



Colonial Virginia Aeromodelers

Chapter 1474
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March 2021
Editor: Alan Fry



Presidents Column: John Backes

Upcoming Meeting Schedule

March meeting - Saturday after normal meeting day @ 1:00 Rain date Sunday.
April meeting - Saturday after normal meeting day @ 1:00 Rain date Sunday.

March Meeting

Check the guestbook for scheduling of the meeting if there is a possibility of rain.

FAA Remote ID

The FAA remote ID rules were released recently. A summary of the rules on the AMA website is here:

<http://amablog.modelaircraft.org/amagov/2021/01/01/summary-of-faas-final-rule-on-remote-id/>.

The rules become law 60 days after they are published in the Federal Register. UPDATE: The rules have not been published as planned. All planned rules have been delayed until they can be reviewed by the new administration. The rules have a 30-month period before they will be enforced. The rules will not change anything about flying at the CVA field. We will have to register the field as an FAA Recognized Identification Area (FREA) prior to that date.

Flying outside of a FRIA requires the aircraft to broadcast information. This can be built into the aircraft (Standard Remote ID) or with an add on Broadcast Module. The Broadcast Module is expected to cost \$25 to \$50 and can be moved between aircraft.

FAA Testing

The one area that will affect everyone that registers with the FAA is a requirement to take a test. The test is 20 multiple choice questions and is guaranteed pass if you complete the test. If you get a question wrong, they will give you some information and then ask the question again. The follow video has more info:

<https://www.youtube.com/watch?v=smxN4Elgsh0&feature=youtu.be&t=1947>

Start at 33:15. There has been some action on this but it will probably be mid-summer before the testing is available and there is no word on when it will be required.

Activities

We will not be having any formal activities until the Coronavirus threat has lessened considerably. With the current trend and increase in vaccinations, I hope that we can have events in the summer or fall.

Training

Bob Juncosa was doing most of the training but has decided that he does not have sufficient time to be the main trainer. If you are able to help with training, please contact me.

Show and Tell

We are going to have a short show and tell at the end of each meeting. Bring it and show us!

Contact Me

Phone: 757-876-1241

Email: jb753@cox.net

Address: 8630 Diascund Road, Lanexa, Va. 23089



Secretary's Report: Fred Hill

The minutes from our last meeting was reported in the mid-January newsletter. Since we did not have a February meeting, there are no meeting minutes to publish in this newsletter.



Training: Bob Juncosa

"The Immelmann Turn"

The year is 1914 and air combat is still in its infancy. Max Immelmann, the man that would become Germany's first "Ace" performs a turning maneuver in a Fokker Einderker that will eventually bear his name, the Immelmann Turn. In the modern era, the maneuver is a basic one but back then it was revolutionary and considered the best way to reverse one's flight path quickly so that you could obtain a position on your adversary's "six".

As old as this maneuver is, there is still considerable debate on exactly what it is and how it is done. I'll try to clear up some of the confusion.

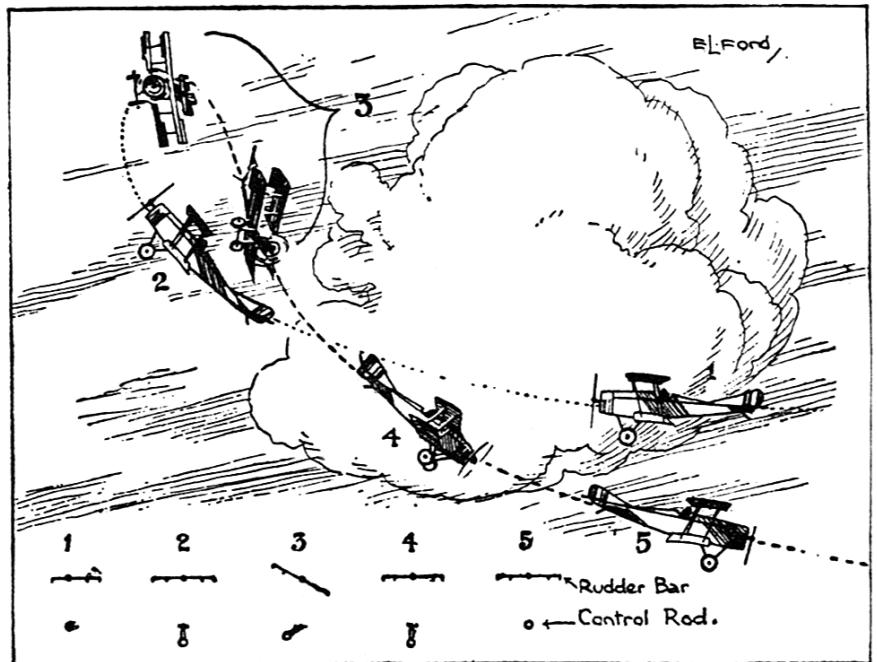
Consider the combat situation where 1) you have just completed strafing a ground target, 2) you have just finished a head on pass with an opponent, or 3) you have just shot past an opponent headed in the opposite heading after attacking his plane from above. In all three cases, you want to reverse your direction as quickly as possible to hopefully regain your advantage and re-engage your enemy. An Immelmann is a way to do just that.

The Classic/Historical Immelmann

As we will see later, there are all sorts of descriptions and opinions as to what an Immelmann is but let's start with the historic version.

An Immelmann starts with a moderate dive to gain speed. That stored energy is used to put the plane into a steep climb sufficient to reach an altitude either the same as when the engagement was broken off or higher than that of your opponent, now headed in the opposite direction.

Before reaching the stall point, hard rudder is kicked over to quickly reverse your direction. (Left rudder was typically used in order to take advantage of the forces of a rotary engine and spinning propeller.) As your plane reverses its flight path, elevator is used to put your plane in the best position for re-engagement. Check out the figure to the right. It is from 1918 training material.



So, as you can see in the diagram, an Immelmann turn is a *yaw* maneuver.

The Immelmann Debate

Fast forward to present day. Even among the full-scale flying community there are all sorts of definitions of what constitutes an Immelmann. My issue with some of these is that they are inconsistent with the intent of the maneuver in the first place. It was conceived as a combat maneuver, not a demonstration maneuver.

These days, an Immelmann is sometime referred to as a “stall turn”. Intentionally stalling a WWI plane is/was never a good idea. Some had very poor or nonexistent stall recovery capabilities. Also, taking the plane to the stall point in a combat situation would waste valuable time and dissipate more energy from the plane than necessary. Remember, the point is to reach the best altitude to re-engage the enemy in the shortest amount of time. Climbing to the stall point just for the sake of the stall does not do that.

Just for the record, if you entered into an Immelmann-like maneuver but took it straight into the vertical, stalled at the top and kicked over hard rudder, that would be a Hammerhead Stall.

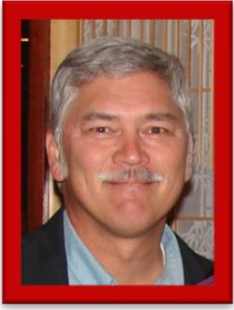
Then there is what some call the “Modern Immelmann”. This is where the plane is taken all the way to the top of a half loop and then rolled over from the inverted. In my opinion, rubbish! That is really half of a Cuban 8 where the roll is done at the top of the loop instead of at the 45° portion of down side of the loop. An Immelmann is a yaw maneuver, not a roll maneuver.

I hope you have enjoyed this mix of training and history. Give the Immelmann a try.

Happy Landings

Bob Juncosa

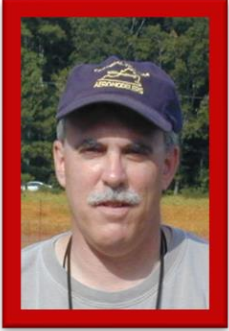
bob.juncosa@gmail.com



Safety Officer: Cliff Casey

Hope all is well out there. For the most part the weather has been wet. Field condition has not been great. Watch the ground; it's very muddy. Slipping and falling will be painful.

Fly Safe, Be Safe



Newsletter Editor: Alan Fry

<p><u>President:</u> John Backes (757) 566-1403 jb753@cox.net</p>	<p><u>Secretary:</u> Fred Hill (864) 441-1120 fred_hill07@yahoo.com</p>	<p><u>Safety Officer:</u> Cliff Casey (757) 342-4358 rccasey@verizon.net</p>	<p><u>Activities:</u></p>	<p><u>Newsletter</u> Alan Fry (757) 229-7698 Alanwfemail- CVA@yahoo.com</p>
<p><u>Vice President:</u> Randy Rogers (757) 784-7181 RRogers72@cox.net</p>	<p><u>Treasurer:</u> Jon Persons (757) 603-1929 mrpersons@hotmail.com</p>	<p><u>Field Marshal:</u> John Hofmeyer (804) 829-2555</p>	<p><u>Field Maintenance:</u> Randy Rogers (757) 784-7181 RRogers72@cox.net</p>	<p><u>Training:</u> Bob Juncosa (585) 414-3328 Bob.Juncosa@gmail.com</p>