



Harbor Soaring Society

Charter #128 Costa Mesa, California
 AMA's Oldest Radio Controlled Soaring Club
 Silver Leader Club Since 2009



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.

December 2016

HSS IS NOW OVER 52 YEARS OLD!

Volume 53

Come to the December 6 Christmas Party and officer installation at Woody's Diner in Huntington Beach. There will be a great party and raffle. See P. 5 for details.

Plane Rap Index

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Coming Events and Soaring Competitions

November 2016 – February 2017

- Tuesday December 6.. HSS Annual Christmas Party and officer installation, 7-9 PM. Held at Woody's Diner. See P.5 for details.
- Saturday December 10.. Final SC2 soaring competition and Toys for Tots event. Hosted by Soaring Union of Los Angeles (SULA) at San Pedro field. www.sulaclub.org
- Tuesday January 3, 2017. HSS monthly meeting, Round Table Pizza, 11095 Warner Ave. General meeting, 7 PM. See P.15 for details.
- Friday-Sunday January 6-8 2017. AMA Convention. Ontario Convention Center. See P.5 for details.
- Tuesday February 7, 2017. HSS monthly meeting, Round Table Pizza, 11095 Warner Ave. General meeting, 7 PM. See P.15 for details.
- Tuesday March 7, 2017. HSS monthly meeting, Round Table Pizza, 11095 Warner Ave. General meeting, 7 PM. See P.15 for details.
- Imaginology, scheduled for Apr 21-23, 2017.



HSS General Meeting Minutes for November 1, 2016

The November 2016 General Meeting of HSS was held at Round Table Pizza, Fountain Valley, CA. The meeting convened at 7:05 P.M. Joni Whitsitt President, presiding.

Board and Steering Committee Member in attendance were: Joni Whitsitt, Henry Smith III, Mike Gaczowski, Bruce Gale, and Fred Hesse.

The meeting began with the Pledge of Allegiance.

In anticipation of Veteran's Day, Nov 11, 2016, a photo was taken of all veterans attending this month's meeting. There were ten veterans in attendance. Thank you for your service to our country!

Announcements:

HSS received an award and \$50 for the treasury for the spookiest house at this year's Scarecrow Event held in Fairview Park. Thank you to all members who worked this event.

The revised club Bylaws passed on Thursday Oct. 27, 2016. 53 of 104 members approved, and none disapproved. Three concerns were reported by Mike Gaczowski, Treasurer.

Henry Smith shared that the Christmas-Holiday Party will be held on Dec 6, 2016, 7 PM, at Woody's on Adams and Brookhurst in Huntington Beach. See P. 5 for details. This will be the largest Opportunity Drawing of the year, and amongst the giveaways will be planes, batteries, and chargers

Old/New Business, Joni Whitsitt**New Business:**The 2017 HSS elected Officers are:

- President: Joni Whitsitt
- Vice-President: Henry Smith III
- Secretary: Bruce Gale
- Treasurer: Mike Gaczowski
- Contest coordinator: Bruce Schaefer
- Editor: Fred Hesse

The volunteer positions are:

Social Media Manager	David Miller
Principal Flight Instructor	Henry Smith III
Grounds Keeper	Ryan McMinimy
Safety Coordinator	TBD
Club Photographer:	Rob Askegaard
Publisher	Fred Hesse

There was a motion and second to accept all nominations by acclimation. The motion carried, none opposed.

The open position of Safety Coordinator will be taken up at the next Steering Committee meeting.

Guest Speakers:

Henry Smith introduced our guest speaker this month, Jerry Smith. Jerry spoke at length on the topic: How to fix up your foamie" so it doesn't look like a piece of foam!"

Early foam planes were covered by materials such as balsa, plywood, and fiber glass. Today, EPO foam is the best, but painting on foam is difficult and usually ends up chipping. The key is Preparation, which takes time and patience. Also remember, paint can add 25% more to the weight of a plane.

You'll need fine sand paper, such as 600 grit, and sanding blocks of various types for flat surfaces and compound curves. Jerry recommends using wet sandpaper as it lasts longer. 3M is the best.

For cleaning the foam, use naphtha, which must be purchased outside of California, or you can use alcohol to remove the release agents on the foam. Take care, as it will etch plastics, such as canopies.

Use water-based Minwax Polyacrylic or Krylon water-based enamel. If Polyurethane is used, it sets up slow. Be sure to apply in light coats. If you have a run, just wipe it off, or sand it with 600 grit after it dries. Use Minwax after the base coat. Jerry recommends using foam brushes, as they do not leave bubbles, or a Minwax brush for polyacrylic.



HSS General Meeting Minutes for November 1, 2016 (Continued)

For dimples, apply household spackle over the base coat. Wipe and push down at a 45-degree angle, then apply another coat of polyacrylic.

For the color coat, spray at a 45-degree angle, 8" from surface, and use Frog tape for masking. Be sure to pull up tape slowly toward the paint. You can create tape curves in small pieces. Lightly sand after each layer of paint, and add decals before the final coat of clear polyacrylic is applied. Home Depot can color match water-based enamel samples, and Smart 'n Final is a good place for plastic cups and stirrers.

Do any weathering after all has been assembled. Posh or Binks air brushes are excellent for weathering.

Show 'n Tell: None

Opportunity Drawing:

<u>Item:</u>	<u>Donor:</u>	<u>Winner:</u>
UMX Hyper-Taxi	Jim Hanson	Ted Brogerg
A-wing Fighter	Charlie Siegfried	Dick Baxter
Orange Formosa	Roger Nahas	Henry Smith III
X-treme Glider	Charlie Siegfried	John Anderson
LED Light Kit	Hobby People	Richard Morley
Foam Safe Glue	Hobby People	Chuck Herrington
Micro Servo	Hobby People	Bruce Gale
Micro Servo	Hobby People	Ryan McMinimy
Gentle Lady Glider	Roger Nahas	Charlie Siegfried
TX VG6000	Hobby People	Mike Gaczowski
TWIN Airplane Propeller	Roger Nahas	Kevin Koch

Attendance

Bruce Gale, Sec.	Jesse Calleros	Ralph Siegfried
Charles Siegfried	John Anderson	Randy Wilbur
Chuck Herrington, Guest	Joni Whitsitt, Pres.	Richard Morley
Dick Baxter	Kevin Koch	Rob Askegaard
Dick Odle	Larry Koch	Ryan McMinimy
Fred Hesse, Ed	Mary Lou Calleros, Guest	Ted Brogerg
Henry Smith III, VP	Mike Gaczowski, Treas.	
Jerry Smith	Mike Fox	

The meeting was adjourned at 8:35 PM. Submitted by Bruce L. Gale - Harbor Soaring Society Secretary

HSS Steering Committee Meeting Minutes for November 9, 2016

The Steering Committee meeting of HSS was held at Round Table Pizza, Fountain Valley, CA. The meeting convened at 6:05 PM. Joni Whitsitt, President, presiding.

Steering Committee and General Members in attendance were: Joni Whitsitt, Fred Hesse, Mike Gaczowski, Bruce Gale, Bruce Schaefer, Richard Odle, and John Anderson.

Old Business

Bylaws approval and proposed changes:

Motion made to adopt the Oct. 2016 Bylaws, revision B, that was approved by the general membership on Nov. 1, 2016. The motion was seconded and unanimously passed.

Motion made to remove the position of General Director from the Bylaws. The motion was seconded and unanimously passed.



HSS Steering Committee Meeting Minutes for November 9, 2016 (Continued)

Budget creation was added to the Steering Committee duties.

Motion made to revise the duties of the Safety Coordinator, make the modifications listed above, plus some other clean-up changes to the Bylaws. Richard Odle will make these revisions and submit them to the Steering Committee for review.

HSS Positions discussion:

The Membership Chairman is an appointed position

The Grounds Keeper is Ryan McMinimy

Treasurer/AMA and HSS Membership process:

The Steering Committee approved the 2017 membership form with changes made to the year and a revised date of Nov 9, 2016. David Miller, HSS Webmaster will post the new form.

Work party to paint container on Nov. 19, 2016, beginning at 1 PM.

The city of Costa Mesa does not want the container primed, just painted.

Joni will ask Randy to create a flier for the work party, and Mike will send it out.

Bruce G, Fred, and Bruce S volunteered to participate.

Ladders, paint, rollers, roller handles, paint trays and liners will be needed.

Cleanup of debris around the container:

Joni will arrange for a metal company to do a pick-up. The debris will need to be set out by the gate.

Christmas-Holiday party:

There were some member objections to Woody's as the location for the party, but it is too late at this point to consider a change in venue.

New Business

New budget for the January Steering Committee meeting:

Joni will create a first draft.

Activities to promote HSS to the city of Costa Mesa

Imaginology, scheduled for Apr 21-23, 2017.

Three concerts in the park; HSS will have a booth.

Scarecrow Festival, Oct 2017.

HSS Open House

Schedule the open house at the same time as AMA Safety Month, Mar 2017 in conjunction with the Safety Coordinator.

2017 Events:

SC2 events: the 2017 schedule is not available yet.

Bent Wing events: will likely have in 2017.

Fun Fly events: it's unknown yet if there is interest.

When picking up City of Costa Mesa permits for events, Bruce S. has been asked to leave 20 fliers in the city office. This also helps remind the office when the field will be closed.

At the close of the meeting, John Anderson shared a number of thoughts that included the following:

Training new flight instructors

Offering glider instruction training for members.

Fellowship with rubber powered free flight fliers.

Making observers feel welcome.

The Steering Committee meeting was adjourned at 8:05 P.M.

Respectfully Submitted, Bruce L. Gale, - HSS Secretary



AMA Annual Convention

The AMA is conducting the annual convention at Ontario CA on the dates shown below. Note that this year the convention is called AMA Expo West, as they are planning a second convention on the East coast. The annual WRAM show is now AMA Expo East. It's February 24 - 26, 2017 in Secaucus, New Jersey.

Event Hours: Friday, January 6, 2017 11am – 5pm Saturday, January 7, 2017 10am – 5pm
Sunday, January 8, 2017 10am – 4pm

ADVANCE TICKET PRICES

1 day	\$10 Member/\$12 Non-member/\$5 Life Member
2 day	\$18 Member/\$20 Non-member/\$9 Life Member
3 day	\$24 Member/\$28 Non-member/\$12 Life Member
Youth Ticket	12-18 yrs: \$5 per person
Group Pass	For 10 or more: \$8 per person
Kids	12 yrs & Under – Free
Complimentary	Active Military w/ ID, Uniformed Girl/Boy Scouts, Navy Sea Cadets, CAP

ADMISSION TICKET PRICES

1 day	\$13 Member/\$15 Non-member/\$7 Life Member
2 day	\$24 Member/\$28 Non-member/\$12 Life Member
3 day	\$33 Member/\$36 Non-member/\$17 Life Member
Youth Ticket	12-18 yrs: \$5 per person
Kids	12 yrs & Under – Free
Complimentary	Active Military w/ ID, Uniformed Girl/Boy Scouts, Navy Sea Cadets, CAP

Advance tickets will be sold until Wednesday, January 4, 5:00 PM Pacific, after that all tickets must be purchased at the door. Go to <http://amaexpo.com/ama-expo-west/tickets-west/> for advance tickets.

Tickets will NOT be mailed. They can be picked up at Will Call at the Ontario Convention Center as follows:

Thursday, Jan 5 - 4-6pm (outside south entrance doors)

Friday, Jan 6 - 8:30am-Noon (outside south entrance doors); Noon-5pm (in Show Office-Room 104A)

Saturday, Jan 7 - 8-11am (outside south entrance doors); 11am-5pm (in Show Office-Room 104A)

Sunday, Jan 8 - 9-11am (outside south entrance doors); 11am - 4pm (in Show Office-Room 104A)

The dates and times above will be listed in your confirmation email after completing your purchase.

HSS Christmas Dinner, 6 December 2015

The December meeting will be Tuesday December 6 at Woody's Diner, 10136 Adams Avenue. Phone is 714-965-4555. This is located on the Southeast corner of Adams and Brookhurst, in Huntington Beach. This is in place of the usual General Meeting at Round Table Pizza. This HSS Christmas party and 2016 officer installation will be from 7 to 9 PM. We will have a semi-private back room, as we had last year. There is a full bar. They have asked that we have a single group check, so it is strongly suggested that everyone bring cash for your dinner and drinks. **RESERVATIONS SHOULD BE MADE** with Henry Smith III (714-322-6537) as we did last year.

Come join us to celebrate Christmas, enjoy the camaraderie of club members, and install our HSS officers for 2017. We will have a spectacular raffle of neat planes and stuff that Joni Whitsitt has acquired.



Woody's Diner
10136 Adams Avenue, Huntington Beach



HSS Container Painting Project

On Saturday November 19, a work party was put together to clean up the debris and weeds around the HSS storage container, then to prepare and paint the container. The group was spear headed by our President Joni Whitsitt, who provided lunch sandwiches and drinks. In addition to Joni, the group included Henry Smith III, Jesse and Marylou Calleros, Bruce Schaefer, Erv Szego, Rob Askegaard (who took some of the photos,) Fred Hesse, and Richard Odle who lended moral support (and also took photos). Scouring the old pain revealed some areas that have rusted through. This may require some sealing from the inside to keep out the rain. The container looks great (from a distance) but may not have many more years of life. Thanks to all who participated.



Henry Smith III, Jesse Calleros, Erv Szego



Marylou Calleros



Jesse Calleros



Bruce Schaefer



Erv Szego



Joni Whitsitt and the gang



The workers plus Fred Hesse and Rob Askegaard



The Overseer.



FAA Inspections

Joni Whitsitt reports that the FAA has been making impromptu inspections at Fairview Park. They are looking to see if flyers have their FAA permit number on the planes. These inspections have generally been on weekdays, and it is reported that numerous model flying fields around Southern California have been surveyed.

As we all should be aware, back in January of this year, the FAA required a registration of all RC model aircraft flyers, and the display of their registration on all aircraft.

If you own an RC aircraft, you must register it with the Federal Aviation Administration's Unmanned Aircraft System (UAS) registry. A federal law effective December 21, 2015 requires unmanned aircraft registration, and you are subject to civil and criminal penalties if you do not register.

- Review the [UAS Registration FAQs](#) to learn more about the program.
- Read the [Aircraft Registration Records System of Records Notice](#) (PDF).
- Read the [Registration and Marking Requirements for Small Unmanned Aircraft Interim Final Rule](#) (PDF).

The AMA summarized the requirements as follows:

- All aircraft that are flown using a ground control system, such as a transmitter, are required to participate. This includes fixed-wing aircraft, not just multirotors or drones.
- Any pilot flying models weighing between 250 grams and 55 lbs is required to register.
- You will not be required to register every aircraft individually. You only need to register yourself and can affix one registration number to all your aircraft.
- You must mark all aircraft with your registration number. The number can be inside the aircraft, such as a battery hatch - but should not require tools to access.
- The FAA plans to launch the online registration website on Monday, December 21.
- There is a \$5 fee to register, which is waived if you register within the first 30 days.
- You only need to register once every 3 years.

Bob Hoover

Most of us recall the October 4 2016 General Meeting that HSS held at the Hobby People facility. One of the features (in addition to the great hot dog dinner that Hobby People provided) was a full length video documentary about Bob Hoover, the legendary pilot of World War II fame and subsequent accomplishments. The video was graciously provided by Gary Gullikson.

John Rittenhouse has just made us aware that Bob Hoover passed away very recently. The following link provides information.

<http://www.avweb.com/avwebflash/news/Legendary-Bob-Hoover-Dies-At-94-227184-1.html>

Latest Bylaws and Membership Application

Richard Odle has taken upon himself to update our latest Bylaws and Membership Application. Thanks, Richard. These documents are now in the hands of David Miller, our Social Media Manager. David will have these documents on our website shortly. The latest version of the Bylaws is dated 17 Nov 2016. You will need the latest Membership Application to apply for your 2017 HSS membership which is due now. The Membership revision date is also 17 Nov 2016, and is included as the next to the last page of this newsletter.



Uber Drones Advertising in Mexico City

Drivers stuck in traffic in Mexico City lately have found themselves being buzzed by a fleet of sign-toting drones. “Driving by yourself?” some scolded in Spanish. “This is why you can never see the volcanoes”—a reference to the smog that often hovers over the mega-city and obscures two nearby peaks.

It wasn’t exactly a plea for environmentalism, though—it was an ad for UberPOOL, part of Uber’s big push into markets across Latin America. [As Bloomberg points out](#), Uber already does more business in Mexico City than any other city it operates in, and Brazil is its third-largest market after the U.S. and India. Uber sees Latin American countries as generally easier targets for expansion than either of its top two markets.



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. That is 32 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 for access to any issues, contact Bruce Gale as shown on the last page of this newsletter.

Student Training

For many years, our Principal Flight instructor has been Ted Broberg, who has been a friendly and gracious instructor. Ted always goes out of his way to show up at the field to assist many enthusiastic students.

Unfortunately, Ted has suffered a stroke, and needs a little recuperation time. In the meantime, Henry Smith III is filling in with the teaching duties. Here he is shown with Terry Baylor.



Drone Hijacking

There's a new way to take down drones, and it doesn't involve shotguns. Not a jammer, the device lets hackers fly drones and lock out original pilot. The following link was provided by Jim Sonnenmeier.

<http://arstechnica.com/security/2016/10/drone-hijacker-gives-hackers-complete-control-of-aircraft-in-midflight/?comments=1>

The following article was extracted from the link.

[Dan Goodin](#) - 10/26/2016, 5:47 PM

The advent of inexpensive consumer drones has generated a novel predicament for firefighters, law-enforcement officers, and ordinary citizens who encounter crafts they believe are interfering with their safety or privacy. In a series of increasingly common events—[several](#) of [them chronicled by Ars](#)—drones perceived as trespassing have been blown out of the sky with shotguns. Firefighters have also complained that [hobbyist drones pose a significant threat](#) that sometimes prompts them to [ground helicopters](#).

Now, a researcher has demonstrated a significantly more subtle and proactive remedy that doesn't involve shotgun blasts or after-the-fact arrests by law enforcement. It's a radio transmitter that seizes complete control of nearby drones as they're in mid-flight. From then on, the drones are under the full control of the person with the hijacking device. The remote control in the possession of the original operator experiences a loss of all functions, including steering, acceleration, and altitude. The hack works against any drone that communicates over [DSMx](#), a widely used remote control protocol for operating hobbyist drones, planes, helicopters, cars, and boats.

Besides hijacking a drone, the device provides a digital fingerprint that's unique to each craft. The fingerprint can be used to identify trusted drones from unfriendly ones and potentially to provide forensic evidence for use in criminal or civil court cases. Unlike [most other counter-drone technologies publicly demonstrated to date](#), it isn't a frequency jammer that merely prevents a remote control from communicating with a drone. Instead, it gives the holder the ability to completely seize control of the unmanned craft. It was presented on Wednesday at the [PacSec 2016 security conference](#) in Tokyo by Jonathan Andersson, the advanced security research group manager at Trend Micro's TippingPoint DVLab division.

"In the defense and security world, there are people who have done this," Robi Sen, the founder of counter-drone product maker [Department 13](#), told Ars. "There are also a few hackers who have done this but have not made their research public. To my knowledge, this is the first time that this has all been presented, in a complete package, publicly."

Andersson's drone hijacker works because the process DSMx uses to connect a remote control to a drone doesn't sufficiently cloak a crucial piece of information that is shared between the two devices.

"The shared secret ('secret' used loosely as it is not encrypted) exchanged is easily reconstructed long after the binding process is complete by observing the protocol and using a couple of brute-force techniques," Andersson wrote in an e-mail. "Further, there is a timing attack vulnerability wherein I synchronize to the target radio's transmissions and transmit a malicious control packet ahead of the target, and the receiver accepts my control information and rejects the target's."

Possession of the secret gives attackers everything they need to impersonate the vulnerable transmitter. The transmitters are also vulnerable to what security experts call a timing attack that allows the impersonating attacker to effectively lock out the original operator. Wednesday's presentation included the following video demonstration: Drone hijacker.

For now, devices like the one Andersson demonstrated aren't publicly available, but that will undoubtedly change as more people figure out how to exploit DSMx and, quite possibly, competing radio-frequency technologies used to control drones. The widespread availability of hijacking devices comes with a tremendous number of consequences, some of them unsettling. One of the more frightening scenarios is someone using a device to hijack one or more devices that are in close proximity to a large number of people. Drones are



Drone Hijacking (Continued)

capable of carrying large amounts of fuel that can burst into flames upon impact, as [evidenced in this video](#). Vulnerable drones used by emergency first responders could also be commandeered.

On the positive side, hijacks could allow law-enforcement officers to safely seize control of vulnerable drones that are endangering or interfering with first responders. The hacks could also provide ordinary citizens with a less-draconian way of disabling a drone they believe is impinging on their property or privacy. By measuring the frequency-hopping pattern unique to each craft, the device also gives people a way to positively identify the drones they come in contact with. As Ars has reported previously, legal scholars are uncertain about whether citizens can assert aerial trespass claims. A patchwork of federal and state laws makes it unclear if even local authorities have the legal authority to shoot or hack an aircraft out of the sky.

Andersson said DSMx is a technology for hobbyists that has been marketed for its range, robustness, and other performance merits rather than its security. Now that DSMx is in wide use, it's not clear it can ever be purged of the weaknesses that make his remote hijacking attacks possible.

"My guess is that it will not be easy to completely remedy the situation," Andersson said. "The manufacturers and partners in the ecosystem sell standalone radio transmitters, models of all kinds, [and] transmitters that come with models and standalone receivers. Only a certain set of standalone transmitters have a firmware upgrade capability, though the fix is needed on the model/receiver side."

A representative of Horizon Hobby, the company that designed and licenses DSMx, [declined to make anyone from its PR department available for comment](#) prior to publication of this post. The representative instead referred inquiries to the company's legal department, which was closed for the day.

The following is a reply on the blog site.

- [dragosr](#) Smack-Fu Master, in training

To be clear, ALL the current RC systems are vulnerable to this timing injection attack. I was the one who picked DSMx as our first target because it's the most popular system, my favourite and the one I currently use for all my drones, planes, copters, boats and cars. The attack hardware was a teensy and a cyrf6936 transceiver from my friend at 1bitsquared.com, but we could have just as easily implemented it using the same teensy and a ML2724 to attack DJI and Futaba systems. The issue is that all the RC systems from ALL the manufacturers count on frequency hopping obfuscation to "hide" their broadcasts which are easily gathered en masse and reversed with an SDR, or by using a logic analyzer on their transmitters, there is no cryptographically secure authentication layer on any of the current systems. This timing attack is not difficult, just requires some low level radio and embedded system knowledge and about \$100 in parts, and is only the tip of the iceberg in the potential attacks available on current systems. Timing is the low hanging fruit that we picked to attack and demonstrate first. We have further demonstrations planned and Would be glad to talk to any manufacturer about securing their gear. Jonathan will be us in drone hijacking as a lab exercise in his CanSecWest SDR Dojo training course next March, and I highly recommend this course for anyone interested in this area. There are many places this kind of system could be used to detect drones flying in restricted areas (because the attack system can also be used as a drone detection system passively) and to take them over and make them perform controlled landings in safe areas, rather than all the crude systems proposed so far, and we have even more interesting systems, demonstrations and applications planned for future presentations, with the next one likely being at the CanSecWest conference after Jonathan's training. An interesting side note is that you can actually use a second attack system to hijack the first hijacker, so this gets complicated very quickly.

[Dan Goodin](#) Dan is the Security Editor at Ars Technica, which he joined in 2012 after working for The Register, the Associated Press, Bloomberg News, and other publications. Email dan.goodin@arstechnica.com



Model of the Month

We are featuring a beautiful F4U Corsair built by David Dang. It is manufactured by Dynam RC, and is available through Grayson Hobby.com . Rob Askegaard provided the photos.



Seen Around the Field

Jesse Calleros and his J-3 Piper Cub.

The following 2 pages of photos were provided by our hard working club photographer, Rob Askegaard. Thanks, Rob.



Tiny as it is, it flies!



Kevin Koch with his Impress and Dave Maze with his Zero.



Bob Goff's foam Cessna 188 Ag plane by Dynam RC. Wing span is 59 inches. From General Hobby.



Seen Around the Field (Continued)

Two photos of Matt Insley and his SBD Dauntless. It has a 63 inch wing span, manufactured by VQ.



Ed Stiles holds his ME-262 by Dynam RC. Wing span is 63 inches.



"This is Bob Goff's latest creation - the "Electric Storm" - a scratch designed and built electric aerobatic plane. He received his inspiration to design and build this plane when motorcycling through the open flatland of Idaho with his son David and friend Gary Gough. Off to the side of the road and standing alone was an old building with the words "Electric Storm" in large letters on the roof. That was it! He quickly had visions of a new design for an aerobatic electric plane. As soon as he arrived back home in Huntington Beach he went right to work on it. This is the result of his inspiration. The plane has a wingspan of 64" and weighs 6 lb 12 oz. It uses a 500KV Electric Flight "Torque" motor and is powered by 5 cells. It flies Great!"



Member's Appreciation

Gary Gullikson sent the following comments on Remote Control Hobbies, one of our sponsors. Thanks, Gary.

I had a pleasant experience buying building supplies for a scratch build of my Sterling Mambo from Remote Control Hobbies. Owned by "Amir", an HSS member who builds and flies models at Fairview.

He purposely keeps a very complete stock of balsa, ply, basswood, bagged accessories and covering materials, batteries (etc.) needed by scratch and kit builders and lots of ARF models.

If he doesn't have it, he's glad to order it for you with quick availability.

"Remote Control Hobbies" is located on Katella avenue in Orange, on north side of street just past Batavia and near Glassel. Web site: <http://www.rc-hobbies.com/orangecounty/>

City of Costa Mesa Ballot Measure AA

This Measure was placed on the ballot by a petition signed by the requisite number of voters, and was passed by 70% of the electorate on November 8, 2016. This Measure, known as "An Initiative Requiring Changes in Use at Fairview Park be Subject to Voter Approval," amends the Costa Mesa Municipal Code to require certain changes to Fairview Park, as defined, be subject to voter approval. This is really great news for HSS as the existing Master Plan clearly allows our use of the park for model aviation, and planned development of the park threatened our flying site.

Since this turn of events, Richard Odle monitored the most recent Parks and Recreation Commission meeting, and had these comments concerning their annual Fairview Park planning report.

The commission voted to extend consideration of the report to January after obtaining a legal opinion on how Measure AA would affect future projects at the park... that is, what projects must now be approved by the general public before moving forward based on the park's Master Plan.

Bottom line: Our use of the park is consistent with the Master Plan, and is generally well received (Let's keep it up!). Our use should not be an issue.

Thanks Richard for keeping an eye on the city. Ed.

Toys for Tots

The following three clubs are holding Toys for Tots events in early December.

Pomona Valley Model Airplane Club, PVMAC, is holding theirs on Sunday, December 4, 2016. Starting at 7:00 AM, they are serving pancake breakfast and hot dogs for lunch. They are also having a swap meet at the same time.

Orange County Model Aircraft, OCMA, is holding their Toys for Tots event on Saturday, December 10, 2016 starting at 7:00 am at the OCMA field. No swap meet.

Southern California Soaring Clubs, SC-2, is holding the Mark Child Memorial Toys For Tots competition on Saturday December 10 at SULA, San Pedro. See www.sulaclub.org for details. . Note that the SC-2 competition events are normally held on Sunday.

A Touch of Political Humor

California Senator Dianne Feinstein called her travel agent and said, "I need to fly to Pepsi=Cola Florida. Do I need to get on one of those little computer planes?" The agent asked if she meant fly to Pensacola and fly on a commuter plane. She said, "Yeah, whatever, smarty!"



HSS Membership

Our 2017 HSS membership enrollment season is in full swing. Note that the new membership rate of \$25 per year is now in effect. A membership application 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 12 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 2016

Soaring Clubs of Southern California (SC2) has not posted the 2017 competition schedule at sc2soaring.com. All dates are on a Sunday. Be sure to reconfirm the following events at the SC2 web site or the club web sites.

- Feb. 28. Hosted by Silent Wings Soaring Association (SWSA) Azusa/Covina. www.silent-wings.org.
- Mar. 20. Hosted by Downey SoarHeads (DSH) at Fairview Park. downeysoarheads@yahoo.com
- April 17. Hosted by Silent Wings Soaring Association (SWSA) Azusa/Covina. www.silent-wings.org.
- May 15. Hosted by Victor Valley RC Flyers (VVRFCF). Victor Valley RC Park, Hesperia. www.vvrcf.org.
- June 19. Hosted by Harbor Soaring Society (HSS), Fairview Park, www.harborsoaringsociety.org.
- July 17. Hosted by Inland Soaring Society (ISS), Riverside. www.glideiss.us.
- Aug. 21. Hosted by Thousand Oaks Soaring Society (TOSS), Thousand Oaks. www.toss.freesevers.com
- Sept. 18. Hosted: Soaring Union of Los Angeles (SULA) at Field of Dreams, San Pedro. www.sulaclub.org
- Oct. 23. Hosted by Torrey Pines Gulls (TPG), Glider field at Encinitas. www.torreypinesgulls.org.
- Nov. 20. Rain date,
- Dec. 10. Mark Child Memorial Toys For Tots competition at SULA, San Pedro. www.sulaclub.org.

SC-2 Competition Results

The results of the SC2 soaring competitions held since May have not been posted at the SC-2 web site (sc2soaring.com) 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. Not nearly as convenient as the old way of getting results from the SC-2 web site.



Huntington Beach Air Show

The City of Huntington Beach put on a great air show on October 18 through 20. Flying was visible all along Pacific Coast Highway, centered at Beach Boulevard. There was no charge for watching the four hour show. Huntington Beach has contracted for this show in 2017 and 2018. Below are some great photos of part of the action, taken by Rob Askegaard and Jim Sonnenmeier.



USAF Thunderbirds F-16s



Breitling L-39s





THE ACADEMY OF MODEL AERONAUTICS

AMA EXPO WEST 2017**January 6, 7, 8**

Ontario Convention Center, Ontario California

**SHOP
DEALS****PRODUCT DEMOS****FAA
PANEL****SWAP
SHOP****FAMILY
ACTIVITIES**Follow the Expo
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Hundreds of exhibitors, as well as aviation and aerospace experts, will greet thousands of attendees at the 19th annual AMA Expo West in Ontario CA, January 6-8, 2017, at the Ontario Convention Center.

The three-day AMA Expo West provides a "whole family" experience for longtime modelers and newcomers to the hobby, as well as enjoyment for all who love flight. The Expo offers the latest products in radio-controlled model aviation, demonstrations, interactive displays, and exploration of the intricacies of flying model airplanes, helicopters, rockets, gliders, and more.

THE ACADEMY OF MODEL AERONAUTICS

AMA EXPO SPEAKER SERIES**NASA's Model Shop**

AMA Member
Robert "Red" Jensen

Subscale UAS engineer/pilot NASA's
Neil A. Armstrong Flight Research
Center, Edwards CA.

**That Drone Show**

AMA Members

David and Sarah Oneal

Host of That Drone Show, founders of
International Drone Day and producers for
The Drone Invasion Documentary.

SPECIAL SHOWING**My Model Aviation, Career,
and Journey to Inspire Others!**

AMA Member

Chris Wolfe AKA The RC Geek

BS, Embry-Riddle Aeronautical University, UAV professional,
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**EDUCATION EXPERIENCE****POWERED BY:**

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USC Aero Design Team**AMAEXPO.COM****GROUP PRICING AVAILABLE****GET ADVANCE TICKETS NOW! (800) 435-9262, EXT. 272**

AMA Expo speakers and attractions subject to change. Visit AMAEXPO.COM for the latest information.

2017 City Flying Permits Available December 1

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 Member 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 that 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. Details should include a description, a small photo is acceptable, asking price, and contact address/phone. Ads should be sent to HSS Editor Fred Hesse at fhesse@socal.rr.com. Items will be displayed in three issues unless a request for extension is made.

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.

**REMOTE CONTROL
HOBBIES****SALES / PARTS / REPAIRS****211 West Katella Avenue, Suite J****Orange 92867****M-F 10-7 SAT 10-6 SUN 10-5****714-633-1247**

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www.rc-hobbies.com/orangecounty<https://www.facebook.com/RemoteControlHobbiesOrangeCounty>**ROB'S R/C HOBBIES****Sales / Parts / Repair**

Radio Control Airplanes, Helicopters, and Cars.
15071 Goldenwest St. Huntington Beach
S.W. Corner of Goldenwest & Bolsa Ave
(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.comrobsrchobbies@earthlink.net

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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 Email delivery of the monthly Newsletter in place of U.S. Mail delivery of hardcopy
- ☐ 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.

SIGNATURE: _____ DATE: _____

Total Dues Owed and Attached: \$ _____

SIGNATURE OF CLUB OFFICER RECEIVING APPLICATION: _____

Revised: November 17, 2016 RCO



HARBOR SOARING SOCIETY OFFICERS FOR 2016

President	Joni Whitsitt	714-396-2523	whitsittjo@gmail.com
Vice President	Henry Smith III	714-322-6537	henry.smith.3@earthlink.net
Treasurer	Mike Gaczowski	949-632-1747	mgaczowski@cox.net
Secretary	Bruce Gale	949-394-3924	galebl@cox.net
General Director	Joni Whitsitt	714-396-2523	whitsittjo@gmail.com
Contest Coordinator	Bruce Schaefer	714-814-6412	metaterra@msn.com
Safety Officer			
Alternate Safety Officer	Vincent San Filippo Jr.	714-791-5588	vincsfjr@gmail.com
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Editor	Fred Hesse	714-963-5838	fhesse@socal.rr.com
Publisher	Mike Gaczowski	949-632-1747	mgaczowski@cox.net
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 DECEMBER 6, 2016, AT WOODY'S BARBEQUE, 10136 ADAMS AVE.

HUNTINGTON BEACH, CHRISTMAS PARTY AND OFFICER INSTALLATION, 7-9 PM.

BRING YOUR FAMILY, WIFE, AND FRIENDS FOR DINNER. WE WILL HAVE A SPECTACULAR RAFFLE. SEE DETAILS AND INSTRUCTIONS TO LOCATION ON PAGE 5.

SEE THE COLOR NEWSLETTER SENT BY E-MAIL AND AVAILABLE ON OUR WEB SITE.

