

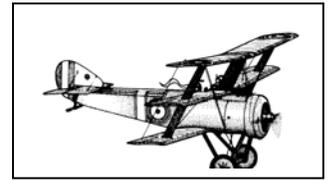
Newsletter Editor

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## The Johnstown R/C Club

# Digital Dope Sheet



January 2009 Newsletter

Johnstown R/C Club's Forty-Seventh Year

Join us online at: [www.Johnstownrc.org](http://www.Johnstownrc.org)

## Important Dates for your 2009 Calendar.....

**January In-Door Fly-In** Tuesday Jan. 6th 6:30 pm at the LDS Church on Walters Ave., Geistown. Bring a friend, your appetite, and a plane to fly!

**Annual Club Banquet** - Saturday, March 28<sup>th</sup>, 6:00 pm at the American Legion Hall, Windber, PA

**Annual Mall Show** - May 1-2-3 Center Court, Richland Galleria Mall, 9 to 9 daily Set up night will be on Thursday, April 30<sup>th</sup> 7-9 pm.

## What's this 2.4GHz all about!

In all truth, the only real difference **IS** the frequency difference. But both the Laws of the Universe and the Laws of Man partner to make this simple frequency change into a *qualitative difference* in the way RC flying will operate in the near future.

First up are the Laws of Man and what they do for us. In its collective wisdom, our government, in the life form of the Federal Communications Commission (FCC), has set rules for all transmitters operating in the 2.4 GHz Band. These rules might also apply to other frequency bands but that is not relative to us here. But one major 2.4 GHz rule, "thou shalt cause no interference", does not apply to our current 72 MHz equipment.

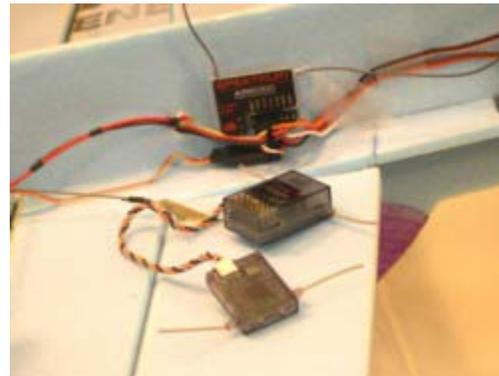
The most common system now operating in the 2.4 GHz band is the portable, not wireless cell, telephone. If you have a portable home telephone with a short antenna, you have already been using the 2.4 GHz Band. (Yes, there are some 5 and 9 GHz portables but the majority still use 2.4 GHz.)

The FCC identified a problem with our portable phone systems almost before their inception. If you are talking on a portable phone and I, your next door neighbor, fire up my portable, it is possible

that I could listen in on your conversation or, more likely, interfere with it. So the FCC made this major Law of Man:

For all 2.4 GHz transmitters, *every transmitter* must first search *all* the individual 2.4 GHz frequencies in its operating Frequency Band before it ever begins to transmit a signal. No open frequency means no transmitting.

You can hear this Law operating every time you press the talk button on your portable telephone. There is always a delay, usually 1-2 seconds, between pressing the talk button and hearing the dial tone. THAT DELAY is your portable phone searching its operating band **BEFORE** transmitting a signal to its home base. It searches through its entire frequency range until it finds a single frequency not currently in use in your area. It then, and only then, selects that frequency and transmits to the base set. Therefore, your portable telephone operates on a different frequency each time you use it; within its operating Frequency Band that is.



The 2.4 GHz RC radio control systems operate the same way. After you turn on your transmitter, it will search its operating frequency band (2.400-2.4835GHz), find a frequency not in use within its range, select that frequency (sometimes two frequencies but more on that later), and *only then* actually start to transmit. Some 2.4 GHz transmitters operate on only a few sections of the Frequency Band, others operate over the entire band, hoping from one frequency to another but even this system will not interfere with other manufacturers' 2.4 GHz systems.

This means that no 2.4 GHz transmitter will ever interfere with another 2.4 GHz transmitter that is already controlling an aircraft in flight. No Interference means no “shoot downs”. There will be no need for frequency control systems for 2.4 GHz operation. Of course, a 2.4 GHz system also cannot interfere with 72 MHz operation due to the large frequency difference.

This also means that the old rule of turning on the transmitter before the receiver is now even more important. The new rule is: **Turn on the transmitter, wait five seconds and only then turn on the receiver. The reason for this is that some systems need to be told when a change is made to a flaperon system. If you don't do this, the aileron servos travel to strange territories and sometimes nearly past their operating limits so put the waiting period into your daily operations.** Even better, re-bind your receiver to the transmitter after all the setup and trimming flights have been made.

While the Laws of Man actually helped us in this instance, (I leave it up to you whether you find that surprising or not), the Laws of the Universe are not so cooperative. 2.4 GHz waves are very short compared to MHz radio waves. Of course, this makes them “line of sight” only but then, our current 72 MHz band has the same restriction.

However, very short wave lengths mean very short antennae and waves that are easily stopped by conductive surfaces. Unlike our 72 MHz system with its yard-long receiver antenna, 2.4 GHz systems have a short 3 inch antennae. This means that, at any given time, some piece of metal (an engine or motor for instance) or electrically conductive item such as a servo wire, a carbon fiber spar or the landing gear will be between the receiver antenna and the transmitter.

When that happens, the short waves are blocked. They are not as good at going “around” objects as are our 72 MHz waves. Nope, they just stop right in their tracks and few reach that really tiny antenna. The result is the airplane continues on its original course until one of the receiver antennae becomes unblocked. Then all is better, if not well. I believe about ten of our members currently utilize the 2.4Ghz system.

*Merry Christmas to you and your family. May you enjoy the true meaning of the holiday!*

## December Club Meeting Recap.....

The December Club meeting was held on Tuesday, December 2<sup>nd</sup>. There were 20 members present, plus one guest. Secretary Paul Yuhas gave his report on the November meeting, and Treasurer Ken Shilling reported that our finances are still in good shape with 2009 dues starting to come in. If you haven't paid your 2009 dues yet, please do so promptly. You can take the \$5 discount and only pay \$35 if paid by January 15<sup>th</sup>, 2009. After that date the whole \$40 is due. We have not yet received the mowing bill as yet, nor the field lease invoice. President Sam reviewed the clubs upcoming events:

**In-Door Fly-In** Tuesday, January 6<sup>th</sup> 6:30 pm at the LDS church on Walters, Ave. Geistown.

**The Annual Club Banquet**, Saturday, March 28<sup>th</sup> 6:00 pm at the Windber American Legion Hall

**Club Mall Show**, May 1,2, & 3 at the Galleria Mall Center Court, Johnstown, PA.

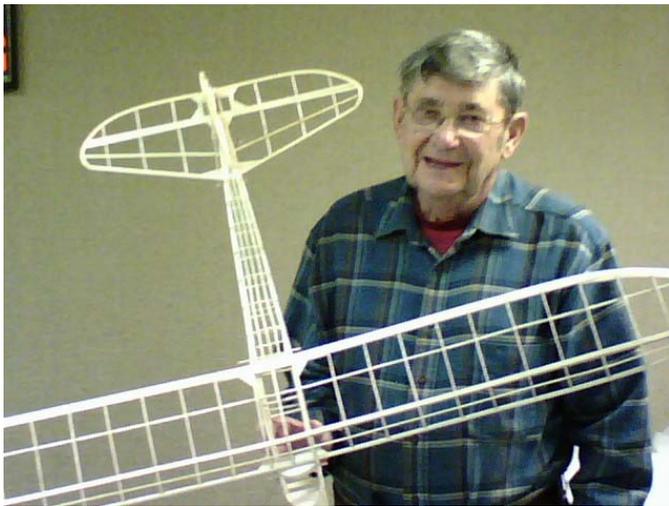
The club held its election of officers, and the entire slate was elected by acclamation.

President	Sam Kaplitz
V. President	Ken Reese
Secretary	Paul Yuhas
Treasurer	Ken Shilling

President Sam asked us about a number of recently in-active members and their whereabouts. If you know of members who have become in-active, give them a call and welcome them back to club activities. The upcoming In-Door Fly-In would be a good opportunity to invite them back! The 50/50 was won by Travis Miller.

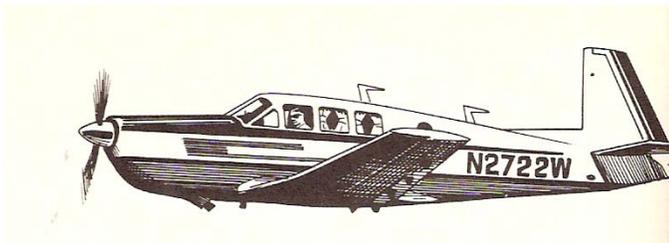
## December Meeting Continued...

The show and tell portion of the meeting started off with Sam Kaplitz showing us his In-Door wind up plane he has made for the upcoming Fly-In. He also showed us several small hand tools he uses to aid in airplane construction, including a stripper tool to make small 1/8 inch strips from flat stock, and a small “plane” to smooth rough edges. Caleb Butler showed off his Half A “MG Capin” plane now under construction. This uses a 2 channel radio and will be a hand launched electric.



**Caleb Butler with his Half A” M.G. Capin”**

There was much discussion concerning the quality of various types of cover material. Some club members have recently had trouble with the more common “Mono-Coat” covering available from Tower Hobbies. Neil Woffingden showed us his Super Cub C-18 electric, which is under construction, and Ken Reese showed us a recently built one wheeled “Flight Streak” control line plane from the 50’s era. He built it for Sam who plans to fly it with a Fox 35 engine using 60 foot wires. Ken covered it with Econ-O-Coat covering. Really a sharp looking plane.



**Ken Reese’s “Flight Streak” Control Line**

The December meeting concluded about 8:40 pm and 11 of the guys went to Pappy’s for pizza. We hope to see everyone at the January meeting, which will be held in conjunction with the Annual In-Door Fly-In.

## Funnies.....

An older guy was driving somewhat erratically and when turning a corner too fast, his wife’s door opened and she fell out. A policeman was following a few cars behind, observed all this, and quickly stopped to help her. She wasn’t hurt much, so he put her in his cruiser and sped after the guy. Several miles later he pulled him over and told the fellow what happened. The old guy exclaimed, “Thank God, for a couple minutes there, I thought I went deaf”!

A woman walked up to a little old man rocking on his porch. “I couldn’t help notice how happy you look” she said. “What’s your secret to such a long and happy life?” The guy responded, “I smoke three packs of cigarettes a day” he said. “I also drink a case of whiskey a week, eat fatty foods, and never, ever exercise” “That’s amazing” the woman says, “How old are you?” The guy responds, “Twenty Six”

What’s the difference between a man and a dog running? One wears trousers, the other pants!

# Pictures from the 2008 In-Door Fly-In.....



## Last Chance for 2009 Dues.....

If you haven't paid your 09 Club dues, this is the time to do it. If paid before January 15<sup>th</sup>, 2009, you can deduct \$5, and only pay \$35. After the 15<sup>th</sup>, the full dues amount of \$40 is due. The picture at right is from a Sunday afternoon flight line.



Johnstown R/C Club Membership For 2009  
Mail to Ken Shilling, or bring to the next meeting.

Ken Shilling 109 Hoyt Street  
Johnstown, PA 15904

Date Paid: \_\_\_\_\_ Check #: \_\_\_\_\_

Note:

Name: \_\_\_\_\_

1. All flying members and guests must have a current AMA card
2. All radio equipment must be Narrow band (1991 specs)
3. The club uses all available legal Radio frequencies including the new 2.4 Ghz systems.

No.& Street: \_\_\_\_\_

City: \_\_\_\_\_ State : \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone #: \_\_\_\_\_

List all Channel Numbers you use  
\_\_\_\_\_

AMA # : \_\_\_\_\_

Email: \_\_\_\_\_

(If applying for an AMA#, you must turn in your current AMA # prior to flying at our field.

Dues paid before January 15<sup>th</sup> for the coming year can take a \$5.00 discount, for open members only!

Date of Birth: \_\_\_\_/\_\_\_\_/\_\_\_\_

Membership Category: (check one)  
 Open Member (over 19 years - \$40)  
 Junior Member (under 19 years, \$5)  
 Non-Flying Member (\$15)

Please fill out this form completely  
Send form or photo copy, and make Checks payable to "Johnstown RC Club"