

the

Monitor

February

The MRCS Officers

2021

President:

Greg Eilers
3061 Budd Rd.
Stockbridge, MI 48285
Phone: 517-416-2685

Vice-President:

Ken Myers
1911 Bradshaw Ct.
Commerce Twp., MI 48390
Phone: 248.669.8124

Secretary:

Lynn Morgan
15790 Penn
Livonia, MI 48150
Phone: 734.679.8468

Treasurer:

Dave Stacer
PO Box 75313
Salem, MI 48175
Phone: 313-318-3288

Safety Officer:

Bill Brown, Jr.
18659 Fox Hollow Ct
Northville, MI 48168
Phone: 313.268.4167

Head Flight Instructor:

Ken Myers
1911 Bradshaw Ct.
Commerce Twp., MI 48390
Phone: 248.669.8124

Newsletter Editor:

Ken Myers

Next Meeting: Date: February 3, 2021

Time: 7:30 p.m. **Place:** On Zoom

What's In This Issue:

Renew Your Midwest Membership for 2021, President - MPORTANT WARNING ABOUT USING OUR FLYING FIELD! - Designing and Building With Dollar Tree Foam Board - Even More Info On Foam and Foam Board Type Airframes - Midwest January Zoom Meeting - Upcoming Events

Time to Renew Your Midwest Membership for 2021

From Lynn Morgan

MRCS Club Secretary

Reprinted from the December 2020 issue

EAA building is currently closed down to the public.

Lynn

MRCS Secretary

<http://theampeer.org/midwest/currentapp.pdf>

Hello Gents,

It is that time of the year to think about next year's MRCS membership application. Hopefully you had some relief from the COVID thing, and were able to get out and socially distance at the field with other club members.

Many THANKS to Larry and Ted for running the MRCS Glider League this summer which turned out to be a great success. Several new faces were added to the club and a few seasoned members participated, please consider participating next year, it has been a lot of fun and very challenging at a very reasonable cost!!

Please find the 2021 membership application link below. It looks like club meetings will be conducted online as the

Note that Lynn's address IS on the membership application. KM

IMPORTANT WARNING ABOUT USING OUR FLYING FIELD!

Reprinted from the January 2021 issue

This has been a strange winter with continual freezing and thawing. Please heed the following advisory. KM

When the weather is going through constant freeze and thaw cycles, the flying field is to be considered CLOSED!!!

Neither the entrance road or the

Helicopter Frequencies

21, 27, 29, 39, 41

Sailplane Frequencies

11, 12

The Monitor online at: <http://www.midwestrcsociety.org>

parking area cannot support vehicle traffic during these cycles.

Please, unless the ground is totally frozen solid, stay off the entrance road and parking area.

Designing and Building With Dollar Tree Foam Board

By Ken Myers

Based on His Presentation During the January 6, 2021
Zoom Meeting for the Midwest RC Society

Background:

I have built several Dollar Tree Foam Board airplanes over the past several years.

Two were based on designs from FliteTest.

The other two were of my own design.

FliteTest Website

<https://www.flitetest.com/>

FliteTest Store

<https://store.flitetest.com/>

FliteTest Forum

<https://forum.flitetest.com/index.php>

FliteTest on YouTube

FliteTest

<https://www.youtube.com/user/flitetest>

FliteTest Tech

<https://www.youtube.com/channel/UCrTpude4ov3gWwSZQnByxLQ>

FliteTest Community

https://www.youtube.com/channel/UCoDYSpX0Vgh8sZ6UBD7_5iQ

FliteTest (FT)

Who and What is Flite Test?

<http://theampeer.org/ampeer/ampjul18/ampjul18.htm#FT>

Flite Test Partners With amain hobbies

<http://theampeer.org/ampeer/ampsep18/ampsep18.htm#FT>

Since the FT partnership with amain hobbies, the output of new airframes has markedly decreased, kits are not as readily available and the prices for FT power systems has risen much faster than inflation.

The Old Fogey

In early 2016 I built an enlarged version of the FliteTest (FT) Old Fogey. I enlarged 1.22 times to use a power system that I had on hand.



There are areas in the FT build that require folds over or under parts, so the slots, where the folds are, need to be adjusted to the correct width. A 2D CAD program was used to enlarge the plans and adjust the slot cutout widths.

Since it was my first DTFB build and FT designed plane, it became my learning experience regarding the material strengths and weaknesses, as well as the design ability of Josh Bixler.

FliteTest.com & The Old Fogey

<http://theampeer.org/ampeer/ampjun16/ampjun16.htm#OF>

More on the Old Fogey's Old Fogies

<http://theampeer.org/ampeer/ampjul16/ampjul16.htm#FOGEY>

There is a lot of information to be learned from those articles.

After flying it for quite awhile, I gave the final version of my Old Fogey to Tim Young.



After finally working out the bugs in the Old Fogey, I wanted to see if I could build a simple Ugly Stik/Ugly Stick type plane, but I wanted to see if I could build an airfoil based on a “real” airfoil.

The NACA 2412 was my chosen airfoil, and it worked out reasonably well. It did require a bit more effort, but I think it was worth it.

Ken Myers' Dollar Tree Foam Board (DTFB) Ugly Stik

<http://theampeer.org/ampeer/ampmay17/ampmay17.htm#STIK>

I still have, and fly, this Ugly Stik.

What I learned from the FliteTest Simple Cub

My Award Winning Flite Test Simple Cub

<http://theampeer.org/ampeer/ampdec18/ampdec18.htm#CUB>

Ken Myers' Modifications to FliteTests' Simple Cub - Part 1

<http://theampeer.org/ampeer/ampdec19/ampdec19.htm#CUB1>

Modifications to FliteTest's Simple Cub - Part 2

<http://theampeer.org/ampeer/ampjan20/ampjan20.htm#CUB>

Modifications to FliteTest's Simple Cub - Part 3

<http://theampeer.org/ampeer/ampfeb20/ampfeb20.htm#CUB>

Modifications to FliteTest's Simple Cub - Part 4

<http://theampeer.org/ampeer/ampmar20/ampmar20.htm#CUB>

Modifications to FliteTest's Simple Cub - Part 5

<http://theampeer.org/ampeer/ampapr20/ampapr20.htm#CUB>

In part 5 I noted that a part 6 would follow, but I never completed and published part 6.

The following are the links to the draft of my final version, version 5.

<http://theampeer.org/Kens-Simple-Cub-v5/Construction/Kens-Introduction-to-FT-Cub-Mods.pdf>

<http://theampeer.org/Kens-Simple-Cub-v5/Construction/Construction.pdf>

Again, there is a lot of useful information in those articles.

I still have and fly the version 4 Simple Cub, which is covered with Eonkote.



Version 4

I have the 3-channel version 5, which I use for training after introduction training using the RUA (Really Ugly Airplane) 2-4-10. I still love flying the 4-channel version 5 Simple Cub for sport flying.



Both Version 5s

Both of the version 5 Simple Cubs are painted with stick-on graphics applied to the yellow paint.
Designing and Design Considerations for the RUA 2-4-10

It is no secret that for many decades I've been trying to find the “best” trainer for my student pilots and training technique.

The one that I finally found that was best for my teaching style and methods was the FMS SuperEZ. The FMS SuperEZ PNP AKA SupREZ Review <http://theampeer.org/ampeer/ampmar16/ampmar16.htm#SUPEREZ>
 The FMS SuperEZ PNP AKA SupREZ Review: Part 2 <http://theampeer.org/ampeer/ampapr16/ampapr16.htm#SUPEREZ>
 A Change in the Stock ESC for the FMS SuperEZ <http://theampeer.org/ampeer/ampjun17/ampjun17.htm#SUPEREZ>
 More on the ESC Problem in the FMS SuperEZ <http://theampeer.org/ampeer/ampjul17/ampjul17.htm#ESC>
 Some FMS SuperEZ Models <http://theampeer.org/ampeer/ampnov17/ampnov17.htm#SUPER>

Since I was well into the use of DTFB construction, I thought that I could design a decent flying, inexpensive and somewhat disposable airframe for training using DTFB.



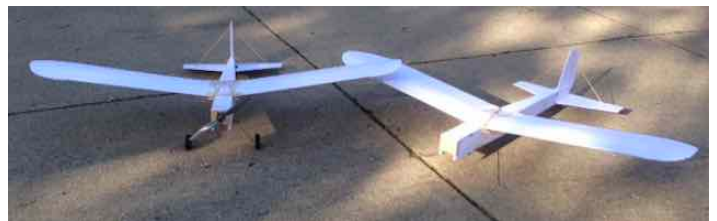
I was pretty sure that I wanted something along the lines of the Leisure Amptique.

Before getting into the design, I refreshed my memory regarding basic design proportions by rereading "Basic Proportions for R/C Model Aircraft" by Andy Lennon, Model Airplane News, Nov. '96.

I also reviewed Keith Shaw's "Building and Flying Electric Sport Scale" a Transcript of Keith Shaw's presentation to the 1992 Electric Model Fliers of Southern Ontario General Membership Meeting, March 1992. It was transcribed by Martin Irvine of Kingston, Ont.

<http://theampeer.org/shaw/ShawConstructionNotes.pdf>

While the article by Keith relates to constructing a typical balsa and plywood construction plane, there is also a lot of information regarding general design decisions.



I knew that I wanted to use the same construction as the Simple Cub wing, but I wanted to built as large as possible, span wise, using two widths of DTFB.

I also realized the errors that were designed into the original FT design Simple Cub, and set out to avoid them

For one thing, I built 2 degrees of wing incidence into the fuselage design.

I did not want the landing gear to be attached to the interior of the foam board fuselage. I'd recently seen a landing gear design, similar to the one that I used for my design, in a magazine. I decided to "borrow" the design.

Using the design articles, the Amptique, and other tips and tricks I'd learned over the years, as well as what I'd learned from working with DTFB, I created a prototype.

To keep the design simple, only a 3-channel version was designed.

I fly it with the rudder channel mixed 100% to the aileron channel so that my students can use the

“rudder” stick on the ground and the “aileron” stick in the air.

The rudder and elevator servos are placed way back in the fuselage, near the tail.

To achieve the proper CG, without adding weight, the nose of the prototype was shortened and lengthened several times until it was “just right”. That’s very easy to do with foam board and glue.

I suggest that two airframes be built at once, as the two airframes only require 10 sheets of DTFB and the second plane provides for a back up.

Everyone knows that if you have two of something, the first one will last much longer than if you only have one of it.

The Power of Two

<http://theampeer.org/ampeer/ampapr18/ampapr18.htm#2>

The RUA 2-4-10

You Can BUILD and FLY Your Own RC Plane

<http://theampeer.org/RUA-2-4-10B/RUA-2-4-10B.html>

Some of the Things I’ve Learned

My preferred adhesives are, Aleene’s Original Tacky Glue and 15-minute epoxy. For tape I use packaging tape and strapping tape.

Other tools and supplies that I use can be found here.

<http://theampeer.org/RUA-2-4-10B/RUA-2-4-10B.html#TOOLS>

I use a fairly thick, inexpensive Yoga mat to cut on. It is much cheaper than a cutting mat and can be discarded if it gets too cut up, but mine is still just fine after lots and lots of builds, including 9 complete RUA 2-4-10s. Yeah, each prototype had some changes to it.

Thoughts on a One Design Contest

Greg Eilers suggested that we might want to have a “One Design” plane contest where everyone flies the same plane through a series of events.

That could be a lot of fun. Pete Waters put on a few simple events for us a couple of years ago, and they were a lot of fun. Thanks again Pete!

Greg suggested that we might want to consider the FT Stick design as he’d seen Paul Sockow’s fly, and it looked like it performed well.

Unfortunately, the Flite Test Simple Stick "Maker Foam" Electric Airplane Kit (1067 mm) has been on backorder for more than three months now.

<https://store.flitetest.com/flite-test-simple-stick-maker-foam-electric-airplane-kit-1067-mm-flt-1168/p1225402>

The construction video was released on YouTube on August 11, 2020. Although their typical practice has been to release the plans to the public, FT has not yet made the plans available.

https://youtu.be/5UDfUt_JMKc

The FT Simple Stick is based on a design by a person known only as The Hangar or sometimes The Hanger.

<https://www.flitetest.com/articles/simple-stick> and

The plans, but not from FliteTest.

<https://forum.flitetest.com/index.php?resources/simple-stick.125/>

and

<https://forum.flitetest.com/index.php?resources/simple-stick.125/updates>

Wanna Give It a Try?

If you think you might want to give foam board a try, you might want to download a set of PDF plans from FliteTest just to try the building techniques.

With just a few dollars worth of foam board, you could learn a lot about their techniques, and you wouldn’t even have to make it flyable. The choice would be yours.

Here is an example of how to get other plans from FliteTest.

You can find a plane in the FT Store that you might like to try.

<https://store.flitetest.com/>

Note the name of the plane and then go to <https://www.flitetest.com/>.

Type the name of the plane in the search box.

I chose Tiny Trainer and it came up with a link to Flite Test | Tiny Trainer BUILD.

The FT Tiny Trainer Build page has a link to the build video at the top of the page and the links to the free plans near the bottom of the page.

I did not provide the URLs for the Tiny Trainer, as I wanted you to find it on your own so that you could find others if you so desire.

Have fun and keep building models!

Addendum:

During the presentation, **Larry Markey** asked what brand of motors I recommend and what “size” I was using.

I **incorrectly** stated a Cobra 2017-20 with about a K_v of about 960, from memory.

My response was incorrect because the “best” answer would have been a 72 gram 960 K_v motor. Weight and K_v are the “best” way to compare motors, as the numbers like 2217 vary on how the manufacture or supplier want to name their motor. Some use the exterior bell size while others use the stator size.

<https://innov8tivedesigns.com/cobra-c-2217-20-brushless-motor-kv-960.html>

That page contains a great deal of useful information about that motor.

I also should have mentioned that I like the motors from Innov8tive Designs because Lucien Miller provides actual test data for the motors that he sells.

https://innov8tivedesigns.com/images/specs/Cobra_2217-20_Specs.htm

Larry recommended that I look at the Sunny Sky brand. I noted that I was familiar with that brand but didn't know where they were sold anymore. He said they are available in Ohio.

I found them available at SunnySky USA.
<https://sunnyskyusa.com/>

I found the Website difficult to navigate, as there were a lot of different names for the motors they sell; Angel motors, EOLO Motor, F3P Motors, M motors, Other Multirotor Motors, R motors, V motors, X motors, X V3 motors, and XS motors.

I looked at each of the motor “lines” and found that the majority did not provide the motor weight, nor maximum amp draw or suggested voltage range.

While poking around in the motors, I did find their prices were reasonable, for sure, but for ME, I could not find enough information to order one.

Even More Info On Designing With Foam and Foam Board Type Airframes

From Arthur Deene via email

Ken,

I see you are the speaker at the next MRCS meeting and that the subject is foam construction.

I would like to suggest that you include a link in your presentation to videos on YouTube from both “Experimental Airlines” and “Andrew Newton”. If you subscribe to these videos (free) you can quickly get a listing of all their uploads.

The information on the Experimental Airlines site is particularly interesting. His video on covering foam board with tape provides many tips to make the job quick and reliable.

<https://www.youtube.com/user/ExperimentalAirlines>

He also provides information on tests he has made to compare various wing spar constructions.

Overall a site with a lot of useful foam board construction info.

I was also interested in the lightweight covering tape he recommends from Tapebrothers.com. It is a thin 2 mm clear tape with colored adhesive.

<http://tapebrothers.com/>

The Andrew Newton's videos are more about building and flying foam planes. He flies several foam sailplanes which should be of interest to our sailplane group. He also has several equipment tests documented.

<https://www.youtube.com/user/andyandvirg>

One I was particularly interested in details a radio system that had a return to base feature and will not allow the motor to start until the plane had been hand launched

Hope this helps.

Stay safe and let's hope 2021 will be a better year.

AJ

Midwest January Zoom Meeting

Our monthly meeting, held on Wednesday, January 6, at 7:30 P.M. was held over Zoom. There were 17 members present.

Greg Eilers, club president, noted that in his previous message to the club, he did not want to sound alarmist and didn't want to sound like we are in dire financial trouble. He just wanted us to help him think of ways that we can possibly make money to make up the short fall created by not being able to have our annual swap shop.

It was suggested that we look into the possibility of reducing the field rent in winter. It was also suggested that Greg contact George Harm to help him with this as he's a personal friend of Marty, the field owner.

Dave Stacer, club treasurer, gave his full financial report. We could clearly see our annual expenses and incomes, based on the information he presented. Yes, we did have a "short fall" for this past year, but there were a few items that partially offset this short fall, most notably were donations to Midwest from those who received Rich Seivert's planes.

Dave also shared our current balance in the bank.

If you have any questions, please feel free to contact Dave directly.

Larry Markey volunteered the use of the parking lot at his business for swap shop later this year.

Greg said that he get with Larry to put a time frame together for this year.

Roger Wilfong said that he didn't check with his contacts at the Rib Crackers about our offer to let them join without paying the \$25 initiation fee.

Ken Myers did his presentation.

Ken wants to thank Dave for putting up the homepages of various sites while he was doing the presentation.

During the presentation **Ved Hiremath**, asked through Chat, whether or not the Flite Test Commuter "Maker Foam" Electric Airplane Kit (762mm) would be a good plane, as he really likes the look of it.

<https://store.flitetest.com/flite-test-commuter-maker-foam-electric-airplane-kit-762mm-flt-1120/p1218496>

Dave Stacer answered that he knew what Ken would say, and told Ved that the trike style landing

and relatively small wheels might cause a problem getting off the grass.

Yeah, he's been hanging around Ken a long time and was right on.

Ken finished up by noting that if Bed didn't mind not installing the landing gear, it might be an okay plane for hand launching and belly landing.

To change your email address contact Ken Myers at kmmyersefo@mac.com

The 2021 membership application is available at the club Web site,
<http://www.midwestrcsociety.org>,
for downloading with the link on the homepage.

Upcoming Events:

Starting Wednesday, October 14, Indoor RC Flying at the Legacy Center in Brighton, MI (more details in this issue)

Starting Thursday, October 15, Indoor Free Flight Flying at the Legacy Center in Brighton, MI, 10 a.m. - ???

On Thursdays, Indoor RC Flying, Premier Sports Center, 23 Mile and Hayes, from 9 AM to 3 PM. (details in this issue)

Starting Tuesday, October 27, Indoor Flying at the Ultimate Soccer Arenas in Pontiac, MI

Please note that there is NO Flying Here for the month of January! Flying is, at this time, planned to resume in February.

Wednesday, February 3, 2021, Midwest RC Society Monthly meeting, 7:30 p.m. on Zoom. Be sure to check the club Website for any last minute changes and check your email for the Zoom meeting URL.

Guest Speaker: To be finalized

Topic: TBD

Renew your Midwest Membership today!

Mail your application, found on our website, a copy of your AMA membership card and check to Lynn Morgan ASAP. His address is in the heading of this newsletter.

Midwest RC Monitor
Editor: Ken Myers
1911 Bradshaw Ct.
Commerce Twp., MI 48390

The Next Meeting:

Date: Wednesday, February 3 , 2021

Time: 7:30

Place: On ZOOM