Volume 2020-08

Middlesex County R-C Fliers Club Newsletter – August 2020

Email: info@mcrcf.org
Web page: www.mcrcf.org
Newsletters: www.mcrcf.org/misc.htm
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Upcoming Club Events:

Wednesday, May 6, 2020, 7:30pm - MCRCF Online Meeting

All In-Person Events are considered CANCELLED* until further notice - all dates below are tentative and for planning only

President (interim)	Paul Sullivan	psullivan2313@yahoo.com 978.987.8301
Vice President	Paul Sullivan	psullivan2313@yahoo.com 978.987.8301
Secretary/Registrar	Saket Sankhla	Saket.Sankhla@gmail.com 978.495.6923
Treasurer	Jeffrey Ward	jeff@jeffward.biz 978.987.1142
Director	Dan Costa	
Director	Randy Grossman	
Director	Dan Micalizzi	
Newsletter Editor	Mel Suarez	MelSuarez@verizon.net 617.335.9770

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2 From The (acting) Prez – by Paul Sullivan

Covid-19 is still “the elephant in the room”. I’ve observed that mostly distancing and masks have been observed, but once or twice, I’ve seen otherwise. Please don’t assume that you’re not a carrier, or that anyone else is not.

Congratulations to Micah, our newest solo pilot! I’m excited for you, and hope that you continue to enjoy RC flying for many years to come. Thanks too Jim Orsborn, and everyone else involved.

Thanks too to all that show up at the Zoom meetings. It’s a big change for sure, and we all miss the after-meetups at Dunkin, sadly. One great thing has been the Show and Tell segments, especially with Ken Walker sharing of his collection with us.

3 New Pilot – by Jim Orsborn

Micah completed his Solo flight at our field today. He demonstrated that he can safely take off and land his plane in both directions with no assistance from me, using only the Advanced Flight Mode. I believe he has a good understanding of our club safety rules and he demonstrated them today, both on the ground and in the air. Micah is anxious to learn more about flying RC planes and by observing him today I believe that he has demonstrated a sufficient skill level to allow him to fly on his own at our field.

Micah has been a pleasure to coach. He has learned quickly because he has put in a great deal of time on a simulator and he has been anxious for us to meet at the field whenever we can make the arrangement. He has been very good about using our time together and making the most of his coaching experience. Micah has experimented with two different AeroScout models and used them to his advantage by learning how to set them up. When things did not work as expected Micah would call or write me to ask a question, and they often lead to a learning experience for us both.

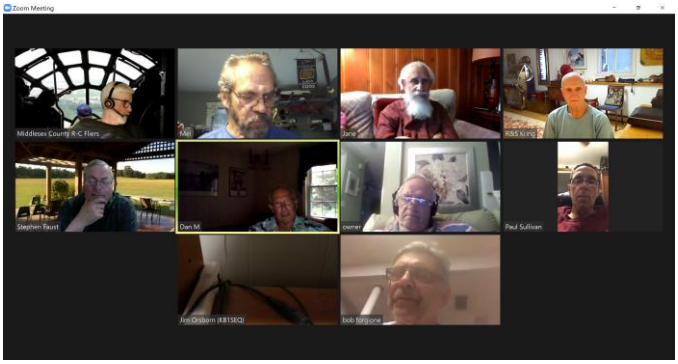
I mentioned how he has used the RF9 Flight Simulator, but he has also been able to practice flying his plane at another field closer to his home. Both experiences have enabled him to progress quickly from our first introductory flight to flying exclusively in the Advanced Mode.

Please join me in offering congratulations to Micah on this accomplishment.

Jim Orsborn

4 CLUB MEETING NOTES – JULY 1

Group Zoom pic:



Membership at 51.

Parks (like ours) are now open to passive recreation in Billerica.

Roland Sorel has started the Intro Pilot Program. He has a quad racing drone.

Jeff Ward has an extra copy of the **Real Flight 9** and controller.

Jeff will update the **member list** on the web site.

Paul talked about **electricity for a charge station**. Plan A is to trench over, Plan B is to come off the town's pole to our pole. A trench would save money. Solare charger is another option if others fail.

Mel asked about progress regarding **new members and training**. Paul thought it would be good to have a training report at monthly meeting. Dan Micallizzi will look into it. Dan has a cousin that would like to get into flying.

Paul Sullivan spoke about **maintaining a path** along the treeline to support plane retrieval (or is it parts?). Will get together at 10am, next Wednesday. Bring loppers, machette, bowsaw, chainsaw, pole saw, etc.

4.1 SHOW N TELL 

4.1.1 Ken Walker's Treasure

Who else but Ken Walker can pull this kind of ancient technology out of his basement and not just talk about its use, but also how he altered the design! What a treat it is.

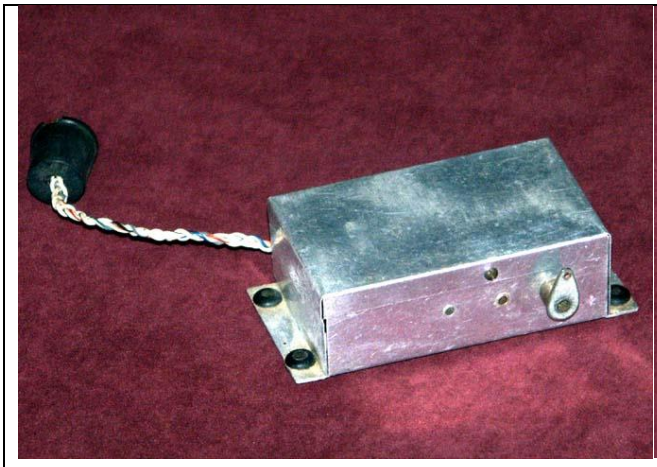
Hello Mel,

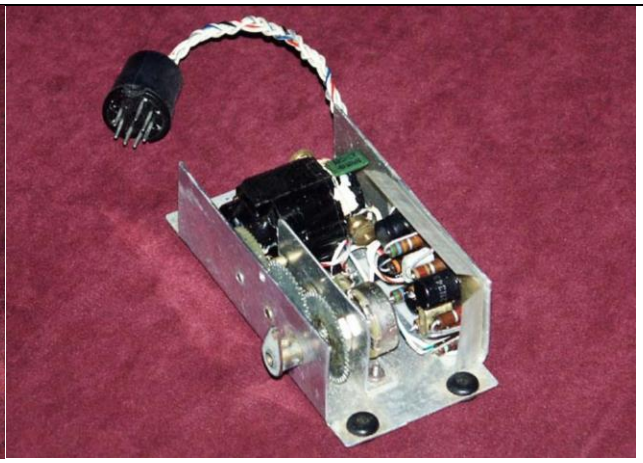
The gold anodized aluminum box is a 6-channel RC reed type transmitter operating in the 27-megahertz citizen's radio band. It is the Kraft/Ecktronics brand from Phil Kraft and Ed Eck in the early 1960's.

The 6 channels are operated by 3 spring loaded thumb switches that allow you non-proportional control of rudder, elevator and throttle. The electronics are a combination of vacuum tubes and transistor. An audio oscillator sends 6 different tones (not simultaneously) to the receiver which has a bank of 6 vibrating reeds that are individually tuned to a corresponding audible frequency. The reed sends a signal to one relay in a bank of 6 relays which tells the servo to move and which way to move.

The other picture shows one of the three homemade servos that I built from scratch to work with this system. Two clearer pictures of the servo are attached.

Ken Walker

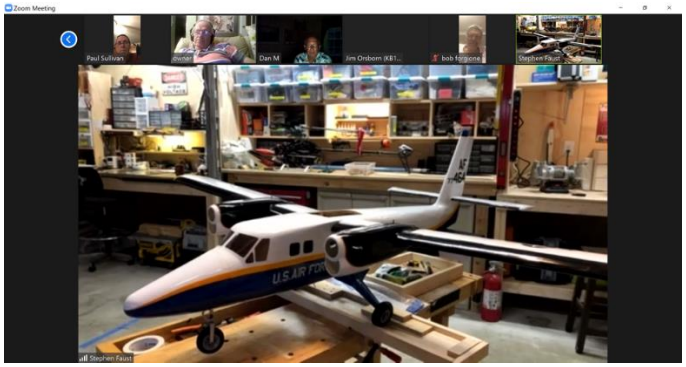




4.1.2 Roland has a drone

From Stephen Faust on 8/6: Yea, it's Roland's FPV quad. Was checking it out on Monday with him while training. I can look in more detail next time he and I are together to see who manufactures the boards, or any other id markings which will point us in the right direction. He was hoping to get together early next week, so I can let you know shortly after that.

4.1.3 Steve Faust showed off his Twin Otter



Hangar 9 Twin Otter. Has to pick motors, ESC and battery. 13 lbs. 82” wingspan. Nose wheel has shock absorber. He uses a tiny table saw.

People commented on Steve's workshop in the background of the Otter photo, including his many tools. Jeff mentioned the company "MicroMark" that has a great selection of hand and power tools optimized for folks working in the smaller scales. Their website is: https://www.micromark.com/

Here is their table saw, an example. Note the pencil as reference on the lower right. →

5 From The Hangar

5.1.1 Carl Vause

with his profile doing some 3D. check out a little flying at:
https://photos.app.goo.gl/AuXAb39puGrmypxy8

…and then with his aerobatic plane laying some classic lines in the air.

I had to break it to Paul Sullivan (aka Crocodile Dundee) that the bush whacker didn't belong on the runway. So, he went off-road with it. Note the blood pouring down his shin…no matter.	

5.1.2 Jose Mendes (not in the picture) is flying his new Autel Evo-2 these days.

"It comes with 12 sensors and a 35 minute flight time, propellers, controller. It's a nice bundle that uses the phone for display."

I believe he said the cost was about $2,300.

Here are some specs:

- HDR Video
- Omnidirectional Obstacle Avoidance
- 5.5 mile video transmission
- Dynamic 48MP still photos
- High-resolution thermal imaging
- Built-In screen controller
- 40 minute flight time

And a link:
https://www.autelpilot.com/

5.1.3 John Parisi's A26 Phoenix

with twin 17cc NGH17 engines.
It wouldn't get off the ground with just NGH9 9cc engines he said.

Sharad - Flex Innovations Cessna 170.

Got this used. It has all stock HW but had trouble with stock motor and ESC. Might replace it out with a Castle90 ESC and Power60 470Kv with a 4500mah 6s

6 ARE YOU GOING? AMA EVENTS

Below are the results for a search on the Event Finder at https://www.modelaircraft.org/

Event Results: **District 1, 8/1/2020 – 10/31/2020**

AUGUST8 - 9

MAINE CONTROL-LINE FLYIN 2020
CLASS C
Contact: EDWARD SCHMIDT
Location: 449 Augusta Road Topsham ME 04086
Visit Website

AUGUST13 - 16

2020 PLUM ISLAND JET RALLY
CLASS C - RESTRICTED
Contact: ROBERT RADFORD
Location: 19 Plum Island Turnpike Newbury MA 01951

AUGUST15

JOHN NICOLACI MEMORIAL FLOAT FLY ***EVENT CANCELLED***
CLASS C
Contact:
Location: 461 Mary's Pond Rd Rochester MA 02770

AUGUST15 - 16

NEW ENGLAND SCALE FLY-IN ***EVENT CANCELLED***
CLASS C
Contact: RAYMOND SCHMIDT
Location: 792 Conant St Bridgewater MA 02324
Visit Website

AUGUST22 - 23

WING OVER HADLEY
CLASS C
Contact: MICHAEL SHAW
Location: 21 Honey Pot Road Hadley MA 01035
Visit Website

AUGUST23

SILVER LAKE SHOOTOUT
CLASS A
Contact: NEIL SIMPSON
Location: 260 Pembroke St Kingston MA 02364

AUGUST29

RADIAN ONE DESIGN ALES CONTEST
CLASS A
Contact: DAVID SPIELMAN
Location: 233 North Road Sudbury MA 01776
Visit Website

AUGUST30

SAM-7 EAST COAST CHAMPS
CLASS AA
Contact: ALLAN VOLLMER
Location: 76 Maple Avenue Durham CT 06422

SEPTEMBER12 - 13

GRANITE STATE FALL IMAC
CLASS AA
Contact:
Location: 58 Locke Rd Concord NH 03301
Visit Website

SEPTEMBER12 - 13

WARBIRDS OVER ELLINGTON ***EVENT CANCELLED***
CLASS A
Contact: DENNIS THIBODEAU

Location: 190 Green Rd Ellington CT 06029
Visit Website

SEPTEMBER18 - 20

JOEL CHAPPELL MEMORIAL 24TH FALL FLOAT FLY-IN ***EVENT CANCELED***
CLASS C
Contact: TIM SOWDER
Location: 973 Forest Rd Greenfield NH 03047
Visit Website

SEPTEMBER19

BIPLANE BASH
CLASS C
Contact: DAVID BUTTERO
Location: 3 Meadow Rd Farmington CT 06032
Visit Website

SEPTEMBER19 - 20

KIWANIS FLOAT FLY IN
CLASS C
Contact: WILLIAM REEVE
Location: 40 Kiwanis Beach Rd Standish ME 04084

SEPTEMBER26 - 27

DISTRICT 1 OPEN FUN FLY ***EVENT CANCELLED***
CLASS C
Contact: MICHAEL FIORITO
Location: 190 Green Rd Ellington CT 06029
Visit Website

SEPTEMBER26 - 27

SSRCC MULTI CLUB FLY IN ***EVENT CANCELLED***
CLASS C
Contact: RAYMOND SCHMIDT
Location: 792 Conant St Bridgewater MA 02324
Visit Website

OCTOBER4

GREAT NEW ENGLAND ELECTRIC FESTIVAL
CLASS C - RESTRICTED
Contact:
Location: 21 Honey Pot Road Hadley MA 01035

OCTOBER11

BILL O'DONNELL MEMORIAL AIRSHOW
CLASS C
Contact: JOHN HOLCOMB
Location: 90 Cedar St Milford MA 01757
Visit Website

OCTOBER18

ANNUAL AUCTION
CLASS E - NON-FLYING
Contact: MICHAEL DASCOLI
Location: 474 North St Georgetown MA 01833
Visit Website

7 MODIFIED IT – BUT IS IT BETTER?? – JIM ORSBORN

When we decide to modify something;
Let's try to make sure it will be an improvement
By Jim Orsborn

I recently stopped flying glow models and currently fly only electric planes. Recent changes in electric power and the integration of gyros into the receivers shipped with trainer models has changed everything. While at the field recently, I observed several areas where a factory equipped AS3X equipped trainer had been modified in a way that may not have resulted in an improvement. I would like to offer a few comments on these well-intentioned modifications. Understand that the following comments represent my opinion. I offer them simply with an idea to help improve things for everyone.

I have come to enjoy the Horizon Hobby Apprentice, for several reasons that I will explain. I will mention that I have also agreed to help Coach students interested in learning to fly these models.

Comment: As a Horizon Hobby Flight Coach, my job is to help novice students *Get in the Air* as quickly as possible using any of the Horizon Hobby AS3X equipped models. These models come almost fully assembled and need little setup. They require no modifications and they are a perfect trainer for a novice pilot. I have used them on numerous occasions to introduce men, women and children to the fun of flying a model airplane.

I have always felt that Sig's Kadet LT-40 model was a classic, "Best of Breed" glow powered trainer. It was large, easy to see in the air, and the light wing loading made it especially easy to learn basic flying skills. Furthermore, the Club sponsored, buddy box style of training was ideally suited for this plane, because it allows the Instructor to have complete control of the plane. Sig tried to modify the model for electric flight, but it is no longer in production, likely due to decreased demand for the product.

The Horizon Hobby Apprentice is *not* an electric trainer in the same style as the Sig Kadet. These new models are built from molded foam. They are much lighter than a balsa model, and they have virtually no inertia or momentum to help them fly smoothly, even in a light breeze. This is where the AS3X gyro stabilization comes into play. These gyros help to stabilize the model's flight profile and this makes the Apprentice fly and "feel" like it is a much larger airplane.

Many of you have heard the saying that "large planes fly better." This is because they have more inertia and are less prone to being easily buffeted in a rapidly changing airborne environment (e.g. wind gusts). This is also why larger planes make better trainer models. When used as a trainer, these larger models are often used with a buddy box system that was introduced to help instructors keep their student out of trouble. We know that flight troubles often occur when a student makes an exaggerated correction to a wind gust, or they simply over control the model and it gets into an unsafe attitude. Instructors also need to watch the student carefully as they learn to make turns. This is because it can be difficult to maintain a constant altitude and the novice pilot's plane can quickly drop to an unsafe altitude.

The Apprentice was designed in a way that avoids the requirement for a traditional buddy box training approach. I can offer this opinion because I feel that most of the problems that a buddy box was designed to address are no longer an issue once the AS3X stability has been added to the model. Furthermore, the simple act of passing the transmitter to the Flight Coach will allow the AS3X receiver to start correcting for most mistakes.

With some coaching, the student will learn that they also have an option to help themselves out of a bad situation by simply switching back to the Student Mode. Obviously, this will not work if they are already in Student Mode – so the approach is to pass the transmitter to the Coach. But once they have a little experience, this should become the first reaction to any troubles when flying in the Intermediate Mode. As a Flight Coach I explain this technique early, and the student and I experiment using this technique as soon as they start flying in the Intermediate Mode. Note that the Apprentice transmitter has a button that switches the receiver into Panic Mode. The literature claims that the Panic Button can always be used to help the model recover from an unsafe attitude (e.g. unexpected inverted flight). In my

opinion, this is not always true, mainly because this recovery method is not appropriate until the pilot is using the Advanced flight mode. Remember that the Student and Intermediate Modes make it virtually impossible to roll the model into an inverted attitude because they limit both pitch and roll angles.

I came to the field recently with the intention of helping another pilot fly his new Apprentice. I thought that we were going to be flying a standard Apprentice model that had recently been setup, but never flown. What I discovered was that my friend had modified the model. He showed me a new bolt on wing arrangement that no longer required rubber bands. He had also mounted a battery connector on the side of the model. I noticed that the bind plug for the receiver was easily accessible because it was hanging out the side of the plane! I asked a few more questions and discovered that the plane had not been flown before and I was asked to help with its maiden flight. After binding the receiver and transmitter, we went over all of the controls and checked the plane's general airworthiness. One of the things I discovered was that no switch had been assigned the receiver's flight control mode function! Apparently the original AS3X receiver had been replaced for a standard Spektrum unit. I was going to have to fly the model without the AS3X stability features.

After careful consideration, I agreed to take the plane up for a maiden flight. I looked at the control throws and decided to use the middle position on all of the rate switches. In flight, I found that the plane had more than adequate control and generally it flew flawlessly. However, it seemed to constantly move around in the sky, and I needed to make small control corrections. During the entire flight I was never able to relax and feel comfortable that the plane could fly by itself. After I landed, I explained to my student that the maiden flight had been a success, but I did not feel it would be wise to use his model as a trainer. I had brought my Apprentice to the field, so I offered to start coaching him with my Apprentice instead.

Opinion: This pilot apparently followed the advice of someone who told him that he would never learn to fly with an AS3X equipped model and that he should replace the receiver before trying to fly the model. This pilot is an excellent builder, so the physical modifications that he made were beautifully executed. But it is my opinion that the modifications should be saved until later. The plane will be a joy to fly once he has soloed on an AS3X equipped Apprentice (by completing an entire flight using just the Advanced flight mode). When he does get to fly the model, he will probably realize that he received poor advice to remove the AS3X receiver. Without this receiver in the plane any pilot will discover that he needs to *constantly* fly the model with little or no time to relax and enjoy the flight.

Together we made several flights on my Apprentice. It still has rubber bands to hold the wing on, there are no dual rates, and the covering is loose in several spots. But the model has an AS3X receiver, and as I told him; "I can let a rank novice fly this plane without needing to use a buddy box." I demonstrated how I wanted him to handle the takeoff and then handed him the transmitter. He made about four flights using the two batteries I had available. During these flights he used both the Student and Intermediate flight modes. I usually land the plane myself on these early flights, but I was able to coach him through this experience and he made at least two landings himself without assistance.

I believe that the flights were controlled and fully instructional. I was able to easily coach this student thru each phase of these flights and I took the transmitter from him once; to make the first landing. I was able to talk to the student and explain to him how to avoid flying directly overhead or into the early morning sun. I also talked him through more than one landing approach; all without any incidents.

The beauty of the AS3X flight control is that I was able to comment (during the flight) on how the plane was flying straight and LEVEL while it was still in the Student Mode. I also explained how the turns were slow and graceful with no change (up or down) in altitude. I also took some time to explain on how the pilot should try to do the same thing when we shifted to the Intermediate Mode. With a novice student, I usually take the time to explain how to visually check the plane's directional line of flight. While in flight, I can explain the difference between the plane's ground track and the plane's heading in the sky. These are important visual observations that a student must learn to recognize quickly if they are going to tighten their sphere of control and become a better model airplane pilot.

Comment: I do not recommend trying to "improve" an AS3X model by removing the receiver. Nor do I believe that the basic setup should be modified to include a Buddy Box. In my opinion, these changes will result in a trainer with inferior flight characteristics and they will make it difficult to help the student learn to fly the plane by himself. Instead, use the AS3X stability features as an integrated training aide.

I like to fly my Apprentice because I can fly it under a wide variety of wind conditions. I even like to fly it under strong wind conditions that are not suitable for training, but they offer an opportunity for some practice under adverse conditions. Using the Advanced Mode, I can perform fully aerobatic maneuvers while keeping the plane within the limited space of our runway. I can also offer to let virtually anyone fly my model themselves even if they are a novice pilot with no flight experience.

ARF trainer models like the Apprentice have advanced technology features included in the design in an effort to make them easier and safer to learn how to fly. We are all familiar with the advanced technology found in new car models. Adaptive cruise control, lane assist and blind spot warnings are just a few examples of new technology designed to help the driver avoid accidents. When using a model like the Apprentice to help a new pilot learn to fly, I believe the best approach is to take advantage of the advanced features and use them as part of the training program.

8 Flying Tips 

8.1 Umbrella for your Transmitter? – From Micah via Jim Orsborn

Today, I noticed that Micah was using some add-on posts on his transmitter and asked him to share the link.

The posts include some colored sleeves for the switches, that make them easier to identify. But the neat things are the add-ons for the two sticks. They look like flat disks at the top, but they provide GREATLY increased size and tactile feedback when using either the pinch or the finger/thumb on the top technique. Please take a look at the URL for a better explanation.

https://www.amazon.com/Apex-RC-Products-Spektrum-Transmitter/dp/B079QJ1MBT

Please submit your tips to me at melsuarez@Verizon.net , on WhatsApp or text (617.335.977O) and put "TIP" in the text, in the subject or text so I can find it later. Don't everyone write at once! (Just kiddin' 😊)

9 Wing Cube Loading – By Jim Benn (reprint)

From Jim Orsborn

Hi Mel,

I made a comment on WhatsApp about how a model's Wing Cube Loading can be used to indicate how well the model will fly. No one seemed to pick up on the comment or ask any questions, so I just dropped the subject. But today I decided to look up the original article that was published several years ago on this topic. I found it in the May 2006 issue of the Club Newsletter that is archived on the Club website. I've reprinted the article from my original version of the Newsletter and included the WCL graphic (last page) that Jeff had to delete because of limited space on the website.

Anyway, I thought the article might be of interest for your next edition of the newsletter. If you do include it, you might mention that the Club Website has a large archive of old newsletters. They are all available to be downloaded and many include interesting articles on relevant topics. They also include numerous pictures of previous club events and activities. For instance, the May 2006 edition that included this article has a photo of the flight line poles being installed and some more photos of folks working the Clean-up Day event that year.
Jim [Orsborn]

Reprint from May 2006 MCRCF Newsletter

I was out at the field a few days ago, and was chatting with Jeff about his and my "Little Extra" models. It seems that a few of our club members have purchased this great little model. Mine works wonderfully with the recommended .074 engine, but I understand others have used larger engines.

I thought some of you may be interested in this discussion. As you may know, smaller models require a lighter wing loading than larger models to have similar flying characteristics. A useful tool for predicting the relative performance of different sized models is called the Wing Cube Loading (WCL) (Ref. Mo del Aviation, July 2002).

The formula is WCL = Wt / (A ** 1.5)
Wt = model weight in ounces
A = model wing area in square feet (raised to the 1.5 power)

This results in ounces per cubic feet and is a good predictor of how the model will fly. The formula works the same for both large and small models. For different types of models, regardless of wing area, the WCL predicts the flying characteristics of the model as follows:

WCL	—	Flight Characteristics
4		Thermal glider
6		RC Trainer
9		Sport Aerobatic
10		Pattern Model
12		Racer

Scale models may have a WCL that ranges anywhere from 6-15.
My "Little Extra" weighs 26 ounces ready to fly, and has a wing area of 344 sq inches (2.39 sq ft). So my WCL = 26/(2.39^1.5) = 26/3.69 = 7.04 . Therefore it should and does handle somewhere between an RC trainer and a Sport Aerobatic plane.

Another version of the same model that weighed 36 ounces, would have a WCL of 9.75 and fly more like a pattern model; that is to say, hot and hard to handle.

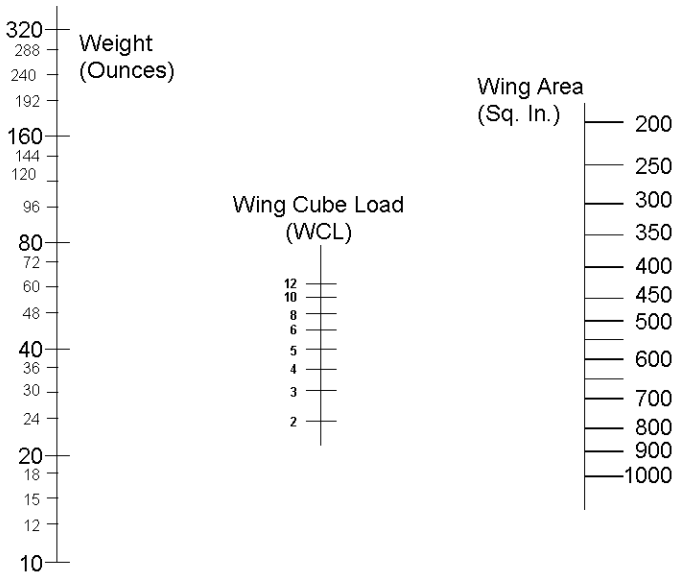
Conversely, if the model had 244 sq inches wing area at a weight of 26 oz, the model would have a WCL close to 12, and be extremely hard to handle.

I recently flew my new Great Planes U-Can-Do 60 ARF. I was amazed at how easy it was to handle, and how it came in for a landing as though it were on railroad tracks. The wing loading for this Beast is 17 ounces per sq ft, yet it flies a whole lot easier than the Little Extra with a wing loading of 11 ounces per sq ft. The reason is that the WCL for the model calculates out to only 6.4, which is lower than the Little Extra at 7.04. This means that the U-Can-Do should fly more like an RC trainer than the Little Extra, confirming my experience with these two models.

Hope some of you find this useful,

Jim Benn

[Ed. Note. Try the little graphic below. Draw a line from model weight to wing area and see where it crosses the WCL line — for most accurate results use the formula.]



[From Jim – link to a calculator for this: http://www.flyrc.com/wing-load-calculator/]

10 FROM THE EDITOR – BY MEL SUAREZ

For some strange reason I'm still enjoying the tiny Blade Inductrix FPV Brushless. It's amazing the fun one can have for just $89 – never mind the expensive goggles, extra batteries, and transmitter. I've progressed (ever so slowly) to doing loops and an occasional roll with this toy. Flying around trees and obstacles is such a hoot.

Full scale flying is going slower than it should, partly because of some health issues at home.

Last Saturday I had my first mountain-biking experience and although it was indeed exhilarating at times – riding the back brakes, leaning way back while getting off the seat so as not to go flying head first – I don't think I need yet another hobby.

On another note from the field…

Momma bear exposing her young bucks to the craziness of our RC world. The kids are damaged now, for sure. LOL There were a lot of passers by that day. I love telling them about the hobby.	

11 Random Stuff

11.1 Support Your Local Hobby Store & Get Discount

This is one great hobby store and the owner, Bill Horton, has agreed to provide our Club with a discount. Show a current MCRCF membership card and receive a 5% discount for any purchase over $25.

http://abcrchobbies.com/ 11 Rockingham Rd, Windham, NH 03087; (603) 458-6481

11.2 Plane Retrieval

Call Paul Sullivan – his friend, Mike, charges ~$50 to retrieve a plane.

If you wish to unsubscribe, please email info@mcrcf.org and write "UNSUBSCRIBE" in the subject.

If there's someone you would LIKE to subscribe, send their email along and thank you.