



The Transmitter

Suburban RC Barnstormers - P.O. Box 524, Bloomingdale, IL 60108

AMA CHAPTER 640

October 2017

<http://www.suburbanrcbarnstormers.com>

Coming in October and November

October 9th, Member Meeting, Itasca Public Library, 7:00pm

October 16th, "What's Inside an RC Plane", Itasca Public Library, 7:00pm

October 30th, Board Meeting, Itasca Public Library, 7:00pm

November 2nd and 3rd, DOME OPENING - ** FREE **

November 13th, Member Meeting, Itasca Public Library, 7:00pm – TURKEYS!!

November 27th, Board Meeting, Itasca Public Library, 7:00pm

Notes of the Suburban RC Barnstormers Membership Meeting

September 11, 2017

ATTENDANCE

There were 19 members present at the September meeting held at the Itasca Public Library. Visitor **Merv Keeney** was present. He told us about starting with control line and free flight flying many years ago but was interested in getting into RC.

OFFICER REPORTS

President: Hector Rivera talked briefly about the Open House event on August 20th. We considered it a success that will help increase our visibility.

Hector reminded members if they are talking to new people at the flying field, please take advantage of the business cards in the flight box to provide the people with contact and club information.

Our next meeting will be on October 9th in the Itasca Library.

Vice President: Paul Kramer said the door prizes for the evening would be a voltmeter, wheels, and fiber fill.

Treasurer: Bob Vance reported we had about \$5400 in the bank.

Secretary: Ofelia Rivera was busy with other duties, so **Scott Taylor** was filling in for her.

COMMITTEES

Safety – Paul Kramer reported on some incidents at the field that are worth noting. Among them was a receiver failure. This can happen at any time, so always treat your models as if you could have a loss of control. Another was a case where an engine was unintentionally set to full throttle while starting, creating a potentially dangerous situation. Finally, a model had a servo failure after landing which caused the pilot to run into another model. All these types of incidents can be very dangerous, so please check your equipment regularly and always treat your models as if a component or radio could fail.

Fun Flies – Hector said he would not be available for the last fun fly. So, the activities

and organization would need to be done by someone else.

Flight Instruction – Hector said we are still looking for chair people for both the Fun Flies and Flight Instruction. Maybe this is something for you!

NEW BUSINESS

New Pilot Introductions - Paul Kramer talked about RC flying classes to be offered at the Itasca Library. On Monday September 18th, we will be showing different types of planes and RC flying. Paul is looking for members to bring different types of models for display. On Monday October 16th, we will be showing what is inside and what make RC planes go! Again, if you can help, please contact Paul.

Shirts and Hats – Thanks to Tom Jennings efforts we have received an order of shirts and hats that are available for members to purchase. Sizes under XXL cost \$18 and XXL and larger are \$20. Hats are \$14. Tom also

said that the club logo can be embroidered on many different articles of clothing. This can be done at Cook's Sports on Lake Street.

PLANES

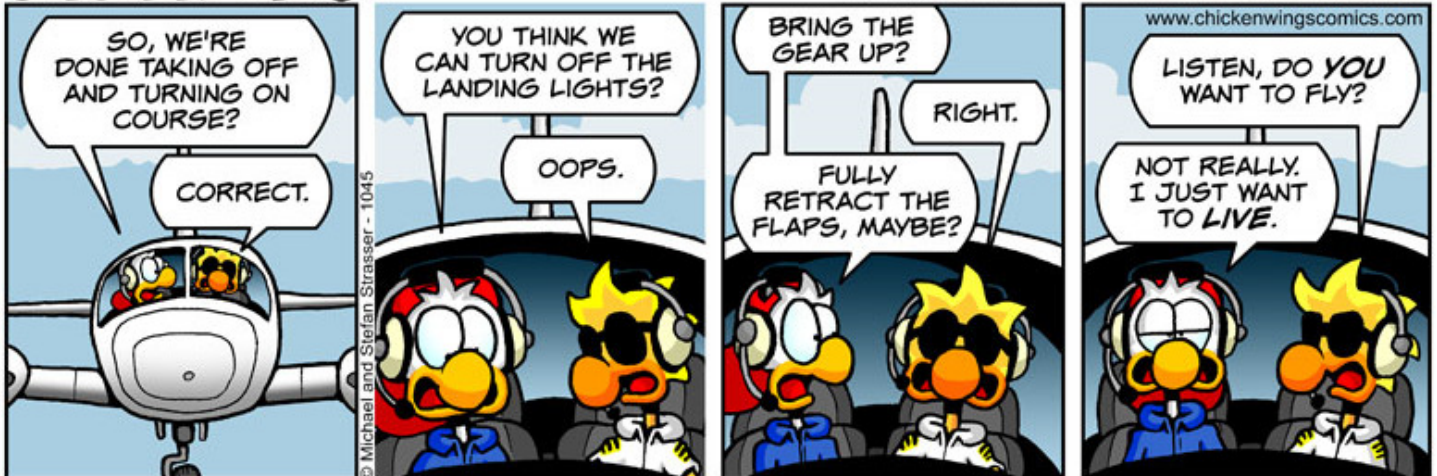
Paul Kramer brought in a SIG Kougat that he had completed last winter to show the members. This kit uses a foam sheeted wing and Paul had made some changes to lighten the tail. After mounting his .46 engine it balanced perfectly!

Keith Egging had a SIG Rascal that he said was free for the taking. **Dave West** stepped up and claimed the kit, but also donated \$20 to the club for the honor. Thanks Dave!

Door Prizes – Chuck Weibler took the wheels, **Dave West** got the glass filler, and **Ruth Egging** the volt meter. **John Gadziak** won the Thanksgiving Turkey! The rollover carries on to the next meeting.

CHICKEN WINGS®

BY MICHAEL AND STEFAN STRASSER





Bits and Pieces Related to Our RC Model Airplane Hobby

By: Bob Sarley

Welcome to the fourth issue of the “Final Approach”. This is the fourth in a series of articles that are intended to provide additional information and insight into our RC model airplane hobby. I hope you find the articles informative and useful (questions or suggestions for topics are always welcome).

The topic for this issue is **RC Servos – Analog and Digital Evaluated (Part-2)**

In the last article we discussed the major components and operation of an RC aircraft servo and the distinction between analog and digital versions of that device. In this article we will explore the various physical dimensions (size, weight, speed and torque) of the servo, which will help us pick the right servo for the application.

As with any project, the components and materials needed to obtain successful results are dependent upon the requirements of the application. In this case, what is the aircraft used for and what are the expectations of the pilot? Is the plane a laid-back casual sport flier or a precision aerobatic pattern plane? Do you require repeatable precision of a geometric maneuver or are you content with steering into on a column of rising air with your glider? Is the project aircraft a large and heavy warbird or is it a light 3-D performer? These planes all involve different flying techniques and all have different servo requirements. We can roughly categorize them as follows:

Servo Requirements by Application			
Aircraft	Servo Characteristics		
Application	Size	Torque	Speed
Gliders	micro to mini	moderate	moderate
Foam Park Flier	micro to mini	moderate	moderate
Foam 3-D	micro to mini	moderate	fast
Balsa Park Flier	micro to mini	moderate	moderate to fast
Small Balsa 3-D	mini	moderate to high	fast
Foam Warbird	mini	moderate	moderate
Small Balsa Warbird	mini	moderate to high	moderate
Large Balsa Warbird	full size	high	moderate
Small Pattern	mini	moderate	moderate
Large Pattern	mini to full size	moderate to high	fast
Small 3-D	mini to full size	moderate	fast
Large 3-D	full size	high	fast
Landing gear drives	mini to full size	moderate to high	moderate
Flaps	mini to full size	moderate to high	moderate

These are not all categories of aircraft, of course, nor are they absolute values. But it is important to identify the intended use of your finished aircraft and to choose servos that best accommodate the application. Too large a servo crammed into a small lightweight aircraft and you will hinder its flight characteristics while overpowering the control surfaces with unneeded torque and/or speed. Conversely, It is always advantageous to keep the overall weight of the airframe as low as possible, but too small a servo and you will experience slow or inadequate response and possible servo stalling.

The number of servos from which to choose is great and servos that meet your project requirements and budget can surely be found. That abundance, though, can make servo

selection a daunting task. Thanks to the Internet, help is as near as your computer, tablet or smart phone.

The following URL link takes you to an interactive servo database indicating specifications, manufacturers and typical pricing of over two thousand servos. It also allows you to enter desired specifications and will display all the servos that meet those specifications.

From your favorite browser, go to - <https://servodatabase.com/>

From within this web page you can sort or filter the database to display only servos in which you are interested. You can also build a list of selected servos and easily compare their respective specifications. A screen shot of the ServoDatabase home page is shown below. Clicking on the model number in the “Model” column will open a detailed rendering of the servo selected.

ServoDatabase.com
Servo Specifications and Reviews

All Servos Brands Compare (0)

Click for a list of all servos in the database.

Click for a listing of servo manufacturers.

Click for a worksheet to store and compare servo selections.

All Servos (2,426)

Make	Model	Modulation	Weight	Dimensions (LxWxH)	Torque	Speed	Motor Type	Rotation	Gear Material	Typical Price	Compare
Ace RC	C0915	Analog	0.32 oz (9.1 g)	0.87x0.45x0.93 in (22.1x11.4x23.6 mm)	4.8V 20.8 oz-in (1.5 kg-cm) 6.0V 26.4 oz-in (1.9 kg-cm)	4.8V 0.10 s/60° 6.0V 0.08 s/60°	(add)	Single Bearing	Plastic	\$30.99	🛒
Ace RC	C1046	Analog	0.32 oz (9.0 g)	0.87x0.45x0.93 in (22.1x11.4x23.6 mm)	4.8V 22.2 oz-in (1.6 kg-cm)	4.8V 0.10 s/60°	(add)	Single Bearing	Metal	\$17.99	🛒
Ace RC	DS0606	Digital	2.12 oz (60.1 g)	1.59x0.80x1.56 in (40.4x20.3x39.6 mm)	4.8V 58.0 oz-in (4.2 kg-cm) 6.0V 74.0 oz-in (5.3 kg-cm)	4.8V 0.07 s/60° 6.0V 0.06 s/60°	(add)	Dual Bearings	Plastic	\$83.95	🛒
Ace RC	DS1013	Digital	2.19 oz (62.0 g)	1.62x0.79x1.51 in (41.1x20.1x38.4 mm)	6.0V 180.5 oz-in (13.0 kg-cm)	6.0V 0.11 s/60°	(add)	(add)	Metal	\$93.99	🛒
Ace RC	DS1013	Digital	2.19 oz (62.0 g)	1.62x0.79x1.51 in (41.1x20.1x38.4 mm)	6.0V 201.4 oz-in (14.5 kg-cm)	6.0V 0.11 s/60°	(add)	Single Bearing	Metal	\$96.99	🛒
Ace RC	DS1113	Digital	2.19 oz (62.0 g)	1.62x0.79x1.51 in (41.1x20.1x38.4 mm)	4.8V 118.0 oz-in (8.5 kg-cm)	4.8V 0.16 s/60°	(add)	(add)	Metal	\$92.99	🛒
Ace RC	DS1211	Digital	2.19 oz (62.0 g)	1.62x0.79x1.51 in (41.1x20.1x38.4 mm)	6.0V 149.9 oz-in (10.8 kg-cm)	6.0V 0.13 s/60°	(add)	(add)	Metal	\$79.99	🛒
Ace RC	DS1213	Digital	2.33 oz (66.0 g)	1.65x0.81x1.56 in (41.9x20.6x39.6 mm)	4.8V 133.0 oz-in (9.6 kg-cm)	4.8V 0.16 s/60°	(add)	(add)	Metal	\$96.99	🛒
Ace RC	DS1313	Digital	2.33 oz (66.0 g)	1.65x0.81x1.56 in (41.9x20.6x39.6 mm)	6.0V 173.6 oz-in (12.5 kg-cm)	6.0V 0.13 s/60°	(add)	Single Bearing	Metal	\$74.99	🛒
Ace RC	S1807MG	Analog	1.71 oz (48.5 g)	1.59x0.79x1.49 in (40.4x20.1x37.8 mm)	4.8V 95.8 oz-in (6.9 kg-cm)	4.8V 0.18 s/60°	(add)	Dual Bearings	Metal	\$39.99	🛒
Ace RC	S1903	Analog	1.64 oz (46.5 g)	1.59x0.79x1.49 in (40.4x20.1x37.8 mm)	4.8V 41.7 oz-in (3.0 kg-cm)	4.8V 0.19 s/60°	(add)	Bushing	Plastic	\$14.99	🛒
Ace RC	S1903MG	Analog	1.78 oz (50.5 g)	1.59x0.79x1.49 in (40.4x20.1x37.8 mm)	4.8V 41.7 oz-in (3.0 kg-cm)	4.8V 0.19 s/60°	(add)	Bushing	Hybrid	\$16.99	🛒

Click on model number for server details.

Clicking on the “Advanced Search” field will open up the interactive “Advanced Servo Search”. This page will allow you to enter the specifications and parameters you need and produce a list of the servos that meet your criteria. This tool will allow you to navigate the sea of available servos with relative ease. The screen shot below shows the Advanced Servo Search page and its many variables that you can manipulate.

ServoDatabase.com

All Servos Brands Compare (0)

Click for the interactive worksheet. Find servos meeting your specifications.

Advanced Servo Search

You can use this tool to find all servos that match a specific set of criteria. Using all of the default selections is the same as viewing all servos.

Brand: Any Custom Set

Modulation: Analog Digital

Weight: Greater than 0 ounces

Torque: Greater than 0 oz-in @ 4.8 volts

Speed: Greater than 0 sec/60° @ 4.8 volts

Length: Greater than 0 inches

Width: Greater than 0 inches

Height: Greater than 0 inches

Range: Greater than 0 degrees of rotation

Support: Bushing 1 Bearing 2 Bearings 3 Bearings

Motor: 3-pole 5-pole Brushed Brushless Coreless Electroactive Polymer

Gears: Hybrid Metal Plastic Titanium

Unknowns: Exclude unknown values

Find Servos Restore Defaults

The choice is still up to the modeler, of course. But having information about the performance and cost of the candidate servos will be a valuable aid in selecting those that will fulfill the application requirements without straining your modeling budget.

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This newsletter is published monthly by the Suburban RC Barnstormers, Inc.

We reserve the right to edit all information forwarded to us. Permission is hereby given to reprint any article that we publish as long as proper credit is given.

Material can be submitted for publication: (1) at a meeting, (2) by mailing to Suburban RC Barnstormers, Inc., P.O. Box 524, Bloomingdale, IL 60108, (3) sending it to the email of the editor, Scott Taylor, at taylorstr@core.com

Articles must be received by the 4th Saturday of the month to be included in the following month's newsletter.

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