



# Wing Tips



## September 2018

The Newsletter of the Mid-Hudson Modelmasters

Editor: Domenick Fusca, PO Box 266, Pleasant Valley, NY 12569-0266

Email: [wingtips@modelmasters.us](mailto:wingtips@modelmasters.us)

Website: <http://www.Modelmasters.us>

### 2018 Club Officers

President: Brad Quick

Secretary: Larry Kunz

Sgt. at Arms: Flavio Ambrosini

Vice President: Scott Fellin

Treasurer: Tom Eng

Junior VP: George Amenta

### Club Calendar

#### Coming Up:

- **NEAT Fair, Peaceful Valley Campgrounds, Downsville, NY, September 13-16:** For more info see <http://www.neatfair.org/index.php>
- **NY Air Show, Stewart Airport, Newburgh, NY, September 15-16:** For more info see [http://airshowny.com/?utm\\_source=New+York+Air+Show&utm\\_campaign=618c23e891-GA-B-17+Ann-Jul26%2718&utm\\_medium=email&utm\\_term=0\\_4a178eb331-618c23e891-158566645](http://airshowny.com/?utm_source=New+York+Air+Show&utm_campaign=618c23e891-GA-B-17+Ann-Jul26%2718&utm_medium=email&utm_term=0_4a178eb331-618c23e891-158566645)
- **CLUB MEETING , Saturday September 22:** At our VanWagner Road Field, 11am.
- **Big Biplane Bash, Farmington, CT, Saturday September 22, 2018 8am,** CRCC field, 3 Meadow Rd. check our google group for posting Brad made on Sept. 6 for more info
- **Mohawk Valley Firebirds, 2018 Highlands Warbirds, Frankfort, NY, Sept. 29 - 30,** for more info see their facebook page <https://www.facebook.com/MVFirebirds/>
- **October Wing Tips articles & photo submissions due, Thurs., October October 4:** Send your submissions to [wingtips@modelmasters.us](mailto:wingtips@modelmasters.us) Due date is first Thursday of each month.

#### Other Events:

- **MONTHLY MEETINGS:** For the summer months meetings will be held at the flying field, check the newsletter for exact dates and watch google groups for update notices.
- **OUTDOOR FLYING SESSIONS AT WEST ROAD FIELD** – Every Saturday Morning, weather permitting.

## I built an AT 6!! by Rick Rizza

OK, maybe "built" isn't the right word. It is an ARF I found this Top Flight AT 6 new in the box at a swap meet down in Yorktown Heights back in the Spring and I decided to buy and build it. I got started and here is what happened: The build winds up. I am 65 and slow at best. I work full time and when I get home I am tired so sometimes it takes me forever to do a simple ARF, which I would say this AT 6 is not. It is an "old school" ARF, if there is such a thing, and it requires knowledge and hobby skills to assemble. That being said, I was up to the task, and a maiden is in the offing.

For the most part, I followed along with the manual, drilling and screwing and unscrewing and CA hardening and rescreeing all of those servos (4 in the wing and 3 in the fuse!). The servo mounts in the wing don't fit into the hatch- es when standard size servos are used (Dremel time!)-ultimately, all was done. My choice of power plant is an OS LA 65 with a Pitts muffler. This engine is side mounted and fits completely inside the cowl. I had to bore a hole for the glow starter and the needle valve, and cut 2 grooves in the bottom for the twin exhausts and I was still able to use the 4 hardwood blocks to mount the cowl. This motor is out of a Great Planes DR 1 which I sold to a guy who wanted to electrify it (I still have seller's remorse over that one!) and the motor was already on a mount which was a drop in fit, and the firewall to thrust washer distance was an exact match! The dummy radial fit like a glove. I had to clear out only one space between the cylinders and the carb peeks out there with the real cylinder head directly in line with that. When I went to glue the fake motor in place, instead of making a complete fillet around the motor, I filled in only over the cylinder heads. This leaves an invisible source of cooling intake around the outside of the dummy engine which I think may be beneficial. I had to do some engineering here to make the throttle servo work. Because of the location of the throttle arm on the side mounted engine, the servo output arm had to be raised by 2 inches. I did this with hardwood blocks and epoxy. Of course when you "raise" a servo in a fuse that is inverted at the time, you are actually lowering it.

Along the way I made some changes with pushrod connections. 90 degree bends are tough to make in 2/56 rod and keep them tight enough to snap a quick connect onto. With the rudder connection in the fuse I couldn't get the quick connect to snap on, so I just bent the upper part of the rod another 90 degrees and turned it into a Z bend. Works fine. More notable however is the elevator pushrod which is encased in the fuse at the tail with a metal clevis, and the instruction blithely tell you there is a hole in the bottom of the fuse so you can stick a forceps in if you need to fine tune your pushrod. That ain't happening! Simple solution is put the kind of connector that the push rod goes thru and you tighten down a set screw on the servo, which is what I did.

So, basically finished up today-had the fuse on one stand and the wing on another along side it so I could wire every- thing up and test and adjust, then I put it together for a few pics. I still have to balance it, but I realized I had not yet put those wing joint covers on, so that's what I am doing now. Typing this as the epoxy dries. Wish I could say that are a good fit but they are not. Still I think it will be better to have them then not, but they can't just be glued in place all at once. I am doing the top of one, then the top of the other, then I will get to the bottoms, and then, the balance ma- chine. Today is Sunday. I have work tomorrow but am off Tuesday, and hoping for a maiden then. Wish me luck! Oh yeah! I haven't done the decals yet!

I put her inverted on the GP CG machine, and was pleasantly surprised to see her hanging there near dead straight per- fect, hands off! So today a friend and I worked the decals-Thanks, Larry!- (couldn't find a home for ALL of them!) and set up the throws. I don't usually bother with 2 rates or expo. I was pleased to see the ailerons perfect at 1 inch high throw. I had to dial the rudder back, she was almost 2 inches, and when it came to the elevator set at 5/8th up and down, well, something told me to give myself more down elevator then that just in case the nose wanted to stay point- ed to heaven...turned out to be a good move! We rechecked the CG and drove to my club's field in Walkill, NY. Af- ter field assembly, fuel was pumped and I quickly saw fuel pouring out of the Pitts muffler, but I knew the tank was no where near filled. It was then that I realized because the fuse was inverted during the tank installation and I had installed the tank with the vent tube UP, the vent tube was now on the bottom of the tank! Rookie error, soon correct- ed by removing the wing and turning the tank. Fortunately I had enough slack in my lines not to need to remove the cowl, etc, for the flying, but I will redo things at home before the next flight. I figured at 1/4 oz per turn to turn the crank on the fuel pump about 48 turns for 12 ounces of fuel, but had fuel coming out of the muffler at about 42 turns. Then I opened up the needle valve and this old trooper of a 65 two stroke (OS LA 65) fired right up and ran like the wind! I knew that power would NOT be an issue!

Now I was getting a little scared...it was "put up or shut up" time. I taxied around a bit. The motor kept running. With no excuses to be had, I ran the throttle up and she was off. She rolled straight, the tail came up, and with a little back elevator she broke ground and climbed well-a bit steeply but under control. Take off flaps were employed, and before doing anything about them or the gear I flew a circuit or 2 having reduced power. She flew nicely, very responsive to control inputs and needed very little trim to any axis except pitch. It needed a LOT of down trim! But it was strange, it wasn't like it ALWAYS went up, but when it did, and for no obvious reason, it went up like a homesick angel and I was pushing full down elevator and glad I had the extra! She would climb at high throttle, she would climb at low throttle, but once I corrected it back to straight she was fine, until she wasn't again! By this time I had retracted gear and flaps and was kind of enjoying myself, though not at all happy about the climb action, I figured it was time to try to return her to terra firma. Gear down, flaps to full, uhoh! full flaps was not a good idea, she was ballooning bad, flaps up and a no flap approach, but I was out of shape as I got close to the ground and went around, Decided to try take off flaps, brought her around and I don't mind saying I greased her in! Whew!

So that was it for the day. I didn't want to tempt fate with a second flight until I do something. Add nose weight? Add down thrust? BTW, I did not see any indication of tip stalling during the flight, which included some pretty steep bank angles and on the landing I slowed her down quite a bit and she floated nicely down to a tail low touch down.

I promised myself I would not put her up again until I made some kind of adjustment, and I decided to add a little down thrust-exactly one popsicle stick's thickness-and see what, if any difference that makes. Have today off so working on it now. I might get out for a test flight later.

I found a couple of other things that got shook loose on the shake down flight. Besides the hub caps which both fell off, one of my cowl mounting blocks unglued itself, and 2 of my cockpit hold down screws came loose. All part of the hobby, I guess.

I finally got her out for round two with the added down thrust. That seemed to help. However, the plane needed right trim and for some reason the motor started acting up and I had to dead stick her in. The landing wasn't pretty but fortunately I don't see any significant damage, So the shake down continues. I don't know when I'll have her out again, but I want to fly her at Binghamton, NY later this month. I got a few pictures at the field and these show her dressed in her decals and markings. And that is the last time I flew her. I cleaned the carbs and checked the prop and spinner for balance. I found them both needing work. I have come to believe that between the first and second flights the relationship of the prop to the hub changed 180 degrees. Bear with me. Both of these items were in need of balancing. Mounted one way, however, the hub and prop could have counterbalanced each other and run smoothly. Remounted the opposite way, there could have been significant out of balance vibration, perhaps enough to shake the fuel to a froth and lead to a dead stick. Eventually I will fly it some more and then we will see. Here are some pics.





## Field Mower Woes by Brad Quick

I'll share this story for two reasons. First, it has to do with mowing our flying field. Second, it has to do with diagnosing technical problems and many R/C enthusiasts enjoy solving technical problems.

The problem started when Bob Santoro was mowing the field. He stopped to take a break in the middle of mowing and when he started the mower back up, it made a constant beeping noise. He called me to tell me about the beeping, so I ran over to the field to see what was going on. Before I left for the field, I googled and determined that the beeping was probably related to a lower oil pressure switch.

When I arrived at the field, sure enough, the mower beeped as soon as it was started. I found the oil pressure switch and banged on it and if my memory is correct, it stopped beeping briefly and then started beeping again. My quick diagnosis was that the oil pressure switch was going bad. Under that assumption, I told Bob that he could continue mowing and ignore the beeping. I left and ordered a new switch off of eBay.

A few days later, the new switch arrived. It should be as simple as screwing one switch out and screwing the other one in, right? Well, the switch was in such a position that it was difficult to get a wrench on it, but I managed to get a wrench on it and tried to break it loose. I turned hard, but the wrench was slipping on the fitting and rounding it off. There was no way to get enough torque on it to crack it loose. The switch was threaded into a brass tee, so I got out my torch and heated up the tee. A couple of oil and grass fires later, I managed to get just enough torque on the fitting with the tee heated to break it loose. I was able to turn the switch about 1/16 of a turn before the wrench ran into the frame, then I flipped the wrench over and got another 1/16 of a turn or so, then flipped the wrench again and I hadn't turned it enough to be able to get the wrench on it again. I eventually figured out that I could get the wrench on it again if I came in from the other side, but there wasn't any room to swing the wrench until I removed the oil filter. I was finally able to slowly work the switch out by cycling through the three wrench positions.

The new switch I bought looked just like the old one except the plastic was white instead of black and it had 1/4" spade terminals on it instead of screw terminals. I had to cut the connectors off of the two wires that went to the switch and install connectors for spade terminals. I finally got the new switch in place and wired and when I started the mower up, it continued to beep.

So I then figured the problem may be in the oil filters. There was a small oil filter that screwed into the side of the engine and then the mower manufacturer had installed a larger bypass oil filter that ran in parallel. The oil pressure switch was in the tee coming out of the engine just before the oil went to the two filters. Maybe the bypass filter was clogged and bypassing and this allowed the pressure to drop to where the switch wouldn't work. So I ordered two oil filters.

Unfortunately, the oil filters took over a week to arrive and were expected to show up after the club picnic and the field needed mowing badly. I took another look at the mower. I detached the oil line going into the bypass filter and started the engine. Oil shot all over a tarp that I had covered the mower with. We had pressure. I put the oil line back on and removed the line after the bypass filter and started the engine. Oil flowed out more slowly this time, but it was flowing. The bypass filter seemed to be working and we had pressure, so I mowed the flying field with it beeping again.

The filters finally arrived and I installed them. When I started the engine, the beeping had stopped for a couple of seconds, then beep-beep-beep. Hmm. That was odd that I got no beeping at first, then I got beeping when it was up to pressure. It seemed like it was working backward. I looked more closely at the switch that I had removed and the switch that I had installed. Each switch had positions for three terminals, but only two were present on each switch. I noticed that the three positions were labeled C, NO, and NC for common, normally opened and normally closed. One switch had terminals on C and NO and the other had terminals on C and NC. I had bought the wrong switch. The switch that I bought worked backwards from the original switch, so it was beeping when it shouldn't and not beeping when it should. I ordered the right switch.

The good news is that after installing the proper oil pressure switch, the mower is back to running like it should.

## Interesting Stuff

**Tom Eng:** Tom Eng (left) Steve Curran (right) visit



## Pictures from our 2018 Annual Picnic



*Larry Kunz: packing the car with planes*



*Larry Kunz: the gallery*



*Larry Kunz: the cooks, left to right, Domenick Fusca, Tom Eng*



*Tom Eng: the gallery*



Tom Eng: 5 large cubs ready for take-off at picnic  
 Pilots from near to far Larry Kunz, Scott Fellin, Lloyd Quick, Brad Quick, Domenick Fusca



Tom Eng: 5 large cubs in the air

## **Picnic contest Results:**

**Musical Planes** – When told to land, last person to land their plane on the runway is out.

1<sup>st</sup> place: Brad Quick, 2<sup>nd</sup> place: Lloyd Quick, 3<sup>rd</sup> Place: Tom Eng

**Timed Fight** – Pick a time out of the hat, without the aid of a watch, time your flight to take off and land closest to the time picked.

1<sup>st</sup> place: Brad Quick, 2<sup>nd</sup> place: Tom Eng, 3<sup>rd</sup> Place: Larry Kunz

**Aerobatics** – left roll, right roll, and loop in the shortest time.

1<sup>st</sup> place: Lloyd Quick, 2<sup>nd</sup> place: Tom Eng, 3<sup>rd</sup> Place: the rest of the contestants did not finish.

**Spot Landing** – After several seconds of powered flight, dead stick landing closest to the spot marked on runway. Closest wins.

1<sup>st</sup> place: Brad Quick, 2<sup>nd</sup> place: Lloyd Quick, 3<sup>rd</sup> Place: Domenick Fusca

**Duration** – 10 seconds of power flight, then dead stick and stay in the sky as long as possible.

1<sup>st</sup> place: Domenick Fusca, 2<sup>nd</sup> place: Lloyd Quick, 3<sup>rd</sup> Place: Brad Quick

**Best Crash of the day** – Domenick Fusca, nosed vertically into the weeds. Looked real bad, but due to tall weeds and brush, plane survived to fly again.

**Top 3 finishers** (combined all events) – 1<sup>st</sup> place: Brad Quick, 2<sup>nd</sup> place: Lloyd Quick, 3<sup>rd</sup> place: Domenick Fusca