HCR MASSACHUSETTS

AM









Come on out every Friday night (weather permitting) for our grill and chill, and fly of course. Hot dogs and hamburgers as well as drinks usually provided but feel free to bring what ever you want.



WELCOME TO THE HCRC CLUB!

Hey everyone,

Help me welcome our newest members to our club! When you see them at the field be sure to go over and say "Hello" and lend them a hand to get started if they need it.

- 1. David Gage, Agawam, MA.
- 2. Karsten Joensen, Northampton, MA.
- 3. **Liv Joensen**, Northampton, MA.
- 4. Dave Landon, Enfield, CT. (Returning member)
- 5. Richard Nadeau (Rick), Southampton, MA.
- 6. Randolph Scott, West Springfield, MA. (Returning member)
- 7. Warren Sweatt, Russell, MA.
- 8. Jacob Edwards, Northampton, MA.
- 9. Gavin Budhram, South Hadley, MA.
- 10. **Bob Faivre**, Easthampton, MA. (Returning member)











Hampshire County Radio Controllers Invite you to attend our

www.hampshirecountyrc.org

Social Distancing to be enforced. Face coverings required within 10' of other people

Club Summer Chicken BBQ

July 11th 2020

Rain date July 12th

10AM to 3PM (Food Served Approx. 12:00)

Come fly, eat and enjoy the day at the club field

This is a closed event

All club members and immediate family only

BBQ Chicken, Sides, Drinks and deserts will be provided

Please bring one item of nonperishable human or pet food to donate to local charities

Our Club Web Site at www.hampshirecountyrc.org or Our Facebook Page at www.facebook.com/groups/148353592007739/

or Contact:

Mike Shaw CD - mshaw.spfld@gmail.com or Santiago Mercado - santme2000@hotmail.com - (413)267-6100







Article submitted by Tom Tenerowicz

Building 101

I've wrestled with what is the first thing to peruse when wanting to start building. What I've found is that there is no clear answer to the question. There are many logical starting points but no clear first step. So, I've come to the conclusion that developing the tools needed to build is a good logical first step as it is useful in building kits, arfs and doing sometimes needed repairs. To that end I offer you my ideas.

The first tool to purchase is a good stable building board. My choose is a Luan hollow core door, 1 1/2" x 18" x 60". It can be positioned on the counter in my building room and placed to the corner when not in use. The luan sides allow building pins to be easily inserted and they hold solid yet can be removed when the time comes. To this add one or two machinist style squares of different sizes. I like one that is 12" long and one 18" in length. Next is a 3 foot metal yardstick I can use to measure and as a straight edge. A roll of 1/2" masking tape, some building "T" pins, thin and thick ca glue, a roll of wax paper, Elmers carpenters glued and 5 or 20 minute epoxy should round out the initial tools. Oh I forgot a couple of exacto type knives, replacement blades and a fine tooth modeling hand saw.

With these you can build ANY size RC aircraft your heart will desire from park flyers to giant scale. Next month I hope to start talking about choosing an airframe.

Best to you all, Tom Tenerowicz

Upcoming Events:

July 2nd Business meeting (**HAPPENING**) 7pm at the field Club BBQ - See above (**HAPPENING**)

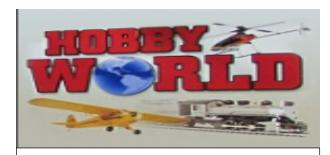
Airplane of the month: ScramJet

A scramjet (supersonic combustion ramjet) is a variant of a ramjet airbreathing jet engine in which combustion takes place in supersonic airflow. As in ramjets, a scramjet relies on high vehicle speed to compress the incoming air forcefully before combustion (hence ramjet), but whereas a ramjet decelerates the air to subsonic velocities before combustion, the airflow in a scramjet is supersonic throughout the entire engine. That allows the scramjet to operate efficiently at extremely high speeds. In the 2000s, significant progress was made in the development of hypersonic technology, particularly in the field of scramjet engines. The HyShot project demonstrated scramjet combustion on July 30, 2002. The scramjet engine worked effectively and demonstrated supersonic combustion in action. However, the engine was not designed to provide thrust to propel a craft. It was designed more or less as a technology demonstrator. A joint British and Australian team from UK defense company Qinetiq and the University of Queensland were the first group to demonstrate a scramjet working in an atmospheric test. [9] Hyper-X claimed the first flight of a thrust-producing scramjet-powered vehicle with full aerodynamic maneuvering surfaces in 2004 with the X-43A. [10][11] The last of the three X-43A scramjet tests achieved Mach 9.6 for a brief time. [12]On June 15, 2007, the US Defense Advanced Research Project Agency (DARPA), in cooperation with the Australian Defence Science and Technology Organisation (DSTO), announced a successful scramjet flight at Mach 10 using rocket engines to boost the test vehicle to hypersonic speeds. [13]A series of scramjet ground tests was completed at NASA Langley Arc-Heated Scramjet Test Facility (AHSTF) at simulated Mach 8 flight conditions. These experiments were used to support HIFiRE flight 2.¹¹⁴¹On May 22, 2009, Woomera hosted the first successful test flight of a hypersonic aircraft in HIFiRE (Hypersonic International Flight Research Experimentation). The launch was one of ten planned test flights. The series of flights is part of a joint research program between the Defence Science and Technology Organisation and the US Air Force, designated as the HIFiRE. [15] HIFiRE is investigating hypersonics technology (the study of flight exceeding five times the speed of sound) and its application to advanced scramjet-powered space launch vehicles; the objective is to support the new Boeing X-51 scramjet demonstrator while also building a strong base of flight test data for quick-reaction space launch development and hypersonic "quick-strike" weapons.



Thank you to our sponsors





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