permit, liability insurance (preferably AMA), and you need to follow City of Costa Mesa Ordinance No. 07-01, City Regulations for Issuance, Suspension and Revocation of Permits to Fly at Fairview Park, Academy of Model Aeronautics Safety Code, and the Fairview Park Flying rules posted at the flying site.

Invitation To Members For Contributions To The Plane Rap Newsletter

Your editor would love to hear from club members. If there is anything you would like to share with the rest of us I want you to send it to me. I will add it to the next newsletter. My favorite things to publish are items sent in by members!! These can be anything like reviews of your plane or equipment, links to good videos, links to articles and things you have built or created. Bad spelling and/or grammar gladly accepted. Anything from a picture with a caption to a full blown build/review article is good. Letters-to-the-Editor are always welcome as well. Tell us what you think. Please help make the newsletter and website more interesting with your submissions. Embarrassing pics/vids are the best. I look forward to hearing from you.

Fred Hesse - Plane Rap Editor - fhesse@socal.rr.com .

Photos of Your Planes

We are very fortunate to have Rob Askegaard as our club photographer. Rob has a high degree of talent, and supplements that with an excellent camera. His well composed and very realistic photos taken at ground level and his remarkable stop action in-flight pictures are superb. Rob's contributions are what make our newsletter really spectacular. We try to feature everyone and their planes, so if you haven't seen yourself in our newsletter, look for Rob just about any morning and pose for him.

Anyone who wishes a high quality print or jpg file of their favorite plane should contact Rob, or your editor. Phone and E-mail contact information are shown on the last page of this newsletter.

Plane Rap Classified Ads and Services - For Sale

We are pleased to offer free advertising space for anyone (member or nonmember) who has items or services for sale.

- This month, Bob McKenzie has an "Apprentice" aircraft for sale. It is a foam trainer with tricycle gear. Bob is asking $100, and may be reached at 949-644-0676.
- John Ostrowski has a Radian Electric glider with a DX6i transmitter for sale.
- John also has an electric powered Blaster 2e for sale.

  This is a cousin of the Snipe. Contact John at drjwo@yahoo.com if you are interested.

Above is Radian, and Blaster is at right.

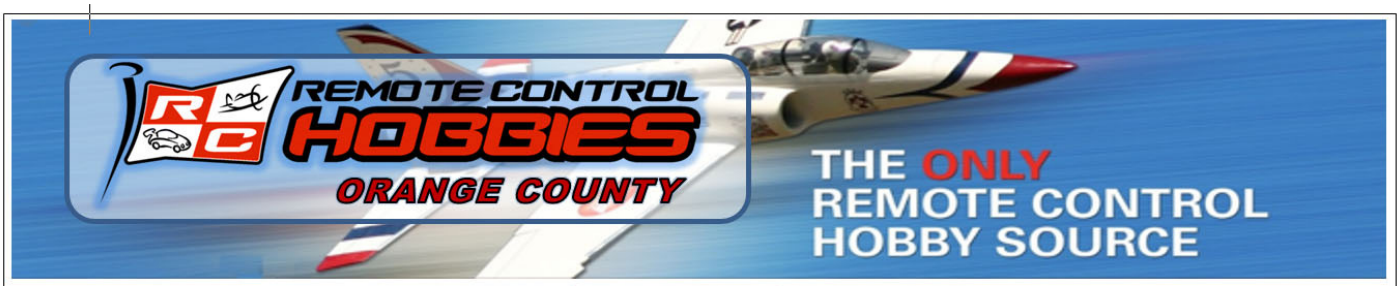
Photos are stock from the internet, not the actual items.

A Little Justice

Iraqi terrorist Khay Rahnajet didn't pay enough postage on a letter bomb. It came back with 'return to sender' stamped on it. Forgetting it was the bomb, he opened it and was blown to bits.

HSS Sponsors

The following companies are proud sponsors of Harbor Soaring Society. They give us special offers, and make contributions to our monthly raffles. In return, please support them, and mention that you saw them advertised in the HSS Plane Rap newsletter.



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(714) 372-3777

All HSS Club members with proof of club membership, will get a 10% discount on most parts and accessories. Discount does not apply to plane kits, helicopter kits, radios, and other already marked down products. Please ask staff if you have any further questions.

Robsrchobbies.com

HSS Sponsors (Continued)

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MEMBERSHIP APPLICATION 2017

Harbor Soaring Society

AMA Chartered Club #128 - AMA's Oldest Chartered Soaring Club
P.O. Box 1673 Costa Mesa, CA 92628

I understand that by applying for membership in the Harbor Soaring Society I must be a current member of the AMA (Proof of status required, may be photocopy of membership card or AMA receipt of fees paid)

Name_____ **AMA #**_____

Address_____

City_____ **State**_____ **Zip**_____

Home Phone_____ **Work Phone**_____

Date of Birth_____ **Email**_____

- ☐ New Applicants (Without Name Tag) (all ages): $25.00
- ☐ Adult Member (Renewal Without Name Tag) (19 years and older as of July 1st): $25.00
- ☐ Junior Member (Without Name Tag) (19 years and under as of July 1st): $10.00
- ☐ Family Member (Without Name Tag) (At Same Address): $5.00
- ☐ Optional or Extra HSS Name Tag: $15.00
- ☐ I hereby give my permission to publish my [Name], [Address], [Phone], [Email Address] in the monthly Newsletter. **Strike out those not to be published**. Note that the Newsletter is published on the club Website (http://www.harborsoaringsociety.org)
- ☐ I request a printed copy of the monthly Newsletter by U.S. Mail. Printing and Mailing: $20.00/year

My primary interests in radio control flying are? Check all that apply. Show future interests with the letter F.

Thermal Duration Gliders_____	Slope Soaring Gliders_____	RES Gliders _____
Large Scale Gliders_____	Hand Launched Gliders_____	Electric Motor Gliders_____
Park Flyer Electric _____	Acrobatic Electric Planes_____	Scale Electric Planes_____
Electric Drones / Multi-rotor _____	Indoor Electric Planes_____	Electric Helicopters_____

In accordance with the Federal Equal Opportunity Act, this organization prohibits discrimination against anyone on the basis of race, color, religion, national origin, sex, marital status, age, individuals with disabilities or veterans. New applicants making application between November 1st and December 31st will pay the annual rate indicated above and such dues will make the new member paid in full for the following year. Applications for adult members submitted between July 1st and October 31st will pay a reduced rate of $15.00 (name tags extra). A signature is required from all Harbor Soaring Society applicants, agreeing to comply with the current AMA Safety Code, the current HSS and Costa Mesa City General Field Rules, and FAA rules and regulations applicable to the flying of RC model Aircraft.

The undersigned attests that: I will operate my model using only radio frequencies for the control of fixed wing or multi-rotor aircraft, and/or data transmission, on equipment certified and approved for such use by the AMA, FAA or FCC as applicable. I understand that my failure to comply with the above restrictions will result in nullification of liability coverage for damages caused or claimed. I understand that my monthly newsletter will be delivered by E-mail unless the U.S. Mail request (shown above) has been selected.

SIGNATURE:_____ DATE:_____
Total Dues Owed and Attached: $_____

*SIGNATURE OF CLUB OFFICER RECEIVING APPLICATION:*_____
Revised: January 16, 2017 (FMH)

HARBOR SOARING SOCIETY OFFICERS FOR 2017

President	Joni Whitsitt	714-396-2523	whitsittjo@gmail.com
Vice President	Henry Smith III	714-322-6537	henry.smith.3@earthlink.net
Treasurer	Mike Gaczkowski	949-632-1747	mgaczkowski@cox.net
Secretary	Bruce Gale	949-394-3924	galebl@cox.net
Contest Coordinator	Bruce Schaefer	714-814-6412	metaterra@msn.com
Safety Officer	Jim Sonnenmeier	814-490-9957	jrs36psu@gmail.com
Alternate Safety Officer	Vincent San Filippo Jr.	714-791-5588	vincesfjr@gmail.com .
Grounds Keeper	Ryan McMinimy	714-948-0942	hotshotviper@hotmail.com
Editor	Fred Hesse	714-963-5838	fhesse@socal.rr.com
Publisher	Fred Hesse	714-963-5838	fhesse@socal.rr.com
Club Photographer	Rob Askegaard	714-968-1973	rmaskegrd@gmail.com
Social Media Manager	David Miller	949-351-7047	davidjmiller949@gmail.com
Lead Flight Instructor	Ted Broberg	714-235-6430	tcbroberg@gmail.com.

See our web site at www.harborsoaringsociety.org**, our YouTube site at** http://www.youtube.com/user/hssletsfly **, and Facebook at** www.facebook.com/harborsoaringsociety

NEXT CLUB MEETING WILL BE:
TUESDAY AUGUST 1, 2017 AT ROUND TABLE PIZZA, 11095 WARNER AVE.
FOUNTAIN VALLEY , GENERAL MEETING 7-9 PM. NOTE: NO JULY 4 MEETING.
BRING YOUR FAMILY, WIFE, AND FRIENDS FOR DINNER. WE WILL HAVE SHOW AND TEL, AND A SPECTACULAR RAFFLE. SEE DETAILS AND INSTRUCTIONS TO LOCATION ON PAGE 14.
SEE THE COLOR NEWSLETTER SENT BY E-MAIL AND AVAILABLE ON OUR WEB SITE.

Harbor Soaring Society
P.O. Box 1673
Costa Mesa, CA 92626