



AMA #1256  
**2010 Club Officers**  
 President: Chet Thayer  
 VP: John Gardiner  
 Treasurer: Elliott Smith  
 Secretary: Mike Hunter  
 Editor: Tim Mihalski  
 District IV AVP: John Kirchstein

**Volume 37 Issue 12**



Official Newsletter of the

# FIRST STATE R/C CLUB

Established 1973 – An AMA Gold Leader Club

<http://www.firststaterc.org>



**DECEMBER 2010**

## UNOFFICIAL NOVEMBER MEETING MINUTES

**Members In Attendance:** Joe Berry, John Gardiner, Mike Hunter, Chet Thayer, Ron Becker, Steve Johnson, Mike Sobieski, Bill Mull, Charles Hruska, Jack Springer, Art Harris, Frank Donnelly

Minutes:

### Show & Tell:

- **Frank Donnelly** brought in his electric powered Russian SU-37. Frank got interested in this model because of the thrust vectoring capabilities and the electronics needed to make it work. The aircraft required two ESCs to control two separate motors. Frank did not build in any rudder or canard capability so all control will be maintained by thrust vectoring, elevons and changing thrust on each motor. Frank downloaded the plans from the internet and had them upsized at Kinko's. The entire plane is made from 6mm Dacron that Frank had to cut, glue and sand. He will later cover the plane with fiberglass.
- **Ron Becker** brought a Zeke's park flyer Citabria Pro. The kit was entirely laser cut and was assembled dry and then glued when all parts were assembled. Ron reported that all the pieces fit as advertised and that there were no major changes required. Ron is not sure what he will use to cover the model, but he is looking for the lightest covering he can find.
- **Steve Johnson** brought in his electric ARF that he purchased from G-Force Hobbies. The plane is modeled after the RV-9 homebuilt. Steve installed a park 480 motor with 32 MA batteries. He has flown the plane and crashed it already. The crash was the result of a hard landing that stressed the under carriage to the point that it collapsed. He and Bob Cyr were able to fix the damage and upon closer inspection beefed up the motor mount. Steve also burned up the motor on the ground when testing the plane's endurance. As of now the model is in good shape and flying well.

### Call to Order:

- President Chet Thayer called the meeting to order at 7:45 P.M.

## MEETING MINUTES continued...

### Reading of the Minutes:

- Mike Hunter summarized the meeting minutes from October meeting. The meeting minutes were accepted as summarized.

### COMMITTEE Reports:

- **Treasury Report:** Elliot Smith was on vacation so John Gardiner gave an abbreviated summary. We have \$xx.xx in our accounts with no outstanding bills. This includes \$520 from 2011 dues received so far. You should have received an invoice for your 2011 dues. If you have not paid yet please forward your 2011 dues to John Gardiner by the end of November.
- **Safety Report:** There was no safety report. However, Mike Hunter will form a committee early next year to address new flying rules with the advent of helicopter and fix wing operations now becoming more common place.
- **Field Report:** The field is in great shape. Ron Becker reported that he Blue Diamond MotoCross race will occur this Sunday, Nov. 20<sup>th</sup>. The flying field will be closed that day. Some weekend after that Ron will form a work party to cut down a tree at the south end of the field and other improvements that can be accomplished given the weather and manpower that turns out. Please be on the lookout for an e-mail announcing the work date. Joe Berry and Bob Cyr will take on the responsibility of building three new safety flight stands as approved at an earlier meeting. Additionally, Ron Becker will lay our plans for a portable fence to possibly replace or augment the grass barrier we have used to separate the pits from the field. Once a design is put forth we will vote on whether or not to proceed. Most members at the meeting were supportive of the idea.

### OLD Business

- **2011 Officer Election:** The final list of nominations for 2011 Officers were as follows:  
 Chet Thayer for President  
 Steve Johnson for Vice President  
 John Gardiner for Treasurer  
 Mike Hunter for Secretary  
 Tim Mihalski for Webmaster

## MEETING MINUTES *continued...*

Since there were no contested offices the candidates were elected by unanimous proclamation by the members present. Congratulation to the Officers for 2011.

### New Business

- **Change in Account Authorized Signatures:** A motion was made to authorize Elliot Smith (previous treasurer and authorized signer) and John Gardiner (current treasurer) to meet with Wilmington Trust to change the authorized signers from Elliot Smith and Ron Becker to John Gardiner and Chet Thayer. There was no discussion. The motion was seconded and passed unanimously.
- **Friends of Bellanca Airfield:** Mike Sobieski reported that he and Elliot Smith were nominated to be President of the Friends of Bellanca Airfield organization. Elliot Smith was elected and is now the President. Mike Sobieski continues to serve as a member of the board of the FOBA.
- **December Meeting Change:** The Date, Time and Place of the December meeting is being changed to 10:00 am, Saturday December 18<sup>th</sup> at the FOBA Hanger on Rt. 273. All members are encouraged to attend and bring any electric flying aircraft suitable for indoor flight. All radios must be spread spectrum as there is no pin control for frequency interference. Additionally, members are invited to attend breakfast at Arnes on Rte 13 for breakfast at about 8:30 am.

### Adjournment

The meeting adjourned at 8:14 pm.



*Respectfully Submitted,*  
Mike Hunter  
Secretary  
First State R/C Club

Happy Holidays

HAPPY  
BIRTHDAY

Randy Weaver	12/10
Charles Hruska	12/24
Michael Sobieski	12/30



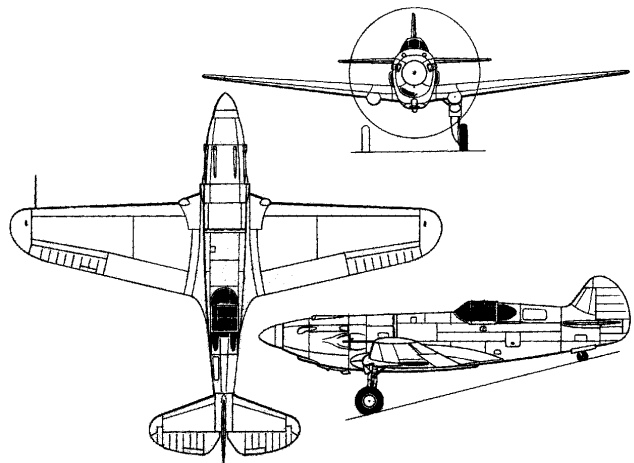
## NOVEMBER'S MYSTERY AIRCRAFT



### Curtiss P-37

The 'long-nosed' P-37 was a Curtiss attempt in the late 1930s to couple the P-36 Mohawk design with the 992kW Allison V-1710-21 inline engine. The result was a pursuit ship with some promise but with a few serious drawbacks, including poor visibility from its far-aft enclosed cockpit. The sole XP-37, ordered in 1937 with a supercharged V-1710-11 powerplant, was nothing more than a P-36 airframe with the engine change. It was quickly apparent that the pilot not only could not see well in flight but also on the ground he could scarcely see at all! It was hoped that some improvement would be offered by the 13 service-test YP-37 airframes which were 0.56m longer and had the V-1710-21 engine.

The YP-37 aircraft went through rigorous tests at Wright Field, Ohio, including gunnery tests, but the visibility problem was not resolved and the YP-37s were not as stable as Army pilots wanted. Serious consideration was given to further development, but at the time Curtiss was also about to come forth with the P-40 which offered an inline powerplant without the drawbacks. Though they contributed to knowledge gained by fighter designers and tacticians, the YP-37s never reached operational service as other types appeared with greater promise. As world conflict loomed, multi-role missions were now being foreseen for aircraft once intended solely to chase other aircraft, and machines capable of a range of combat functions would increasingly become known not as pursuit ships but as fighters.



## MYSTERY AIRCRAFT continued...



### **Curtiss P-37**

#### **SPECIFICATION**

##### **WEIGHTS**

Take-off weight 3255 kg 7176 lb

Empty weight 2596 kg 5723 lb

##### **DIMENSIONS**

Wingspan 11.38 m 37 ft 4 in

Length 10 m 33 ft 10 in

Height 2.90 m 10 ft 6 in

Wing area 21.92 m<sup>2</sup> 235.94 sq ft

##### **PERFORMANCE**

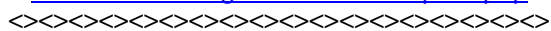
Max. speed 547 km/h 340 mph

Ceiling 10360 m 34000 ft

Range 1400 km 870 miles

ARMAMENT 1 x 7.62mm + 1 x 12.7mm machine-guns

Source: [www.aviastar.org/air/usa/curtiss\\_p-37.php](http://www.aviastar.org/air/usa/curtiss_p-37.php)



## **SPREAD SPECTRUM INFO**

If you already have one or have been thinking of buying a 2.4GHz spread spectrum RC transmitter and receiver then hopefully this article will help you understand more about spread spectrum.

The introduction of spread spectrum technology happened during WWII and was used for encrypting signals that controlled torpedoes so the enemy could not detect or jam the signal. Today this technology is used in almost every aspect of military communications not to mention Wi-Fi, blue tooth, cordless phones and GPS.

A Globally Unique Identification Code (GUIC) is assigned to every radio transmitter during manufacturing; it is a unique code out of millions of possible codes. The spread spectrum technology binds a transmitter to a specific receiver so that the receiver only "listens" to that particular transmitter using the GUIC and blocking all other codes in the process.

There are two ways to achieve this bond. The first and most common type is Direct Sequence Spread Spectrum (DSSS). This involves the transmitter and receiver staying within a fixed part of the 2.4GHz band. The transmitted signal is spread out over a wide band before being accepted and then re-assembled in narrow band by the receiver, further increasing security. The 2.4 GHz transmissions will appear to be random "white noise" for any non-bound receiver. The second type is called Frequency Hopping Spread Spectrum (FHSS) and involves having the transmitter and receiver constantly changing their operating frequency within the 2.4GHz band. It continuously changes its frequency several times a second. From the binding process the receiver knows

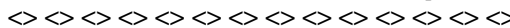
## **SPECTRUM INFO continued...**

the GUIC that the transmitter is using. It then focuses on the appropriate frequency as the transmitter changes from one frequency to the next.

Since both DSSS and FHSS radio systems transmit in the 2.4 GHz frequency band the FCC requires that any device that transmits in this frequency range must first scan the frequency band and use only the narrow band frequencies within the 2.4 GHz frequency band which are not in use by another device. This process only takes a few seconds every time the transmitter and receiver are powered up. Once your transmitter and receiver sync up, your flying frequency is chosen for you and it becomes unique to that model – virtually no other radio signals or interferences can penetrate the signal. This makes it possible for many devices to utilize the 2.4 GHz frequency band at the same. The wavelength of the 2.4 GHz frequencies is so small that it can't go around objects very well and can be easily blocked by metal objects on an aircraft such as the engine or landing gear. To aid with this a second receiver is added to the system so that at least one of the receivers will have a clear unblocked signal from the transmitter. The main receiver resembles a standard receiver and is installed in the same way. The second receiver is a satellite receiver connected to the main receiver via an umbilical cord. The two receivers need to be mounted at least 2" (best 3-4 inches) apart. It is important to mount the antennas pointing 90 degrees from one another so that one of them is always receiving a signal at any given time. The satellite receivers are typically mounted in the fuselage where it is easily accessible. There are many advantages of spread spectrum related to R/C flight. One is the response time - everything happens within a few milliseconds, so servo movement and model response is instantaneous. A safety aspect is the shorter antenna; it is no longer extended several feet in front of you. Crystals are no longer required so you don't need to carry a spare set of those. The transmitter uses less current to operate so the result is longer life to your transmitter and receiver batteries. Here is a great link for more details on the subject:

[http://en.wikipedia.org/wiki/Spread\\_spectrum](http://en.wikipedia.org/wiki/Spread_spectrum)

*From the Anoka County Radio Control Club, Inc.  
Coon Rapids, Minnesota*









# FIRST STATE R/C CLUB

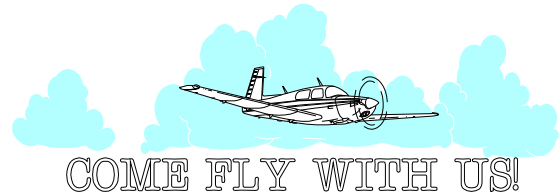
## APPLICATION & DUES RENEWAL FORM

Date: \_\_\_\_\_  
Name: \_\_\_\_\_  
PO Box/RD/Street: \_\_\_\_\_ Apt #: \_\_\_\_\_  
Development: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Home Phone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_  
Work Phone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_  
E-Mail Address: \_\_\_\_\_

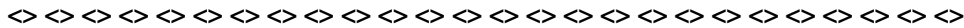
AMA #: \_\_\_\_\_ Expires: \_\_\_\_\_ 1991 R/C Frequency(s): \_\_\_\_\_  
Birthdate: \_\_\_\_\_ (AMA Requirement)  
Referred By: \_\_\_\_\_ (New members only)  
AMA Junior Members (under 19 years old) at same address: \_\_\_\_\_  
Dues Payment Amount: \$ \_\_\_\_\_

Please indicate your experience:

- Beginner (Need instruction)!
- Previously soloed!
- Operated R/C aircraft with assistance!



*The above form should be filled in and submitted with your 2011 Club dues so that the Club Membership database can be updated. This data is used for AMA Club Charter renewal as well as our Club Roster. Please fill-in all fields that apply.. Thanks in advance!*



### **2011 CLUB DUES**

**except from the Club by-laws....**

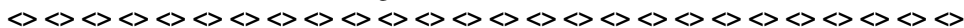
3. Dues are \$60.00 per year for A.M.A. Open members and \$25.00 for A.M.A. Youth members (those not 19 by July 1). Members age 65 or older by July 1 will be assessed \$35.00. No dues are assessed for Junior members when a parent or guardian holds an Open Club membership.

4. All dues are payable in advance by November 30 of each year. **Members who do not pay their dues by December 31 will be listed in the January newsletter.** Any members who do not pay their dues by January 31 will be dropped from the Club membership.

5 Dues for new members joining prior to September 1 will be for the full year amount. Dues for members joining after September 1 will be prorated at \$6.00 per month for each month remaining in that year.

6. Members dropped from the Club for non-payment of dues may be reinstated after paying the annual dues plus the \$10.00 late fee.

Mail to John Gardiner, 108 Weldin Park Drive, Wilmington, DE 19803





----- FOLD HERE, STAPLE OR TAPE AND ADD STAMP -----

John Gardiner  
108 Weldin Park Drive  
Wilmington, DE 19803

## DECEMBER'S MYSTERY AIRCRAFT



A mystery aircraft for you to ponder... you can read all about this mystery ship in the January issue of *Contact...*

### IMPORTANT REMINDERS...

#### DECEMBER CLUB MEETING

Saturday 10:00 A.M 12/18/10 at the FOBA Hanger on Rte. 273

Installation of 2011 Club Officers

#### JANUARY CLUB MEETING

Monday 7:30 P.M. 01/17/11@ Stahl American Legion Post

#### FEBRUARY CLUB MEETING

Monday 7:30 P.M. 02/21/11@ Stahl American Legion Post



Timothy I. Mihalski, Editor  
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