



Propeller Teller

The Official Newsletter of the MARKS Club (Miniature Aircraft Radio Kontrol Society) - AMA Charter 133

Greenspot Action



Andreas' P-51D ready for some low flying strafing actions on the freshly excavated taxi way.

The year 2008 will go down in the history of the MARKS Club as a year of transformation, and change, and hard work. All you have to do is look at the "Previous Pictures of the Month" section (<http://www.rcmarks.org/RecentPicturesOTtheMoment.html>) accessible from the main webpage, and you know why: Besides flying our models and enjoying the remoteness and beauty of the Greenspot borrow pit we did put a lot of effort into the reconstruction and beautification of our flying site this year. – Those of you who have been at the field this summer can attest that our hard work paid off: We have now again a decent runway that is wide and long enough (48 x 580ft) for most every plane that is flown by our members, the taxiway is back

too, and we have an increasingly useful infrastructure. The results of these improvements are that there is now much more activity at the field than just one year ago and that the fun factor of flying in the



Jim Levell and Sven Blaser enjoying and judging the pylon race

Greenspot borrow pit has increased dramatically.

Last weekend we hosted the first World Model pylon race of the season at Greenspot. We had a good turnout of pilots, helpers, and spectators and the races were very exciting. The bigger Reno-style pylons that we had setup for the first time on Sunday helped the pilots a lot to find the best moment to turn left; well it did help some of them you can read more about that in one of the following sections. The picture to the side shows Jim Levell and Sven Blaser enjoying the race as pylon judges, the plane that just made the turn belongs to Mel Santmyer.



Chris Gautier, Don Giandomenico, Tom Widmer, and Holly in action.

Other stories we are covering in this first newsletter after the summer break concern the development in context with the relocation of our field in Greenspot, a full report of the last pylon race, some new online tools, some firsts and the usual mix of aviation and RC related local news. From now on we will also have a cartoon section in our Propeller Teller -

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September 2008

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Michael & Stefan Strasser the creators of the "Chicken Wings" (<http://www.chickenwingscomics.com>) are kind enough to let us publish their art for our enjoyment

Thanks guys!



September 2008 Pylon Race

The conditions for the first pylon race of the season could not have been better: Very comfortable temperatures, only a slight breeze down the runway, and a great racing crowd consisting of pilots, helpers, and spectators. The seven pilots were randomly put into two initial groups of four and three contestants which formed the first heat, the two other heats where also picked randomly. Don Giandomenico with his honed flying style and



his well run-in blue Zero WM racer dominated the heats whenever he flew. He just finished once not on top, which was during a heat when he too aggressively turned on one of the pylons. Don had his

race flying style perfect in that he was flying relatively low – below the top of the pylons – and making very precise turns. The rest of the field was more evenly spread and there was some fierce, but very friendly competition. Mel and Andreas showed the crowd how to skillfully cut multiple pylons, (Mel 3 and Andreas 4 cuts in the first heat) which cost them valuable points but also gave them bragging rights for the most cuts in a heat, at least for this season. Still unreached is heat #2 of the November 2007 race where Don managed to cut 9 and Andreas



Holly posing with his Yak before the race

10 times – yes in a single heat! Anyway that is all past now and engraved in the

WM pylon racing Hall of Fame.

Chris Gautier had recovered (“recovered”



Oscar giving Chris a hand preparing Chris’ newly covered WM racer

as with Monocote) his plane to make it stand out – and so it did. Chris did a very nice job of not only giving his plane a different look but also to improve the appearance of the somewhat plain WM racers. Great job! - This was also the first race that Chris used his Magnum .28, which worked perfectly and which looks



The complete crew of race pilots

very competitive compared to the other OS Max LA .40 engines that everybody else used. Chris approached the race very carefully, did never cut and flew a conservative race, which at the end brought him on rank two of the golden (“Money”) race. Oscar Furlong had some problems with his engine and somehow could never bring it up to speed. Tom Widmer from AMAA, a proven racing legend from the Fisherman’s Retreat club also came out to fly for the first time at Greenspot. It was easily perceivable that this wasn’t his first racing season. He and his helper also from AMAA ran a very professional race that ultimately won them the third rank.

The final score was as follows:

- | | |
|---|--------------------|
| 1 | Holly Hollingworth |
| 2 | Chris Gautier |
| 3 | Tom Widmer |
| 4 | Don Giandomenico |
| 5 | Andreas Blaser |
| 6 | Mel Sandmeyer |
| 7 | Oscar Furlong |

Congratulations!



The happy winning three from left to right: Tom Widmer, Chris Gautier, and Holly Hollingworth.

Don was not only active as a pilot he also came out to the field half an hour earlier than everybody else in order to setup his video equipment. Besides the usual hardware consisting of monitor, receiver, antenna, etc., he brought his electric video glider to shoot some race video. Whenever Don wasn’t racing with his WM racer he was aloft during the races making wide circles and shooting video of the racing action. There was only one minor close call but both pilots (Holly and Don)



Don setting up his sophisticated video equipment

September 2008 Pylon Race (Continued)



Our Event Coordinator and Pylon Race Authority Joe Augino keeping the event under control

avoided a collision and everything was fine. In addition to the air-borne video shots Erik was filming what was happening before and during the races from the ground. The idea behind this filming project is to have some new video footage to

present at the upcoming AMA Convention January 2009. – Thanks Don and Erik! – We are already looking forward to checking out the races from a bird’s eye view!



The sweet life of pylon judges: Sun fun and (almost) nothing to do :-) - Sven, Jim, and Rick will make me pay for this one ...



Brian and Rick following the racing action.

Vandalism at Greenspot

It seems that the world is such a big place and that there is enough room for most everybody to pursue his or her path of happiness. Unfortunately, there are some



Runway center section looking from East to West—After removing all debris

individuals in our society that do not share the same common sense and mutual respect for property of others like we do. A handful of those individuals came to our newly paved field on a weekend in mid July and started burning rubber on the runway. Even though most parts of the resurfaced area withstood the torture inflicted by the ATV and dirt bike drivers, there were a couple of weaker spots that were not up to the task (we had applied only about a 0.5 inch thick polymer slab over the old runway surface). You can still see the donuts and racing marks that they left on our runway. The most damage was done in the center section where there was more sand and less polymer.



Detail of the damage before it was fixed

In light of that damage there was a lot of discussion what to do and how to proceed. We had a board meeting about the issue and Andreas met with the Bob Neufeld (General Manager of the San Bernardino Valley Water Conservation District, SBVWCD) and Chris Bahnson our long time contact with the SBVWCD to look into possible actions that would reduce

the impact of such events. The broad conclusion of these discussions was that it will be nearly impossible to avoid having ATVs and dirt bikes in the Greenspot borrow pit, because the area is so vast and because there are multiple access points (mostly from the South-West and from the former rail corridor from Redlands to Highland).

Vandalism at Greenspot (Continued)



Freshly “excavated” taxi area—The damage is not yet fixed.

Hence our primary line of defense is to build a runway and infrastructure that will withstand such intrusions. Besides this we will create signs that spell out that this is an RC runway and no other traffic is allowed.



The same taxi area after applying the polymer patches and re-striping the runway markings

While this will not keep everybody out it will at least make the literate part of intruders aware that they are trespassing. The other important element is that of a deterrent: If there are members at the field there has never been an issue with ATVs and bikes.

Our observations show that most intrusions and vandalism happens on weekends. ATVs and bikes start showing up between 11:00 AM and sunset; if there are members at the field then they simply

drive around the top loop and then disappear where they came from (mostly the South-Western access road). - Like mentioned before, if you see intruders, please note as much detail as possible and drop me a line or give me a call (president@rcmarks.org). We have a log of such events and you never know when this information comes in handy.

The other decision we made early on was to fix the field again. Fixing the damage required us to clean the rubble from the runway and then patch up the holes. Our new and powerful parking blower came in very handy, however it still took 5 hours to clean the entire runway, excavate the ready zone and the old taxi way. Yes, we actually found the old

taxi way in fairly good condition; it was just buried below a lot of gravel and sand. The next task was to patch the runway. As a first step Steven, Rick, and Andreas did a test patch which turned out to be very good. Then on the following weekend we gathered a bigger work crew and patched up the whole field.

Thanks a lot to the participants (v.l.t.r. Rick Inlow, Steven Lumpkin, Andreas Blaser, Art Doud, Erik Blaser, Woody Mummery, Roger Foor, Robert Boehm, Sven Blaser, and Glenn Sparks) and to Harry Hill (President

AMAA) from Redlands-Yucaipa Equipment Rental (<http://www.redlandsyucaiparentals.com/>) for letting us use a garden roller and a vibrator plate.



The patched runway turned out perfect and there were only very few places where we should have skimped less with polymer – live and learn! Steven even put the marking back on top and marked the taxi way.



The runway patching crew.—Thanks guys!

Member Section

New MARKS Members

We have two new members, who have joined us during the last month.

Andreas Glendening and

Liam Glendening

Welcome to the Club!

Birthday Boys

September:

Sven Blaser	9/1
Clayton S. Rhoades	9/5
Dion Reed	9/9 (10x!)
Jim Keller	9/16
Daniel G. Payne	9/26

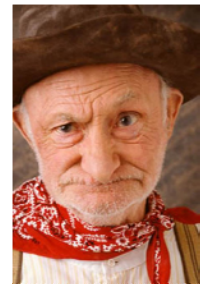
October:

Andrew Glendening	10/5
Scott J. Workman	10/8
Eloy Martinez	10/16
Keith Taschetti	10/18
Mark Edward Rudiger	10/18
Daniel E. McClanahan	10/29
Guillermo Ruvalcaba	10/30
Dana Manjarrez	10/31

Congratulations and best wishes from the MARKS Club!



Note from the Editors: This is a new section in our newsletter, where we want to welcome our newest members to the MARKS club and at the same time introduce them to the entire membership. The goal is to have a little story and maybe some pictures for all new members that join. – So if you are a new member, please send us some info about yourself and you will be featured in the next issue of the Propeller Teller.



This could be you! →

New Member Sightings

We welcomed two new members this August: Andrew and Liam Glendening are a father-son team from Redlands. Andrew had been flying RC planes practically all his life, starting when he was 12 years old. He started with control line planes but moved quickly to RC planes once they were more commonly available.



Like many of us, Andrew made a family/career-related break from RC flying for a couple of years. However, he kept and tented all his gear and now he is back flying again. Liam has been practicing a lot on the simulator and by the time you read this has probably already soloed for the first time! – Welcome to the club!

The picture to the right shows Andrew and Liam preparing a predecessor of a 3D plane at Greenspot in mid August.



There were a couple of other prospective members that are playing with the idea of becoming a new MARKS member, some have already come out to check out our facilities and others are waiting for their AMA membership (a prerequisite for joining).

Grapevine

New Setup Table at Greenspot

After the last meeting in July, Art went ahead and immediately built another setup table, that is, we now have two nice



wooden tables besides the old steel table. Art did a great job working from the plans and he improved the design on a couple of places to create a sturdier table. **Thanks a lot Art!** – Also he won a free one year membership for building and sponsoring the table. We still need about five tables and whoever wants to build one will get the plans and a free one year membership form from the club. Please contact Andreas if you are interested. (909 793-9895 or president@rcmarks.org)

Rick's Piper Cherokee

Rick Inlow built one of the brand new Piper Cherokees from Top Flight. He test flew it with no incident two weeks ago at Greenspot. Robert Binkley, a fellow guest RC pilot who is interested in becoming a member as well, assisted Rick with the first flight. The plane flies very stable at all



speeds and required almost no trim adjustments, plus it looks as great on the ground as well as in the air. We predict there are going to be many more of these

planes flying soon from our field!

Brian's First Flight

Brian Ahrens is a prospective member. He has served four years in the Marine Corps and is currently a full time student at UCR. Brian is from Yucaipa and has recently purchased a glow trainer. Last weekend he came out to the field to check out our facilities but he also helped out as a pylon judge.



After the race Sanford, our club flight instructor, helped Brian to get his plane in the air and down in one piece. Judging from Brian's enthusiasms for RC flying it is just a question of days (hours?) until he will earn his wings – We are looking forward to calling Brian a new member!

Blower #1

A while ago Phil Michelsen donated to the club an older parking blower that he had recently purchased. The blower worked fine when cold but would not reliably run when the operating temperature was reached. Oscar Furlong, who has a motor bike business, volunteered to take a look at the engine and bring it up to speed. And so he did! – Last meeting, Oscar brought the serviced blower and it now runs perfectly. Although not as powerful as our new blower, it is suitable for smaller tasks, such as, removing sand and dirt from our runway. The blower will find a new home in our new 24' container. Eventually all members will have access to that container and its content so that everybody can help keep the field clean. The



blower is relatively easy to operate but there are a couple of tricks. Oscar is the man to ask in this context. Once the blower is there for all members to use we will have a little cheat sheet that shows how to use it. – And by the way: Thanks Oscar for fixing that engine!!!

A New Air-Band Radio!

As you all know we monitor the incoming air traffic at Greenspot with an airplane radio. The current implementation is a simple Radio Shack Air-Band Receiver which is housed in the Frequency box. This approach, although workable, is not really satisfying because the air-band receiver is rather cheap, analogue, and the reception is marginal. For the new location we are envisioning to have a fixed setup that is accessible via a switch on the outside of one of our containers (with a lock, for members only). We did not really start looking for such a solution but the idea dates back to the time when George Manning was president.



Two weeks ago George got a call from Don Birmingham, who is a full scale pilot and who frequently flies jets with George. Don, who had heard from George of our

Grapevine (Continued)

plans, offered to donate his "old" two way radio to the club. Now this radio is not only an air-band radio but also a GPS receiver and an airplane computer. The device is in tip top condition and it will be perfect for our fixed installation at the new field. George Manning, did some tests with the radio and was easily able to receive all the frequencies in the greater SBDO area. He did also replace the internal battery to complete this great radio (Thanks!) – What makes this contribution even more amazing is that Don is not even yet a member!

Thanks a lot Don, we really appreciate you thoughtful donation!

Congratulations Robert Boehm!

Since the beginning of this month there is one more Aussie that has converted to a US citizen! – After many years as a green card holder Robert, finally naturalized and became a US citizen on August 14th. – Robert said the toughest part was the English test (Just kidding, Robert teaches English at RCC :-)

– Congratulations Robert, we will have you sing the National Anthem at our next event!



Unconfirmed Rumors & Stories

Our very own Jim Levell, one of the master builders in our club has talked for a while about going into exile-retirement to South Dakota, where he bought a piece of land and a house. He said he is not sure



yet about when that move is going to happen but that it eventually will. Strangely we have received reports that the number of crop circles has tripled in that area since Jim staked out his new place in SD a while ago. Could there be a correlation? Did Jim ever travel to Cornwall? Are the traces of castor oil and cowboy boot imprints somehow related to our very own Jim? – As a note for members that do not know Jim too well, he has been seen playing with control line equipment, wearing a very special head cover,

and some special kind of leather shoes.



Note of the editors: As we have threatened before, we will come up with rumors, gossip, and any type of anecdote (true or false) if we do not get input from you, our members. Nobody is safe! So you better send in those stories ...

RAF Mechanic Joke

Q: "What is the difference between a fighter pilot and his aircraft?"

A: "The plane stops whining when you shut down the engines"

Definitions:

Glide Time: The time between the engine falling out and the airplane hitting the ground.

Crash: Method of seeing inside a model airplane.

CHICKEN WINGS™

BY MICHAEL AND STEFAN STRASSER



Note from the Editor



To make the newsletter even better than it is now Andreas and I would like to see other members contribute as well. Since most of you fly RC planes, everybody should have some stories or anecdotes to share with the rest of the membership. We are not looking for Pulitzer Prize material just something interesting that you have experienced or have seen—It is also fine if these are stories of the past. If you send me a bare bones idea and a short story I can probably fill in the blanks with something from my

(vast) experience in RC flying :-)

The best and easiest way is to send an e-mail to newsletter@rcmarks.org, but you can also send me a letter or simply come to a club meeting and give me a copy of your adventure. Pictures are always nice too! (dh)

Thanks!
Dennis

“Send us your stories and adventures—it is always great to share what is happening in your workshop or at the field with the gang”

Model of the Month: September

Although we had another very productive meeting there was no Model of the Month for September.

Miscellaneous

Of Robbers and the Arm of the Law

Those of you that follow the e-mails that we send out know that one of our member's (Jon Soffel) house and garage got raided while he was working out of state. Besides computers, CD, and other material also much of Jon's RC equipment was stolen. We had sent out and e-mail to all members and to some neighboring clubs describing the items that were stolen. – The idea behind the RC equip- face sooner or most people our hobby use it anyway. Early August.



In a twist of Bernardino most of the while doing a San Bernardino. Apparently the thief was active in various places as far away as Indio, accumulating laptops, motor bikes, and other valuables. Now Jon is back in business and one more criminal element is behind bars, hopefully to rethink his strategy of life. – Thanks again for everybody keeping an open eye for these stolen goods.

this was that ment will resur- later because not involved in cannot readily This was in

luck, the San Sheriffs found stolen property, parole check in

Unfortunately there was another break-in, this one in Cathedral City. Glen Elliot's (760-219-6549) storage unit was raided last week and many RC items were stolen: Below is a list of things that were removed from his place. As usual please report any suspicious selling activity to Glen – Thanks!

Super Chipmunk, red and white with a .90 Nitro engine

World Models Trainer, white with red and blue and a .32 Heli Engine

Large Scale Extra 300 still in the box

Prather Deep Vee with OS.46 Marine Engine (boat)

Orange and yellow outrigger with a Picco .80 Marine Engine (boat)

Custom blue color **outrigger Race Boat** with Nitro Engine (boat)

Fighting Kites including one made of Pink back-ground fabric with the Star Trek Klingon Emblem on it.

About **100 Compact Disks** of Music of the 80's and 90's.

President's Corner



Hello everybody,
Here are a couple of items on my current MARKS radar screen that I would like to share with you.

Study in Greenspot

In our last Propeller Teller I wrote about the ongoing geological and hydrological study that was initiated by the SBVWCD earlier this year. This study has since been completed and a plan for the future usage for the greater Greenspot pit area has been worked out. According to that plan the SBVWCD will be building a vast



Example of a wetland: Water meanders slowly through a network of small streams allowing it to infiltrate into the ground (in our case).

wetland area north of our new flying site location. This wetland's purpose is to filter the water from the Seven Oaks dam and potentially from other sources. Water from these sources will be guided through a naturally meandering channel from East to West following the slope of the borrow pit. The water will be fed into the pit year round and the gradient of the channel will be small enough so water can gradually penetrate along its path.

Our new field will be separated by a dam from the wetland – the dam will only be a few feet high and far enough away from the runway so that it will not interfere with our flying activities. Together with the SBVWCD we have worked out the final location for our new field. This new location will allow us to pursue our flying activities in a safe manner and it will not impact the usage of the rest of the Greenspot pit by the SBVWCD. Like many times before it has been a pleasure working

with Bob, Chris, Randy, and Shanae from the SBVWCD. Coordinating and planning such a big project like a new RC flying field would be impossible without the support and goodwill of public service providers, such as the San Bernardino Water



Conservation District. In this context we can consider ourselves very lucky to work with the SBVWCD

which has recognized the importance of setting aside areas for recreational use, such as, for our new RC field. I really believe that such actions of the public sector will benefit our local communities significantly in the long term, because they do not only provide areas where recreational activities can be pursued safely but they also encourage people –and especially young people– to take up a hobby and find a balance in life. So the next time you see a representative of the SBVWCD don't forget to say a big "Thanks!"

Now that the final location of our new field has been approved, we are ready to move to that new site at any time. At our last monthly meeting we decided to initiate the move as soon as possible. The main reasons being that a) we want to move before the rainy season (we need warm weather for the polymer to cure) and b) so that we can purchase the polymer before its price goes up again. Plus there is the "excitement" factor that we are finally able to move.

During the following weeks we will, therefore, start cleaning the area from brush and other dry organic material, stake out the runway and the pit area and then start grading and leveling our future flying site. Once this is done then we will be moving our infrastructure (containers,



tables, frequency box, etc.) from the current field to the new location. These initial tasks will require only a small (but important) number of our members to chip in; basically we are looking for members that have tools, equipment, and a formation to help with these initial chores. Please let me know if you can help in this context (president@rcmarks.org / (909) 793-9895).



Approximate location of the new field looking East from the dirt road, crossing the pit from NNE to SSW.

After this initial phase which should take between two and three weeks we are ready for the polymer: We will basically repeat what we did earlier this year when we resurfaced our old runway. However we will use three to four times the amount of polymer and mix it with the base before we roll it. We will get a 1.5 to 2" thick polymer surface that should be able to withstand occasional intrusions from ATVs and alike. The initial runway dimension will be 40 x 500' – This is somewhat smaller than originally planned but under the current situation this seems the most appropriate solution. A benefit from using our polymer approach is that we can easily extend the width and length of our runway - every year if we want to. Also starting out with a smaller footprint will be easier on our budget while eventually still getting us to our targeted field size of 50 x 800'. – Good things take time.

Concerning our shades, we already have all the material to build our 105' shade structure; instead of setting it up at our current location we will move it directly to the new site. Like always please volunteer your time and equipment – such big projects live or die based on our member

President's Corner (Continued)

base.

Flying Buddy Calendar

Since two weeks ago we have a new online tool for all of our members. It is called the "Flying Buddy Calendar" and can be accessed, for instance, via our main web-page (<http://www.rcmarks.org/cgi-bin-2/index.cgi>). This page is for our members only, that is, you need our club user ID and password (the same that you use for any other members-only page). When you open the Flying Buddy Calendar you see a calendar that shows you who is at the field and when. The difference between this calendar and our regular event calendar is that you can update it yourself. That is, if you want to go flying you can add an entry to the calendar or

you can update an existing entry by adding your name to it. Try it out, it is very easy. If you made a mistake (e.g., typo, wrong date, change of plans, etc.) you can simply open the calendar again and change or delete an entry. – If you can write an e-mail then you can update our Flying Buddy Calendar! The reason why we added this new tool is to make it simpler for you to link up with fellow members: It is much more fun to fly together with your buddies than flying alone, and as we said before it is also much safer. – So please start using the Flying Buddy Calendar; there is no reason to be reluctant adding new entries it is really easy ... and as always if you have questions your friendly webmaster (webmaster@rcmarks.org) will gladly help



e-mail account your e-mail account information. Like always the annual dues are due until December 31st with a grace period until January 31st. After that a 50% late fee applies (\$40). Why do we have a late fee? – The member administration is a very laborious task and everybody who ever has had an office in a club knows that it is a pain in the rear end if people send in their payments late and the renewal phase is extended over four months or more. Like for everyone else in our club it is much more fun building planes and flying RC models instead of chasing late payments. Hence, it seems only a simple courtesy towards your club officers (mostly the treasurer) to pay on time. – If there is a problem with a payment then let us know and we can deal with it, but we need to know up front and not in February 2009.

The new dues, as voted in to our Bylaws during the July meeting are \$80 for full members, \$40 for students, and \$40 for supporting members. Please refer to our Bylaws for a detailed description of each member category. In addition to the dues we encourage each member to contribute a one-time \$20 Greenspot Field fee. This is not too much for everyone but it will help us realizing our runway quicker. Finally because we are now a full-fledged non-profit organization (501(c)(3) public) you can make donations and deduct them from your tax return. That is, we are tax-status equivalent to organizations, such as, the Red Cross, Habitat for Humanity, or any tax exempt organization.

Thanks for reading that far and happy flying!

Your MARKS President,
Andreas

The screenshot shows the 'MARKS - Flying Buddy Calendar' web application. The main content area displays a calendar for September 2008. The calendar grid has columns for Sunday through Saturday. Entries are listed for various dates, including:

- 17: Address (9:00 - 11:30)
- 18: Address, Erik, Sven (9:30 - 12:00)
- 22: Rick and Howard (9:00 - 11:30)
- 23: Roger and Henke (9:00 - 10:30)
- 24: Roger, Sven, Dennis G., Steven (4:30 PM)
- 25: Roger, Sven, Dennis G., Steven (4:30 PM)
- 26: Roger, Sven, Dennis G., Steven (4:30 PM)
- 27: Roger, Sven, Dennis G., Steven (4:30 PM)
- 28: Roger, Sven, Dennis G., Steven (4:30 PM)
- 29: Roger, Sven, Dennis G., Steven (4:30 PM)
- 30: Roger, Sven, Dennis G., Steven (4:30 PM)

 The page also includes a navigation menu on the left with options like Home, Club Info, Club Activities, MARKS Forum, RC Flight Training, Useful Links, News and Directions, Member Section, Regulations & Bylaws, and a footer with the phone number 53-457.

you if you cannot get it to work.

Membership Renewal

Chuck and I had talked in the past about sending the MARKS membership renewal surveys already in November instead a month later. Doing this the renewal will not fall together with the many other bills that flock into our mailboxes towards the end of the year. Like during the previous

two years each member will receive an exact copy of his/her record as it is in our database. If there was a change then simply use a red pen (or something else that stands out) to make the change and send it back with your payment. If there is no change then send it back anyway, so we know that there was no change. In turn you will get you new 2009 membership card and if you chose to get a MARKS

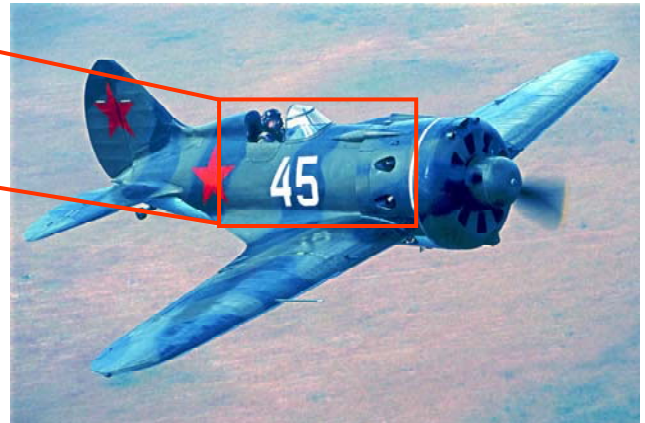
Solution to last Month's Picture Quiz

Guess who figured out (again) in no time, what last month's mystery plane was? Well, avid readers of the Propeller Teller might already have guessed that this has to be Joe.—And they are correct. Joe Augino was again the fastest airplane recognition buff! The plane was a Polikarpov I-16

Joe Augino

Congratulations!

Below is some information about this interesting plane.



The sources:

<http://www.fighterfactory.com/airworthy-aircraft/polikarpov-i-16.php>

http://en.wikipedia.org/wiki/Polikarpov_I-16

<http://walkarounds.airforce.ru/avia/rus/polikarpov/i-16/index.htm>

Polikarpov I-16

The Polikarpov I-16 was a Soviet fighter aircraft of revolutionary design; it was the world's first cantilever-winged monoplane fighter with retractable landing gear. The



I-16 was introduced in the mid-1930s and formed the backbone of the Soviet Air Force at the beginning of World War II. The diminutive fighter prominently featured in the Second Sino-Japanese War[1], the Spanish Civil War where it was called the Rata or Mosca, and the Battle of Khalkhin Gol.

Design and development

While working on the Polikarpov I-15 bi-plane, Nikolai Nikolaevich Polikarpov began designing an advanced monoplane fighter. It featured cutting-edge innovations such as retractable landing gear and a fully enclosed cockpit, and was optimized for speed with a short stubby fuselage (similar to Gee Bee R-1) and a Wright Cyclone radial engine in a NACA cowl. The aircraft was small, light and simple to build.

Full-scale work on the TsKB-12 prototype began in June 1933 and the aircraft was accepted into production on 22 November 1933, a month before it ever took to the air. The TsKB-12 was of mixed construction using a wooden monocoque fuselage and wings based around a KhMA chromolybdenum steel alloy wing spar, dural ribs and D1 aluminum alloy skinning on the center and leading edges, with the remaining portions of the wings fabric covered. Another modern feature were the ailerons which ran almost the entire trailing edge of the wing and also operated as flaps (in the manner of more modern flaperons) by drooping 15°. The cockpit was covered by a 40cm wide canopy which featured an Aldis turbular gun



sight which could slide back and forth on runners fitted with bungee cords of rubber. A 225 liter (59.4 US gallon) fuel tank was fitted directly in front of the cockpit. The main gear was fully retractable by a hand-crank. The armament consisted of a pair of 7.62 mm (0.30 cal) ShKAS machine guns in the wings, mounted on the outboard side of the main gear and carried 900 rounds of ammo. These features

were proposed at first by Andrei N. Tu-



polev, however the NII V-VS was more concerned about the stresses a typical combat aircraft was subjected to in combat, and it initially considered to be too big of a risk. However TsAGI, with the help of the 3rd Design Brigade under the leadership of Pavel O. Sukhoi and Aleksandr P. Putylov eventually convinced NII V-VS that what was being proposed was not only feasible, but would enhance the aircraft's performance. The TsKB-12 was designed around the Wright Cyclone SR-1820-F-3 nine cylinder radial engine (rated at 710 HP) which was being negotiated to be licence built. As the license was not yet approved, Polikarpov was asked to settle for the less powerful M-22 (Soviet-built version of the Gnome-Rhone Jupiter 9ASB which itself was a licensed version of the Bristol Jupiter VI) with 480 hp. This was deemed acceptable because the projected top speed still exceeded 300 km/h (185 mph).

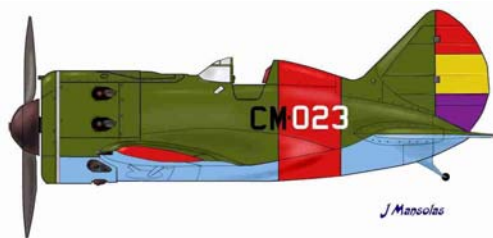
Solution to last Month's Picture Quiz (Continued)

The M-22 powered TsKB-12 first took to the air on 30 December 1933 with the famous Soviet test pilot Valery Chkalov at the controls. The second TsKB-12 with a Cyclone engine and three-bladed propeller flew in January of the following year. Initial government trials in February 1934 revealed very good maneuverability but the aircraft did not tolerate abrupt control inputs.



Thus the TsKB-12 was deemed dangerous to fly and all aerobatics were forbidden. The M-22 version was preferred due to vibration of the Cyclone-powered aircraft. Pilots commented early on about difficulty in climbing into the cockpit, a trait that persisted through I-16's service life. Before continuing test flights the designers had to answer the question of spin behavior. Wind tunnel testing suggested that TsKB-12 with its short tail would enter an unrecoverable flat spin, but real-life trials were necessary to confirm this. Since Cyclone engines were rare it was decided to risk the M-22 prototype for this purpose. On 1 March and 2 March 1934, Chkalov performed 75 spins and discovered that the aircraft had very benign stall behavior (dipping a wing and recovering without input from the pilot when airspeed increased) and intentional spins could be easily terminated by placing controls in the neutral position. The stories of vicious spin behavior of the I-16 perpetuated in modern literature is unfounded (perhaps extrapolated from Gee Bee experience). The I-16's stablemate, in fact, the biplane Polikarpov I-153, exhibited much worse spin characteristics.

Service trials of the new fighter, designated I-16, began on 22 March 1934. The M-22 prototype reached 359 km/h



(223 mph). The manually-retracted landing gear was prone to jamming and required considerable strength from the pilot. Most of the test flights were performed with the gear extended. 1 May 1934, the M-22 prototype participated in the flyover of the Red Square. Approximately 30 I-16 Type 1 aircraft were delivered, but were not assigned to any V-VS fighter eskadriliya. Most pilots that flew the I-16 Type 1 for evaluation purposes

did not find the plane to have any redeeming characteristics. Regardless of pilot opinion, much attention was focused on the Cyclone powered aircraft and the M-25 (the license built Cyclone). On 14 April 1934, the Cyclone prototype was damaged when one of the landing gear legs collapsed while it was taxiing.

The third prototype with a Cyclone engine incorporated a series of aerodynamic improvements and was delivered for government trials on 7 September 1934. The top speed of 437 km/h (270 mph) no longer satisfied the Air Force, who now wanted the experimental Nazarov M-58 engine and 470 km/h (290 mph). Subsequently, the M-22 powered version entered production at Factory 21 in Nizhny Novgorod and Factory 39 in Moscow. Because it was the fourth aircraft produced by these factories it received the designation I-16 Type 4. Type 4 aircraft fitted with these new engines required a slightly changed airframe, these changes included armour plating for the pilot and changes to the retract doors to allow for complete closure.

The M-25 fitted I-16, the I-16 Type 5, featured more changes, including a new engine cowling which was slightly smaller in diameter, had nine forward facing shuttered openings to control cooling flow and a redesigned exhaust with eight individual outlet stubs. The M-25 was rated at 635 hp at sea level and 700 hp at 2,300 m. Due to the poor quality of the canopy glazing, the I-16 Type 5 pilots typically left the canopy open or removed the rear portion completely. By the time the

Type 5 arrived, it was the world's lightest production fighter (1,460 kg / 3,219 lbs), as well as the world's fastest, able to reach speeds of 454 km/h (282 mph) at altitude and 395 km/h (245 mph) at sea level. While the Type 5 could not perform the high-g maneuvers of other fighters, it possessed superior speed and climb rates, and had extremely responsive aileron control which gave the Type 5 a very good roll rate which led to precision maneuvers in loops and split-Ss.

A total of 7,005 single-seat and 1,639 two-seat trainer variants were produced.

Operational history

Initial service experience revealed that the ShKAS machine guns had a tendency to jam. This was the result of the guns being installed in the wings upside-down to facilitate the fit. The problem was addressed



in later modifications. Evaluations from pilots confirmed the experience with prototypes. Controls were light and very sensitive, abrupt maneuvers resulted in spins, and spin behavior was excellent. A barrel roll could be performed in under 1.5 seconds (roll rate over 240 degrees/second). The machine guns were fired via a cable and the required effort, coupled with sensitive controls, made precision aiming difficult. The rear weight bias made I-16 easy to handle on unprepared airfields because the aircraft was rather unlikely to flip over the nose even if the front wheels dug in. The canopy tended to become fouled with engine oil and the moving portion was prone to slamming shut during hard maneuvers which caused many pilots to fix it in the open position.

Solution to last Month's Picture Quiz (Continued)



The start of Spanish Civil War in 1936 saw pleas from the Republican forces for fighter aircraft. After receiving payment in gold, Joseph Stalin dispatched around 500 I-16 Type 5s and Type 6s. The aircraft immediately began dominating the enemy Heinkel He 51, Arado Ar 68 and Fiat CR.32 biplanes, and remained unchallenged until the introduction of the Messerschmitt Bf 109. A number of aviation publications called the new Soviet fighter a "Boeing" due to the incorrect assumption that it was based on the Boeing P-26's design. The Nationalists nicknamed the stubby fighter "Rata" (Rat), while the Republicans affectionally called it "Mosca" (Fly).

Combat experience showed that the I-16 had deficiencies; several aircraft were lost after structural failure of the wings which was quickly remedied by reinforced structures. Heavy machine gun bullets could sometimes penetrate the armored backrest and fuel tanks occasionally caught fire in spite of being protected. The hot Spanish climate required addition of oil radiators and dust adversely affected the life of the engines. Although some aircraft accumulated up to 400 hours of flying time, the average life of an I-16 was 87 days, of which one sixth was spent on maintenance. The biggest complaint in service was the light armament of only two 7.62 mm (0.30 cal) machine guns. This was urgently addressed with Type 6 which added a third ShKAS in the bottom of the fuselage. The four-gun Type 10 was nicknamed "Super Mosca" or simply "Super."

Another 250 I-16 Type 10 were supplied to China. This model added a second set of 7.62 mm (0.30 cal) ShKAS guns, armor

behind the pilot, and had a slightly upgraded 560 kW (750 hp) M-25 engine. In 1939, these aircraft fought against the Japanese, beating the Nakajima Ki-27 and matching the Mitsubishi A5M. Further large scale action took place in fighting between the Soviet Union and Japan in the Battle of Khalkhin Gol in 1939. The Imperial Japanese Navy introduced the A6M Zero in 1940, which swept the I-16 from the skies.

Further attempts were made to upgrade the firepower of the aircraft using 20 mm (0.8 in) ShVAK cannons, making the I-16 one of the most heavily armed fighters of that moment[5], able to fire twenty-eight pounds of ammunition in three seconds. Pilots loved the results, but the cannons were in short supply and only a small number of I-16 Type 12, 17, 27, and 28



were built. The cannons adversely affected performance with the 360° circle time increasing from 15 seconds in Type 5 to 18 seconds. Type 24 replaced the skid with a tailwheel and featured the much more powerful 670 kW (900 hp) Shvetsov M-63 engine. Type 29 replaced two of the ShKAS guns with a single 12.7 mm (.50 cal) UBS. Types 18, 24, 27, 28, and 29 could be equipped to carry RS-82 unguided rockets.

A 1939 government study found that I-16 had exhausted its performance potential. Addition of armor, radio, battery, and flaps during the aircraft's evolution exacerbated the rear weight distribution to the point where the aircraft required considerable forward pressure on the stick to maintain level flight and at the same time developed a tendency to enter uncontrolled dives. Extension and retraction of the landing flaps caused a dramatic

change in the aircraft attitude. Accurate gunfire was difficult.

By 1941, the I-16 was still the most numerous Soviet fighter and made up about two-thirds of the VVS. The Red Army pilots nicknamed the aircraft *Ishak* (Russian: Ишак, Donkey/Hinny) because it was similar to the Russian pronunciation of "I-16." The I-16 performance was generally equal to that of the Messerschmitt Bf 109 (of the era) at altitudes up to the 3,000 m, where the I-16 could fight the Messerschmitt Bf 109 "Emil" on equal terms in turns and had a more durable engine due liquid cooled engine of the Bf 109. The I-16 was slightly more maneuverable than the early Bf 109's, but the Bf 109 could use its advantages in slashing climbing and diving attacks to bring an I-16 down. Skilled pilots took advantage of its superior horizontal maneuverability and liked the aircraft enough to resist the switch to more modern fighters. About half of all produced I-16s were still in service in 1943, when they were finally replaced. Specially modified I-16s were used in the Zveno parasite aircraft experiments using the Tupolev TB-3 mothership.

The Luftwaffe was know to have captured some I-16s and UTI-4s (two of which were marked with the Stammkennzeichen codes DM+HC and DM+HD) and flown from Rechlin by Kampfgeschwader 200 (KG200). The Luftwaffe was not the only airforce able to test it's fighters against the I-16, the Japanese captured a few I-16s as well and the Rumanian Air Force also got one when a Soviet pilot defected.



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MARKS Club Motto

E.g., "MARKS - Powered by RC Enthusiasts!"

We are still looking for a good motto for our club. So scratch your heads and think of something, positive, and original that we could use here. Send your ideas to Dennis (newsletter@rcmarks.org)



M.A.R.K.S. stands for Miniature Aircraft Radio Kontrol Society – Our club has been founded in 1965 and has been a chartered club with the AMA since 1967. Since 2006, the MARKS Club is an incorporated organization with the State of California and since January 2008 MARKS is a tax exempt non-profit organization under IRS Tax Section 501(c)(3).

Our goal and vision as an organization is to the promotion of a safe, convenient, and cooperative pursuit of the sport of radio controlled aircraft as well as the fostering of talented modelers to compete on national or international level. In this context, the MARKS Club wants to provide a fitting framework for recreational and competitive activities involving any type of radio controlled aircraft and thus enriching the variety and the social environment of our local communities. The MARKS Club is open to everybody interested in model aviation. Emphasis is given to the introduction and education of the younger generation emphasizing values, such as, responsibility, good judgment, comradeship, teamwork, persistence, and technical skills specific to aviation.



Behind our name there is an active RC Model club that is located in the San Bernardino - Redlands - Highland area in Southern California. We have currently about one hundred members, flying everything from electric slow flyers, over helicopters, IMAC planes, and scale planes to fast turbine powered jets.

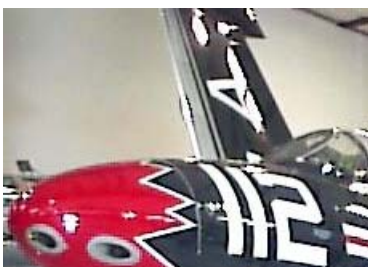
The Last Page

The Tailender

Please keep on reading your e-mail and check our website regularly—this is the fastest and most efficient way for us to inform you about what is going on. If you have spam blockers please allow all e-mails from the @rcmarks.org and @esri.com domains.—Thanks.

Picture Quiz

What is the name and type of this airplane? - Please send your answers to newsletter@rcmarks.org and we will announce the first three members/readers that guessed correctly. (editors)



September 2008						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

October 2008						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Important Dates:

Next Pylon Race (Gilman Springs)	Saturday, Oct. 4th
October Meeting	Thursday, Oct. 9th
2nd Annual Holiday Season Swap (Gilman Springs)	Saturday, Oct 18th
Corona RC Club Float Fly at Lake Perris	Sat/Sun, Oct 18/19th
USRA Giant Scale Race 2008 – El Mirage Dry Lake Bed	Oct 30th - Nov 2nd
Construction of new runway	TBA
Fun Fly & BBQ with guests	TBA

If you would like to have your events listed here please send an e-mail to newsletter@rcmarks.org.