

Radio Control Flyers Unlimited

Flight Plan

AMA Charter # 1442

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Current News

Even with problems getting the flying field repaved, we were able to get it completed on Thursday, June 23. Unfortunately, because of the weight of the paving equipment causing damage to the existing pavement, the field was slurry coated with a thick coat. A special thanks goes to Dave Vickers for this efforts managing the paving project.

The first flyers on the field were the IMAC aerobatic pilots (I also participated). Most of the pilots kept their planes in the shade. Because of the weight of these planes and the extreme temperatures at the field, a problem of the wheels sinking into the slurry coat was an issue. It appears that the coating on the field is not completely cured as gasoline will easily remove some of the coating. We made sure to fuel our planes on the concrete surfaces only. But is sure was nice to land on a smooth surface.

The IMAC contest had 25 contests. There was also quite a crowd of non flyers at the field. Everybody was very cooperative with all of the help needed to run the contest. A very gracious and special thanks to Kip Garvey, Dick Beldon, and Santi Robillos's family for performing the major responsibilities of running the IMAC contest. We gained \$1223 for the club from this event.

I understand there are some issues with the web site including scheduling events and contact information. I will spend time going through the web site and correct these deficiencies. I have been busy settling in my

new job. I will start investing more time with club activities. Please note: most of the information needed including any events are posted on each newsletter. But it does surprise me how few members actually read the newsletter. I have been doing this for 15 years and I am constantly amazed how many members complain about not knowing about rule changes, events being held, and other news pertaining to club business when all they have to do is read the newsletter and get the information needed. The web site is a secondary place to get information. I find it a bit curious that members find fault with the leadership but will not step up and help or participate. We need more people to at least help with any events at the field. An example is, I received only one member that wanted to help at the meet when I sent out a couple of email notices and announced at the meet and previous newsletters.

Next Pylon race is scheduled for 8/20/16 and 8/21/16. Lunch and pot luck dinner were discussed. Further info on that TBD.

Pattern Fly scheduled for 10/22/16 and 10/23/16. Dick Belden contact person. We will need volunteers for lunch etc.

When out at the field, club members are recommended to have a first aid kit with them at all times. Each time we had a first aid kit at the field, it would get stolen, vandalized, or invaded by wasps.

PILOTS CORNER

RUDDER SKILLS from Troy Built Models web site

An awesome pilot will use the rudder early often. Set a distance away from you that you wish to fly, say 500 feet. Maintain that distance at all times. Adjust for the wind and for maneuvers which are flown incorrectly. If you find yourself too far in or out, or that you are not on the correct heading, don't bank and yank to move the plane back onto course. Use rudder to correct heading and BE SNEAKY about it. Slowly apply the rudder to get you on the heading you desire, then slowly get off the rudder. Don't bang the rudder correction. You can slip back into position completely unnoticed by the untrained eye.

Don't fly a racetrack pattern unless you are forced to by other airplane traffic. If you are forced to fly racetrack, practice center maneuvers only. At the ends, practice 180 degree rolling circles or 180 degree turns in the pattern.

HOW TO BUILD YOUR RUDDER SKILLS:

FIRST STEP: Practice knife edge flight. Fly at a speed where your plane has adequate rudder authority. If this is at full throttle, then so be it. If it's at 3/4 throttle, then that's better. Trim out your plane using the trim guide on the NSRCA site so that your plane flies knife edge by only managing rudder and throttle. If you use elevator or aileron correction use your computer radio to make corrections. Practice knife edge over and over, upwind and downwind, looking at the canopy and looking at the belly (this is much more difficult). Do not go onto the second step until you are very comfortable and your plane flies as it should. If you can't fly knife edge consistently, you won't be an awesome pilot. You may need a more powerful servo or a 6 volt battery or both to do knife edge. Practice knife edge along with straight and level flight maintaining a precise heading. Be sure to practice straight and level flight making heading corrections using the rudder. Your plane should be trimmed out now well enough that it won't dive to the ground when you are upright and want to yaw slightly by applying the rudder. Most planes dive to the ground when the rudder is applied. Make adjustments to this doesn't happen. Don't be a hero and try to compensate with the sticks. Let the computer radio do it for you. There is not a top pilot in the world who doesn't mix out his airplane's problems. You'll have enough to do flying the plane without compensating for your plane's inadequacies.

SECOND STEP: The first step is the most difficult.

After that you have it easy (for awhile). Now we move on to 2 point rolls. The CG of the plane should be such that when inverted the plane should be close to hands off which means it's a little on the tail heavy side for the average pilot (but you're going to be an awesome pilot aren't you??? So make it a little tail heavy!!). When you roll to inverted you need to use, dare I say it? THE RUDDER! Yes! You said you don't need the rudder didn't you? SORRY, YOU NEED THE RUDDER!. As you roll to inverted, bump the rudder the exact same amount as you did during knife edge flight, but just when the plane is around knife edge position. Not too soon and not too long or you will veer off course. Just right. Hey, guess what? When you're inverted, you must use the rudder there too!! Aaaaghhh. Yes, now that you are inverted you are now going off heading and you must correct using the rudder. Wow, you just hit the rudder the wrong way didn't you?? Well roll back over to upright, turn around and try it again. Roll to inverted just before center so that you are inverted at center. It's hard to tell whether you're coming in or going out isn't it? You'll figure it out pretty quickly if the spectators start diving for cover. It's easier to see if you're high up, and you'll also avoid those Oooh's and Aaaah's from others as you pull instead of push and just barely miss the ground. When in doubt, roll to upright and pull! Don't half loop. Do that 500 to 1000 times (not kidding), and you'll have it down pat. You may even be down to less than 5000 feet when you're doing it! Roll slower and slower, and fly longer and longer inverted. When you can fly at 500 feet out and 100 feet high and can take 2 seconds to roll to inverted, then fly for 2 seconds inverted, then roll for 2 seconds back to upright, and do this at 3/4 throttle, and stay right on line, you'll be able to do what most people in the chairs behind you can only dream about. You are awesome! If you can do it at 1 second intervals, that's excellent. Now is the tough part. Do it rolling to the left, turn around and do it rolling to the right. Also do it from left to right and from right to left. HA! You can only do it in one direction! Practice another 500 - 1000 times flying from left to right and rolling left, then rolling right, and flying right to left, and rolling right and then rolling left. AND YOU'RE NOT DONE! While flying any maneuver which has you inverted (which is most of them), you need to use rudder when inverted. Practice all the time, you'll get it.

THIRD STEP: OK, it's been three years, but you're feeling cocky now, and want more. It's 4 point roll time. That means knife edge to the belly!! Very predictably you will do the first quarter roll to see the canopy, then the second roll is to go to inverted, and then you saved the worst for last hoping beyond hope that something will happen and you don't have to do the third point of the 4 point roll. Now matter how you try to delay it, it's coming, and so is the ground if you

use the wrong rudder. Most planes do very nice cartwheels, right up until the wings and fuselage fly apart. Avoid that. Go back to step one and practice knife edge flight with the belly to you. You don't have the practice knife edge with the canopy to you, that's too easy now for Mr. Awesome. You've got to be able to hold it for 3 seconds. Also, watch your batteries when you're doing this. The rudder uses a lot of juice, and if you haven't used it before, you're in for a surprise. But you sensed something was up in step one didn't you? Yes, that's it. Using the rudder to only steer on the ground just didn't use up your battery much. A four point roll should be done in rhythm. Count one, two, three, four. Count evenly and slowly. Time it so that you are inverted just before center. Again, learn this from left to right and right to left and rolling to the right and rolling to the left. Use rudder mainly when you are close to knife edge, not while rolling too much or you will veer off course. See you next summer.

FOURTH STEP: Rolls are next! They are called slow rolls which the 4 point roll is a hesitation roll. How slow is slow and how you hesitate is up to you, but generally the longer the harder/better. The slow roll is tough because now you are feeding the rudder in sooner and ending later and you can't stop to gather your thoughts in between. It's not much different, and after a few hundred times, you'll only need a few more hundred times to get it close to perfect.

FIFTH STEP: OK things are dragging on and on, you've spent \$1000 in gas and that's just driving to the flying field. You've almost crashed too many times to count and your finger is sore from flipping the prop. Now it gets hard. Really hard. You may want to bail at this point, but hang in there. It's time for rolling circles. These babies are tough! We want to end up with 4 rolls in one circle, one roll each 90 degrees. Start with 90 degree one roll rollers. It's just like the slow roll from before just bent a little bit, kind of like when you were trying to fly it straight but weren't too good at it. To see how big to do it, try flying a circle without rolling and see what seems comfortable. Then do a flat circle using rudder only and staying upright. The radius is pretty big to do it smoothly. That's the radius to shoot for. Once you master the first 90 degrees, you must

learn it from left to right, right to left, and rolling to the inside and to the outside of the circle. This will take awhile, a loooooong while. But after that, it just gets harder. The worst is the final 90 degrees with the plane starting out heading towards you and the flight-line. The key is to practice the 90 degree roller only, with the rest of the circle being flown banked without rolling BUT after you master the first 90 degrees, don't roll the first 90 degrees, roll the second 90 degrees only. Do the rest of the circle in a regular bank. Do it from left to right and right to left, starting upright and starting inverted, upwind and downwind, in a crosswind and in calm weather. Then do just the third 90 degrees and then the dreaded fourth 90 degrees. When you practice the fourth 90 degrees, try to do it with no one else around. It keeps down the shrieks and doesn't jeopardize too many cars in the parking lot.

SIXTH STEP: Well you got the 90 degree rollers down, now it's time for the 180 degree rollers and then the 270 degree rollers keeping in mind to stagger the starting and engine positions, which way you roll, and flying right to left and left to right, starting from inverted and starting from upright, and upwind and downwind. Keep mixing it up.

SEVENTH STEP: Rollers. Full blown you name it you have to fly it rollers. Now it's time to put it all together and do a 4 roll roller. Now it's tougher because you need good throttle management. You must be at full throttle into the wind, and part throttle when downwind. You must start and stop in exactly the same place. And now you must alternate the rolls too. Practice the first 90 rolling in and the second rolling out and keep changing. Then, just to make it more difficult, you must also do 3 roll rollers, 2 roll rollers, and 1 roll rollers upwind, downwind, from inverted or upright, alternating and with your eyes closed standing on one foot while singing Broadway show tunes. Then you can be like Quique Somenzini and do a snap at each 90 while rolling the rest of the circle and do it to the beat of the music. (You can put him to shame by doing it with your eyes closed and the transmitter behind your back.)

Once you master rollers, you can easily fly many maneuvers with a minimal amount of practice because you will be good on the rudder. Rudder is the key to flying precisely and becoming an awesome pilot. The better on the rudder you are, the more awesome you are.

**The July Club meeting is scheduled for:
Saturday, July 16, 2016 at 10:30 am
at the club flying field.**